LSD

2012

40

15

480

360

480

360

360

240

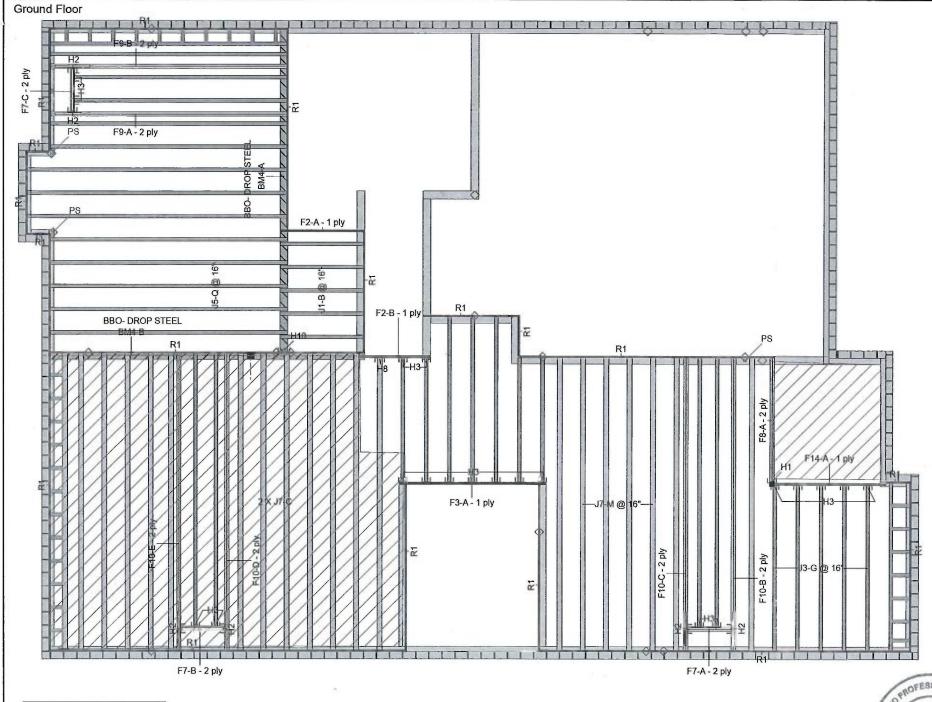
480

360

OSB

3/4"

Nailed & Glued



be in perm

Architectural Drawing Info

REGION DESIGN INC 8700 DUFFERIN ST. CONCORD, ON L4K 4S6

Project # 17-04-07 Model: SANDSTONE 2A Date: JULY, 2018

JOISTS SPACING 16"O/C NOTED OTHERWISE

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -12904-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

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THIS CERTIFICATION IS TO CONFIRM THAT:

- 1. THE LOADS USED IN THE CALCULATION OF THE ATTACHED APPROVED COMPONENTS CONFORM TO THE FLOOR ASSEMBLY SHOWN ON THIS LAYOUT.
- 2. THE FLOOR JOISTS COMPLY WITH THE NASCOR SPAN TABLE FOR THE LOADS AND SPACING SHOWN ON THIS LAYOUT.

THE FLOOR SYSTEM MUST BE ASSEMBLED IN ACCORDANCE TO THE NASCOR SPECIFIER GUIDE. MULTI-PLY MEMBERS MUST BE ATTACHED TOGETHER AS PER THE INCLUDED MULTIPLE MEMBER CONNECTION DETAIL.

ALL OTHER COMPONENTS AND STRUCTURAL ELEMENTS SUPPORTING THE FLOOR SYSTEM SUCH AS BEAMS, WALLS. COLUMNS AND FOUNDATION WALLS AND FOOTINGS INCLUDING ANCHORAGE OF COMPONENTS AND BRACING FOR LATERAL STABILITY ARE THE RESPONSIBILITY OF OTHERS.

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READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA

I.A. EL-MASRI

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

USED IN THE DESIGN OF THIS COMPONENT.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

LVL/LSL Width Depth Qty Plies Pcs Length Label Description F3 Forex 1.75 11.875 10-0-0 2.0E-3000Fb LVL Layout Name F14 Forex 1.75 11.875 8-0-0 2.0E-3000Fb LVL SANDSTON 2A EL-2 F2 1.75 11.875 2 6-0-0 Design Method 2.0E-3000Fb LVL LSD Joist Description Label Description Width Depth Qty Plies Pcs Length GREENPARK HOMES 1.5 11.875 4 F10 NJ 2 8 18-0-0 MINISALE.BRAMPTON.ON F9 NJ 1.5 11.875 2 4 14-0-0 Created F8 NJ 1.5 11.875 2 8-0-0 1.5 11.875 June 29, 2018 F7 NJ 2 3 6 4-0-0 J7 NJ60U 3.5 11.875 20 18-0-0 Builder J6 NJH 2.5 11.875 16-0-0 Sales Rep J5 NJH 2.5 11.875 11 14-0-0 J3 NJH 2.5 11.875 9 10-0-0 J2 NJH 2.5 11.875 4 8-0-0 Designer J1 NJH 2.5 11.875 5 6-0-0 Rim Board Shipping Width Depth Qty Plies Pcs Length Label Description Project R1 Norbord Rimboar 1.125 11.875 Builder's Project Plus 1.125 X 11.875 **Kott Lumber Company** Blocking 14 Anderson Blvd Label Description Width Depth Qty Plies Pcs Length Stouffville, Ontario BLK1 NJH 2.5 11.875 LinFt Varies 23-0-0 Canada Hanger L4A 7X4 Beam/Girder Supported 905-642-4400 Member

Ground Floor Label Pcs Description Skew Slope fasteners fasteners HUC210-2 (Min) 14 10dx1 1/2 6 10d Design Method 6 LT2-151188 H2 4 10d 2 10dx1 1/2 Building Code NBCC 2010 / OBC H3 20 LT251188 4 10d 2 10dx1 1/2 H8 1 LT351188 4 10d 2 10dx1 1/2 Floor H10 Unknown Loads Hanger Live

NOTES:

Ground Floor

- Framer to verify dimensions on the architectural drawings.
- Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
- Install 2x4 blocking @ 24" o/o under parallel non-loadbearing walls.

 Install single-ply flush window header along inside face of rimboard/rimjoist
- Refer to Nascor specifier guide for installation details.
- Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof. Load transfer blocks to be installed under all point loads, It shall be the framer's responsibility that floor joists and beams

Refer to Multiple Member Connection Detail to ply to ply nailing or bolting

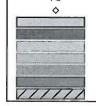
are fastened as per the hanger manufacturer's standards.

Rim parallel to joists: 1-1/8" rimboard with 2"x4" block (1/16" longer than rim depth) @ 16" o/c. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.

Hatch area represents ceramic tiled floor with an additional dead load

The framing shown on this layout may be deviate from the architectural drawings. Project Engineer to review and approve the deviation prior

Legend



Point Load Support Load from Above Norbord Rimboard Plus 1,125 X 11,875 NJ 11.875 NJ60U 11.875 NJH 11.875

Forex 2.0E-3000Fb LVL 1.75 X 11.875 5.25 X 10.25 (Dropped)

All work shall conform to the Ontario Building Code O. Reg. 332/12 as amended

CITY OF BRAMPTON BUILDING DIVISION REVIEWED MARK DERKSEN

Dead

Deflection Joist

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

Decking Deck

Thickness

Fastener

Vibration

Deflection Girder

Legend PS

11111

Point Load Support 0 Load from Above Norbord Rimboard Plus 1.125 X 11.875 NJ 11.875 N.I40U 11 875 NJH 11.875 1///// Forex 2.0E-3000Fb LVL 1.75 X 9.5 (Dropped)

Forex 2.0E-3000Fb LVL 1.75 X 11.875

1.5 X 9.5 (Dropped)

1.75 X 9.5 (Dropped)

5.75 X 10.25 (Dropped)

OPTIONAL 5BEDROOM

THIS CERTIFICATION IS TO CONFIRM THAT:

SHOWN ON THIS LAYOUT.

2. THE FLOOR JOISTS COMPLY WITH THE NASCOR SPAN TABLE FOR THE LOADS AND SPACING SHOWN ON THIS LAYOUT.

THE FLOOR SYSTEM MUST BE ASSEMBLED IN ACCORDANCE TO ATTACHED TOGETHER AS PER THE INCLUDED MULTIPLE

ALL OTHER COMPONENTS AND STRUCTURAL ELEMENTS SUPPORTING THE FLOOR SYSTEM SUCH AS BEAMS, WALLS. COLUMNS AND FOUNDATION WALLS AND FOOTINGS INCLUDING ANCHORAGE OF COMPONENTS AND BRACING FOR

1. THE LOADS USED IN THE CALCULATION OF THE ATTACHED APPROVED COMPONENTS CONFORM TO THE FLOOR ASSEMBLY

THE NASCOR SPECIFIER GUIDE. MULTI-PLY MEMBERS MUST BE MEMBER CONNECTION DETAIL.

LATERAL STABILITY ARE THE RESPONSIBILITY OF OTHERS.

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

CONNECTION DETAIL FOR PLY TO PLY

NAILING OR BOLTING REQUIREMENTS.

N.A. EL-MASRI

PASS THRU FRAMING SQUASH

POINT LOADS OVER BEARINGS

R1 BLOCK IS REQUIRED AT ALL

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETA FOR PLY TO PLY NAILING OR OF IN EURE EN 1. PASS THRU TO A IN BLOCK IS RECORE POINT LOADS OVER BEARINGS

Second Floor LVL/LSL (Flush) Pcs Length Label Description Width Depth Qty Plies F11 1.75 11.875 2 12-0-0 Forex 2.0E-3000Fb LVI Layout Name F6 10-0-0 Forex 1.75 | 11.875 2 2 2.0E-3000Fb LVL Forex F5 1.75 11.875 8-0-0 Design Method 2.0E-3000Fb LVL F4 1.75 11.875 6-0-0 Forex 2 2.0E-3000Fb LVL Description _VL/LSL (Dropped) Label Description Width Depth Qty Plies Pcs Length Created BM6 Forex 1.75 9.5 12-0-0 2 2 2.0E-3000Fb LVI Joist (Flush) Builder Width Depth Qty Plies Label Description Pcs Length Sales Rep F10 NJ 1.5 11.875 2 18-0-0 J8 NJ40U 3.5 11.875 39 18-0-0 2.5 11.875 .19 N.1H 5 18-0-0 Designer J6 NJH 2.5 11.875 11 16-0-0 SB J5 NJH 2.5 11.875 17 14-0-0 Shipping J4 NJH 2.5 11.875 13 12-0-0 Project J3 NJH 2.5 11.875 5 10-0-0 2.5 11.875 J2 NJH 3 8-0-0 **Builder's Project** Rim Board Label Description Width Depth Qty Plies Pcs Length Norbord Rimboar 1.125 11.875 Plus 1.125 X 11.875 Blocking Label Description Width Depth Qty Plies Pcs Length 905-642-4400 BLK2 NJ 1.5 11.875 LinFt Varies 1-0-0 Second Floor BLK2 NJH 2.5 11.875 LinFt Varies 6-0-0 Design Method Hanger Building Code NBCC 2010 / OBC

Supported Member Label Pcs Description Skew Slope fasteners fasteners H2 1 LT2-151188 4 10d 13 LT251188 H3 4 10d 2 10dx1 1/2 H4 1 HUC312 16 16d 6 10dx1 1/2 H5 1 HGUS410 46 16d 16 16d H6 5 HU310 14 16d 6 10dx1 1/2 2 LF2511 H7 12 10d H8 2 LT351188 4 10d

N.A. EL-MASRI Beat Enjoye

1 Unknown

H10

ROFESSIO

Aug 20, 2018

imensions on the architectural drawings. equire filler/backer ply when supporting another ce-mounted hanger.

g @ 24" o/c under parallel non-loadbearing walls ush window header along inside face of rimboard/rimjoist pecifier guide for installation details. commended to be installed at end bearing on all first level

joists which support loading from above exceeding two levels floor or roof. Load transfer blocks to be installed under all point loads.

It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

Refer to Multiple Member Connection Detail to ply to ply nailing or bolting equirements.

Rim parallel to joists: 1-1/8" rimboard with 2"x4" block (1/16" longer than rim depth) @ 16" o/c. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the esponsibility of others.

Hatch area represents ceramic tiled floor with an additional dead load of 5 PSF.

The framing shown on this layout may be deviate from the architectural drawings. Project Engineer to review and approve the deviation prior

JOISTS SPACING 16"O/C UNI ESS NOTED OTHERWISE

Floor oads 2 10dx1 1/2 Dead Deflection Joist LL Span L/ TL Span L/ 1 #8x1 1/4WS LL Cant 2L/ 2 10dx1 1/2

TL Cant 2L/ Deflection Girder LL Span L/ TL Span L/ LL Cant 2L/

TL Cant 2L/ Decking Deck Thickness

5/8" Nailed & Glued Fastener Vibration Ceiling: Gypsum 1/2"

PAGE 22 OF 47

SANDSTON 2A EL-2

GREENPARK HOMES MINISALE, BRAMPTON, ON

Kott Lumber Company

LSD

40

15

480

360

480

360

360

240

480

360

OSB

14 Anderson Blvd

Stouffville, Ontario

Canada

L4A 7X4

June 29, 2018

LSD

RM

REGION DESIGN INC 8700 DUFFERIN ST. CONCORD, ON L4K 4S6

Architectural Drawing Info

Project # 17-04-07 Model: SANDSTONE 2A Date: JULY 2018

Version 18.40.162 Powered by iStruct™

5. CCMC -12787-R APA PR-L310(C)

2. Nascor CCMC - 13535-R

3. LVL CCMC -12904-R

4. CAN/CSA-086-09

1. OBC 2012 O.Reg 332/12 as amended

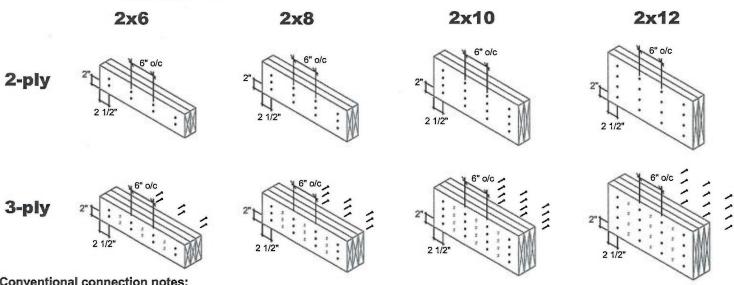
This layout is to be used as an installation guide ly. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them



IPLE MEMBER CONNECTIONS

SANDSTONE 2A EL 2-BRAMPTON-ON

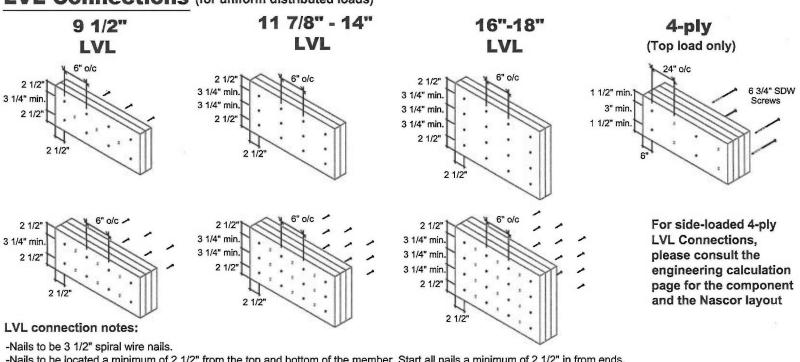
Conventional Connections (for uniform distributed loads)



Conventional connection notes:

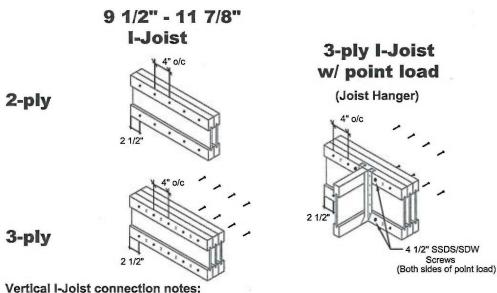
- -Nails to be 3" 10d spiral wire nails.
- -Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

LVL Connections (for uniform distributed loads)



- -Nails to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Minimum 3 1/4" spacing between rows.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail or screw driven from the opposite side.

Vertical I-Joist Connections (for uniform distributed loads)



- Vertical I-Joist connection notes:
- -Nails to be 3" spiral wire nails.
- -Nails to be located at centre of top and bottom flanges. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.



MULTI-PLY CONNECTION **DETAILS**

Date: November 30, 2016

KOTT 3228 Moodie Drive Ottawa, ON **K2H 7V1** Ph: 613-838-2775

Fx: 613-838-4751

Engineering Note Page (ENP-2)

REVISION 2009-10-09

GREENPARK HOMES-MINISALE-SANDSTONE 2A EL 2-BRAMPTON-ON

LOT 25

Please read all notes prior to installation of the component

DESIGN INFORMATION

This building component is certified as an individual component for the loads and conditions shown on the calculation and drawing page.

The responsibility of the undersigned engineer is <u>only</u> limited to the calculation of this building component for the loads and conditions shown on this drawing.

The responsibility of the undersigned is limited to the verification of the structural capacity of the NASCOR floor joists and LVL beams based on placement as shown on the layout. The loads applied are limited to the gravity effects of the specified loads. The structural integrity of the building and the effect of wind, uplift, seismic, lateral or other forces, calculation of adequate support and anchorage of components, as well as the dimensions and design loads used to calculate components are the responsibility of the overall building designer.

Floor joists and OSB rim board are designed to carry uniformly distributed loads only. Point loads should be transferred through the floor cavity with squash blocks. Structural elements such as walls, posts, connectors, and squash blocks are the responsibility of the overall building designer.

The undersigned engineer disclaims any responsibility for damages as a result of being furnished faulty or incorrect information, specifications and/or designs.

Installation of NASCOR joists is to be carried out in accordance with the current edition of the manufacturer's approved literature available at http://www.nascor.ca.

CODE

This building component is designed in accordance with the National Building Code of Canada, the Ontario Building Code, CCMC and Canadian Standards Association guidelines.

COMPONENT

- 1. The building component used in construction must be the same as indicated on the drawings.
- 2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
- 3. Members consisting of multiple plies must be connected as per the document "Multi-ply Connection Details".
- 4. Pass-thru squash block framing is required at all point loads over bearings.

HANDLING AND INSTALLATION

Do not drill any hole, cut or notch a certified building component without a written preauthorization.



TIPLE MEMBER CONNECTIONS

GREENPARK HOMES-MINISALE SANDSTONE 2A EL 2-BRAMPTON-ON

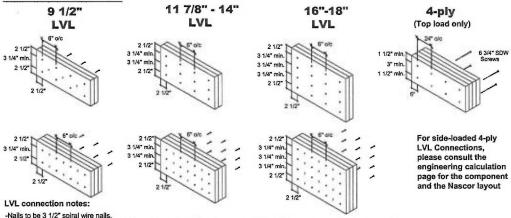
Conventional Connections (for uniform distributed loads)

2x10 2x12 2x6 2x8 2-ply

Conventional connection notes:

- -Nails to be 3" 10d spiral wire nails.
- -Nalis to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
 -Number of rows and spacing as per details shown, unless noted otherwise.
 "X" represents nall driven from the opposite side.

LVL Connections (for uniform distributed loads)



- -Nalls to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nalls a minimum of 2 1/2" in from ends.
- -Minimum 3 1/4" spacing between rows.
 -Number of rows and spacing as per details shown, unless noted otherwise.
 "X" represents nail or screw driven from the opposite side.

Vertical I-Joist Connections (for uniform distributed loads)

9 1/2" - 11 7/8" **I-Joist** 3-ply I-Joist w/ point load (Joist Hanger) 2-ply 3-ply Screws (Both sides of point load)

Vertical I-Joist connection notes:

- -Nails to be 3" spiral wire nails.
 -Nails to be located at centre of top and bottom flanges. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per detalls shown, unless noted otherwise.
 "X" represents nail driven from the opposite side.

3228 Moodle Drive Ottawa, ON K2H 7V1 Ph: 613-838-2775 Fx: 613-838-4751

MULTI -PLY CONNECTION DETAILS

NE0818-127 Ground Floor F9-A-2 ply F2-A - 1 ply BBO-DROP STEEL F3-A-1 ply

Architectural Drawing Info REGION DESIGN INC 8700 DUFFERIN ST. CONCORD, ON L4K 4S6

Model: SANDSTONE 2A Date: JULY, 2018

JOISTS SPACING 16"O/C UNLESS NOTED OTHERWISE

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -12904-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

Version 18.40.162 Powered by iStruct™

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N.A. EL-MASRI Aug 20, 2018

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> REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. IPASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

_								FAGE 3 OF 47
Ground								
LVL/LS Label	Description	Width	Depth	Qly	Plies	Pcs	Length	NASCO
F3	Forex 2.0E-3000Fb LVL	1.75	11.875		- 11 - 20	1	10-0-0	
F14	Forex 2.0E-3000Fb LVL	1.75	11.875			1	8-0-0	Layout Name SANDSTON 2A EL-2
F2	Forex 2.0E-3000Fb LVL	1.75	11.875			2	6-0-0	Design Method
I Joist								
Label	Description	Width	Depth	Qty	Plies	Pcs	Length	Description
F10	NJ	1.5	11.875	4	2	8	18-0-0	GREENPARK HOMES MINISALE, BRAMPTON ON
F9	NJ	1.5	11.875	2	2	4	14-0-0	
F8	NJ	1.5	11.875	1	2	2	8-0-0	Created
F7	NJ	1.5	11.875	3	2	6	4-0-0	June 29, 2018
J7	NJ60U	3.5	11.875			20	18-0-0	Builder
J6	NJH	2.5	11.875			7	16-0-0	0.1 - 8
J5	NJH	2.5	11,875			11	14-0-0	Sales Rep
J3	NJH	2.5	11.875			9	10-0-0	RM
J2	NJH	2.5	11.875			4	8-0-0	Designer
J1	NJH	25	11.875			5	6-0-0	SB
Rim Bo	ard							Shipping
Label	Description	Width	Depth	Qty	Plies	Pcs	Length	Project
R1	Norbord Rimboard Plus 1.125 X	1.125	11.875			16	12	Builder's Project
	11.875							Kott Lumber Company
Biockin								14 Anderson Bivd
	Description	Width	Depth	Qty	Plies	Pcs	Length	Stouffville, Ontario
BLK1		2.5	11.875	LinFt		Varies	23-0-0	Canada
Hange	-							

					Beam/Girder	Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	1	HUC210-2 (Min)			14 10dx1 1/2	6 10d
H2	6	LT2-151188			4 10d	2 10dx1 1/2
H3	20	LT251188			4 10d	2 10dx1 1/2
H8	1	LT351188			4 10d	2 10dx1 1/2

NOTES:

Hanger

- Framer to verify dimensions on the architectural drawings.

- Framer to venify dimensions on the architectural drawings. Double joist only require filler/lacker ply when supporting another member using a face-mounted hanger. Install 24 th Dorsing @ 24 ros under parallel non-loadbearing walls, install single-ply flush window header along inside face of rimboard/ifmjoist Refer to Nascor specifier guide for install*abor details. Squash blocks recommended to be installed at end bearing on all first level
- squash blocks recommended to be instaired at end bearing to an irist levi joists which support leading from above exceeding two levels floor or roof. Load transfer blocks to be installed under all point loads. It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

Refer to Multiple Member Connection Detail to ply to ply nailing or bolting

Rim paratel to inists: 1-1/8* rimboard with 2"x4" block (1/16" longer than rim depth) @ 16" o/c. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation wa'ls and foolings including anchorage of components and bracing for lateral stability are the ponsibility of others

Hatch area represents ceramic bled floor with an additional dead load of 5 PSF

The framing shown on this layout may be deviate from the architectural drawings. Project Engineer to review and approve the deviation prior to construction.

Legend



Point Load Support Load from Above

Norbord Rimboard Plus 1.125 X 11.875 NI 11 875 NJ60U 11.875 NJH 11.875

Forex 2.0E-3000Fb LVL 1.75 X 11.875 5.25 X 10.25 (Dropped)

PAGE 3 OF 47

L4A7X4

Floor Loads

Live

Dead Deflection Joist

LL Span L/

TL Span L/

LL Cant 2U

TL Cant 2L/ Deflection Girder

LL Span L/ TL Span L/

LL Cant 2L/ Ti Cant 21/

Decking

Fastaner Vibration

Deck Thickness

905-642-4400 Ground Floor Design Method

Building Code NBCC 2010 / OBC 2012

LSD

40

15

480

360

480 360

360

240 480

360

OSB

3/4

Nailed & Glued

D----(0)-d-- - -----



Client:

Project: Address: Date: 8/14/2018

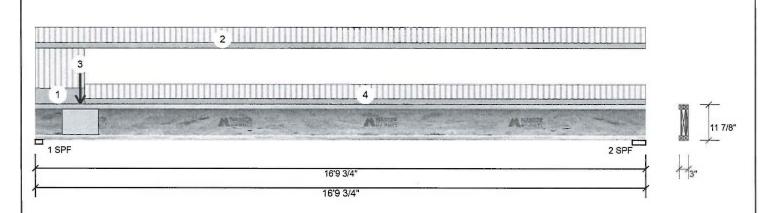
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

2-Ply - PASSED F10-B NJ 11.875"

Level: Ground Floor



/lember Info	rmation			Unfactore	d React	ions UNPATTERN	IED lb (Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	663	248	0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	362	136	0	0
Deflection LL:	360	Load Sharing:	No					
Deflection TL:	240	Deck:	Not Checked	1				
Importance:	Normal	Vibration:	Not Checked					
General Load								
Floor Live:	40 PSF			Bearings a	and Fact	ored Reactions		
Dead:	15 PSF			Bearing L	ength	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
				1-SPF 2	.375"	46% 310 / 994	1304 L	1.25D+1.5L
				2-SPF 4	.375"	21% 169 / 543	712 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3007 ft-lb	7'9 1/4"	9020 ft-lb	0.333 (33%)	1.25D+1.5L	L
Unbraced	3007 ft-lb	7'9 1/4"	3044 ft-lb	0.988 (99%)	1.25D+1.5L	L
Shear	1284 lb	1 5/8"	3400 lb	0.378 (38%)	1.25D+1.5L	L
Perm Defl in.	0.061 (L/3211)	8'1 11/16"	0.546 (L/360)	0.110 (11%)	D	Uniform
LL Defl inch	0.163 (L/1203)	8'1 11/16"	0.546 (L/360)	0.300 (30%)	L	L
TL Defl inch	0.224 (L/875)	8'1 11/16"	0.819 (L/240)	0.270 (27%)	D+L	L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'3" o.c.

5 Bottom flange braced at bearings

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT **CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-6	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-9-12	(Span)1-0-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Far Face	113 lb	303 lb	0 lb	0 lb	F7
4	Tie-In	1-4-6 to 16-9-12	(Span)0-11-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design critisia and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to wrift the dimensions and loads. Lumber

Handling & Installation

- Lightling & Installation

 Lioist flanger must not be cut or drilled

 Refer to latest copy of the Lioist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-hip/ fastening details and handling/erection details

 Demaged Lioist must not be used

 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeness for point load as shown Minimum point load bearing length>= 3.5 Inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





Client:

Project:

Address:

Date: 8/14/2018

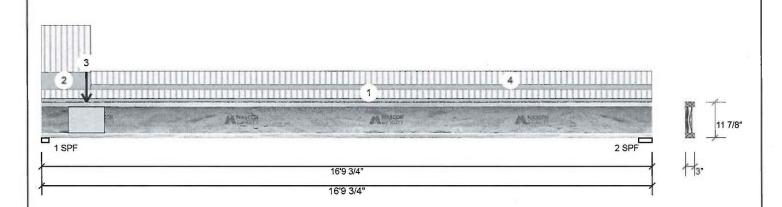
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

11.875" 2-Ply - PASSED NJ

Level: Ground Floor



Member Infor	mation			Unfactor	ed Reac	tions U	NPATTERNI	ED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	N	Wind
Plies:	2	Design Method:	LSD	1	584		219		0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	251		94		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored I	Reactions			
Dead:	15 PSF	1		Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	2.375"	40%	274 / 876	1150	L	1.25D+1.5L
				2 - SPF	4.375"	14%	118 / 376	493	L	1.25D+1.5L
1 . 0										

Analysis Results

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	2173 ft-lb	7'4 15/16"	9020 ft-lb	0.241 (24%)	1.25D+1.5L	L
	Unbraced	2173 ft-lb	7'4 15/16"	2175 ft-lb	0.999 (100%)	1.25D+1.5L	L
	Shear	1133 lb	1 5/8"	3400 lb	0.333 (33%)	1.25D+1.5L	L
	Perm Defl in.	0.044 (L/4417)	8' 9/16"	0.546 (L/360)	0.080 (8%)	D	Uniform
	LL Defl inch	0.119 (L/1657)	8' 9/16"	0.546 (L/360)	0.220 (22%)	L	L
l	TL Defl inch	0.163 (L/1205)	8' 9/16"	0.819 (L/240)	0.200 (20%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'11" o.c.

5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-9-12	(Span)0-6-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-6	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Near Face	125 lb	333 lb	0 lb	0 lb	F7
4	Tie-In	1-4-6 to 16-9-12	(Span)0-9-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 Uplish not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- Handling & Installation

 1. Lioist flanges must not be cut or drilled

 2. Refer to latest copy of the Lioist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-py f

Provide lateral support at bearing points to avoid lateral displacement and robation
 Wab stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 For fat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario 905-642-4400





Project: Address:

Date: 8/14/2018

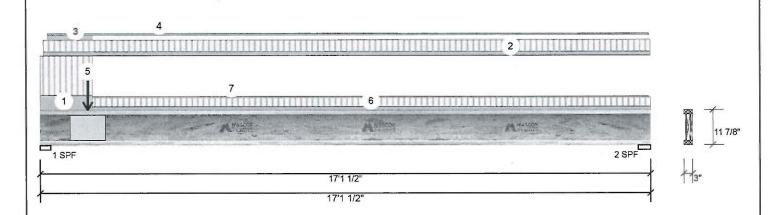
Designer:

Job Name: SANDSTON 2A EL-2

Project #:

2-Ply - PASSED 11.875" F10-D NJ

Level: Ground Floor



Member Info	rmation			Unfactore	ed React	ions U	NPATTERNI	ED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	N	Wind
Plies:	2	Design Method:	LSD	1	643		326		0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	270		139		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored l	Reactions			
Dead:	15 PSF	The st		Bearing L	_ength	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF 3	3.500"	42%	407 / 965	1371	L	1.25D+1.5L
				2-SPF 4	1.125"	17%	173 / 404	578	L	1.25D+1.5L

Analysis Results

Г	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	2589 ft-lb	7'7 3/8"	9020 ft-lb	0.287 (29%)	1.25D+1.5L	L
	Unbraced	2589 ft-lb	7'7 3/8"	2628 ft-lb	0.985 (99%)	1.25D+1.5L	L
l	Shear	1342 lb	2 3/4"	3400 lb	0.395 (39%)	1.25D+1.5L	L
l	Perm Defl in.	0.069 (L/2907)	8'3 1/16"	0.554 (L/360)	0.120 (12%)	D	Uniform
ı	LL Defl inch	0.133 (L/1494)	8'3 1/16"	0.554 (L/360)	0.240 (24%)	L	L
	TL Defl inch	0.202 (L/987)	8'3 1/16"	0.831 (L/240)	0.240 (24%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'6" o.c.

5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-8	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-2 to 17-1-8	(Span)0-9-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-10 to 1-5-8		Тор	7 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-11 to 17-1-1		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-4-0		Far Face	186 lb	367 lb	0 lb	0 lb	F7
6	Tie-In	1-5-8 to 17-1-8	(Span)0-7-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-5-8 to 17-1-0		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
4									

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown, it is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 Uplist not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

Intuiting & Installation
Disit flenges must not be cut or drilled
Refer to letest copy of the Lloist product information
details for framing details, stiffener tables, web hole
chart, bridging details, multi-ply fastening details and
handlingferection details
Damaged Lloists must not be used

Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at beering points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario 905-642-4400





Client:

Project:

Address:

Date: 8/14/2018

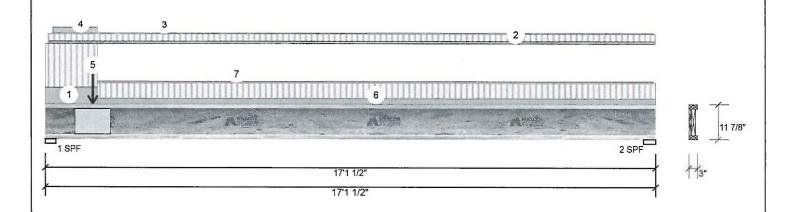
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

NJ 11.875" 2-Ply - PASSED F10-E

Level: Ground Floor



								/		
Туре:	Girder	 Application:	Floor (Residential)	Brg	Live		Dead	Snov	N	Wind
Plies:	2	Design Method:	LSD	1	575		281		0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	265		128		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fact	tored I	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	3.500"	38%	352 / 863	1215	L	1.25D+1.5L
		 		2-SPF	4.125"	16%	160 / 398	557	L	1.25D+1.5L
nalveie Rocul	ltc									

Analysis Results

Member Information

ı	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
l	Moment	2457 ft-lb	7'9 1/16"	9020 ft-lb	0.272 (27%)	1.25D+1.5L	L
l	Unbraced	2457 ft-lb	7'9 1/16"	2478 ft-lb	0.991 (99%)	1.25D+1.5L	L
l	Shear	1187 lb	2 3/4"	3400 lb	0.349 (35%)	1.25D+1.5L	L
l	Perm Defl in.	0.062 (L/3202)	8'3 7/16"	0.554 (L/360)	0.110 (11%)	D	Uniform
	LL Defl inch	0.129 (L/1550)	8'3 1/2"	0.554 (L/360)	0.230 (23%)	L	L
L	TL Defl inch	0.191 (L/1044)	8'3 1/2"	0.831 (L/240)	0.230 (23%)	D+L	L
•							

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'8" o.c.
- 5 Bottom flange braced at bearings.

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Unfactored Reactions UNPATTERNED Ib (Uplift)

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



	Harrige braces at boaring	•.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-8	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-2 to 17-1-8	(Span)0-5-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-6 to 17-0-12		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-8 to 1-5-8		Тор	7 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-4-0		Near Face	151 lb	304 lb	0 lb	0 lb	F7
6	Tie-In	1-5-8 to 17-1-8	(Span)0-11-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part, Uniform	1-5-8 to 17-0-12		Top	2 PLF	OPLE	0 PLF	OPLE	

Notes

Celculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Inlended application, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 Uplish not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. Licist flanges must not be cut or drilled

 2. Refer to latest copy of the Licist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-py frastening details and handling/erection details

 3. Damaged bloists must not be used

 4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4 905-642-4400





Project: Address: Date: Designer:

Brg

1

2

8/14/2018

SB

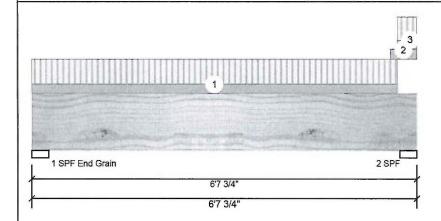
Job Name: SANDSTON 2A EL-2

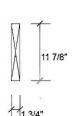
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





Wind

0

0

Snow

0

0

nation		
Girder	Application:	Floor (Residential)
1	Design Method:	LSD
Dry	Building Code:	NBCC 2010 / OBC 2012
360	Load Sharing:	No
240	Deck:	Not Checked
Normal	Vibration:	Not Checked
40 PSF		
15 PSF		
	1 Dry 360 240 Normal	Girder Application: 1 Design Method: Dry Building Code: 360 Load Sharing: 240 Deck: Normal Vibration:

Rearings	and.	Factored	Parctions	

Live

665

659

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

265

299

_							
Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF End Grain	3.500"	29%	332 / 997	1329	L	1.25D+1.5L	
2-SPF	3.500"	36%	374 / 988	1363	L	1.25D+1.5L	

Analysis Results

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	1914 ft-lb	3'3 7/8"	17130 ft-lb	0.112 (11%)	1.25D+1.5L	L
	Unbraced	1914 ft-lb	3'3 7/8"	7267 ft-lb	0.263 (26%)	1.25D+1.5L	L
	Shear	1230 lb	5'5 1/8"	5798 lb	0.212 (21%)	1.25D+1.5L	L
	Perm Defl in.	0.008 (L/9867)	3'3 7/8"	0.206 (L/360)	0.040 (4%)	D	Uniform
	LL Defl inch	0.019 (L/3947)	3'3 7/8"	0.206 (L/360)	0.090 (9%)	L	L
	TL Defl inch	0.026 (L/2819)	3'3 7/8"	0.309 (L/240)	0.090 (9%)	D+L	L
-							

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA

USED IN THE DESIGN OF THIS COMPONENT REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY

NAILING OR BOLTING REQUIREMENTS.

EL-MASRI

Design Notes 1 Girders are designed to be supported on the bottom edge only. 2 Top braced at bearings.

3 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead
1	Part. Uniform	0-0-0 to 6-3-12		Near Face	75 PLF
2	Part. Uniform	6-2-4 to 6-7-12		Тор	80 PLF
3	Part. Uniform	6-3-12 to 6-7-12		Тор	69 PLF
	Self Weight				5 PLF

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL

POINT LOADS OVER BEARINGS. Comments 200 PLF 0 PLF 0 PLF 0 PLF 0 PLF 0 PLF Wall Self Weight 183 PLF 0 PLF 0 PLF

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimenalons and loads. Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

approvals
Demaged Beams must not be used
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4 905-642-4400





Client:

Project: Address: Date: Designer: 8/14/2018

SR

Job Name: SANDSTON 2A EL-2

Project #:

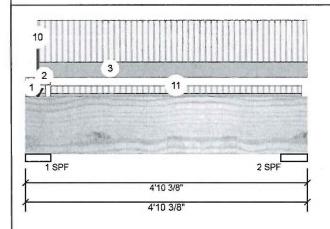
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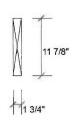
2-SPF 5.500"

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





0

1.25D+1.5L

Member Info	rmation		
Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		

Unfacto	red Reaction	S UNPATTER	NED lb (Uplif	t)
Brg	Live	Dead	Snow	Wind
1	1812	813	0	0

98

0

469 L

231

Bearing:	s and Fac	tored I	Reactions			
Bearing	Length	Cap.	React D/L ib	Total	Ld. Case	Ld. Comb.
1-SPF	5.250"	82%	1016 / 2719	3735	L	1.25D+1.5L

123 / 346

Analysis Results

Dead:

15 PSF

•						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	405 ft-lb	2'5 1/16"	17130 ft-lb	0.024 (2%)	1.25D+1.5L	L
Unbraced	405 ft-lb	2'5 1/16"	10983 ft-lb	0.037 (4%)	1.25D+1.5L	L
Shear	204 lb	1'4 3/8"	5798 lb	0.035 (4%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/49514)	2'5 1/8"	0.136 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/21048)	2'5 1/8"	0.136 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.003 (L/14770)	2'5 1/8"	0.205 (L/240)	0.020 (2%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at hearings

DECONTROLLED AND ALLE
POINT LOADS OVER BEARINGS

4 Bollom	braced at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-4	(Span)0-9-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-4	(Span)0-6-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part, Uniform	0-2-10 to 4-10-6		Тор	30 PLF	80 PLF	0 PLF	0 PLF	
4	Point	0-2-10		Тор	647 lb	1491 lb	0 lb	0 lb	BM2 BM2
5	Point	0-2-10		Тор	11 lb	29 lb	0 lb	0 lb	J5
6	Point	0-2-10		Тор	17 lb	46 lb	0 lb	0 lb	J4
Continued	n naga ?								

Continued on page 2...

Notes

NOUS

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended anolization, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or continuous.

chemicals

Handling & Installation

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- restering destails, bearn strenger values, and code approvals
 Damaged Beams must not be used
 Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA; PR-L318



Page 2 of 2



Client:

Project: Address: Date:

8/14/2018

SB Designer:

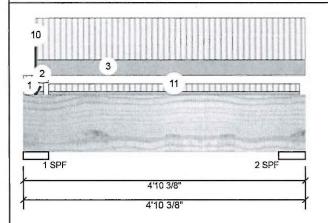
Job Name: SANDSTON 2A EL-2

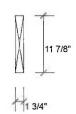
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





Continued fro	om page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	0-2-10		Тор	28 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Point	0-2-10		Тор	7 lb	19 lb	0 lb	0 lb	J5
9	Point	0-2-10		Тор	4 lb	11 lb	0 lb	0 lb	J4
10	Point	0-2-10		Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
11	Tie-In	0-5-4 to 4-9-4	(Span)0-9-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the dasgin criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the ill-responsibility of the customer and/or the contractor to ensure the component suitability of the ill-responsibility of the customer and coads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

- Handling & Installation

 1. IV/L beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements. multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design essumes top edge is lateratly restrained

 5. Provide lateral support at bearing points to evoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318







Project: Address: Date: 8/14/2018

Designer: SB

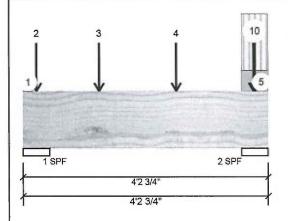
Job Name: SANDSTON 2A EL-2

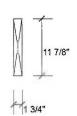
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





Member Into	rmation		
Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Wind	
0	
0	

892 / 2515

623 / 1452

Cap. React D/L lb

Unfactored Reactions UNPATTERNED Ib (Uplift)

Analysis Results										
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case				
Moment	748 ft-lb	1'3 3/4"	17130 ft-lb	0.044 (4%)	1.25D+1.5L	L				
Unbraced	748 ft-lb	1'3 3/4"	12732 ft-lb	0.059 (6%)	1.25D+1.5L	L				
Shear	813 lb	1'4 5/8"	5798 lb	0.140 (14%)	1.25D+1.5L	L				
Perm Defl in.	0.001 (L/28388)	1'9"	0.115 (L/360)	0.010 (1%)	D	Uniform				
LL Defl inch	0.003 (L/12395)	1'9 5/16"	0.115 (L/360)	0.030 (3%)	L	L				
TL Defl inch	0.005 (L/8628)	1'9 3/16"	0.172 (L/240)	0.030 (3%)	D+L	L				

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

60%

35%

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Bearing Length

1 - SPF 5.500" 2-SPF 5.500"



Ld. Comb.

1.25D+1.5L

1.25D+1.5L

Total Ld. Case

3407 L

2075 L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Rottom braced at bearings

ı	4 DOLLOIT DIACEC	at bearings.								
I	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
I	1	Part. Uniform	0-0-0 to 0-2-1		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
I	2	Point	0-2-12		Тор	535 lb	1278 lb	0 lb	0 lb	C2
I	3	Point	1-3-12		Near Face	196 lb	454 lb	0 lb	0 ib	J7
I	4	Point	2-7-12		Near Face	72 lb	190 lb	0 lb	0 lb	J2
ı	5	Tie-In	3-9-4 to 4-2-12	(Span)2-3-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
ı	6	Point	3-11-12		Near Face	50 lb	121 lb	0 lb	0 lb	J2

Continued on page 2...

Calculated Structured Designs is responsible only of the Structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dilensalions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

articuling & Installation
LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, multi-ply
fastening details, beam strength values, and code
approvals
Demaged Beams must not be used

Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





Page 2 of 2



Client:

Project: Address: Date:

8/14/2018

SB Designer:

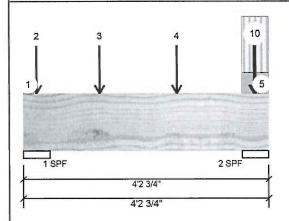
Job Name: SANDSTON 2A EL-2

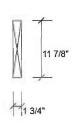
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





Continued	Continued from page 1									
ID	Load Type	Location Trib Width	Side	Dead	Live	Snow	Wind	Comments		
7	Point	4-0-0	Тор	187 lb	448 lb	0 lb	0 lb	F4 F4		
8	Point	4-0-0	Тор	41 lb	109 lb	0 lb	0 lb	J3		
9	Point	4-0-0	Тор	9 lb	23 lb	0 lb	0 lb	J2		
10	Point	4-0-0	Тор	94 lb	0 lb	0 lb	0 lb	Wall Self Weight		
	Self Weight			5 PLF						

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown, it is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

chemicals

Handling & Installation

Handling & Installation

1. LVL beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damagad Beams must not be used

4. Design assumes top adge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318







Client:

Project: Address

8/14/2018 Date:

SB Designer:

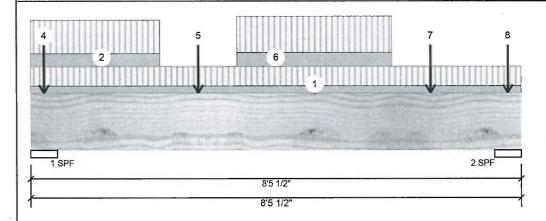
Job Name: SANDSTON 2A EL-2

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor



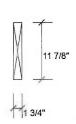
Application:

Design Method:

Building Code:

Load Sharing:

Deck: Vibration:



Wind

0

0

Member Information

Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Unfactored Reactions UNPATTERNED lb (Uplift)

Floor (Residential)	Brg	Live	Dead	Snow	_
LSD	1	2137	870	0	
NBCC 2010 / OBC 2012	2	1147	455	0	
No					
Not Checked					
Not Checked					

Bearings	and	Factored	Reactions
Rooring	Longt	h Can	Poact D/Lib

Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1-SPF	5.500"	72%	1087 / 3205	4293	L	1.25D+1.5L	
2 - SPF	5.500"	39%	568 / 1721	2289	L	1.25D+1.5L	

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4044 ft-lb	4'2 7/16"	17130 ft-lb	0.236 (24%)	1.25D+1.5L	L
Unbraced	4044 ft-lb	4'2 7/16"	5865 ft-lb	0.690 (69%)	1.25D+1.5L	L
Shear	2022 ib	7' 7/8"	5798 lb	0.349 (35%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/4218)	4'2 9/16"	0.256 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.055 (L/1672)	4'2 9/16"	0.256 (L/360)	0.220 (22%)	L	L
TL Defl inch	0.077 (L/1197)	4'2 9/16"	0.383 (L/240)	0.200 (20%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA

PROFESSION EL-MASRI

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings

USED IN THE DESIGN OF THIS COMPONENT. REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY

NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL

POINT LOADS OVER BEARINGS.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part, Uniform	0-0-0 to 8-5-8		Тор	38 PLF	100 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 2-2-12		Far Face	66 PLF	170 PLF	0 PLF	0 PLF	
3	Point	0-2-12		Тор	1 lb	0 lb	0 lb	0 lb	Wall Self Weight
4	Point	0-2-12		Тор	407 lb	978 lb	0 Њ	0 lb	F6 F6
5	Point	2-10-12		Far Face	90 lb	241 lb	0 lb	0 lb	J3
6	Part. Uniform	3-6-12 to 6-2-12		Far Face	70 PLF	185 PLF	0 PLF	0 PLF	
7	Point	6-10-12		Far Face	70 lb	185 lb	0 lb	0 lb	J2
Continued on	page 2								

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corr

chemicals

Handling & installation

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- approvals
 Damaged Bearns must not be used
 Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318





Project:

Address:

Date:

8/14/2018

Designer: SB

Job Name: SANDSTON 2A EL-2

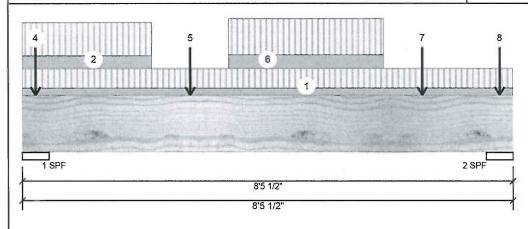
Page 2 of 2

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor



..Continued from page 1

ID Load Type 8

Point

Self Weight

8-2-12

Location Trib Width Side

Far Face

Dead 61 lb 5 PLF

Live 162 lb Snow 0 lb Wind Comments 0 lb J2

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVI, not to be treated with fire retardant or corrosive

Handling & Installation

and ling & Installation
LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, muttl-ply
fastening details, beam strength values, and code
approvals
Demaged Bearns must not be used
Design assumes top adge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

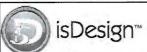
For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info Forex

APA: PR-L318





Project: Address:

8/14/2018 Date:

Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

Brg

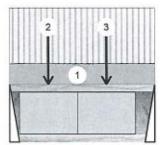
1

2

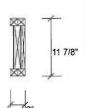
Hanger

NJ 11.875" 2-Ply - PASSED

Level: Ground Floor



1 Hanger (LT2-151188) 2 Hanger (LT2-151188) 2'6"



Wind

0

0

Member Info	rmation		
Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF	(1)	
Dead:	15 PSF		

Bearings and Factored Reactions										
Bearing	Length		React D/L lb	Total	Ld. Case	Ld. Comb.				
1 - Hanger	2.000"	24%	156 / 500	656	L	1.25D+1.5L				
2-	2.000"	22%	142 / 455	596	L	1.25D+1.5L				

Live

333

303

Unfactored Reactions UNPATTERNED lb (Uplift)

Dead

125

113

Snow

0

0

Analysis Res	sults					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	418 ft-lb	1'8"	9020 ft-lb	0.046 (5%)	1.25D+1.5L	L
Unbraced	418 ft-lb	1'8"	6861 ft-lb	0.061 (6%)	1.25D+1.5L	L
Shear	650 lb	1 1/4"	3400 lb	0.191 (19%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/33964)	1'6 3/16"	0.076 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/12714)	1'6 3/16"	0.076 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.003 (L/9251)	1'6 3/16"	0.115 (L/240)	0.030 (3%)	D+L	L
and the second second second						

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-6-0	(Span)1-3-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-8-0		Far Face	102 lb	273 lb	0 lb	0 lb	J6
3	Point	1-8-0		Far Face	112 lb	299 lb	0 lb	0 lb	J6

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design critieria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise IJoist not to be treated with fire retardant or corrosive

Handling & Installation

- IAROLING & INSTALIATION

 Julist flanges must not be cut or drilled
 Refer to latest copy of the IJoist product information details for framing details, suffiner tables, web hole chart, bridging details, multi-ley flastening details and handling/erection details

 Demaged IJoist must not be used
 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Wab sittleness for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent portiling

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





Client:

Project: Address: Date:

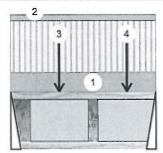
8/14/2018 SB

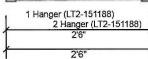
Designer: Job Name: SANDSTON 2A EL-2

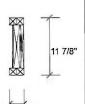
Project #.

2-Ply - PASSED NJ 11.875"

Level: Ground Floor







	Information
Type:	Girder

Туре:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Floor (Residential) NBCC 2010 / OBC 2012

No Not Checked Not Checked

LSD

Unfactored	Reactions	UNPAT	TERNED	lb	(Uplift)

Dig	Live	Dead	SHOW	VVIIIG
1	304	151	0	0
2	367	186	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	452 ft-lb	10"	9020 ft-lb	0.050 (5%)	1.25D+1.5L	L
Unbraced	452 ft-lb	10"	6861 ft-lb	0.066 (7%)	1.25D+1.5L	L
Shear	777 lb	2'4 3/4"	3400 lb	0.228 (23%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/25792)	10 1/16"	0.076 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/12802)	10 1/16"	0.076 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.003 (L/8555)	10 1/16"	0.115 (L/240)	0.030 (3%)	D+L	L

Application:

Deck: Vibration:

Design Method:

Building Code: Load Sharing:

Bearings and Factored Reactions

Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	24%	189 / 457	645	L	1.25D+1.5L
2 - Hanger	2.000"	29%	232 / 550	782	L	1.25D+1.5L

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings.

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 2-6-0	(Span)1-3-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Part. Uniform	0-0-0 to 2-6-0		Тор	3 PLF	0 PLF	0 PLF	0 PLF		
3	Point	0-10-0		Far Face	162 lb	329 lb	0 lb	0 lb	J6	
4	Point	2-0-0		Far Face	143 lb	278 lb	0 lb	0 lb	J6	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Inlended application, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 Uplist not to be treated with fire retardant or corros

chemicals

Handling & Installation

- I Joist flanges must not be cut or drilled

 Refer to latest copy of the Liciat product information details for framing details, stiffener tables, web hote chart, bridging details, stiffener tables, web hote chart, bridging details, multiply fastening details and handling/erection details

 Design details must not be used

 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

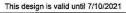
- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Wab stiffeners for point load as shown Minimum point toad bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott









Project: Address: Date:

8/14/2018

Designer:

Job Name: SANDSTON 2A EL-2

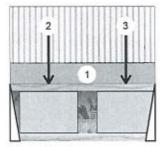
Project #:

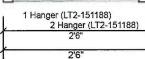
Brg

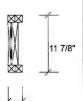
1 2

NJ 11.875" 2-Ply - PASSED

Level: Ground Floor







Wind

0

nation		
Girder	Application:	Floor (Residential)
2	Design Method:	LSD
Dry	Building Code:	NBCC 2010 / OBC
360	Load Sharing:	No
240	Deck:	Not Checked
Normal	Vibration:	Not Checked
40 PSF		
15 PSF		
	2 Dry 360 240 Normal	Girder Application: 2 Design Method: Dry Building Code: 360 Load Sharing: 240 Deck: Normal Vibration:

Building Code:	NBCC 2010 / OBC 2012
Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Bearings and Factored Reactions									
Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.			
1 - Hanger	2.000"	19%	124 / 398	522	L	1.25D+1.5L			
2 - Hanger	2.000"	21%	135 / 432	567	L	1.25D+1.5L			

Snow

0

0

Analysis Results Analysis Actual Location Allowed Capacity Comb. Case 0.031 (3%) 1.25D+1.5L L 7 15/16" 9020 ft-lh Moment 281 ft-lb Unbraced 281 ft-lb 7 15/16" 6861 ft-lb 0.041 (4%) 1.25D+1.5L L 562 lb 2'4 3/4" 3400 lb 0.165 (17%) 1.25D+1.5L L Shear Perm Defl in. 0.001 11 3/4" 0.076 (L/360) 0.010 (1%) D Uniform (L/50498) LL Defl inch 0.001 11 3/4" 0.076 (L/360) 0.020 (2%) L (L/18899) TL Defl inch 0.002 11 3/4" 0.115 (L/240) 0.020 (2%) D+L (L/13752)

ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT

READ ALL NOTES ON THIS PAGE AND ON

Unfactored Reactions UNPATTERNED lb (Uplift)

Dead

108

Live

265

288

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings

O DOLLO	i hange braced at bearings									
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 2-6-0	(Span)1-3-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Point	0-7-15		Near Face	95 lb	254 lb	0 lb	0 lb	J5	
3	Point	1-11-15		Near Face	88 lb	235 lb	0 lb	0 lb	J5	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 Upoist not to be treated with fire retardant or corrosive

Handling & Installation

- andling & Installation.

 Lioist flanges must not be cut or drilled.
 Refer to latest copy of the Lioist product information details for framing details, stiffener tables, web hole-chart, bridging details, multi-piy fastening details and handling/erection details.

 Damaged Lioist must not be used.
 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Wab stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott







Client:

Project: Address Date:

8/14/2018 SB Designer:

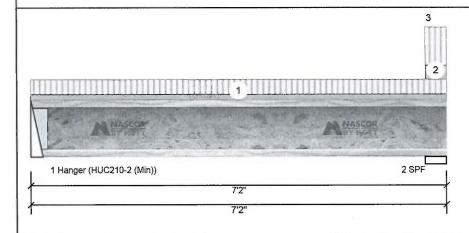
Job Name: SANDSTON 2A EL-2

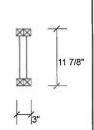
Project #:

11.875"

2-Ply - PASSED

Level: Ground Floor





Member Infor	mation		
Туре:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfacto	red Reaction:	S UNPATTER	NED lb (Uplif	t)
Brg	Live	Dead	Snow	Wind
1	82	31	0	0
2	107	41	0	0

Bearings and Factored Reactions Cap. React D/L lb Bearing Length Total Ld. Case Ld. Comb. 38 / 123 2.500" 6% 161 L 1.25D+1.5L Hanger 2-SPF 4.375" 51 / 161 212 L 1.25D+1.5L 6%

Analysis Results Analysis Actual Location Allowed Capacity Comb. Moment 259 ft-lb 3'6 1/16" 9020 ft-lb 0.029 (3%) 1.25D+1.5L L 259 ft-lb 3'6 1/16" 1010 ft-lb 0.256 (26%) 1.25D+1.5L L Unbraced 162 lb 6'10 3/8" 3400 lb 0.048 (5%) 1.25D+1.5L L Shear Perm Defl in. 0.001 3'6 1/8" 0.224 (L/360) 0.010 (1%) D Uniform (L/66000) LL Defl inch 0.003 3'6 1/8" 0.224 (L/360) 0.010 (1%) L (L/24754) TL Defl inch 0.004 3'6 1/8" 0.336 (L/240) 0.010 (1%) D+L (L/18002)

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.

Part, Uniform

- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings

I	7 Web stiffeners	s required at Bearing 1								
I	1D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	C
ı	1	Tie-In	0-0-0 to 7-2-0	(Span)1-2-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
I	2	Tie-In	6-9-10 to 7-2-0	(Span)3-0-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Top

Notes

3

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads

Lumber

Dry service conditions, unless noted otherwise
 IJoist not to be treated with fire retardant or corrosive

Handling & Installation

6-9-10 to 6-11-2

- 1.
- and limit & installation.

 Lolat flanges must not be cut or drilled.
 Rafer to latest copy of the I.Joist product information details for framing details, suffaner tables, web hole chart, bridging details, multi-piy fastering details and handling/erection details.

 Damaged Joists must not be used.
 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

7 PLF

0 PLF

This design is valid until 7/10/2021

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Wab stiffeness for point load as shown Minimum point load bearing length=3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

0 PLF

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4 905-642-4400



0 PLF

Comments





Client:

Project: Address: Date: 8/14/2018

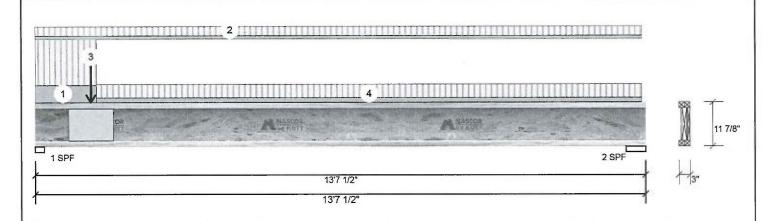
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

2-Ply - PASSED 11.875" NJ

Level: Ground Floor



Member Infor	lember Information			Unfactored Reactions UNPATTERNED Ib (Uplift)						
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	W	Wind
Plies:	2	Design Method:	LSD	1	472		177		0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	207		78		0	0
Deflection LL:	360	Load Sharing:	No	1 -						
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored l	Reactions			
Dead:	15 PSF			Bearing L	ength	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF 2	2.375"	33%	221 / 709	930	L	1.25D+1.5L
				2-SPF 5	5.250"	12%	97 / 311	408	L	1.25D+1.5L

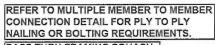
Analysis Results

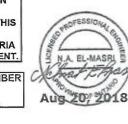
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1468 ft-lb	5'9 1/4"	9020 ft-lb	0.163 (16%)	1.25D+1.5L	L
Unbraced	1468 ft-lb	5'9 1/4"	1470 ft-lb	0.998 (100%)	1.25D+1.5L	L
Shear	912 lb	1 5/8"	3400 lb	0.268 (27%)	1.25D+1.5L	L
Perm Defl in.	0.020 (L/7818)	6'4 13/16"	0.437 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.054 (L/2929)	6'4 13/16"	0.437 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.074 (L/2131)	6'4 13/16"	0.656 (L/240)	0.110 (11%)	D+L	L

ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

READ ALL NOTES ON THIS PAGE AND ON

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS





Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 5'10" o.c.

5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-6	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-6-8	(Span)0-6-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Far Face	99 lb	265 lb	0 lb	0 lb	F7
4	Tie-In	1-4-6 to 13-6-8	(Span)0-9-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the dasgin criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component sulfability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 Liplist not to be treated with fire retardant or corrosive

- landling & Installation

 Loist flanges must not be cut or drilled

 Refer to latest copy of the Jubist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-phy fastering details and handling/erection details

 Damaged Jubist must not be used

 Design easumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

- Provide lateral support at beering points to avoid lateral displacement and rotation
 Wab stiffeness for point load as shown Minimum point load bearing length>= 3.5 inches
 For fat roofs provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4 905-642-4400





Client: Project: Address:

8/14/2018 Date:

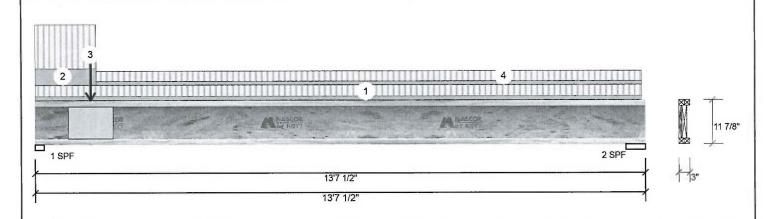
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

11.875" 2-Ply - PASSED NJ F9-B

Level: Ground Floor



Member Inform	mation			Unfactored Reactions UNPATTERNED lb (Uplift)					
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind	
Plies:	2	Design Method:	LSD	1	498	187	0	0	
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	209	78	0	0	
Deflection LL:	360	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal	Vibration:	Not Checked						
General Load									
Floor Live:	40 PSF			Bearings a	nd Factored	Reactions			
Dead:	15 PSF			Bearing Le	ength Cap.	React D/L lb	Total Ld. Case	Ld. Comb.	
		1		1-SPF 2.3	375" 34%	233 / 747	980 L	1.25D+1.5L	
		1		2-SPF 5.2	250" 12%	98 / 314	412 L	1.25D+1.5L	
Amphain Decul	her.								

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	
Moment	1500 ft-lb	5'8 5/16"	9020 ft-lb	0.166 (17%)	1.25D+1.5L	L	
Unbraced	1500 ft-lb	5'8 5/16"	1511 ft-lb	0.993 (99%)	1.25D+1.5L	L	
Shear	961 lb	1 5/8"	3400 lb	0.283 (28%)	1.25D+1.5L	L	
Perm Defl in.	0.021 (L/7646)	6'4 5/8"	0.437 (L/360)	0.050 (5%)	D	Uniform	
LL Defl inch	0.055 (L/2867)	6'4 5/8"	0.437 (L/360)	0.130 (13%)	L	L	
TL Defl inch	0.075 (L/2085)	6'4 5/8"	0.656 (L/240)	0.120 (12%)	D+L	L	

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 5'9" o.c.

5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-6-8	(Span)0-8-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-6	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Near Face	108 lb	288 lb	0 lb	0 lb	F7
4	Tie-In	1-4-6 to 13-6-8	(Span)0-7-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component sustability of the Intended application, and to verify the dimensions end loads.

Lumber

Dry service conditions, unless noted otherwise
 Usist not to be treated with fire retardant or corrosive

- landling & Installation

 Joist flanges must not be cut or drilled.
 Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart. bridging details, multi-phy fastening details and handling/erection details

 Design distails must not be used

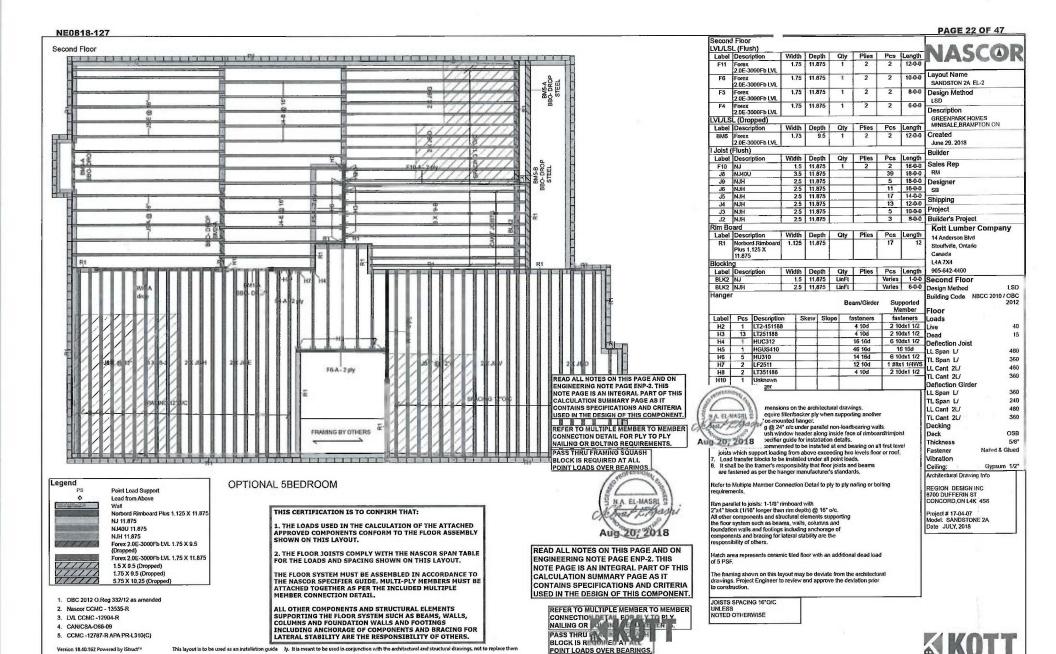
 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at beering points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roots provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





isDesign"

Client:

Project: Address: Date:

8/14/2018

Job Name: SANDSTON 2A EL-2

Designer:

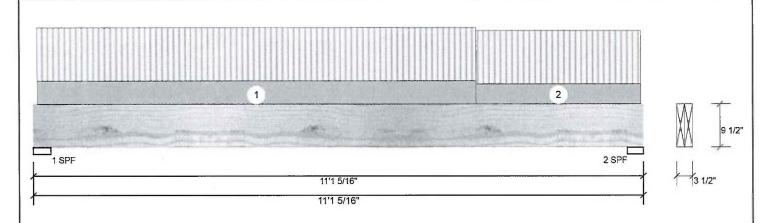
Page 1 of 1

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED Level: Second Floor



Member Info	rmation			Unfactor	ed React	tions U	INPATTERNI	ED lb (l	Jplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snow	1	Wind
Plies:	2	Design Method:	LSD	1	1870		838	C)	0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1870		795	0)	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked	10						
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	3.838"	47%	1048 / 2805	3853	L	1.25D+1.5L
				2-SPF	3.500"	50%	994 / 2805	3799	L	1.25D+1.5L

Analysis Results

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	9860 ft-lb	5'6 11/16"	22724 ft-lb	0.434 (43%)	1.25D+1.5L	L
	Unbraced	9860 ft-lb	5'6 11/16"	20494 ft-lb	0.481 (48%)	1.25D+1.5L	L
	Shear	3165 lb	1' 9/16"	9277 lb	0.341 (34%)	1.25D+1.5L	L
	Perm Defl in.	0.094 (L/1361)	5'6 11/16"	0.354 (L/360)	0.260 (26%)	D	Uniform
l	LL Defl inch	0.212 (L/603)	5'6 7/8"	0.354 (L/360)	0.600 (60%)	L	L
	TL Defl inch	0.305 (L/418)	5'6 13/16"	0.531 (L/240)	0.570 (57%)	D+L	L

Design Notes 1 Girders are designed to be supported on the bottom edge only.

- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-13 to 8-0-13		Тор	146 PLF	340 PLF	0 PLF	0 PLF	
2	Part. Uniform	8-0-13 to 11-0-13		Тор	127 PLF	340 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

Calculated Structured Designs is responsible only of the structural edequacy of this component bessed on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

and Iling & Installation
LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, multi-ply
fastening details, beam strength values, and code
approvals
Damaged Beams must not be used
Design assumes top adge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

Manufacturer Info APA: PR-L318







Client:

Project: Address: Date: Designer:

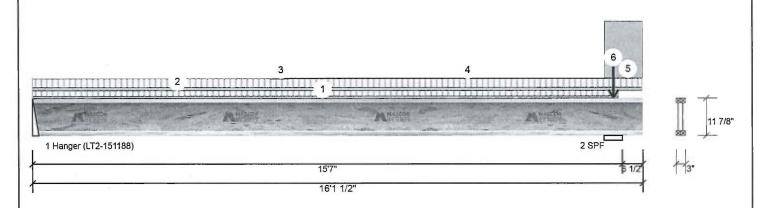
8/14/2018

SB

Job Name: SANDSTON 2A EL-2

Project #:

11.875" 2-Ply - PASSED Level: Second Floor



Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored	Reactions	ΙΙΝΡΔΤ	TERNED	lb	(Unlift)
Ulliactoreu .	Reactions	OHENI	IFVIAFD	ID	(ohing)

Brg	Live	Dead	Snow	Wind
1	152	58	0 (-1)	0
2	182	236	95	0

295 / 320

ead:	15 PSF		Bearin	g Length	Cap. R	teact D/L lb
			1 -	2.000"	11%	72 / 229
			Hange	r		

Ana	lysis	Resu	ts

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-62 ft-lb	15'7"	6765 ft-lb	0.009 (1%)	1.25D+1.5S	L
Unbraced	-62 ft-lb	15'7"	6700 ft-lb	0.009 (1%)	1.25D+1.5S	_L
Pos Moment	1121 ft-lb	7'7 7/16"	9020 ft-lb	0.124 (12%)	1.25D+1.5L	L_
Unbraced	1121 ft-lb	7'7 7/16"	1131 ft-lb	0.991 (99%)	1.25D+1.5L	L_
Shear	306 lb	15'7"	2550 lb	0.120 (12%)	1.25D+1.5S	_L
Perm Defl in.	0.019 (L/9336)	7'7 5/16"	0.502 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.051 (L/3533)	7'7 11/16"	0.502 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.071 (L/2563)	7'7 1/2"	0.753 (L/240)	0.090 (9%)	D+L	L_
LL Cant	-0.005 (2L/2439)	Rt Cant	0.200 (2∐/480)	0.027 (3%)	L	L_
TL Cant	-0.007 (2L/1861)	Rt Cant	0.300 (2L/360)	0.023 (2%)	D+L	<u>L</u>

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

18%

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Bearings and Factored Reactions

2-SPF 5.750"



Ld. Comb. 1.25D+1.5L

1.25D+1.5L

+0.58

Total Ld. Case

301 L_

615 LL

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange must be laterally braced at a maximum of 6'5" o.c.
- 6 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

Notes

Colculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Inlended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 Uplist not to be treated with fire retardant or corrol.

Handling & Installation

- Handling & Installation

 1. Lioist flanges must not be cut or drilled

 2. Refer to latest copy of the Lioist product information details for framing details, stiffener tables, web hole chart. bridging details, multi-ply fastening details and handling/erection details

 3. Damaged loists must not be used

 4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notices.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stifferers for point load as shown Minimum point load bearing lengthree 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400



Page 2 of 2



Client:

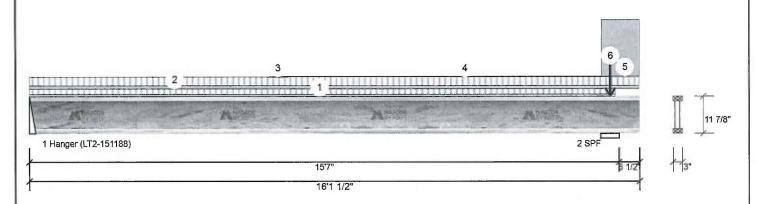
Project: Address: Date

8/14/2018 Designer: SB

Job Name: SANDSTON 2A EL-2 Project #:

11.875" 2-Ply - PASSED NJ

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-5-14	(Span)0-4-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-1-4	(Span)0-7-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tapered Start	6-3-9		Тор	0 PLF	0 PLF	0 PLF	0 PLF	
	End	6-10-3			1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	6-10-3 to 15-4-9		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
5	Part. Uniform	15-1-8 to 16-1-8		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	15-4-4		Тор	86 lb	17 lb	94 lb	0 lb	F1 F1

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the inlended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 Unless not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. Joist flanges must not be cut or drilled

2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

3. Damaged Idolets must not be used

4. Design assumes top flange to be leterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeness for point load as shown Minimum point load bearing length=3.5 inches
 For dat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Onlario Canada L4A 7X4 905-642-4400



Project: Address: Date: Designer: 8/14/2018

SB

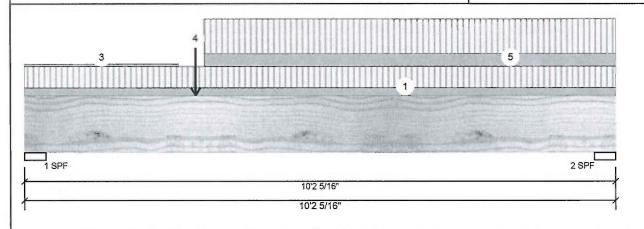
Job Name: SANDSTON 2A EL-2

Project #:

Forex 2.0E-3000Fb LVL

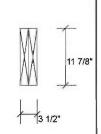
1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Floor (Residential)

NBCC 2010 / OBC 2012



Member Information

Ī	Туре:	Girder
	Plies:	2
	Moisture Condition:	Dry
	Deflection LL:	360
	Deflection TL:	240
	Importance:	Normal
	General Load	

40 PSF

15 PSF

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	613	311	0	0
2	387	205	0	0
1				

Load Sharing: No Not Checked Not Checked

LSD

Application:

Deck:

Vibration:

Design Method:

Building Code:

Bearings and Factored Reactions

Bearing	Length	Can	React D/L lb	Total	Ld Case	Ld. Comb.
-	_					
1 - SPF	4.436	14%	389 / 920	1309	L	1.25D+1.5L
2 - SPF	4.375"	9%	256 / 580	836	L	1.25D+1.5L

Analysis Results

Floor Live:

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3259 ft-lb	2'11 7/16"	34261 ft-lb	0.095 (10%)	1.25D+1.5L	L
Unbraced	3259 ft-lb	2'11 7/16"	29988 ft-lb	0.109 (11%)	1.25D+1.5L	L
Shear	1248 lb	1'3 9/16"	11596 lb	0.108 (11%)	1.25D+1.5L	L
Perm Defl in.	0.013 (L/8621)	4'7 15/16"	0.319 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.027 (L/4293)	4'7 1/4"	0.319 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.040 (L/2866)	4'7 7/16"	0.479 (L/240)	0.080 (8%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.

USED IN THE DESIGN OF THIS COMPONENT

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



ľ	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
l	1	Tie-In	0-0-0 to 10-2-5	(Span)0-10-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	3	Part. Uniform	0-0-0 to 2-7-15		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
l	4	Point	2-11-7		Far Face	279 lb	641 lb	0 lb	0 lb	F6
l	5	Tie-In	3-1-3 to 10-2-5	(Span)1-4-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
ļ		Self Weight				10 PLF				

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the International Contractor to the International Contractor Contra

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or continuous.

chemicals

Handling & Installation

- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code 1.
- tastening details, beam strength values, and code approvals
 Demaged Beams must not be used
 Design assumes top adge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent

Manufacturer Info Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400







Project: Address: Date: 8/14/2018

Designer: SB

Job Name: SANDSTON 2A EL-2

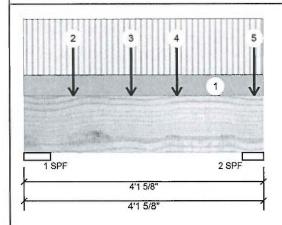
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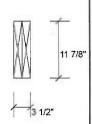
Forex 2.0E-3000Fb LVL

1.750" X 11.875"

2-Ply - PASSED

Level: Second Floor





Member Infor	mation			Unfactore	ed React	tions U	NPATTERNI	D lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	N	Wind
Plies:	2	Design Method:	LSD	1	562		231	1	0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	448		187		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored I	Reactions			
Dead:	15 PSF			Bearing I	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF	5.500"	10%	289 / 843	1132	L	1.25D+1.5L
				2-SPF 4	4.375"	10%	234 / 673	907	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	908 ft-lb	1'10 1/4"	34261 ft-lb	0.026 (3%)	1.25D+1.5L	L
Unbraced	908 ft-lb	1'10 1/4"	34261 ft-lb	0.026 (3%)	1.25D+1.5L	L
Shear	1054 lb	1'4 5/8"	11596 lb	0.091 (9%)	1.25D+1.5L	L
Perm Defl in.	0.001 (∐47319)	1'10 1/4"	0.115 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/19246)	1'10 1/4"	0.115 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.003 (L/13681)	1'10 1/4"	0.172 (L/240)	0.020 (2%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2, THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.

o Laterar	Didition into bacca	ort fan ooosiort maar.			1					
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	-
1	Tie-In	0-0-0 to 4-1-10	(Span)1-1-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Point	0-10-4		Near Face	124 lb	331 lb	0 lb	dl 0	J8	
3	Point	1-10-4		Near Face	115 lb	306 lb	0 lb	0 lb	J8	
4	Point	2-7-12		Near Face	56 lb	150 lb	0 lb	0 lb	J2	
5	Point	3-11-12		Near Face	49 lb	131 lb	0 lb	0 lb	J2	
	Self Weight				10 PLF					

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design critaria and loadings shown. It is the responsibility of the customer and/or the contractor to crisure the component suitability of the Intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information
 regarding installation requirements, multi-ply
 fastening details, beam strength values, and code
- rastening details, beam strengm values, and code approvals

 Damaged Beams must not be used

 Design assumes top edge is laterally restrained

 Provide lateral support at bearing points to avoid lateral displacement and rotation

This design is valid until 7/10/2021

For flat roofs provide proper drainage to prevent ponding



Manufacturer Info Forex APA: PR-L318



isDesign"

Client:

Project: Address:

8/14/2018 Date:

SB Designer:

Job Name: SANDSTON 2A EL-2

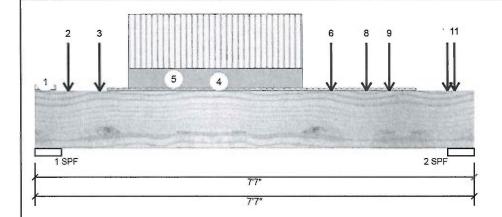
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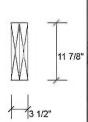
Forex 2.0E-3000Fb LVL

1.750" X 11.875"

2-Ply - PASSED

Level: Second Floor





Member Information

Girder Type: Plies: 2 Moisture Condition: Dry Deflection LL: Deflection TL: 240 Importance: Normal General Load 40 PSF Floor Live:

15 PSF

Application: Floor (Residential) Design Method: LSD **Building Code:** NBCC 2010 / OBC 2012

Load Sharing: Deck: Not Checked Not Checked Vibration:

Unfactored	Reactions	UNPATT	TERNED	lb	(Uplift)
------------	-----------	--------	---------------	----	----------

Brg	Live	Dead	Snow	Wind
1	961 (-73)	371	0 (0)	0
2	1185 (-32)	486	0 (-1)	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1-SPF	5.500"	16%	464 / 1442	1905	L	1.25D+1.5L	
2 - SPF	5.500"	20%	608 / 1777	2385	L	1.25D+1.5L	

Analysis Results

Dead:

Г	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	3461 ft-lb	3'9 1/2"	34261 ft-lb	0.101 (10%)	1.25D+1.5L	L
	Unbraced	3461 ft-lb	3'9 1/2"	32115 ft-lb	0.108 (11%)	1.25D+1.5L	L
	Shear	2341 lb	6'2 3/8"	11596 lb	0.202 (20%)	1.25D+1.5L	L
	Perm Defl in.	0.008 (L/10507)	3'9 5/8"	0.226 (L/360)	0.030 (3%)	D	Uniform
l	LL Defl inch	0.020 (L/4160)	3'9 9/16"	0.226 (L/360)	0.090 (9%)	L	L
	TL Defl inch	0.027 (L/2980)	3'9 9/16"	0.340 (L/240)	0.080 (8%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-6	(Span)1-2-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-6-15		Far Face	-17 lb	-46 lb	0 lb	0 lb	J4
3	Point	1-1-7		Near Face	110 lb	292 lb	0 lb	0 lb	J9
4	Part. Uniform	1-2-15 to 6-6-15		Far Face	-4 PLF	-11 PLF	0 PLF	0 PLF	
5	Part. Uniform	1-7-7 to 4-7-7		Near Face	114 PLF	305 PLF	0 PLF	0 PLF	
6	Point	5-1-7		Near Face	92 lb	245 lb	0 lb	0 lb	J9

Continued on page 2...

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

LATIGITING & INSTALLIBLOM:

LVL beams must not be cut or drilled.

Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals.

Damaged Beams must not be used.

Design assumes top edge is laterally restreined.

Provide lateral support at bearing points to avoid lateral displacement and rotation.

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4 905-642-4400





Page 2 of 2

isDesign™

Client:

Project: Address:

8/14/2018 Date:

Designer: SB

Job Name: SANDSTON 2A EL-2

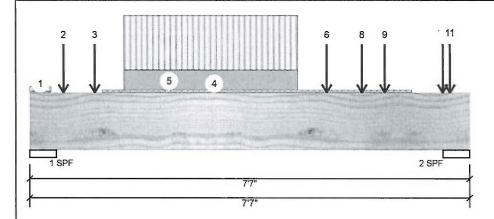
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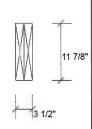
Forex 2.0E-3000Fb LVL

1.750" X 11.875"

2-Ply - PASSED

Level: Second Floor





Continued	from page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	5-8-12		Near Face	58 lb	152 lb	0 lb	0 lb	F10
8	Point	5-8-12		Near Face	0 lb	0 lb	-1 lb	0 lb	F10
9	Point	6-1-7		Near Face	88 lb	213 lb	0 lb	0 lb	J6
10	Point	7-1-7		Near Face	125 lb	305 lb	0 lb	0 lb	J6
11	Point	7-2-15		Far Face	5 lb	15 lb	0 lb	0 lb	J4
	Self Weight				10 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown, it is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. M/L beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damagad Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

APA: PR-L318







Project: Address: Date:

8/14/2018

SB

Job Name: SANDSTON 2A EL-2

Project #:

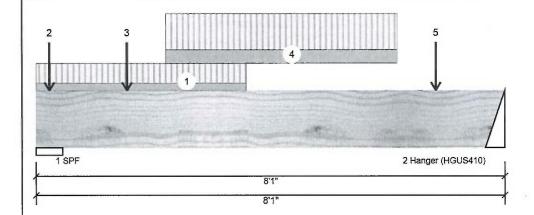
Designer:

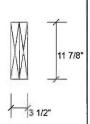
Forex 2.0E-3000Fb LVL

1.750" X 11.875"

2-Ply - PASSED

Level: Second Floor





Member Inform	nation		
Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF	10	

Unfactored Reactions	UNPATTERNED	lb (Uplift)
----------------------	-------------	-------------

Brg	Live	Dead	Snow	Wind
1	978	407	0	0
2	641	279	0	0

Bearings and Factored Reactions

Bearing	Length	Сар.	React D/L lb	Total	Ld, Case	Ld. Comb.
1-SPF	5.500"	17%	509 / 1467	1976	L	1.25D+1.5L
2 - Hanger	4.000"	13%	348 / 962	1311	L	1.25D+1.5L

Analysis Results

Dead:

Г	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	2960 ft-lb	3'9 1/16"	34261 ft-lb	0.086 (9%)	1.25D+1.5L	L
l	Unbraced	2960 ft-lb	3'9 1/16"	31702 ft-lb	0.093 (9%)	1.25D+1.5L	L
	Shear	1391 lb	1'4 5/8"	11596 lb	0.120 (12%)	1.25D+1.5L	L
	Perm Defl in.	0.008 (L/11274)	4' 1/16"	0.247 (L/360)	0.030 (3%)	D	Uniform
	LL Defl inch	0.019 (L/4745)	3'11 7/8"	0.247 (1/360)	0.080 (8%)	L	L
	TL Defl inch	0.027 (L/3340)	3'11 15/16"	0.371 (L/240)	0.070 (7%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.

15 PSF

- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width

/ Lateral	sicilidei liess fallo baseu	on full Section Width.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-7-8		Тор	38 PLF	100 PLF	0 PLF	0 PLF	
2	Point	0-2-12		Far Face	56 lb	150 lb	0 lb	0 lb	J2
3	Point	1-6-12		Far Face	70 lb	187 lb	0 lb	0 lb	J2
4	Part. Uniform	2-2-12 to 6-2-12		Far Face	69 PLF	184 PLF	0 PLF	0 PLF	
5	Point	6-10-12		Far Face	69 lb	184 lb	0 lb	0 lb	J2
	Self Weight				10 PLF				

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

arndling & Installation
LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, multi-ply
fastening details, beam strength values, and code
approvals
Demaged Beams must not be used
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

Manufacturer Info For flat roofs provide proper drainage to prevent ponding

APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400









Client:

Project: Address: Date:

8/15/2018

Designer:

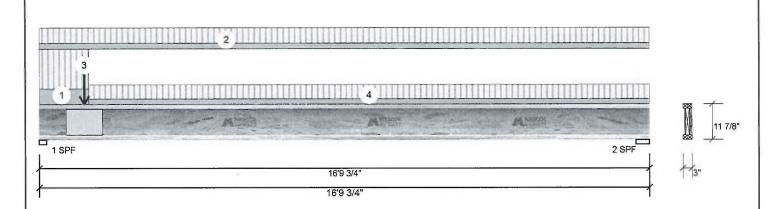
SANDSTON 2A EL-2 WOD CONDITION

Job Name: Project #:

F10-B NJ 11.875"

2-Ply - PASSED

Level: Ground Floor



Member Info	rmation			Unfacto	red Reac	tions U	NPATTERNI	ED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	W	Wind
Plies:	2	Design Method:	LSD	1	663		248		0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	362		136		0	0
Deflection LL:	360	Load Sharing:	No	100						
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearing	s and Fac	tored	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	2.375"	46%	310 / 994	1304	L	1.25D+1.5L
				2-SPF	4.375"	21%	169 / 543	712	L	1.25D+1.5L

Ana	lysis	Resu	ts
			_

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3007 ft-lb	7'9 1/4"	9020 ft-lb	0.333 (33%)	1.25D+1.5L	L
Unbraced	3007 ft-lb	7'9 1/4"	3044 ft-lb	0.988 (99%)	1.25D+1.5L	L
Shear	1284 lb	1 5/8"	3400 lb	0.378 (38%)	1.25D+1.5L	L
Perm Defl in.	0.061 (L/3211)	8'1 11/16"	0.546 (L/360)	0.110 (11%)	D	Uniform
LL Defl inch	0.163 (L/1203)	8'1 11/16"	0.546 (L/360)	0.300 (30%)	L	L
TL Defl inch	0.224 (L/875)	8'1 11/16"	0.819 (L/240)	0.270 (27%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'3" o.c.

5 Rottom flange braced at bearings

	Dottor Hango Diacou at Doarings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-6	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-9-12	(Span)1-0-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Far Face	113 lb	303 lb	0 lb	0 lb	F7
4	Tie-In	1-4-6 to 16-9-12	(Span)0-11-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design crities and loadings shown, it is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 Upoist not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. Joist flarges must not be dut or drilled

2. Refer to latest copy of the Jloist product information details for framing details, stiffener tables, web hole chert. bridging details, multi-ply f

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeness for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400







Client: Project: Address:

8/15/2018 Date:

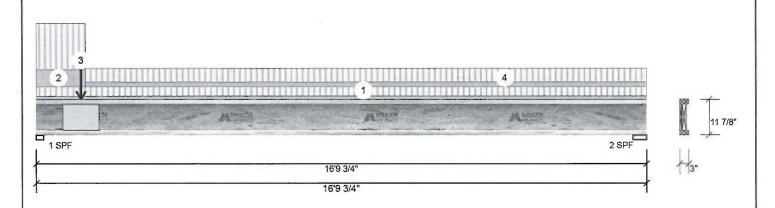
Designer: SB

Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

11.875" 2-Ply - PASSED NJ

Level: Ground Floor



Vlember Infor	mation			Unfactor	ed Reac	tions Ul	NPATTERNI	ED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	N	Wind
Plies:	2	Design Method:	LSD	1	584		219		0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	251		94		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored R	eactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF	2.375"	40%	274 / 876	1150	L	1.25D+1.5L
				2-SPF	4.375"	14%	118 / 376	493	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2173 ft-lb	7'4 15/16"	9020 ft-lb	0.241 (24%)	1.25D+1.5L	L
Unbraced	2173 ft-lb	7'4 15/16"	2175 ft-lb	0.999 (100%)	1.25D+1.5L	L
Shear	1133 lb	1 5/8"	3400 lb	0.333 (33%)	1.25D+1.5L	L
Perm Defl in.	0.044 (U4417)	8' 9/16"	0.546 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.119 (L/1657)	8' 9/16"	0.546 (L/360)	0.220 (22%)	L	L
TL Defl inch	0.163 (L/1205)	8' 9/16"	0.819 (L/240)	0.200 (20%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'11" o.c.

5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-9-12	(Span)0-6-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-6	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Near Face	125 lb	333 lb	0 lb	0 lb	F7
4	Tie-In	1-4-6 to 16-9-12	(Span)0-9-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the dassign criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 Lioist not to be treated with fire retardant or continuous.

chemicals

- and ling & Installation.

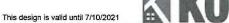
 Joist flanges must not be cut or drilled.
 Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fasterling details and handling/erection details.

 Demaged Joists must not be used.
 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation.
 Web stiffeness for point load as shown. Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent pondling.

Manufacturer Info Nascor by Kott







Client:

Project: Address: Date: 8/15/2018

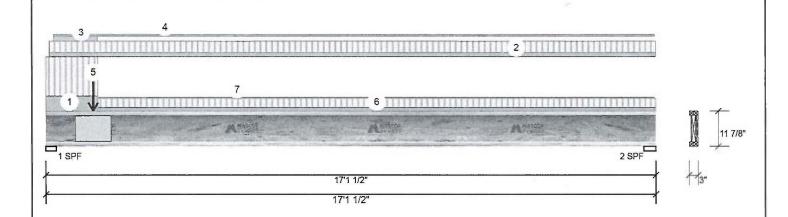
Designer:

Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

11.875" 2-Ply - PASSED NJ

Level: Ground Floor



Nember Inform	nation			Unfactore	d Reacti	ons UNPAT	TERNED	b (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead		Snow	Wind
Plies:	2	Design Method:	LSD	1	643	326		0	0
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	270	139		0	0
Deflection LL:	360	Load Sharing:	No	10.753					
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal	Vibration:	Not Checked						
General Load									
Floor Live:	40 PSF			Bearings a	nd Fact	ored Reacti	ons		
Dead:	15 PSF			Bearing Le	ength	Cap. React	D/L lb To	tal Ld. Case	Ld. Comb.
				1 - SPF 3.	500"	42% 40	7 / 965 13	371 L	1.25D+1.5L
				2-SPF 4.	125"	17% 173	3 / 404	578 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2589 ft-lb	7'7 3/8"	9020 ft-lb	0.287 (29%)	1.25D+1.5L	L
Unbraced	2589 ft-lb	7'7 3/8"	2628 ft-lb	0.985 (99%)	1.25D+1.5L	L
Shear	1342 lb	2 3/4"	3400 lb	0.395 (39%)	1.25D+1.5L	L
Perm Defl in.	0.069 (L/2907)	8'3 1/16"	0.554 (1/360)	0.120 (12%)	D	Uniform
LL Defl inch	0.133 (L/1494)	8'3 1/16"	0.554 (L/360)	0.240 (24%)	L	L
TL Defl inch	0.202 (L/987)	8'3 1/16"	0.831 (L/240)	0.240 (24%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'6" o.c.
- 5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-8	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-2 to 17-1-8	(Span)0-9-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-10 to 1-5-8		Тор	7 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-11 to 17-1-1		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-4-0		Far Face	186 lb	367 lb	0 lb	0 lb	F7
6	Tie-In	1-5-8 to 17-1-8	(Span)0-7-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-5-8 to 17-1-0		Тор	2 PLF	0 PLF	0 PLF	0 PLF	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design critieria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 Uoist not to be treated with fire retardant or corresive

Handling & Installation

andling & Installation
Lioiat flanges must not be cut or drilled
Refer to latest copy of the Lioist product information
defails for framing defails, stiffener tables, web hole
chart. bridging defails, multi-hoj fastening defails and
handling/erection details
Damaged Lioists must not be used
Design assumes top flange to be laterally restrained
by attached sheathing or as specified in engineering
notes.

Provide lateral support at beering points to avoid lateral displacement and rotation
 Neb stiffeness for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





Client:

Project: Address: Date:

8/15/2018

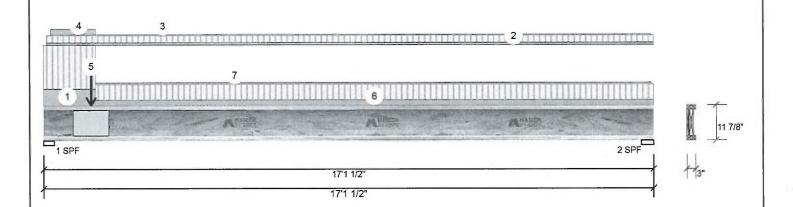
SB Designer:

Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

2-Ply - PASSED NJ 11.875" F10-E

Level: Ground Floor



Nember Infor	Unfactored Reactions UNPATTERNED lb (Uplift)									
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	N	Wind
Plies:	2	Design Method:	LSD	1	575		281		0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	265		128		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored F	Reactions			
Dead:	15 PSF			Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF	3.500"	38%	352 / 863	1215	L	1.25D+1.5L
				2-SPF	4.125"	16%	160 / 398	557	L	1.25D+1.5L

Analysis Results

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	2457 ft-lb	7'9 1/16"	9020 ft-lb	0.272 (27%)	1.25D+1.5L	L
	Unbraced	2457 ft-lb	7'9 1/16"	2478 ft-lb	0.991 (99%)	1.25D+1.5L	L
	Shear	1187 lb	2 3/4"	3400 lb	0.349 (35%)	1.25D+1.5L	L
	Perm Defl in.	0.062 (L/3202)	8'3 7/16"	0.554 (L/360)	0.110 (11%)	D	Uniform
	LL Defl inch	0.129 (L/1550)	8'3 1/2"	0.554 (L/360)	0.230 (23%)	L	L
	TL Defl inch	0.191 (L/1044)	8'3 1/2"	0.831 (L/240)	0.230 (23%)	D+L	L
_							

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT **CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'8" o.c.

L	o Bollom llange	braced at bearings.								
Г	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
١	1	Tie-In	0-0-0 to 1-5-8	(Span)2-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	2	Tie-In	0-1-2 to 17-1-8	(Span)0-5-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	3	Part. Uniform	0-2-6 to 17-0-12		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
l	4	Part. Uniform	0-2-8 to 1-5-8		Тор	7 PLF	0 PLF	0 PLF	0 PLF	
l	5	Point	1-4-0		Near Face	151 lb	304 lb	0 lb	0 lb	F7
l	6	Tie-In	1-5-8 to 17-1-8	(Span)0-11-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	7	Part. Uniform	1-5-8 to 17-0-12		Тор	2 PLF	0 PLF	0 PLF	0 PLF	

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer endfor the contractor to ensure the component suitability of the Intended application, and to werlfy the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 Doist not to be treated with fire retardant or corrosive

Handling & Installation

- IAMILING & INSTALIATION

 Lost flanges must not be cut or drilled

 Refer to latest copy of the IJoist product information details for framing details, suffaner tables, web hole chart. bridging details, multi-ply tastening details and handling/erection details

 Demaged IJoist must not be used

 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeness for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400







Project: Address: Date: 8/15/2018

Designer: SB

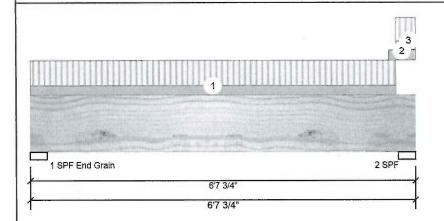
Job Name: SANDSTON 2A EL-2 WOD CONDITION

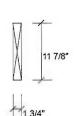
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





Member Inform	nation			
Туре:	Girder	T	Application:	Floor (Residential)
Plies:	1		Design Method:	LSD
Moisture Condition:	Dry		Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	l	Load Sharing:	No
Deflection TL:	240		Deck:	Not Checked
Importance:	Normal	- 1	Vibration:	Not Checked
General Load				
Floor Live:	40 PSF	- 1		
Dead:	15 PSF	- 1		

Brg	Live	Dead	Snow	Wind
1	665	265	0	0
2	659	299	0	0

Unfactored Reactions UNPATTERNED lb (Uplift)

Rearing	s and Fac	tored R	eactions	· · · · · · · · · · · · · · · · · · ·			_
Bearing			React D/L lb	Total	Ld. Case	Ld. Comb.	_
1 - SPF End Grain	3.500"	29%	332 / 997	1329	L	1.25D+1.5L	
2-SPF	3.500"	36%	374 / 988	1363	L	1.25D+1.5L	

Analysis Results

Design Notes

2 Top braced at bearings. 3 Bottom braced at bearings.

A	nalysis	Actual	Location	Allowed	Capacity	Comb.	Case
М	oment	1914 ft-lb	3'3 7/8"	17130 ft-lb	0.112 (11%)	1.25D+1.5L	L
U.	nbraced	1914 ft-lb	3'3 7/8"	7267 ft-lb	0.263 (26%)	1.25D+1.5L	L
S	hear	1230 lb	5'5 1/8"	5798 lb	0.212 (21%)	1.25D+1.5L	L
P	erm Defl in.	0.008 (L/9867)	3'3 7/8"	0.206 (L/360)	0.040 (4%)	D	Uniform
LI	Defl inch	0.019 (L/3947)	3'3 7/8"	0.206 (L/360)	0.090 (9%)	L	L
TI	L Defl inch	0.026 (L/2819)	3'3 7/8"	0.309 (L/240)	0.090 (9%)	D+L	L

1 Girders are designed to be supported on the bottom edge only.

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL

REFER TO MULTIPLE MEMBER TO	O MEMBER
CONNECTION DETAIL FOR PLY T	O PLY
NAILING OR BOLTING REQUIREM	IENTS.

ID	Load Type	Location	Trib Width	Side	Dead	POINT LOA	DS OVER	BEARINGS.	Comments
1	Part. Uniform	0-0-0 to 6-3-12		Near Face	75 PLF	200 PLF	0 PLF	0 PLF	
2	Part. Uniform	6-2-4 to 6-7-12		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	6-3-12 to 6-7-12		Тор	69 PLF	183 PLF	0 PLF	0 PLF	J3
	Self Weight				5 PLF				

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- fastaning oraces, some approvals
 Demaged Beams must not be used
 Design essumes top edge is laterally restretned
 Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex

APA: PR-L318





Page 1 of 2



Client:

Project: Address: Date: 8/15/2018

Designer:

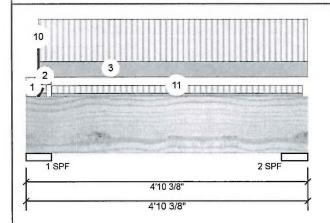
Job Name: SANDSTON 2A EL-2 WOD CONDITION

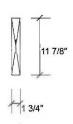
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





Viember Inform	nation		
Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Brg	Live		Dead	Sno	W	Wind
1	1809		813		0	0
2	231		98		0	0
Rearing	s and Fac	tored l	Reactions		-	
			Reactions	Total	Ld. Case	Ld. Comb.
	Length		React D/L lb	Total 3730		Ld. Comb. 1.25D+1.5L

Unfactored Reactions UNPATTERNED Ib (Uplift)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	405 ft-lb	2'5 1/16"	17130 ft-lb	0.024 (2%)	1.25D+1.5L	L
Unbraced	405 ft-lb	2'5 1/16"	10983 ft-lb	0.037 (4%)	1.25D+1.5L	L
Shear	204 lb	1'4 3/8"	5798 lb	0.035 (4%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/49514)	2'5 1/8"	0.136 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/21048)	2'5 1/8"	0.136 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.003 (L/14770)	2'5 1/8"	0.205 (L/240)	0.020 (2%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-4	(Span)0-9-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-4	(Span)0-6-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-10 to 4-10-6		Тор	30 PLF	80 PLF	0 PLF	0 PLF	
4	Point	0-2-10		Тор	647 lb	1489 lb	0 lb	0 lb	BM2 BM2
5	Point	0-2-10		Тор	11 lb	28 lb	0 lb	0 lb	J5
6	Point	0-2-10		Тор	17 lb	46 lb	0 lb	0 lb	J4
Continued on p	age 2								

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and leadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- tastening details, beam strength values, and code approvals
 Damaged Beams must not be used
 Dasign assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario 905-642-4400

Page 2 of 2



Project: Address: Date: 8/15/2018

Designer*

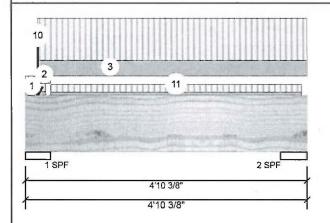
Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor



Continued	from page 1					-			
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	0-2-10		Тор	28 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Point	0-2-10		Тор	7 lb	19 lb	0 lb	0 lb	J5
9	Point	0-2-10		Тор	4 lb	11 lb	0 Њ	0 lb	J4
10	Point	0-2-10		Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
11	Tie-In	0-5-4 to 4-9-4	(Span)0-9-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH

BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled

2. Refer to manufacturer's product information regerding installation requirements. multi-ply festering details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top adge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318 Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400







Page 1 of 2



Client: Project: Address:

8/15/2018 Date:

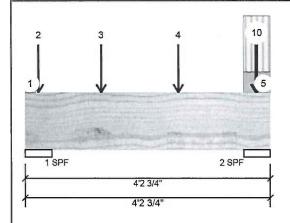
Designer:

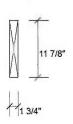
Job Name: SANDSTON 2A EL-2 WOD CONDITION

Forex 2.0E-3000Fb LVL F2-B

1.750" X 11.875" - PASSED

Level: Ground Floor





Member Infor	ember Information					Unfactored Reactions UNPATTERNED Ib (Uplift)				
Туре:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind		
Plies:	1	Design Method:	LSD	1	1677	714	0	0		
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	968	498	0	0		
Deflection LL:	360	Load Sharing:	No	_						
Deflection TL:	240	Deck:	Not Checked	1						
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF	9 Y		Bearings	and Fact	ored Reactions				
Dead:	15 PSF			Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.		
				1-SPF	5.500"	60% 892 / 2515	3407 L	1.25D+1.5L		
				2-SPF	5.500"	35% 623 / 1452	2075 L	1.25D+1.5L		

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	748 ft-lb	1'3 3/4"	17130 ft-lb	0.044 (4%)	1.25D+1.5L	L
Unbraced	748 ft-lb	1'3 3/4"	12732 ft-lb	0.059 (6%)	1.25D+1.5L	L
Shear	813 lb	1'4 5/8"	5798 lb	0.140 (14%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/28388)	1'9"	0.115 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/12395)	1'9 5/16"	0.115 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.005 (L/8628)	1'9 3/16"	0.172 (L/240)	0.030 (3%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings

+ DOMOII.	bradea at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-2-1		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
2	Point	0-2-12		Тор	535 lb	1278 lb	0 lb	0 lb	C2
3	Point	1-3-12		Near Face	196 lb	454 lb	0 lb	0 lb	J7
4	Point	2-7-12		Near Face	72 lb	190 lb	0 lb	0 lb	J2
5	Tie-In	3-9-4 to 4-2-12	(Span)2-3-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	3-11-12		Near Face	50 lb	121 lb	0 lb	0 lb	J2

Continued on page 2...

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to contractor the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

- LVL beams must not be cut or drilled.

 Refer to manufacturer's product information regarding installation requirements, multi-ply festening details, beam strength values, and code approvals.
- approvals
 Damaged Beams must not be used
 Design assumes top edge is leterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Forex APA: PR-L318

Manufacturer Info

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





Project: Address: Date:

8/15/2018

Page 2 of 2

SB Designer:

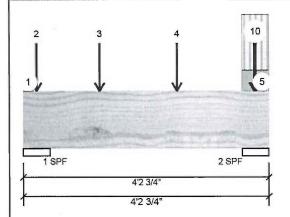
Job Name: SANDSTON 2A EL-2 WOD CONDITION

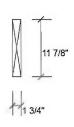
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





Continued	from page 1							
ID	Load Type	Location Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	4-0-0	Тор	187 lb	448 lb	0 lb	0 lb	F4 F4
8	Point	4-0-0	Тор	41 lb	109 lb	0 lb	0 lb	J3
9	Point	4-0-0	Тор	9 lb	23 lb	0 lb	0 lb	J2
10	Point	4-0-0	Тор	94 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight			5 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Lumber

chemicals

Handling & Installation

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- tastering details, beam statigm values, and code approvals

 Damaged Beams must not be used

 Design assumes top adge is laterally restrained

 Provide lateral support at bearing points to avoid lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400







Project: Address: Date: 8/15/2018

Designer: SB

Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Floor (Residential)

Not Checked

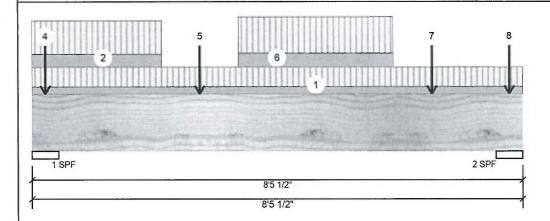
Not Checked

NBCC 2010 / OBC 2012

LSD

No

Level: Ground Floor

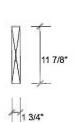


Application:

Deck:

Design Method:

Building Code: Load Sharing:



Member Information

-		
•	Type:	Girder
	Plies:	1
	Moisture Condition:	Dry
	Deflection LL:	360
	Deflection TL:	240
	Importance:	Normal
	General Load	
	Floor Live:	40 PSF

15 PSF

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	2137	870	0	0
2	1147	455	0	0

Vibration:

Bearings and Factored Reactions

bearing.	carrigs and ractorea reactions								
Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.			
1-SPF	5.500"	72%	1087 / 3205	4293	L	1.25D+1.5L			
2-SPF	5.500"	39%	568 / 1721	2289	L	1.25D+1.5L			

Analysis Results

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4044 ft-lb	4'2 7/16"	17130 ft-lb	0.236 (24%)	1.25D+1.5L	L
Unbraced	4044 ft-lb	4'2 7/16"	5865 ft-lb	0.690 (69%)	1.25D+1.5L	L
Shear	2022 lb	7' 7/8"	5798 lb	0.349 (35%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/4218)	4'2 9/16"	0.256 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.055 (L/1672)	4'2 9/16"	0.256 (L/360)	0.220 (22%)	L	L
TL Defl inch	0.077 (L/1197)	4'2 9/16"	0.383 (L/240)	0.200 (20%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

Mind Camanana

טו ן	Load Type	Location I rib Width	i Side	Dead	Live	Snow	VVIna	Comments
1	Part. Uniform	0-0-0 to 8-5-8	Тор	38 PLF	100 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 2-2-12	Far Face	66 PLF	170 PLF	0 PLF	0 PLF	
3	Point	0-2-12	Тор	1 lb	0 16	0 lb	0 lb	Wall Self Weight
4	Point	0-2-12	Тор	407 lb	978 lb	0 lb	0 lb	F6 F6
5	Point	2-10-12	Far Face	90 lb	241 lb	0 lb	0 lb	J3
6	Part. Uniform	3-6-12 to 6-2-12	Far Face	70 PLF	185 PLF	0 PLF	0 PLF	
7	Point	6-10-12	Far Face	70 lb	185 lb	0 lb	0 lb	J2
Continued on p	age 2							

0:4-

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown, it is the capponability of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

Tall Maliable

- tastening dezais, beam strength values, and code approvals.

 Damaged Beams must not be used
 Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

Page 2 of 2



Client: Project: Address: Date:

8/15/2018 SB Designer:

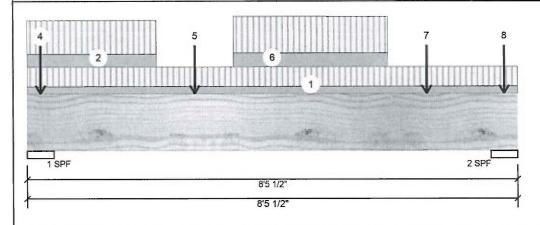
Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor



11 7/8"

.Continued from page 1

ID Load Type Point 8

8-2-12

Location Trib Width

Side Far Face

Dead 61 lb 5 PLF

Live 162 lb Snow 0 lb Wind Comments 0 lb J2

Self Weight

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes

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Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive.

chemicals

Handling & Installation

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- tastering approvals approvals approvals approvals paragred Beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318







Client: Project: Address:

8/15/2018 Date:

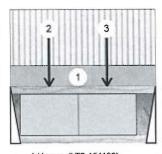
Designer:

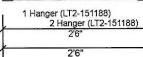
Job Name: SANDSTON 2A EL-2 WOD CONDITION

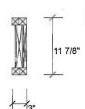
Project #:

2-Ply - PASSED 11.875"

Level: Ground Floor







Wind

0

Mem	her	Info	rma	tion
INIGHT	DCI	mo	LITTE	LUUII

Туре:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

2	303	113	U	U

Dead

125

Snow

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	418 ft-lb	1'8"	9020 ft-lb	0.046 (5%)	1.25D+1.5L	L
Unbraced	418 ft-lb	1'8"	6861 ft-lb	0.061 (6%)	1.25D+1.5L	L
Shear	650 lb	1 1/4"	3400 lb	0.191 (19%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/33964)	1'6 3/16"	0.076 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/12714)	1'6 3/16"	0.076 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.003 (L/9251)	1'6 3/16"	0.115 (L/240)	0.030 (3%)	D+L	L

Bearings and Factored Reactions

Live

333

Brg

1

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - Hanger	2.000"	24%	156 / 500	656	L	1.25D+1.5L	
2 - Hanger	2.000"	22%	142 / 455	596	L	1.25D+1.5L	_

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS



Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-6-0	(Span)1-3-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-8-0		Far Face	102 lb	273 lb	0 lb	0 lb	J6
3	Point	1-8-0		Far Face	112 lb	299 lb	0 lb	0 lb	J6

Calculated Structured Designs is responsible only of the structural adequacy of this component bessed on the design critieria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to wrift the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 Upist not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. Upiet flanges must not be cut or drilled

 2. Refer to latest copy of the Librist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-py festering details and handling/erection details

 3. Demaged Lollists must not be used

 4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide leteral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length=3.5 inches
 For flat roofs provide proper drainage to prevent

Manufacturer info

Nascor by Kott







Page 1 of 1



Client:

Project: Address: Date: Designer:

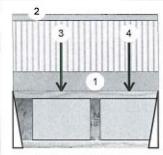
8/15/2018

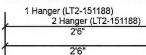
SB

Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

11.875" 2-Ply - PASSED Level: Ground Floor







Member Info	rmation		
Туре:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Brg	Live	Dead	Snow	Wind
1	304	151	0	0
2	367	186	0	0

Cap. React D/L lb

189 / 457

232 / 550

Analysis Results Analysis Actual Location Allowed Capacity Comb. Case Moment 452 ft-lb 10" 9020 ft-lb 0.050 (5%) 1.25D+1.5L L 452 ft-lb 10" 6861 ft-lb 0.066 (7%) 1.25D+1.5L L Unbraced 777 lb 2'4 3/4" 3400 lb 0.228 (23%) 1.25D+1.5L L Shear 10 1/16" 0.076 (L/360) 0.010 (1%) D Perm Defl in. 0.001 Uniform (L/25792) 0.002 10 1/16" 0.076 (L/360) 0.030 (3%) L L LL Defl inch (L/12802) TL Defl inch 0.003 (L/8555) 10 1/16" 0.115 (L/240) 0.030 (3%) D+L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT **CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

24%

29%

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Bearings and Factored Reactions

Bearing Length

Hanger

2 -Hanger 2.000"

2.000"



Ld. Comb.

1.25D+1.5L

1.25D+1.5L

Total Ld. Case

645 L

782 L

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings.

	9								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-6-0	(Span)1-3-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part, Uniform	0-0-0 to 2-6-0		Тор	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-10-0		Far Face	162 lb	329 lb	0 lb	0 lb	J6
4	Point	2-0-0		Far Face	143 lb	278 lb	0 lb	0 lb	J6

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 Uplist not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. Joist flanges must not be cut or drilled

2. Refer to latest copy of the Lioist product information details for framing details, stiffener tables, web hole chart, bridging details, multiply fastering details and handling/eraction details

3. Damaged Loists must not be used

4. Design assumes top flange to be laterally restrained by strached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing lengthr= 3.5 inches
 Por flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400



1.6

Page 1 of 1



Client: Project: Address:

8/15/2018 Date:

Designer:

Job Name: SANDSTON 2A EL-2 WOD CONDITION

Brg

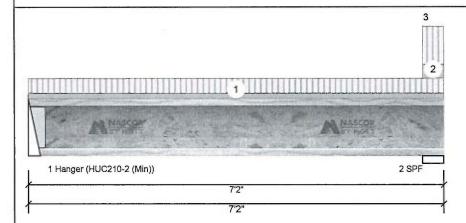
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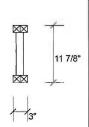
2012

11.875"

2-Ply - PASSED

Level: Ground Floor





Wind

Ld. Comb.

1.25D+1.5L

1.25D+1.5L

iviember into	rmation		
Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		

2	1	07 4	1	0	0

Cap. React D/L lb

38 / 123

51 / 161

Dead

Snow

Total Ld. Case

161 L

212 L

Unfactored Reactions UNPATTERNED Ib (Uplift)

Live

82

Bearings and Factored Reactions

Bearing Length

2 - SPF 4.375"

Hanger

2.500"

	Tell CD					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	259 ft-lb	3'6 1/16"	9020 ft-lb	0.029 (3%)	1.25D+1.5L	L
Unbraced	259 ft-lb	3'6 1/16"	1010 ft-lb	0.256 (26%)	1.25D+1.5L	L
Shear	162 lb	6'10 3/8"	3400 lb	0.048 (5%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/66000)	3'6 1/8"	0.224 (L/360)	0.010 (1%)	D	Uniform
LL Defi inch	0.003 (L/24754)	3'6 1/8"	0.224 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.004 (L/18002)	3'6 1/8"	0.336 (L/240)	0.010 (1%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

6%

6%

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS



Design Notes

Dead:

Analysis Results

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.

15 PSF

- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings.
- 7 Web stiffeners required at Bearing 1.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 7-2-0	(Span)1-2-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	6-9-10 to 7-2-0	(Span)3-0-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	6-9-10 to 6-11-2		Тор	7 PLF	0 PLF	0 PLF	0 PLF	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 Uplish not to be treated with fire retardant or corrosive

Handling & Installation

- IANGINING & INSTAILATION

 Lolist flanges must not be cut or drilled.

 Refer to latest copy of the Ligist product information details for framing details, sufferer tables, web hole-bart. bridging details, multi-lipy fastering details and handling/erection details

 Demaged Lolists must not be used

 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
- Provide lateral support at bearing points to avoid lateral displacement and rotation
- Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 Inches
 For flat roofs provide proper drainage to prevent ponding
- 7.

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4 905-642-4400



isDesign™

Client: Project: Address:

8/15/2018 Date:

Designer:

Job Name: SANDSTON 2A EL-2 WOD CONDITION

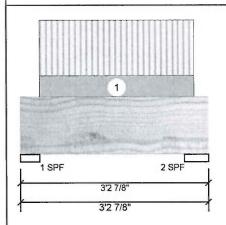
Project #:

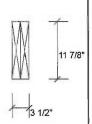
Forex 2.0E-3000Fb LVL

1.750" X 11.875"

2-Ply - PASSED

Level: Ground Floor





Vlember Info	rmation			Unfactore	ed React	ions U	NPATTERNI	ED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	N	Wind
Plies:	2	Design Method:	LSD	1	330		139		0	0
Moisture Conditi	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	372		156		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored I	Reactions			
Dead:	15 PSF			Bearing L	ength	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF 3	3.954"	8%	174 / 495	668	L	1.25D+1.5L
				2-SPF 4	1.938"	7%	195 / 557	752	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	456 ft-lb	1'6 15/16"	34261 ft-lb	0.013 (1%)	1.25D+1.5L	L
Unbraced	456 ft-lb	1'6 15/16"	34261 ft-lb	0.013 (1%)	1.25D+1.5L	L
Shear	684 lb	1'3 1/16"	11596 lb	0.059 (6%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/34463)	1'7"	0.087 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/24395)	1'7"	0.131 (L/240)	0.010 (1%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.
- 5 Lateral slenderness ratio based on full section width.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-3-15 to 2-11-15		Near Face	99 PLF	263 PLF	0 PLF	0 PLF	
	Self Weight				10 PLF				

Calculated Shuctured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

- Handling & Installation

 1. IVL beams must not be out or drilled

 2. Refer to menufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at beening points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





Project: Address:

8/15/2018 Date:

Designer: SB

Job Name: SANDSTON 2A EL-2 WOD CONDITION

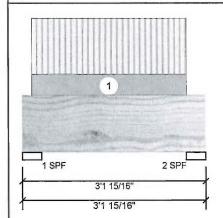
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875"

2-Ply - PASSED

Level: Ground Floor



11 7/8

Member Information							
Type:	Girder	Application:	Floor (Residential)				
Plies:	2	Design Method:	LSD				
Moisture Conditi	on: Dry	Building Code:	NBCC 2010 / OBC 2012				
Deflection LL:	360	Load Sharing:	No				
Deflection TL:	240	Deck:	Not Checked				
Importance:	Normal	Vibration:	Not Checked				
General Load							
Floor Live:	40 PSF						
Dead:	15 PSF						

	Brg	Live		Dead	Sno	w	Wind	
	1	373		156		0	0	
12	2	328		139		0	0	
	Bearing	s and Fact	ored l	Reactions				
	Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
	1-SPF	4.000"	9%	194 / 560	754	L	1.25D+1.5L	

173 / 492

665 L

Unfactored Reactions UNPATTERNED Ib (Uplift)

Analysis Results

_	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	454 ft-lb	1'6 15/16"	34261 ft-lb	0.013 (1%)	1.25D+1.5L	L
	Unbraced	454 ft-lb	1'6 15/16"	34261 ft-lb	0.013 (1%)	1.25D+1.5L	L
	Shear	683 lb	1'10 13/16"	11596 lb	0.059 (6%)	1.25D+1.5L	L
	Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
	LL Defl inch	0.001 (L/34556)	1'6 15/16"	0.087 (L/360)	0.010 (1%)	L	L
	TL Defl inch	0.001 (L/24462)	1'6 15/16"	0.131 (L/240)	0.010 (1%)	D+L	L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

2-SPF 4.000"



1.25D+1.5L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.
- 5. Lateral slenderness ratio based on full section width

J Latera	sicilacificas fatto basca i	off full Section with.							
ID.	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-1-15 to 2-9-15		Near Face	99 PLF	263 PLF	0 PLF	0 PLF	
	Self Weight				10 PLF				

Notes

Calculated Structured Designs Is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- approvals
 Damaged Beams must not be used
 Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4 905-642-4400



