Engineering Note Page (ENP-2)

REVISION 2018-10-17

Floor

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 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 transfer blocks. Structural elements such as walls, posts, connectors, and transfer 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 floor joists is to be carried out in accordance with the current edition of the manufacturer's literature available at http://www.kottgroup.com.

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.

<u>COMPONENT</u>

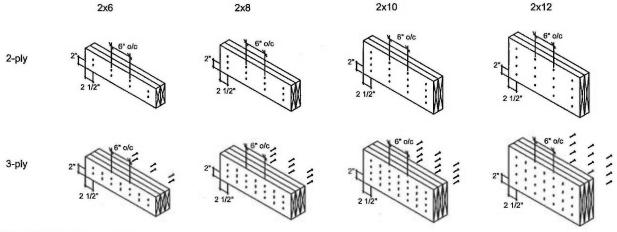
- 1. The building component used in construction must be the same as indicated on the drawings.
- 2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
- 3. Members consisting of multiple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



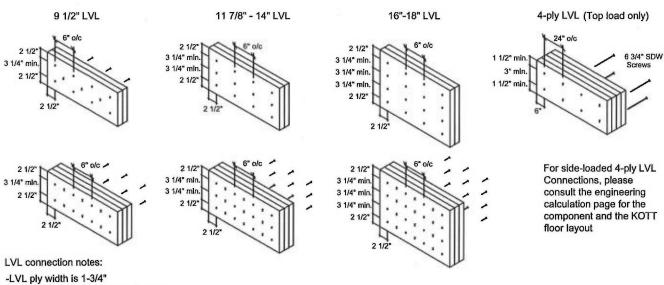
Conventional Connections



Conventional connection notes:

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

LVL Connections



- -Nails to be 3 1/2" common wire nails.
- -Nails to be located 2 1/2" min. from the top and bottom of the member. Start all nails 2 1/2" min. 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.

Multiple Member Connections

All connections are for uniformly distributed loads.

For multi-ply connections of I-joists, refer to Manufacturer's Installation Guide



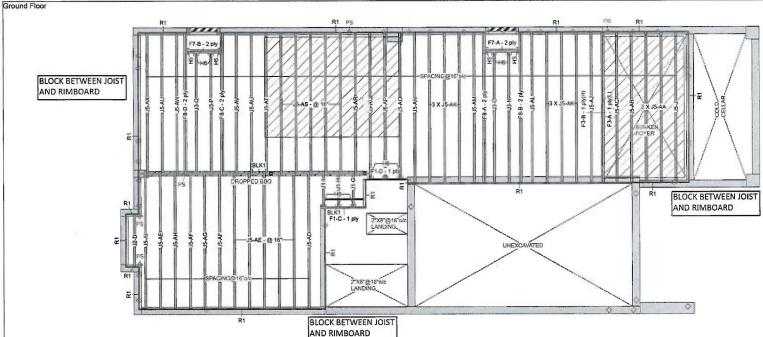
KOTT Inc. 3228 Moodie Drive Ottawa, ON K2H 7V1 613-838-2775

GRANDBROOKE 1-ELEV 2-CUSTON

Layout Name

Design Method LSD Description

Created



	L (Flush)						
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F8	Forex 2.0E-3000Fb LVL	1.75	9.5	4	2	8	14-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5			2	14-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			2	6-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	4-0-0
Joist (Flush)						
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J5	LPI 20Plus	2.5	9.5			42	14-0-0
J3	LPI 20Plus	2.5	9.5			4	12-0-0
J2	LPI 20Plus	2.5	9.5			1	6-0-0
J1	LPI 20Plus	2.5	9.5			3	4-0-0
Rim Bo	ard						
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			12	12

Hanger							Bea	ım/Girder		ported
Label	Pcs	Descript	ion S	kow	Slo	pe	fa	stonors	fas	teners
H5	4	LF359					-	10 10d	2 #8x	1 1/4WS
H6	10	LT259				\neg	4 10dx1 1/2		2 10	dx1 1/2
Blockin	g									
Label	Dosc	iption	Width	De	pth	Q	ty	Plies	Pcs	Length
BLK1	LPI 20	Plus	2.5		9.5	Lin	inFt \		Varies	18-0-0

OTES:

Framer to verify dimensions on the architectural drawings.
 Double joist only require filter/backer ply when supporting another member using a face-mounted hanger.

Install 2x4 blocking @ 24*o/c under parallel non-load bearing walls.
Install single-ply flush window header along inside face of rimboard/rimipist. Refer to Nascor specifier guide for Installation works

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 frame's responsibility that floor joists and beams are fastened as per the hanger manufacturer's clandards.

efer to Multiple Member Connection Detail to ply to ply nailing or

Rim parallel to josis: 1-1/8" rimboard with 2"x4" block (1/16" longer than im depth @ 15"olc). All other components and structural elements upporting the floor systems such as beams, valls, columns, and oundation valls, and footings including anchorage of components and tracing for latest stability are the responsibility of Others.

Hatch are represents ceramic tiled floor with an additional dead load

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

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP 64 Jardin Dr., Suite 3A Date: Rev. 1, 5/22/2018 Project No: 18-24 Model: Grandbrooke 1, Elevation 2

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

- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -14056-R
- 4 CAN/CSA-ORE-09

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

0

Legend

Load from Above Wall Wall Opening Norbord Rimboard Plus 1.125 X 9.5 LPI 20Plus 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5

This certification is to confirm that:

and spacing shown on this layout.

1. The loads used in the calculation of the attached approved

footings including anchorage of components and bracing for

per the included multiple member connection detail.

lateral stability are the responsibility of others.

June 25, 2018 Revised October 23, 2018 Builder GREENPARK Sales Rep RM Designer RO Shipping Project Builder's Project Kott Lumber Company 14 Anderson Blvd Stoutfville, Ontario Canada K2H7V1 905-642-4400 Job Path S:\CUSTOMERS\GREENPARK MINNISALE HOMES/MODELS GRANDBROOKE 1/CUSTOM FLOORS/GRANDBROOKE 1-ELEV 2 CUSTOM.isl **Ground Floor** LSD Design Method Building Code NBCC 2010 / OBC 2012 Floor Loads 40 Livo 15 Dead **Deflection Joist** 480 components conform to the floor assembly shown on this layout. LL Span L/ 360 2. The floor joists comply with the KOTT span table for the loads TL Span L/ 480 11 Cant 21/ The floor system must be assembled in accordance to the KOTT TL Cant 2L/ 360 Specifier Guide. Multi-ply members must be attached together as Deflection Girder 360 LL Span L/ All other components and structural elements supporting the floor 240 TL Span L/ system such as beams, walls, columns and foundation walls and 480 LL Cant 2L/ TL Cant 2L/ 240 Decking OSB Deck Thickness 3/4" Naried & Glued Vibration





Version 18.40.162 Powered by iStructive

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



Client: Project:

Address:

GREENPARK

Date: 10/23/2018

Designer: RO

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

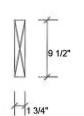
Project #:

Forex 2.0E-3000Fb LVL

Level: Ground Floor 1.750" X 9.500" - PASSED

2 2 SPF 1 SPF 4' 3/8

4' 3/8



Wind

PROFESSIONAL

I.MATIJEVIC

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Member Informatio						
Type:	Girder					
Dling	4					

Moisture Condition: Dry Deflection LL: Deflection TL: 240 Importance:

Normal 40 PSF

15 PSF

Application: Design Method: **Building Code:** Load Sharing:

Deck:

Vibration:

Floor (Residential) LSD NBCC 2010 / OBC 2012 Not Checked Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift) Brg Live Dead Snow 128 320 1 n

0 2 333 132 n

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	11%	160 / 480	640	L	1.25D+1.5L
2 - SPF	2.375"	26%	165 / 500	664	L	1.25D+1.5L

Analysis Results

General Load

Floor Live:

Dead:

Analysis Actual Location Allowed Capacity Comb. Case Moment 690 ft-lb 1'7 1/2" 11362 ft-lb 0.061 (6%) 1.25D+1.5L L Unbraced 690 ft-lb 1'7 1/2" 9427 ft-lb 0.073 (7%) 1.25D+1.5L L Shear 640 lb 3'1 1/4" 4638 lb 0.138 (14%) 1.25D+1.5L L Perm Defl in. 0.002 2' 5/8" 0.117 (L/360) 0.020 (2%) D Uniform (L/20141) LL Defl inch 0.005 (L/7912) 2' 9/16" 0.117 (L/360) 0.050 (5%) L TL Defl inch 0.007 (L/5681) 2' 9/16" 0.175 (L/240) 0.040 (4%) D+L



- 1 Girders are designed to be supported on the bottom edge only.
- 2 Top braced at bearings.
- 3 Bottom braced at bearings

	38
	October 2E 2019
Wind	October 25, 2018
vvina	COMMICINO
0 lb	J1
0 lb	J1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	COMMICINO
1	Point	0-3-8		Far Face	14 lb	38 lb	0 lb	0 lb	J1
2	Point	1-7-8		Far Face	119 lb	315 lb	0 lb	0 lb	J1
3	Point	2-11-8		Far Face	108 lb	290 lb	0 lb	0 lb	J1
4	Tie-In	3-10-0 to 4-0-6	(Span)2-6-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF		Pass-	Thru Fran	nina Sauas

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

Pass-Thru Framing Squash Block is required at all point loads over bearings

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

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
 LVL not to be treated with fire retardant or co

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

Manufacturer Info Forey APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada K2H7V1







Client:

Address:

GREENPARK

Project:

Date:

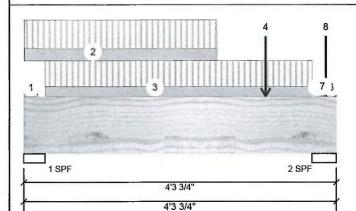
10/23/2018 Designer: RO

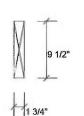
Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED Level: Ground Floor





1.25D+1.5L

Member Info	rmation			Unfactor	ed Reac	tions UNPATTERI	NED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	1009	417	0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1985	863	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 Reactions		
Dead:	15 PSF			Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
				1-SPF	3.500"	54% 522 / 1514	2035 L	1.25D+1.5L

2 - SPF 4.000"

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1825 ft-lb	2'1 1/2"	11362 ft-lb	0.161 (16%)	1.25D+1.5L	L
Unbraced	1825 ft-lb	2'1 1/2"	9065 ft-lb	0.201 (20%)	1.25D+1.5L	L
Shear	1922 lb	3'3"	4638 lb	0.414 (41%)	1.25D+1.5L	L
Perm Defl in.	0.006 (L/7071)	2'1 9/16"	0.127 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.016 (L/2890)	2'1 11/16"	0.127 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.022 (L/2052)	2'1 9/16"	0.191 (L/240)	0.120 (12%)	D+L	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 Bottom braced at bearings.

PROFESSIONAL ENGINEER I.MATIJEVIC 100528832 BOVINCE OF

4056 L

October 25, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-6	(Span)2-6-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-1 to 2-8-1		Far Face	114 PLF	263 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-3-8 to 3-11-12		Тор	90 PLF	240 PLF	0 PLF	0 PLF	
4	Point	3-4-1		Far Face	134 lb	333 lb	0 lb	0 lb	J5
5	Part. Uniform	4-0-4 to 4-0-14		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight ru Framing Squash Block is
6	Tie-In	4-0-14 to 4-3-12	(Span)0-3-12	Тор	15 PSF	40 PSF	0 PSF	required	l at all point loads over bearings
7	Part. Uniform	4-0-14 to 4-3-12		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
Continued or	n page 2	READ	ALL NOTES ON	THIS PAGE	AND ON THE				Multiple Member Connection or ply to ply nailing or bolting

Handling &

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

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. 1. LVL beams 2. Refer to LVL beams
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.

This design is valid until 7/10/2021

requirements
Manufacturer Info Forex APA: PR-L318

94%

1079 / 2977

Client: Project:

Address:

GREENPARK

10/23/2018

Designer: RO Page 2 of 2

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

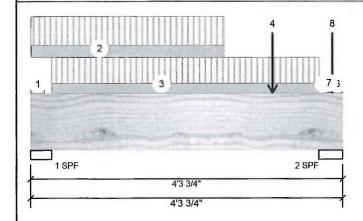
Project #:

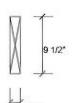
Date:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED

Level: Ground Floor





Continued from page 1

Load Type **Point** 8

Self Weight

Location 4-2-0

Trib Width

Side Top

Dead 476 lb

Live 1063 lb Snow dl 0 Wind Comments 0 lb F8 F8

4 PLF

PROFESSION AL ENGINEER I.MATIJEVIC 100528832 STOVINCE OF ONTER October 25, 2018

Pass-Thru Framing Squash Block is required at all point loads over bearings

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

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component beased on the design critieria and loadings shown. If 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.

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 infor regarding installation requirements, in fastening details, beam strength values, an

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE

IS AN INTEGRAL PART OF THIS DRAWING AS IT

CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

perind supprovals

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

6. For flat roofs provide proper drainage to prevent

Manufacturer Info

APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada K2H7V1 905-642-4400







Client: Project: GREENPARK

Date: Designer: 10/23/2018

Page 1 of 1

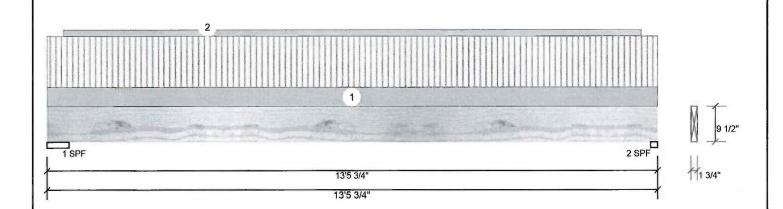
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED

Level: Ground Floor

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM



Member Infor	mation			Unfacto	red Reac	tions U	INPATTERN	ED lb ((Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	w	Wind
Plies:	1	Design Method:	LSD	1	165		108		0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	157		102		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			Bearing	s and Fac	tored	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF	5.875"	6%	135 / 247	381	L	1.25D+1.5L
				2-SPF	1.875"	18%	128 / 235	363	L	1.25D+1.5L
1 . 5 1										

Analysis Results

Ī	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	
	Moment	1163 ft-lb	6'10 7/8"	11362 ft-lb	0.102 (10%)	1.25D+1.5L	L	
	Unbraced	1163 ft-lb	6'10 7/8"	2877 ft-lb	0.404 (40%)	1.25D+1.5L	L	
	Shear	315 lb	12'7 1/8"	4638 lb	0.068 (7%)	1.25D+1.5L	L	
	Perm Defl in.	0.042 (L/3683)	6'10 7/8"	0.432 (L/360)	0.100 (10%)	D	Uniform	
	LL Defl inch	0.064 (L/2434)	6'10 7/8"	0.432 (L/360)	0.150 (15%)	L	L	
	TL Defl inch	0.106 (L/1465)	6'10 7/8"	0.648 (L/240)	0.160 (16%)	D+L	L	
-								П

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	Live	Snow	Wind
1	Tie-In	0-0-0 to 13-5-12	(Span)1-2-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF
2	Part. Uniform	0-4-6 to 13-1-6		Тор	3 PLF	0 PLF	0 PLF	0 PLF
	Self Weight				4 PLF			

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

Pass-Thru Framing Squash Block is required at all point loads over bearings

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

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

Handling & Installation

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

resterning belans, beam suberigin 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

6. For flat roofs provide proper drainage to prevent

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario K2H7V1 905-642-4400

PROFESSIONAL

I.MATIJEVIC 100528832

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October 25, 2018

ENGINEER











Client: Project:

Address:

GREENPARK

Date:

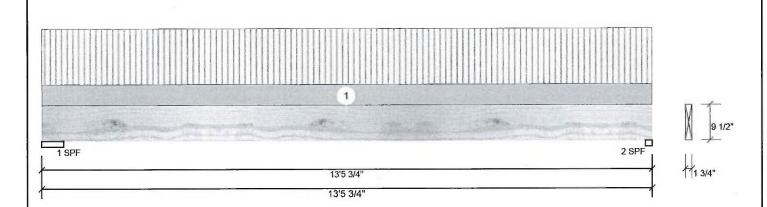
10/23/2018 Designer:

Job Name: **GRANDBROOKE 1-ELEV 2-CUSTOM**

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED Level: Ground Floor



Member Infor	mation			Unfactored Reactions UNPATTERNED Ib (Uplift)						
Type:	Girder	Application:	Floor (Residential)	Brg	Live	11	Dead	Snov	V	Wind
Plies:	1	Design Method:	LSD	1	132		76		0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	126		72		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 Fact	ored F	Reactions			
Dead:	15 PSF			Bearing Le	ength	Сар.	React D/L lb	Total	Ld, Case	Ld. Comb.
				1-SPF 5.	875"	5%	95 / 198	293	L	1.25D+1.5L
				2 - SPF 1.	875"	14%	90 / 188	278	L	1.25D+1.5L
1 ' D	La .									

Analysis Results

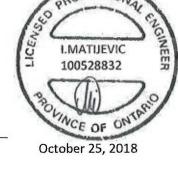
Г	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	889 ft-lb	6'10 7/8"	11362 ft-lb	0.078 (8%)	1.25D+1.5L	L
ŀ	Unbraced	889 ft-lb	6'10 7/8"	2877 ft-lb	0.309 (31%)	1.25D+1.5L	L
	Shear	241 lb	1'2 5/8"	4638 lb	0.052 (5%)	1.25D+1.5L	L
	Perm Defl in.	0.029 (L/5284)	6'10 7/8"	0.432 (L/360)	0.070 (7%)	D	Uniform
	LL Defl inch	0.051 (L/3036)	6'10 7/8"	0.432 (L/360)	0.120 (12%)	L	L
	TL Defl inch	0.081 (L/1928)	6'10 7/8"	0.648 (L/240)	0.120 (12%)	D+L	L.

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	Live	Snow	Wind
1	Tie-In	0-0-0 to 13-5-12	(Span)0-11-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF
	Self Weight				4 PLF			

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



PROFESSIONAL

I.MATIJEVIC

Pass-Thru Framing Squash Block is required at all point loads over bearings

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

Notes

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 cor

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. Damaged 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

Forex APA: PR-L318

Manufacturer Info

Kott Lumber Company 14 Anderson Blvd, Ontario Canada K2H7V1 905-642-4400





Client: Project:

Address

GREENPARK

Date: 10/23/2018

Designer:

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

Project #:

Forex 2.0E-3000Fb LVL

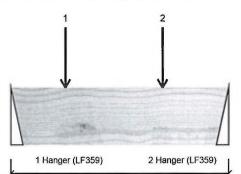
1.750" X 9.500"

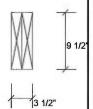
2-Ply - PASSED

Brg

2

Level: Ground Floor





Wind

0

0

1.25D+1.5L

1 1	3'	1
1	3'	1

Member Infor	mation		
Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition	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		

Bearing	earings and Factored Reactions											
Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.						
1 -	2.000"	11%	142 / 410	552	L	1.25D+1.5L						

133 / 379

10%

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

114

106

Snow

0

0

512 L

Live

273

253

2.000°

Hanger

Live

254 lb

272 lb

Analysis Results Comb. Case Analysis Actual Location Allowed Capacity Moment 409 ft-lb 2'1 1/16" 22724 ft-lb 0.018 (2%) 1.25D+1.5L L Unbraced 409 ft-lb 2'1 1/16" 22724 ft-lb 0.018 (2%) 1.25D+1.5L L Shear 543 lb 10 3/4" 9277 lb 0.059 (6%) 1.25D+1.5L L Perm Defl in. 0.001 1'7 1/8" 0.093 (L/360) 0.010 (1%) D Uniform (L/64763) 0.001 1'7 5/16" 0.093 (L/360) 0.010 (1%) L LL Defl inch (L/26644) 0.002 TL Defl inch 1'7 5/16" 0.140 (L/240) 0.010 (1%) D+L L (L/18878)



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 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					
1	Point	0-9-1		Near Face	95 lb					

2 **Point** 2-1-1 Near Face Self Weight READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Comments 0 lb 0 lb

Wind

0 lb J3 Pass-Thru Framing Squash Block is required at all point loads over bearings

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

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.

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

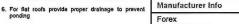
Handling & Installation

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

This design is valid until 7/10/2021

102 lb

8 PLF



Snow









Client:

GREENPARK

Project: Address: Date:

10/23/2018

Designer: RO

GRANDBROOKE 1-FLEV 2-CUSTOM

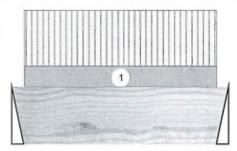
Job Name: Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor



1 Hanger (LF359) 3

Girder

2

240

Normal

40 PSF 15 PSF

Member Information

Moisture Condition: Dry

Type:

Plies:

Deflection LL:

Deflection TL:

General Load

Importance:

Floor Live:

Dead:

2 Hanger (LF359)

Application:

Floor (Residential) LSD

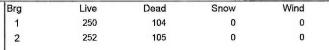
NBCC 2010 / OBC 2012

Load Sharing:

Design Method:

Building Code:

Deck: Not Checked Vibration: Not Checked **Unfactored Reactions UNPATTERNED Ib (Uplift)**



Bearings and Factored Reactions

9							
Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - Hanger	2.000°	10%	130 / 374	505	L	1.25D+1.5L	
2 - Hanger	2.000°	10%	131 / 378	509	L	1.25D+1.5L	

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	369 ft-lb	1'6"	22724 ft-lb	0.016 (2%)	1.25D+1.5L	L
Unbraced	369 ft-lb	1'6"	22724 ft-lb	0.016 (2%)	1.25D+1.5L	L
Shear	501 lb	10 3/4"	9277 lb	0.054 (5%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/70805)	1'6"	0.093 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/29240)	1'6"	0.093 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.002 (L/20694)	1'6"	0.140 (L/240)	0.010 (1%)	D+L	L

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.

Part. Uniform

Self Weight

- 3 Multiple plies must be fastened together as per manufacturer's details.
- 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

Wind I ive Snow Comments

0-2-1 to 2-10-1 Near Face 70 PLF 188 PLF 0 PLF 0 PLF

8 PLF

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

Pass-Thru Framing Squash Block is required at all point loads over bearings

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

Notes

1

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.

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

Handling & Installation

- Amouring & Installation
 I.VL 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

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada K2H7V1 905-642-4400

PROFESSIONA

I.MATIJEVIC 100528832

SOUNCE OF ONTE

October 25, 2018









Client: Project:

Address:

GREENPARK

Date: Designer: 10/23/2018

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

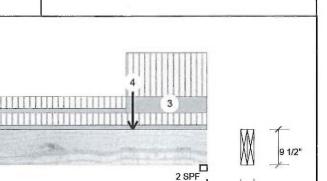
Level: Ground Floor

Project #:

Forex 2.0E-3000Fb LVL F8-A

1.750" X 9.500"

2-Ply - PASSED



mation		Unfactored Reactions UNPATTERNED Ib (Uplift)							
Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	v	Wind
2	Design Method:	LSD	1	288		162	1	ס	0
n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	559		270		0	0
360	Load Sharing:	No							
240	Deck:	Not Checked							
Normal	Vibration:	Not Checked	1						
			-						
40 PSF			Bearings	and Fac	tored I	Reactions			
15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
			1 - SPF	5.875"	5%	203 / 432	635	L	1.25D+1.5L
			2-SPF	1.875"	29%	337 / 838	1175	L	1.25D+1.5L
	Girder 2 n: Dry 360 240 Normal	Girder Application: 2 Design Method: n: Dry Building Code: 360 Load Sharing: 240 Deck: Normal Vibration:	Girder Application: Floor (Residential) 2 Design Method: LSD Building Code: NBCC 2010 / OBC 2012 360 Load Sharing: No 240 Deck: Not Checked Normal Vibration: Not Checked	Application: Floor (Residential) Brg	Application: Floor (Residential) Brg Live	Application: Floor (Residential) Brg Live	Application: Floor (Residential) 1 288 162 2 1559 270	Application: Floor (Residential) Brg Live Dead Snov	Application: Floor (Residential) Brg Live Dead Snow

13'5 3/4"

Analysis Results

1 SPF

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2226 ft-lb	7'10 3/16"	22724 ft-lb	0.098 (10%)	1.25D+1.5L	L
Unbraced	2226 ft-lb	7'10 3/16"	19408 ft-lb	0.115 (11%)	1.25D+1.5L	L
Shear	1020 lb	12'7 1/8"	9277 lb	0.110 (11%)	1.25D+1.5L	L
Perm Defl in.	0.036 (L/4318)	7'1 3/8"	0.432 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.067 (L/2320)	7'2 3/16"	0.432 (L/360)	0.160 (16%)	L	L
TL Defl inch	0.103 (L/1509)	7'1 7/8"	0.648 (L/240)	0.160 (16%)	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.



October 25, 2018

6 Lateral	sienderness ratio base	ed on full section width.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-5-12	(Span) 0-10-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 11-8-6	(Span) 0-10-13	Тор	15 PSF	40 PSF	0 PSF	Pass-TI	nru Framing Squash Block is
3	Tie-In	11-8-6 to 13-5-12	(Span)3-3-8	Тор	15 PSF	40 PSF	0 PSF	require	d at all point loads over bearings
4	Point	11-10-2		Near Face	114 lb	273 lb	0 lb	Refetto Multiple Member Connection	
	Self Weight	READ ALL NOTES ON ENGINEERING NOTE F IS AN INTEGRAL PART CONTAINS SPECIFICA IN THE DESIGN OF TH	PAGE ENP-2. THE FOR THIS DRAW TIONS AND CR	HE NOTE PAGE VING AS IT ITERIA USED	8 PLF			Detail for require	or ply to ply nailing or bolting ments
-		IN THE DESIGN OF TH	O COMPONEN	•					The second secon

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
 LVI, not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. IVL beams must not be cut or drilled

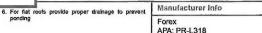
 2. Refer to manufacturer's product Information regarding installation requirements, multi-ply fastering details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

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

This design is valid until 7/10/2021









Client: Project:

Address:

GREENPARK

10/23/2018

Designer:

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

Project #:

Date:

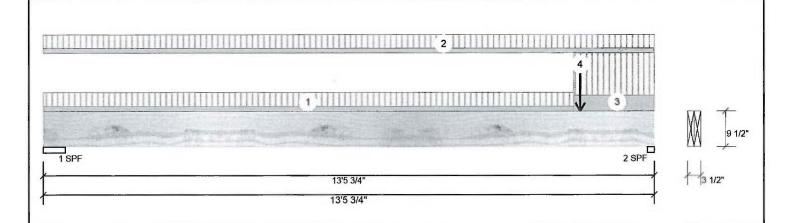
Forex 2.0E-3000Fb LVL F8-B

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor

Unfactored Reactions UNPATTERNED Ib (Uplift)



VICINIDEI ZINOI	mation			omactor	ca iteactio	IID OILL FILLE	me in (epine)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	323	175	0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	571	274	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 Facto	red Reactions		
Dead:	15 PSF			Bearing I	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
				1 - SPF :	5.875"	6% 219 / 484	703 L	1.25D+1.5L
				2-SPF	1.875"	30% 343 / 857	1200 L	1.25D+1.5L

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2406 ft-lb	7'8 1/8"	22724 ft-lb	0.106 (11%)	1.25D+1.5L	L
Unbraced	2406 ft-lb	7'8 1/8"	19408 ft-lb	0.124 (12%)	1.25D+1.5L	L
Shear	1041 lb	12'7 1/8"	9277 lb	0.112 (11%)	1.25D+1.5L	L
Perm Defl in.	0.038 (L/4070)	7'1 1/16"	0.432 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.073 (L/2132)	7'1 11/16"	0.432 (L/360)	0.170 (17%)	L	L
TL Defl inch	0.111 (L/1399)	7'1 7/16"	0.648 (L/240)	0.170 (17%)	D+L	L

- 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.

Girders are designed to be supported on the bottom edge only. Multiple plies must be fastened together as per manufacturer's details.										
Design Not	es									
TL Defl inch	0.111 (L/1399)	7'1 7/16"	0.648 (L/240)	0.170 (17%)	D+L	L				
LL Defl inch	0.073 (L/2132)	7'1 11/16"	0.432 (L/360)	0.170 (17%)	L	L				
Perm Defl in.	0.038 (L/4070)	7'1 1/16"	0.432 (L/360)	0.090 (9%)	D	Uniform				
Shear	1041 lb	12'7 1/8"	9277 lb	0.112 (11%)	1.25D+1.5L	L				



October 25, 2018

ID	Load Type	Location 0-0-0 to 11-8-6	Trib Width (Span)1-0-11	Side	Dead 15 PSF	Live 40 PSF	Snow 0 PSF	Wind 0 PSF	Comments
1	Tie-In	0-0-0 10 11-8-6	(Span)1-0-11	юр	10 PSF	40 PSF	0 PSF	UPSF	
2	Tie-In	0-0-0 to 13-5-12	(Span)1-0-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	11-8-6 to 13-5-12	(Span)3-3-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	11-10-2	Far Face	106 lb	253 lb Pas	0 lb ss-Thru Frai	0 lb F7 aming Squash Block is		
Self Weight		READ ALL NOTES ON ENGINEERING NOTE		8 PLF				ds over bearings	

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

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

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. Damaged 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

IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED

IN THE DESIGN OF THIS COMPONENT.

This design is valid until 7/10/2021



Manufacturer Info



isDesign™

Client: Project:

Address:

GREENPARK

10/23/2018

RO Designer:

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

Project #:

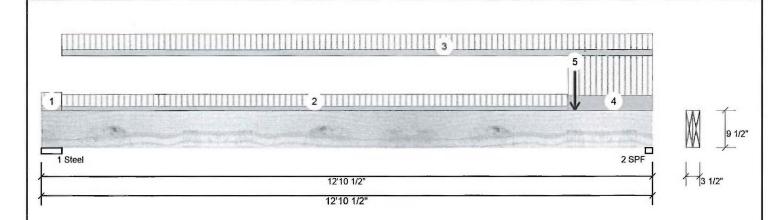
Date:

Forex 2.0E-3000Fb LVL F8-C

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor



Member Inform	nation			Unfactored Reactions UNPATTERNED Ib (Uplift)						
Туре:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind		
Plies:	2	Design Method:	LSD	1	325	173	0	0		
Moisture Condition:	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	584	276	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 an	d Factored	Reactions				
Dead:	15 PSF			Bearing Ler	ngth Cap	React D/L lb	Total Ld. Case	Ld. Comb.		
				1 - Steel 5.25	50" 5%	217 / 488	704 L	1.25D+1.5L		
				2 - SPF 1.87	75" 30%	345 / 876	1221 L	1.25D+1.5L		

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2389 ft-lb	7'3 7/8"	22724 ft-lb	0.105 (11%)	1.25D+1.5L	L
Unbraced	2389 ft-lb	7'3 7/8"	19684 ft-lb	0.121 (12%)	1.25D+1.5L	L
Shear	1053 lb	11'11 7/8"	9277 lb	0.113 (11%)	1.25D+1.5L	L
Perm Defl in.	0.034 (L/4334)	6'9 1/8"	0.414 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.067 (L/2218)	6'9 5/8"	0.414 (L/360)	0.160 (16%)	L	L
TL Defi inch	0.101 (L/1467)	6'9 7/16"	0.620 (L/240)	0.160 (16%)	D+L	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead
6 Lateral	slenderness ratio based on	full section width.			
5 Bottom	braced at bearings.				
4 Top bra	ced at bearings.				
3 Top loa	ds must be supported equal	ly by all plies.			
2 Multiple	e plies must be fastened tog	ether as per manuf	acturer's details	5.	
			-0		



October 25, 2018

O Laterar	dicitacificad ratio bas	ca on ian oconon man.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-4	(Span)1-1-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-5-4 to 11-1-2	(Span)0-11-1	1 Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-5-4 to 12-10-8	(Span)1-3-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	11-1-2 to 12-10-8	(Span)3-3-8	Тор	15 PSF	40 PSF	0 PSFass	s-THPPFr	aming Squash Block is
5	Point	11-2-14		Far Face	105 lb	252 lb	0 Hequired at tall proint loads over bear		
	Self Weight	D ON THE	8 PLF		D (

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

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

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
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- Handling & Installation

 1. LVL beams must not be cut or drilled

 2. Reifer 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 assumes top edge is laterally restrained

 5. 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







Client: Project:

Address:

GREENPARK

Date:

10/23/2018 Designer:

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

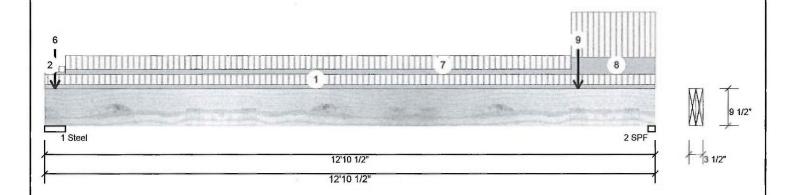
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor



Member Infor	mation			Unfactored Reactions UNPATTERNED lb (Uplift)						
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind		
Plies:	2	Design Method:	LSD	1	1316	611	0	0		
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	516	251	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 a	nd Factor	ed Reactions				
Dead:	15 PSF			Bearing Le	ngth (Cap. React D/L lb	Total Ld. Case	Ld. Comb.		
				1 - Steel 5.2	250"	27% 763 / 1973	2737 L	1.25D+1.5L		
				2 - SPF 1.8	375"	27% 313 / 774	1087 L	1.25D+1.5L		

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1997 ft-lb	7'6 1/8"	22724 ft-lb	0.088 (9%)	1.25D+1.5L	L
Unbraced	1997 ft-lb	7'6 1/8"	19684 ft-lb	0.101 (10%)	1.25D+1.5L	L
Shear	938 lb	11'11 7/8"	9277 lb	0.101 (10%)	1.25D+1.5L	L
Perm Defl in.	0.030 (L/4983)	6'9 7/16"	0.414 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.055 (L/2695)	6'10 1/4"	0.414 (L/360)	0.130 (13%)	L	L
TL Defl inch	0.085 (L/1749)	6'9 15/16"	0.620 (L/240)	0.140 (14%)	D+L	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 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

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October 25, 2018

Refer to Multiple Member Connection

Γ	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
l	1	Tie-In	0-0-0 to 12-10-8	(Span)0-9-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	2	Tie-In	0-0-0 to 0-5-4	(Span)0-5-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	3	Point	0-2-10		Тор	394 lb	947 lb	0 lb	0 lb	BBO4 BBO4
l	4	Point	0-2-10		Тор	29 lb	70 lb	0 lb	0 lb	J5
ı	5	Point	0-2-10		Тор	14 lb	37 lb	0 lbre	quired at a	raming Squash Block is Il point loads over bearings

Continued on page 2...

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

IN THE DESIGN OF THIS COMPONENT.

Calculated Structured Designs is responsible only structural adequacy of this component based 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
 LVL not to be treated with fire retardant or corrosive
- CVF ceans intox rourse cur to other Refer to manufacturer's product information regarding installation requirements, multi-bly 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

This design is valid until 7/10/2021

ofs provide proper drainage to prevent

Manufa Details for ply to ply national 14 Anderson Blvd, Onlario Canada APA: PR-L318 14 Anderson Blvd, Onlario Canada CAPTV1 905-642-4400





Client: Project:

Address:

GREENPARK

Date:

F-GREENPARK-MINNISALE HOMES-GRANDBROOKE 1 10/23/2018

Page 2 of 2

RO Designer:

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

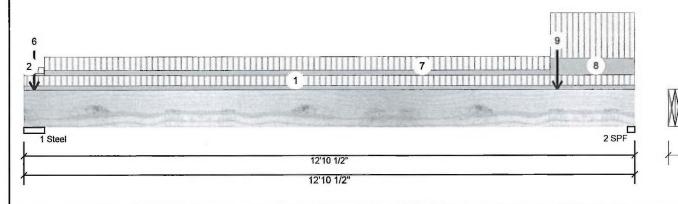
Project #:

Forex 2.0E-3000Fb LVL F8-D

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor



Continued fr	om page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-2-10		Тор	24 lb	0 lb	0 lb	0 lb	Wall Self Weight
7	Tie-In	0-5-4 to 11-1-2	(Span) 0-11-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
8	Tie-In	11-1-2 to 12-10-8	(Span)3-3-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
9	Point	11-2-14		Near Face	104 lb	250 lb	0 lb	0 lb	F7
	Self Weight				8 PLF				



Pass-Thru Framing Squash Block is required at all point loads over bearings

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

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.

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

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. Damaged Beams must not be used

4. Design assumes top edge is laterarly restrained

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

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT

CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318









LSD

40

15

480

360

480

360

36D

240

480

240

OSB

5/8"

Nailed & Glued

Gypsum 1/2"



GREENPARK WINNISH F HOMES GRANDEROOKE

NOTES:

10-0-0

Pcs Length 51 14-0-0

21 12-0-0

6 6-0-0

Member

fasteners

16 16d

16 16d

1 #8x1 1/4WS

4 10dx1 1/2 2 10dx1 1/2

14

Width Depth Qty Plies Pcs Length

Width Depth Qty Plies Pcs Length

Beam/Girder

46 16d

10 10d

46 16d

Width Depth Qty Plies Pcs Length

9.5 LinFt

1 3 3

9.5

9.5

9.5

Skew Slope

Width Dopth Qty Plies

1.75

2.5 9.5 2.5 9.5

Project No: 18-24 Model: Grandbrooke 1, Elevation 2

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/c under parallel non-load bearing walls.

Install single-ply flush window header along inside face of

rimboard/riminist. rminoaron miss.

5. Refer to Nascor specifier guide for installation works.

5. 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 frame'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 requirements.

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 racing for lateral stability are the responsibility of Others.

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

The framing shown on this layout may deviate from the architectural and structural drawings. Project Engineer to review and apporve the dev Varies 32-0-0 prior to construction.

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

Legend



Point Load Support Load from Above Wall Wall Opening

Norbord Rimboard Plus 1.125 X 9.5 LPI 20Plus 9.5 Forex 2.0E-3000Fb LVL 1,75 X 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5 (Dropped) 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 KOTT span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the KOTT 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.



October 25, 2018



TL Cant 2L/

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

Decking

Thickness

Fastener

Vibration

Cailing:

Deck

Deflection Girder

Label Description BLK1 LPI 20 Plus Version 18.40.162 Powered by IStruct's

Blocking

Forex

LVL/LSL (Dropped)

Label Description

Label Description

J5 LPI 20Plus

J2 LPI 20Plus J1 LPI 20Plus

Label Description

Rim Board

Hanger

BBO4 Forex

Joist (Flush)

2.0E-3000Fb LVL

2.0E-3000Fb LVL

Norbord Rimboard Plus 1.125 X 9.5

| Label | Pcs | Description | H1 | HGUS410 | H2 | 1 | LF179 | H3 | HGUS5.50/10 |

H6 34 LT259

Unknown Hanger

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

- 6 Bottom braced at bearings.
- 7. Lateral stenderness ratio based on full section width

Latera	olchacilledo fallo bacca oli	idii ocollott ittadii.				
ID	Load Type	Location	Trib Width	Side	Dead	Live
1	Point	0-0-0		Тор	61 lb	164 lb
2	Point	0-11-9		Тор	100 lb	243 lb
3	Point	1-4-0		Тор	124 lb	331 lb
4	Point	1-11-9		Тор	100 lb	243 lb
5	Point	2-8-0		Тор	124 lb	331 lb

5 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 linear 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 cont
- READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT Hand **CONTAINS SPECIFICATIONS AND CRITERIA USED**
- CONTAINS SPECIFICATION OF THIS COMPCINE IN THE DESIGN OF T IN THE DESIGN OF THIS COMPONENT.
- 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

0.0
^{0 lb} Pass-ThฟิFrahing Squash Block is o เชาequired@ball.point loads over bearings
Olb Nefer to Multiple Member Connection Detail for ply to ply nailing or bolting

Comments

Wind

0 lb J5

0 lb

requirements

Manufacturer Info per drainage to prevent Forex

Snow 0 lb

0 lb

APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada K2H7V1 905-642-4400





1/2"



Continued	from page 1									
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
6	Point	2-11-9		Тор	100 lb	243 lb	0 lb	0 lb	J5	
7	Point	3-11-13		Тор	223 lb	571 lb	0 lb	0 lb	J5	
8	Point	4-11-9		Тор	100 lb	243 lb	0 lb	0 lb	J5	
9	Point	5-4-0		Тор	124 lb	331 lb	0 lb	0 lb	J5	
10	Point	5-11-9		Тор	100 lb	243 lb	0 lb	0 lb	J5	
11	Point	6-8-0		Тор	124 lb	331 lb	0 lb	0 lb	J5	
12	Point	6-11-9		Тор	96 lb	234 lb	0 lb	0 lb	J5	
13	Point	7-11-0		Тор	1242 lb	2873 lb	0 lb	0 lb	F6	
	Self Weight				11 PLF					

8'1 5/8' 8'1 5/8



5 1/4"

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

Notes

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1 SPF

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 fastering delaits, 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 bearing points to avoid lateral displacement and rotation

This design is valid until 7/10/2021

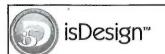
For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex

2 SPF End Grain





Client:

Project: Address

GREENPARK

Date:

10/23/2018 Designer:

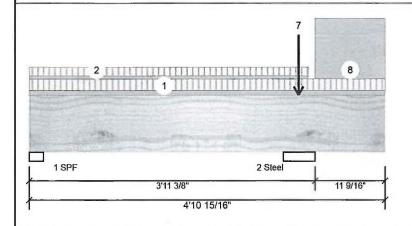
Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

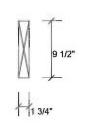
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED

Level: Second Floor





Wind

0

0

Ld. Comb.

1.25D+1.5L

1.25D+1.5S

Member Infor	mation			Unfacto	red Reac	tions L	JNPATTERN	ED lb	(Uplift)
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	w
Plies:	1	Design Method:	LSD	1	50		15		0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	69		249	13	34
Deflection LL:	360	Load Sharing:	No						
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
				1 - SPF	2.375"	5%	19 / 77	96	L_
				2 - Steel	5.250"	9%	312 / 201	513	L_

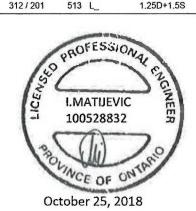
Ana	lvsis	Resu	lts

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-62 ft-lb	3'11 3/8"	7385 ft-lb	0.008 (1%)	1.25D+1.5L	_L
Unbraced	-62 ft-lb	3'11 3/8"	7209 ft-lb	0.009 (1%)	1.25D+1.5L	_L
Pos Moment	68 ft-lb	1'8 1/8"	9090 ft-lb	0.008 (1%)	1.25D+1.5L	L_
Unbraced	68 ft-lb	1'8 1/8"	8317 ft-lb	0.008 (1%)	1.25D+1.5L	L_
Shear	75 lb	2'11 1/4"	3850 lb	0.019 (2%)	1.25D+1.5L	LL
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/61738)	1'11 1/4"	0.120 (L/360)	0.010 (1%)	L+0.5S	L_
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Cant	-0.000 (2L/67348)	Rt Cant	0.200 (2L/480)	0.002 (0%)	L+0.5S	L_
TL Cant	0.001 (2L/32363)	Rt Cant	0.300 (2L/240)	0.002 (0%)	D+L+0.5S	_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 Bottom braced at bearings.

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



Pass-Thru Framing Squash Block is required at all point loads over bearings

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

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. If 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.

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 strength values, a approvals

Damaged Beams must not be used

Design assumes top edge is laterally restral

Provide lateral support at bearing points

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 K2H7V1 905-642-4400







Page 2 of 2



Client:

GREENPARK

Project: Address:

Date: Designer:

10/23/2018 RO

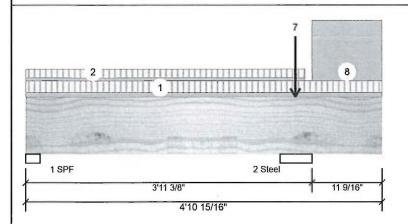
GRANDBROOKE 1-ELEV 2-CUSTOM Job Name:

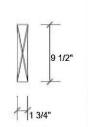
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED

Level: Second Floor





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-10-15	(Span)0-9-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 3-10-4	(Span)0-6-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	3-8-10		Тор	87 lb	0 lb	124 lb	0 lb	F11 F11
4	Point	3-8-10		Тор	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
5	Point	3-8-10		Тор	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
6	Point	3-8-10		Тор	4 lb	0 lb	10 lb	0 lb	
7	Point	3-8-10		Тор	9 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Part. Uniform	3-11-6 to 4-10-15		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				4 PLF				



October 25, 2018

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

chemicals

Handling & Installation

- and Iling & Installation.

 LVL beams must not be cut or drilled
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 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, Onlario Canada K2H7V1 905-642-4400







Client: Project:

Address:

GREENPARK

F-GREENPARK-MINNISALE HOMES-GRANDBROOKE 1 Date:

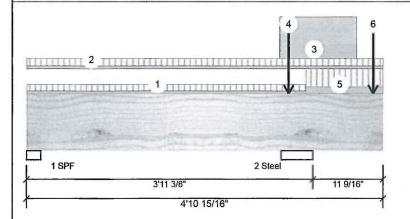
10/23/2018 Designer:

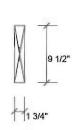
GRANDBROOKE 1-ELEV 2-CUSTOM

Job Name: Project #:

Forex 2.0E-3000Fb LVL

Level: Second Floor 1.750" X 9.500" - PASSED





Member Inforn	nation			Unfacto	red Reac	tions U	INPATTERNI	ED lb (Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	v	Wind
Plies:	1	Design Method:	LSD	1	45		12	1	D	0
Moisture Condition:	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	109		370	27	В	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	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	2.375"	5%	15 / 77	92	L_	1.25D+1.5L
				2 - Steel	5.250"	15%	463 / 448	911	L	1.25D+1.5S

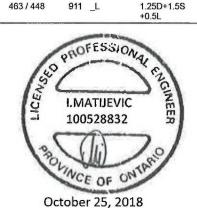
Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-104 ft-lb	3'11 3/8"	7385 ft-lb	0.014 (1%)	1.25D+1.5L	_L
Unbraced	-104 ft-lb	3'11 3/8"	6825 ft-lb	0.015 (2%)	1.25D+1.5L	_L
Pos Moment	62 ft-lb	1'8 1/8"	8181 ft-lb	0.008 (1%)	0.9D+1.5L	L_
Unbraced	62 ft-lb	1'8 1/8"	7621 ft-lb	0.008 (1%)	0.9D+1.5L	L_
Shear	86 lb	2'11 1/4"	3711 lb	0.023 (2%)	1.25D+1.5L	LL
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/61738)	1'11 1/4"	0.120 (L/360)	0.010 (1%)	L+0.5S	L_
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Cant	0.000 (2L/55471)	Rt Cant	0.200 (2L/480)	0.002 (0%)	L+0.5S	_L
TL Cant	0.001 (2L/18442)	Rt Cant	0.300 (2L/240)	0.004 (0%)	D+L+0.5S	_L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
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- 3 Top braced at bearings.
- 4 Bottom braced at bearings

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



Pass-Thru Framing Squash Block is required at all point loads over bearings

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

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Handling & Installation

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

tastening 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

Manufacturer Info 6. For flat roofs provide proper drainage to pre

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





Page 2 of 2

Client: Project:

GREENPARK

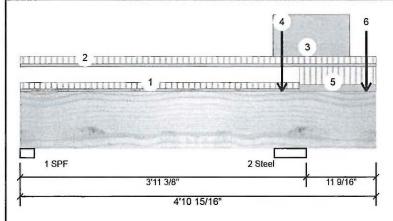
F-GREENPARK-MINNISALE HOMES-GRANDBROOKE 1 10/23/2018 Date:

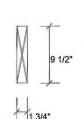
Designer:

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

Project #:

1.750" X 9.500" - PASSED Forex 2.0E-3000Fb LVL





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-10-4	(Span)0-7-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-10-15	(Span)0-8-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	3-5-14 to 4-6-9		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Point	3-7-6		Тор	186 lb	0 lb	278 lb	0 lb	F11 F11
5	Tie-In	3-10-4 to 4-10-15	(Span)1-8-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	4-9-5		Тор	35 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				4 PLF				



Pass-Thru Framing Squash Block is required at all point loads over bearings

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

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

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. Damaged 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

READ ALL NOTES ON THIS PAGE AND ON THE

IS AN INTEGRAL PART OF THIS DRAWING AS IT

CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex

APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Onlario K2H7V1 905-642-4400





Client: Project:

Address:

GREENPARK

Date:

RO Designer:

10/23/2018 GRANDBROOKE 1-ELEV 2-CUSTOM Job Name:

Project #

Forex 2.0E-3000Fb LVL

Level: Second Floor 1.750" X 9.500" - PASSED

4 7 11

1 Hanger (LF179)

7'10 1/4'

7'10 1/4"

Harfa at a maid	D	LINDAT	TEDNED	11.	(11-1:4)
Unfactored	Reactions	UNPAI	LEKNED	ID ((UDIITE)

2 SPF

Member Information Type: Girder Application: Floor (Residential) Brg Dead Snow Wind Live Plies: 1 Design Method: LSD 642 255 0 0 Moisture Condition: Dry **Building Code:** NBCC 2010 / OBC 2012 391 0 0 999 2 Deflection LL: 360 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance:

Vibration: Not Checked Normal

Bearings and Factored Reactions

34%

2 - SPF 5.500"

Live

Snow

Cap. React D/L lb Total Ld. Case Ld. Comb. Bearing Length 1281 L 1.25D+1.5L 2.000" 49% 318 / 962 Hanger

488 / 1499

Wind

0 PSF 0 lb 0 PLF

1987 L

Analysis Results

40 PSF

15 PSF

General Load

Floor Live:

Dead:

Location Allowed Comb. Case Analysis Actual Capacity Moment 3231 ft-lb 4'4 3/16" 11362 ft-lb 0.284 (28%) 1.25D+1.5L L 0.637 (64%) 1.25D+1.5L L Unbraced 3231 ft-lb 4'4 3/16" 5069 ft-lb Shear 1576 lb 6'8" 4638 lb 0.340 (34%) 1.25D+1.5L L Perm Defl in. 0.028 (L/3145) 3'11 15/16" 0.245 (L/360) 0.110 (11%) D Uniform LL Defl inch 0.072 (L/1230) 4' 1/8" 0.245 (L/360) 0.290 (29%) L 1 TL Defl inch 0.100 (L/884) 4' 0.368 (L/240) 0.270 (27%) D+L

Design Notes



October 25, 2018

1 Fill all hanger nailing holes.

- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings

Load Type

1	Tie-In	0-0-0 to 5-9-13	(Span)3-0-2	Тор	15 PSF	40 PSF	0 PSF
2	Point	0-5-13		Far Face	20 lb	53 lb	0 lb
3	Part. Uniform	1-1-13 to 5-1-13		Far Face	20 PLF	54 PLF	0 PLF
4	Part. Uniform	3-8-9 to 7-4-9		Тор	90 PLF	240 PLF	0 PLF
5	Point	5-9-13		Far Face	24 lb	63 lb	dl 0
6	Point	6-9-13		Far Face	17 lb	44 lb	0 lb
7	Tie-In	6-9-13 to 7-4-12	(Span)3-0-2	Тор	15 PSF	40 PSF	0 PSF
	Self Weight				4 PLF		

Location Trib Width

0 PLF 0 lb Pass-firm Framing Squash Block is required at all point loads over bearings

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

Notes

ID

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. If is the responsibility of the customer and/or the contractor to nessure the component suitability of the Inlended 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 & In-

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

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

Dead

Manufacturer Info Forex APA: PR-L318







Client: Project:

Address:

GREENPARK

10/23/2018 Date:

Designer:

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

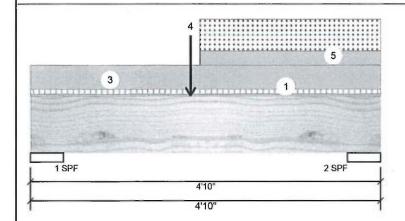
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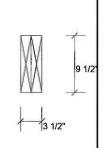
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor





Member Infor	mation			Unfacto	red Reac	tions U	INPATTERN	ED Ib	(Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	w	Wind
Plies:	2	Design Method:	LSD	1	40		326	18	15	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	40		376	31	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			Bearing:	s and Fac	tored	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	5.500"	6%	407 / 297	704	L	1.25D+1.5S +0.5L
Analysis Resul	ts			2-SPF	5.500"	9%	471 / 465	936	L	1.25D+1.5S

Analysis Res	Analysis Results									
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case				
Moment	964 ft-lb	2'2 1/2"	20906 ft-lb	0.046 (5%)	1.25D+1.5S	L				
Unbraced	964 ft-lb	2'2 1/2"	20906 ft-lb	0.046 (5%)	1.25D+1.5S	L				
Shear	545 lb	1'2 1/4"	8535 lb	0.064 (6%)	1.25D+1.5S	L				
Perm Defl in.	0.003 (L/14644)	2'4 1/16"	0.135 (L/360)	0.020 (2%)	D	Uniform				
LL Defl inch	0.003 (L/15915)	2'3 5/8"	0.135 (L/360)	0.020 (2%)	S+0.5L	L				
TL Defl inch	0.006 (L/7627)	2'3 7/8"	0.202 (L/240)	0.030 (3%)	D+S+0.5L	L				



October 25, 2018

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 4-10-0	(Span)0-9-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 4-10-0		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Point	2-2-8		Тор	134 lb	0 lb	230 lb	0 lb	Header Column
5	Part. Uniform	2-4-0 to 4-10-0		Тор	46 PLF	0 PLF	106 PLF		u Framing Squash Block is
	Self Weight	EAD ALL NOTES ON	THIS PAGE AND	ON THE	8 PLF			required a	at all point loads over bearings

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

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

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 inlended 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. LVL beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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 bearing points to avoid isteral displacement and rotation

This design is valid until 7/10/2021

For liat roofs provide proper drainage to prevent

APA: PR-L318

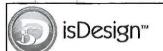
Manufacturer Info

Forex









Client: Project:

Address:

GREENPARK

Date:

F-GREENPARK-MINNISALE HOMES-GRANDBROOKE 1 10/23/2018

Page 1 of 1

Designer RO

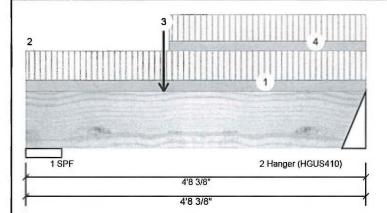
Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

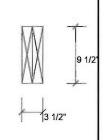
Project #:

F4-B Forex 2.0E-3000Fb LVL 1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor





Member Inforn	nation			Unfacto	red React	ions U	NPATTERN	ED lb (Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	v	Wind
Plies:	2	Design Method:	LSD	1	449		196		0	0
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	293		132		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	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF	6.000"	7%	245 / 674	919	L	1.25D+1.5L
				2-	4.000"	6%	165 / 440	605	L	1.25D+1.5L
Analysis Result	nalysis Results									

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1285 ft-lb	1'10 7/8"	22724 ft-lb	0.057 (6%)	1.25D+1.5L	L
Unbraced	1285 ft-lb	1'10 7/8"	22724 ft-lb	0.057 (6%)	1.25D+1.5L	L
Shear	873 lb	1'2 3/4"	9277 lb	0.094 (9%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/22814)	1'11 5/8"	0.133 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/9620)	1'11 3/16"	0.133 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.007 (L/6767)	1'11 1/4"	0.199 (L/240)	0.040 (4%)	D+L	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 braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

ID Trib Width Wind Load Type Location Side Dead Live Snow Comments 40 PSF Tie-In 0-0-0 to 4-8-6 15 PSF 0 PSF 0 PSF (Span)0-8-7 Top 1 Part. Uniform 0-0-0 to 0-1-4 1 PLF 0 PLF 0 PLF 2 Top 3 **Point** 1-10-14 Near Face 255 lb 642 lb 0 lb 0 lb Pass-Thru Framing Squash Block is required at all point loads over bearings

15 PSF

8 PLF

Tie-In 1-11-12 to 4-8-6 (Span)0-7-9 4 READ ALL NOTES ON THIS PAGE AND ON THE Self Weight

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

Manufacturer Info

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

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.

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

Handling & Installation

and ling & Installation.

LVL beams must not be cut or drilled
Refer to manufacturer's product information regarding installation requirements, multi-ply featening 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.

This design is valid until 7/10/2021

40 PSF

provide proper drainage to prevent

0 PSF







Client: Project:

Address:

GREENPARK

F-GREENPARK-MINNISALE HOMES-GRANDBROOKE 1 Date:

10/23/2018 Designer: RO

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

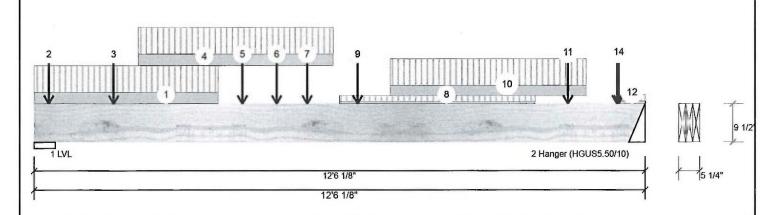
Project #

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

3-Ply - PASSED

Level: Second Floor



Member Infor	mation				Unfacto	red React	tions U	NPATTERN	ED lb (Uplift)	
Type:	Girder		Application:	Floor (Residential)	Brg	Live		Dead	Snow	Wind
Plies:	3		Design Method:	LSD	1	2873		1242	0	0
Moisture Condition	n: Dry		Building Code:	NBCC 2010 / OBC 2012	2	2073		885	0	0
Deflection LL:	360		Load Sharing:	Yes	_					
Deflection TL:	240		Deck:	Not Checked						
Importance:	Normal		Vibration:	Not Checked						
General Load										
Floor Live:	40 PSF				Bearing	s and Fac	tored F	Reactions		
Dead:	15 PSF				Bearing	Length	Сар.	React D/L lb	Total Ld. Case	Ld. Comb.
					1 - LVL	5.250"	29%	1552 / 4310	5862 L	1.25D+1.5L
			ļ		2-	4.000"	27%	1107 / 3109	4216 L	1.25D+1.5L
Analysis Resul	ts				Hanger					
Analysis Ad	tual	Location A	Illowed Capac	ity Comb. Case					-	

13922 ft-lb 5'6 1/8" 35449 ft-lb 0.393 (39%) 1.25D+1.5L L Moment Unbraced 13922 ft-lb 5'6 1/8" 35449 ft-lb 0.393 (39%) 1.25D+1.5L L Shear 4621 lb 1'2" 13915 lb 0.332 (33%) 1.25D+1.5L L Perm Defl in. 0.106 (L/1341) 6'1 9/16" 0.395 (L/360) 0.270 (27%) D Uniform LL Defl inch 0.243 (L/585) 6'1 11/16" 0.395 (L/360) 0.620 (62%) L L 6'1 11/16" 0.593 (L/240) 0.590 (59%) D+L TL Defl inch 0.349 (L/407)

PROFESSIONAL I.MATUEVIC 100528832 30 VINCE OF ONTHE

October 25, 2018

D	esi	gn	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 braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

ID	Load Type	Location	Trib Width	Side	Dead	Live
1	Part. Uniform	0-0-0 to 3-9-3		Near Face	102 PLF	248 PLF
2	Point	0-3-10		Far Face	122 lb	326 lb
3	Point	1-7-10		Far Face	116 lb	286 lb
4	Part. Uniform	2-1-10 to 6-1-10		Far Face	103 PLF	245 PLF
5	Point	4-3-3		Near Face	84 lb	201 lb
6	Point	4-11-10		Near Face	132 lb	293 lb
Continued or	page 2	T	DEAD ALL NO	TES ON THIS P	AGE AND ON	THE

0 lb Refer to Multiple Member Connection Detail for ply to ply nailing or bolting READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE

Snow

0 PLF

0 lb

0 lb

0 lb

0 PLF

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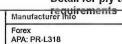
Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or cor

chemicals IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED Handling & Install

andling & Instalii CONTAINS SPECIFICATIONS AND CRIT
LVL beams must not I IN THE DESIGN OF THIS COMPONENT.
Refer to manufate 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

This design is ve

This design is valid until 7/10/2021



Wind

0 PLF

0 lb J5

0 lb J5

Comments

Pass月4fru Framing Squash Block is required at all point loads over bearings

> Kott Lumber Company 14 Anderson Blvd, Onlario 905-642-4400



Client: Project:

Address:

GREENPARK

Date:

10/23/2018

Page 2 of 2

Designer:

Job Name: GRANDBROOKE 1-ELEV 2-CUSTOM

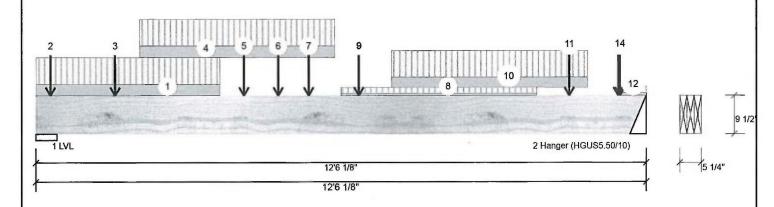
Project #:

Forex 2.0E-3000Fb LVL F6-B

1.750" X 9.500"

3-Ply - PASSED

Level: Second Floor



n page 1								
Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
Point	5-7-3		Near Face	20 lb	53 lb	0 lb	0 lb	J1
Part. Uniform	6-3-3 to 10-3-3		Near Face	20 PLF	54 PLF	0 PLF	0 PLF	
Point	6-7-10		Far Face	119 lb	286 lb	0 lb	0 lb	J5
Part. Uniform	7-3-10 to 11-3-10		Far Face	92 PLF	245 PLF	0 PLF	0 PLF	
Point	10-11-3		Near Face	24 lb	63 lb	0 lb	0 lb	J1
Tie-In	11-11-3 to 12-6-2	(Span)3-0-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
Point	11-11-3		Near Face	17 lb	46 lb	0 lb	0 lb	J1
Point	11-11-10		Far Face	93 lb	247 lb	0 lb	0 lb	J5
Self Weight				11 PLF				
	Load Type Point Part. Uniform Point Part. Uniform Point Tie-In Point Point	Load Type Location Point 5-7-3 Part. Uniform 6-3-3 to 10-3-3 Point 6-7-10 Part. Uniform 7-3-10 to 11-3-10 Point 10-11-3 Tie-In 11-11-3 to 12-6-2 Point 11-11-3 Point 11-11-10	Load Type Location Trib Width Point 5-7-3 Part. Uniform 6-3-3 to 10-3-3 Point 6-7-10 Part. Uniform 7-3-10 to 11-3-10 Point 10-11-3 Tie-In 11-11-3 to 12-6-2 (Span)3-0-2 Point 11-11-3 Point 11-11-10	Load Type Location Trib Width Side Point 5-7-3 Near Face Part. Uniform 6-3-3 to 10-3-3 Near Face Point 6-7-10 Far Face Part. Uniform 7-3-10 to 11-3-10 Far Face Point 10-11-3 Near Face Tie-In 11-11-3 to 12-6-2 (Span)3-0-2 Top Point 11-11-3 Near Face Point 11-11-10 Far Face	Load Type Location Trib Width Side Dead Point 5-7-3 Near Face 20 lb Part. Uniform 6-3-3 to 10-3-3 Near Face 20 PLF Point 6-7-10 Far Face 119 lb Part. Uniform 7-3-10 to 11-3-10 Far Face 92 PLF Point 10-11-3 Near Face 24 lb Tie-In 11-11-3 to 12-6-2 (Span)3-0-2 Top 15 PSF Point 11-11-3 Near Face 17 lb Point 11-11-10 Far Face 93 lb	Load Type Location Trib Width Side Dead Live Point 5-7-3 Near Face 20 lb 53 lb Part. Uniform 6-3-3 to 10-3-3 Near Face 20 PLF 54 PLF Point 6-7-10 Far Face 119 lb 286 lb Part. Uniform 7-3-10 to 11-3-10 Far Face 92 PLF 245 PLF Point 10-11-3 Near Face 24 lb 63 lb Tie-In 11-11-3 to 12-6-2 (Span)3-0-2 Top 15 PSF 40 PSF Point 11-11-3 Near Face 17 lb 46 lb Point 11-11-10 Far Face 93 lb 247 lb	Load Type Location Trib Width Side Dead Live Snow Point 5-7-3 Near Face 20 lb 53 lb 0 lb Part. Uniform 6-3-3 to 10-3-3 Near Face 20 PLF 54 PLF 0 PLF Point 6-7-10 Far Face 119 lb 286 lb 0 lb Part. Uniform 7-3-10 to 11-3-10 Far Face 92 PLF 245 PLF 0 PLF Point 10-11-3 Near Face 24 lb 63 lb 0 lb Tie-In 11-11-3 to 12-6-2 (Span)3-0-2 Top 15 PSF 40 PSF 0 PSF Point 11-11-3 Near Face 17 lb 46 lb 0 lb Point 11-11-10 Far Face 93 lb 247 lb 0 lb	Load Type Location Trib Width Side Dead Live Snow Wind Point 5-7-3 Near Face 20 lb 53 lb 0 lb 0 lb 0 lb Part. Uniform 6-3-3 to 10-3-3 Near Face 20 PLF 54 PLF 0 PLF 0 PLF Point 6-7-10 Far Face 119 lb 286 lb 0 lb 0 lb 0 lb Part. Uniform 7-3-10 to 11-3-10 Far Face 92 PLF 245 PLF 0 PLF 0 PLF Point 10-11-3 Near Face 24 lb 63 lb 0 lb 0 lb Tie-In 11-11-3 to 12-6-2 (Span)3-0-2 Top 15 PSF 40 PSF 0 PSF 0 PSF Point 11-11-3 Near Face 17 lb 46 lb 0 lb 0 lb Point 11-11-10 Far Face 93 lb 247 lb 0 lb 0 lb



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

Pass-Thru Framing Squash Block is required at all point loads over bearings

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

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

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

paprovals

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

Manufacturer life

APA: PR-L318









Client: Project:

Address:

GREENPARK

10/23/2018

Designer:

GRANDBROOKE 1-ELEV 2-CUSTOM

Job Name: Project #:

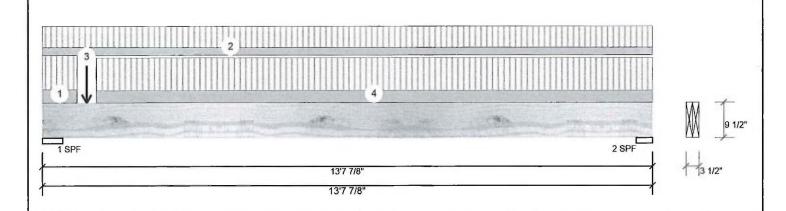
Date:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



Member Inform	nation			Unfacto	red Reac	tions U	NPATTERN	ED lb ((Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	w	Wind
Plies:	2	Design Method:	LSD	1	2127		952		0	0
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	250		150		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			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	5.500"	37%	1191 / 3190	4380	L	1.25D+1.5L
				2-SPF	4.375"	6%	188 / 374	562	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2760 ft-lb	3'2 15/16"	22724 ft-lb	0.121 (12%)	1.25D+1.5L	L
Unbraced	2760 ft-lb	3'2 15/16"	19408 ft-lb	0.142 (14%)	1.25D+1.5L	L
Shear	4326 lb	1'2 1/4"	9277 lb	0.466 (47%)	1.25D+1.5L	L.
Perm Defl in.	0.042 (L/3694)	6'4 1/4"	0.432 (L/360)	0.100 (10%)	D	Uniform
LL Defl inch	0.079 (L/1980)	6'2 1/2"	0.432 (L/360)	0.180 (18%)	L	L
TL Defl inch	0.121 (L/1289)	6'3 3/16"	0.648 (L/240)	0.190 (19%)	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.



October 25, 2018

enderness ratio base	ed on full section width.							
Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
Tie-In	0-0-0 to 0-9-6	(Span)0-8-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
Tie-In	0-0-0 to 13-7-14	(Span)0-5-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
Point	1-0-0		Far Face	885 lb	2073 lb	0 lb	0 lb	F6
Tie-In	1-2-10 to 13-7-14	(Span)0-8-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
Self Weight	ENGINEERING NOTE P IS AN INTEGRAL PART CONTAINS SPECIFICAT	AGE ENP-2, TH OF THIS DRAW FIONS AND CRI	E NOTE PAGE ING AS IT TERIA USED	8 PLF			required Refer to	ru Framing Squash Block is I at all point loads over bearings Multiple Member Connection or ply to ply nailing or bolting
	Load Type Tie-In Tie-In Point Tie-In	Tie-In 0-0-0 to 0-9-6 Tie-In 0-0-0 to 13-7-14 Point 1-0-0 Tie-In 1-2-10 to 13-7-14 Self Weight READ ALL NOTES ON ENGINEERING NOTE P. IS AN INTEGRAL PART CONTAINS SPECIFICA	Load Type	Load Type Location Trib Width Side Tie-In 0-0-0 to 0-9-6 (Span)0-8-11 Top Tie-In 0-0-0 to 13-7-14 (Span)0-5-5 Top Point 1-0-0 Far Face Tie-In 1-2-10 to 13-7-14 (Span)0-8-4 Top	Load Type Location Trib Width Side Dead Tie-In 0-0-0 to 0-9-6 (Span)0-8-11 Top 15 PSF Tie-In 0-0-0 to 13-7-14 (Span)0-5-5 Top 15 PSF Point 1-0-0 Far Face 885 lb Tie-In 1-2-10 to 13-7-14 (Span)0-8-4 Top 15 PSF Self Weight READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED 8 PLF	Load Type Location Trib Width Side Dead Live Tie-In 0-0-0 to 0-9-6 (Span)0-8-11 Top 15 PSF 40 PSF Tie-In 0-0-0 to 13-7-14 (Span)0-5-5 Top 15 PSF 40 PSF Point 1-0-0 Far Face 885 lb 2073 lb Tie-In 1-2-10 to 13-7-14 (Span)0-8-4 Top 15 PSF 40 PSF Self Weight READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED 8 PLF	Load Type Location Trib Width Side Dead Live Snow Tie-In 0-0-0 to 0-9-6 (Span)0-8-11 Top 15 PSF 40 PSF 0 PSF Tie-In 0-0-0 to 13-7-14 (Span)0-5-5 Top 15 PSF 40 PSF 0 PSF Point 1-0-0 Far Face 885 lb 2073 lb 0 lb Tie-In 1-2-10 to 13-7-14 (Span)0-8-4 Top 15 PSF 40 PSF 0 PSF Self Weight READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED 8 PLF	Load Type Location Trib Width Side Dead Live Snow Wind Tie-In 0-0-0 to 0-9-6 (Span)0-8-11 Top 15 PSF 40 PSF 0 PSF 0 PSF Tie-In 0-0-0 to 13-7-14 (Span)0-5-5 Top 15 PSF 40 PSF 0 PSF 0 PSF Point 1-0-0 Far Face 885 lb 2073 lb 0 lb 0 lb 0 lb Tie-In 1-2-10 to 13-7-14 (Span)0-8-4 Top 15 PSF 40 PSF 0 PSF 0 PSF Self Weight READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED 8 PLF Refer to

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
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- andling & Installation

 LVL beams must not be cut or drilled

 Refar 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 Forex APA: PR-L318

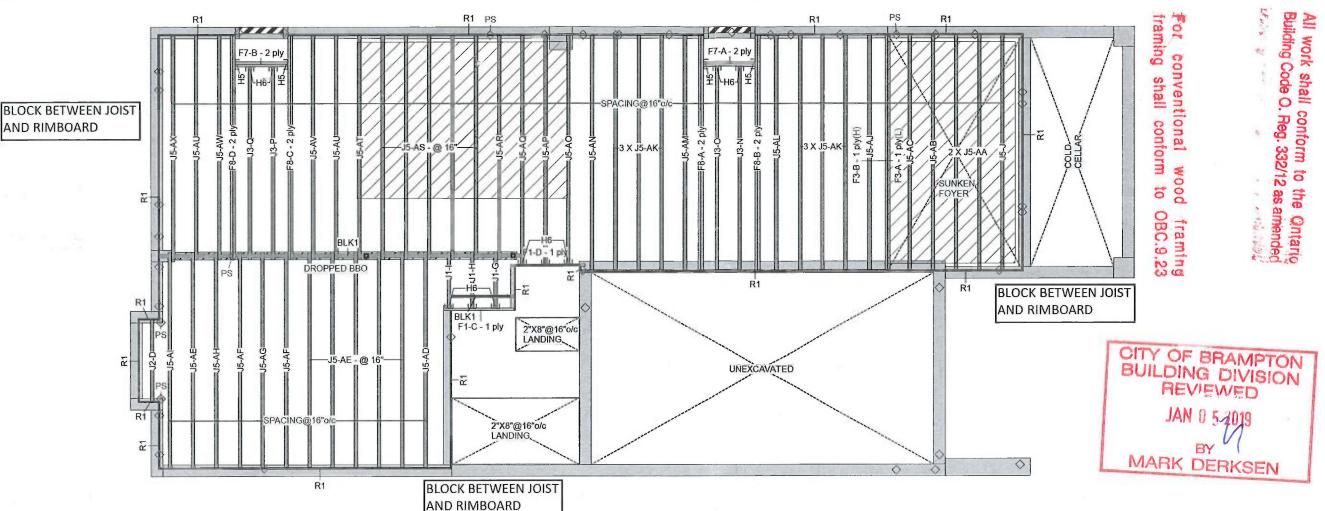
Kott Lumber Company 14 Anderson Blvd, Ontario Canada K2H7V1 905-642-4400



requirements







Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F8	Forex 2.0E-3000Fb LVL	1.75	9.5	4	2	8	14-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5			2	14-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			2	6-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	4-0-0
Joist (Flush)						
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J5	LPI 20Plus	2.5	9.5			42	14-0-0
J3	LPI 20Plus	2.5	9.5			4	12-0-0
J2	LPI 20Plus	2.5	9.5			1	6-0-0
	J1 LPI 20Plus		9.5			3	4-0-0
	ard						
J1	ard Description	Width	Depth	Qty	Plies	Pcs	Length

Skew Slope

Width Depth Qty

2.5 9.5 LinFt

Label Pcs Description

Label Description BLK1 LPI 20 Plus

4 LF359

10 LT259

H5

H6

Blocking

NOTES:

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/c under parallel non-load bearing walls. . Install single-ply flush window header along inside face of

Refer to Nascor specifier guide for installation works. 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 frame's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

efer to Multiple Member Connection Detail to ply to ply nailing or

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

atch are represents ceramic tiled floor with an additional dead load

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

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP 64 Jardin Dr., Suite 3A Date: Rev. 1, 5/22/2018 Project No: 18-24 Model: Grandbrooke 1, Elevation 2

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

2. Nascor CCMC - 13535-R

3. LVL CCMC -14056-R

4. CAN/CSA-O86-09

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

Legend

Point Load Support Load from Above Wall

Wall Opening Norbord Rimboard Plus 1.125 X 9.5 LPI 20Plus 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5

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 KOTT span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the KOTT 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.



Layout Name GRANDBROOKE 1-ELEV 2-CUSTON Design Method Description Created June 25, 2018 Revised October 23, 2018 Builder GREENPARK

Shipping Project

Sales Rep

RM Designer RO

Builder's Project

Kott Lumber Company 14 Anderson Blvd

Stouffville, Ontario Canada

K2H7V1 905-642-4400

Job Path

S:\CUSTOMERS\GREENPARK \MINNISALE HOMES\MODELS **\GRANDBROOKE 1\CUSTOM** FLOORS\GRANDBROOKE 1-ELEV 2 **CUSTOM.isl**

Ground Floor Design Method LSD Building Code NBCC 2010 / OBC

2012 Floor Loads 40 Live Dead 15 **Deflection Joist** 480 LL Span L/ 360 TL Span L/ LL Cant 2L/ 480 TL Cant 2L/ 360

Deflection Girder 360 LL Span L/ TL Span L/ 240 LL Cant 2L/ 480 240 TL Cant 2L/

Decking Deck OSB Thickness 3/4" Nailed & Glued Fastener

Vibration



Version 18.40.162 Powered by iStruct™

Ground Floor

AND RIMBOARD

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

Varies 18-0-0

fasteners

2 #8x1 1/4WS

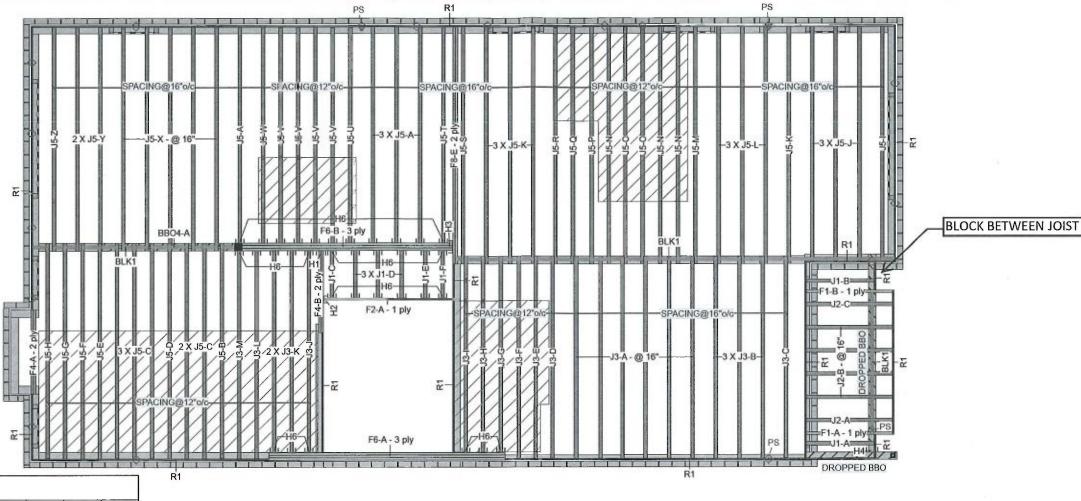
2 10dx1 1/2

Plies Pcs Length

fasteners

10 10d

4 10dx1 1/2



F-GREENPARK-MINNISALE HOMES-GRANDBROOKE 1

Label Description Width Depth Qty Plies Pcs Length 14-0-0 F6 9.5 Forex 1.75 2.0E-3000Fb LVL F8 Forex 1.75 9.5 2 14-0-0 2.0E-3000Fb LVL F2 8-0-0 1.75 9.5 2.0E-3000Fb LVL F4 9.5 6-0-0 1.75 2 2 Forex 2.0E-3000Fb LVL F1 1.75 9.5 6-0-0 Forex 2.0E-3000Fb LVL LVL/LSL (Dropped) Qty Plies Pcs Length Label Description Width Depth 1.75 9.5 BBO4 Forex 3 10-0-0 2.0E-3000Fb LVL Joist (Flush) Qty Plies Pcs Length Width Depth Label Description J5 LPI 20Plus 2.5 9.5 51 14-0-0 9.5 21 12-0-0 J3 LPI 20Plus 2.5 J2 LPI 20Plus 2.5 9.5 6-0-0 2.5 9.5 J1 LPI 20Plus 8 4-0-0

Label	Descr	iption	Width	De	oth	Qty	Plies	Pcs	Length	
R1		d Rimboard 125 X 9.5	1.125		9.5			14	12	
Hanger						Ве	am/Girder		ported ember	
Label	Pcs	Description		kew	Slo	pe fa	fasteners		fasteners	
H1	-1	HGUS410					46 16d		16 16d	
H2	1	LF179					10 10d		1 #8x1 1/4WS	
H3	1	HGUS5.50/	10				46 16d		16 16d	
H4	1	Unknown Hanger								
H6	34	LT259				4	4 10dx1 1/2		2 10dx1 1/2	
Blockin	ıg									
Label	Descr	cription Wi		De	pth	Qty	Plies	Pcs	Length	
BLK1	LPI 20 Plus		2.5		9.5	LinFt		Varies	32-0-0	

ARCHITECTURAL DRAWINGS:

ARDIN DESIGN GROUP 64 Jardin Dr., Suite 3A Date: Rev. 1, 5/22/2018 Project No: 18-24

Model: Grandbrooke 1, Elevation 2

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/c under parallel non-load bearing walls.

 Install single-ply flush window header along inside face of rimboard/rimjoist. . Refer to Nascor specifier guide for installation works. . 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 frame'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 requirements

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 are represents ceramic tiled floor with an additional dead load

The framing shown on this layout may deviate from the architectural and structural drawings. Project Engineer to review and apporve the deviation Varies 32-0-0 prior to construction.

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R 3. LVL CCMC -14056-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

Legend



Point Load Support Load from Above Wall Opening Norbord Rimboard Plus 1.125 X 9.5 LPI 20Plus 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5 (Dropped) 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 KOTT span table for the loads and spacing shown on this layout.

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

The floor system must be assembled in accordance to the KOTT Specifier Guide, Multi-ply members must be attached together as lateral stability are the responsibility of others.

Lavout Name

GRANDBROOKE 1-ELEV 2-CUSTON

Design Method

LSD Description

Created

June 25, 2018

Revised October 23, 2018

Builder

GREENPARK

Sales Rep

RM Designer

RO

Shipping

Project Builder's Project

Kott Lumber Company

14 Anderson Blvd

Stouffville, Ontario Canada

K2H7V1 905-642-4400

Job Path

S:\CUSTOMERS\GREENPARK \MINNISALE HOMES\MODELS **\GRANDBROOKE 1\CUSTOM** FLOORS\GRANDBROOKE 1-ELEV 2

CUSTOM.isl

Second Floor

LSD Design Method Building Code NBCC 2010 / OBC 2012

Floor

Loads Live Dead

Deflection Joist

LL Span L/

480 TL Span L/ 360

40

15

480

360

360

240

Gypsum 1/2"

LL Cant 2L/

TL Cant 2L/ Deflection Girder

LL Span L/

TL Span L/

LL Cant 2L/ 480

TL Cant 2L/ 240

Decking

OSB Deck

Thickness 5/8"

Fastener Nailed & Glued Vibration



October 25, 2018

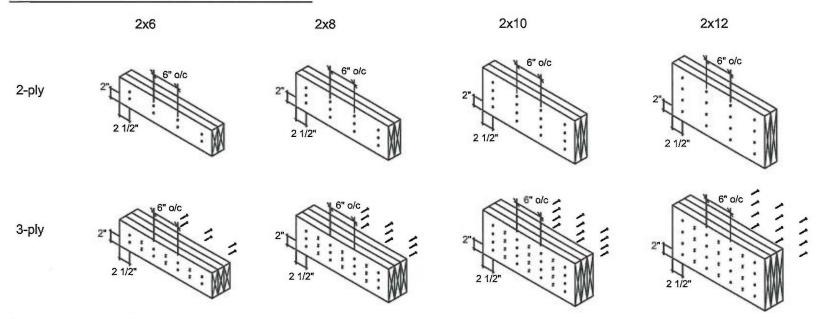


Rim Board

Second Floor

LVL/LSL (Flush)

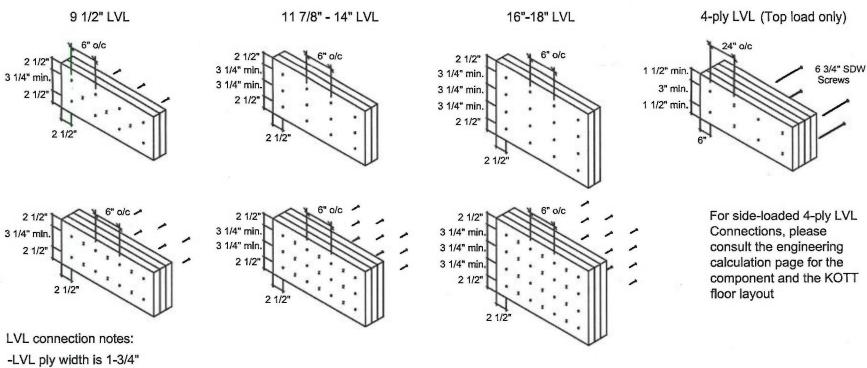
Conventional Connections



Conventional connection notes:

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

LVL Connections



- -Nails to be 3 1/2" common wire nails.
- -Nails to be located 2 1/2" min. from the top and bottom of the member. Start all nails 2 1/2" min. 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.

Multiple Member Connections

All connections are for uniformly distributed loads.

For multi-ply connections of I-joists, refer to Manufacturer's Installation Guide



KOTT Inc. 3228 Moodie Drive Ottawa, ON K2H 7V1 613-838-2775