

**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 only 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.

**COMPONENT**

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



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

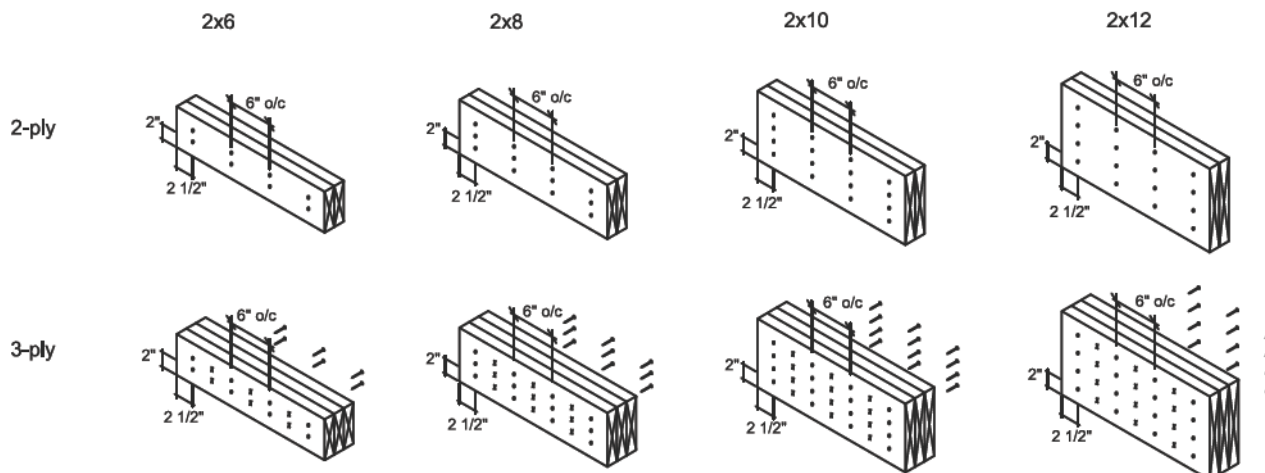
**HANDLING AND INSTALLATION**

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

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

GREENPARK-TRINAR HALL-EAST GWILLIMBURY-ON-LOT-19

## Conventional Connections



### Conventional connection notes:

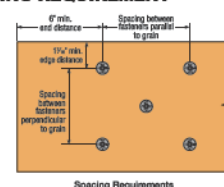
- Nails to be 3" long wire nails.
- Nails to be located 2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

### SIMPSON SDW SPACING REQUIREMENT

Table 9 — Spacing Requirements

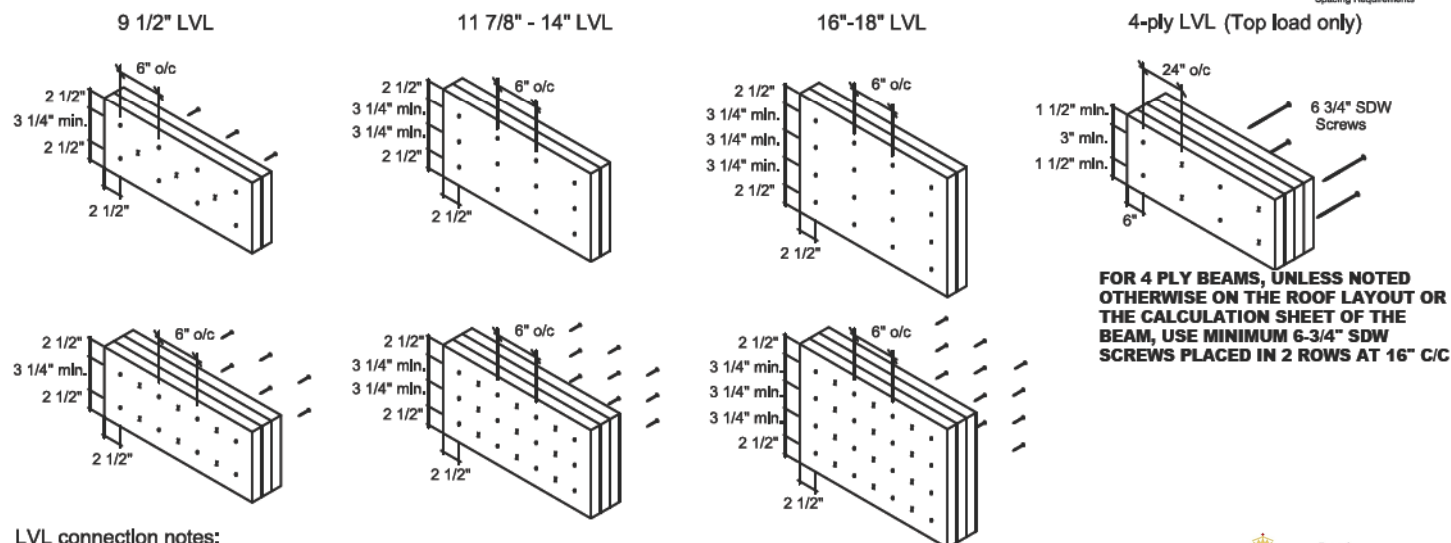
Geometry	Minimum Dimensions (in.)	
	D-J-F-L	S-P-F
Spacing parallel to grain	6	5
End distance parallel to grain	6	6
Spacing perpendicular to grain	3	2 1/2
Edge distance perpendicular to grain	1 1/4	1 1/4

1. Additional screws may be staggered diagonally between rows.



## LVL Connections

**HEAD OF ALL SPECIFIED NAILS AND SCREWS MUST BE ON THE LOADED SIDE**



### LVL connection notes:

- LVL ply width is 1-3/4"
- 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.
- 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.



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## Multiple Member Connections

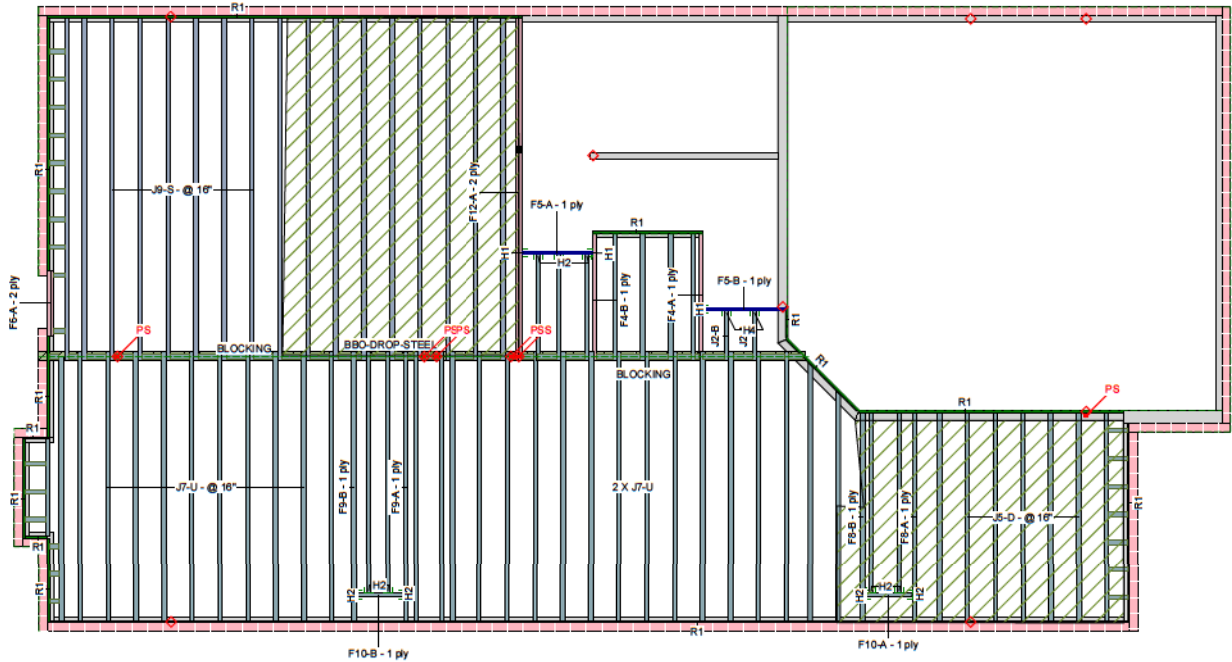
All connections are for uniformly distributed loads.

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

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

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

Hatch Area represents where  
additional load has been applied.  
(e.g. 5 psf for ceramic tile)



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Zoning			

Ground Floor							
LVL/L SL							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F12	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	18-0-0
F4	Forex 2.0E-3000Fb LVL	1.75	11.875			2	8-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875			2	4-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	4-0-0
I Joist							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F9	AJS 140	2.5	11.875			2	14-0-0
F8	AJS 140	2.5	11.875			2	10-0-0
F10	AJS 140	2.5	11.875			2	4-0-0
J7	AJS 140	2.5	11.875			27	14-0-0
J6	AJS 140	2.5	11.875			3	12-0-0
J5	AJS 140	2.5	11.875			9	10-0-0
J4	AJS 140	2.5	11.875			4	8-0-0
J3	AJS 140	2.5	11.875			4	6-0-0
J2	AJS 140	2.5	11.875			2	4-0-0
J9	AJS 20	2.5	11.875			17	18-0-0
Rim Board							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			12	12-0-0
Blocking							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	AJS 140	2.5	11.875	1mR		Varies	42-0-0
Hanger							
				Beam/Girder		Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners	
H1	3	HUS1.81/10			30 16d	10 16d	
H2	11	LF2511			12 10d	1 #8x1 1/4WS	
H4	All blocking to be cut from 12' joists						
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length							
3. Ends of joists to be laterally supported							
4. Packing of Steel beams and attachment by others							
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations							
6. Beams identified as "B" are dropped and supplied by others							
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls							
8. Load transfer blocks to be installed under all point loads							
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements							
10. Hangers and Fasteners to be installed as per manufacturer							
11. Framing shown on this layout may deviate from architectural drawings. Arch/ Eng to review and approve the deviation prior to construction.							

Legend	
PS	Point Load Support
◇	Load from Above
■	Wall
■	Norbord Rimboard Plus 1.125 X 11.875
■	AJS 140 11.875
■	AJS 20 11.875
■	Forex 2.0E-3000Fb LVL 1.75 X 11.875
■	5.25 X 10.25 (Dropped)

JOISTS SPACING 12"O/C  
UNLESS  
NOTED OTHERWISE

JOB INFORMATION	
Builder	
Project	
Shipping	GREENPARK HOMES TRINAR HALL, EAST GWILLIMBURY, ON
Sales Rep	
Designer	S B
Plotted	December 17, 2020
Layout Name	LOT-19(BRENTWOOD-2 EL-2)
Job Path	C:\Data\SAUMIL\GREENPARK HOMES\TRINAR HALL\LOT 19\FLOOR\LOT-19(BRENTWOOD-2 EL-2).jail
DESIGN CRITERIA	
Ground Floor	
Design Method	LSD (Canada)
Building Code	NBCC 2015 / OBC 2012
Floor Loads	
Live	40
Dead	15
Deflection Joist	
LL Span 1/	360
TL Span 1/	360
LL Cant 2/	480
TL Cant 2/	360
Deflection Girder	
LL Span 1/	360
TL Span 1/	240
LL Cant 2/	480
TL Cant 2/	360
Decking	OSB
Thickness	3/4"
Fastener	Nailed & Glued
Vibration	
Strapping	1"x4", 1 Row at Midspan
CCMC References	
Boise - 12472-R, 12787-R LP - 12412-R Forex - 14056-R	
Kott Inc.	
3228 Moodie Dr, Ottawa 14 Anderson Blvd, Uxbridge, Ontario	
613-838-2775 / 905-642-4400	



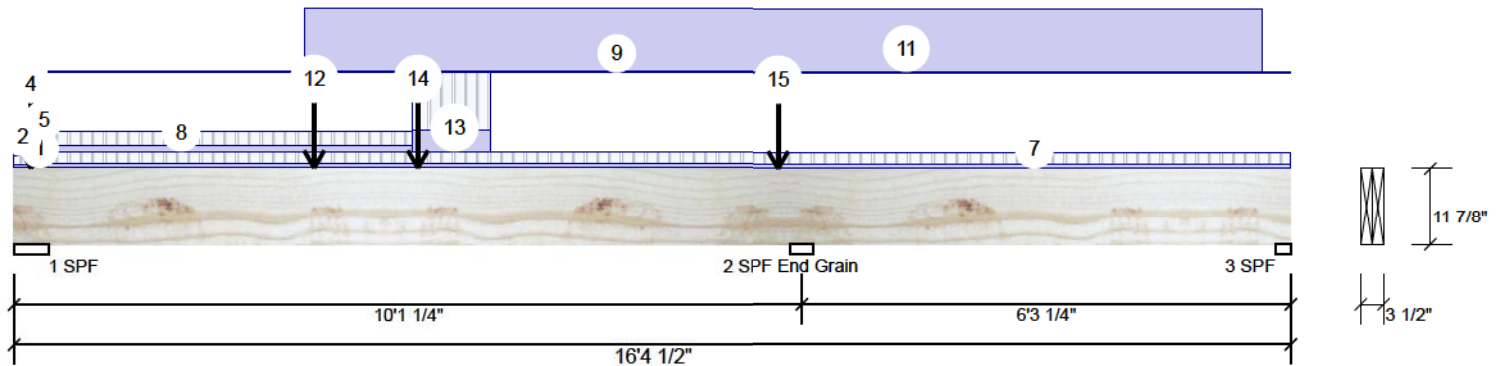




Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**F12-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Ground Floor



### Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1647	853	0	0
2	1673	1550	0	0
3	0 (-279)	44	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	31%	1051 / 2451	3502 L	1.25D+1.5L
2 - SPF	3.500"	50%	1976 / 2573	4549 LL	1.25D+1.5L
End Grain					
3 - SPF	2.375"	3%	31 / 65.97 (-498)	L	1.25D+1.5L (0.9D+1.5L)

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-5225 ft-lb	10'1 1/4"	34261 ft-lb	0.153 (15%)	1.25D+1.5L	LL
Unbraced	-5225 ft-lb	10'1 1/4"	29859 ft-lb	0.175 (17%)	1.25D+1.5L	LL
Pos Moment	8316 ft-lb	3'10 1/8"	34261 ft-lb	0.243 (24%)	1.25D+1.5L	L
Unbraced	8316 ft-lb	3'10 1/8"	29859 ft-lb	0.279 (28%)	1.25D+1.5L	L
Shear	2759 lb	9'1 3/8"	11596 lb	0.238 (24%)	1.25D+1.5L	LL
Perm Defl in.	0.034 (L/3421)	4'8 1/16"	0.324 (L/360)	0.110 (11%)	D	Uniform
LL Defl inch	0.060 (L/1948)	4'5 3/8"	0.324 (L/360)	0.180 (18%)	L	L
TL Defl inch	0.094 (L/1242)	4'6 5/16"	0.486 (L/240)	0.190 (19%)	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 Tie-down connection required at bearing 3 for uplift 498 lb (Combination 0.9D+1.5L, Load Case L).
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on full section width.

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

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



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

### 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

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

### chemicals

### Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information 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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Forex  
APA: PR-L318

Kott Inc.  
3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

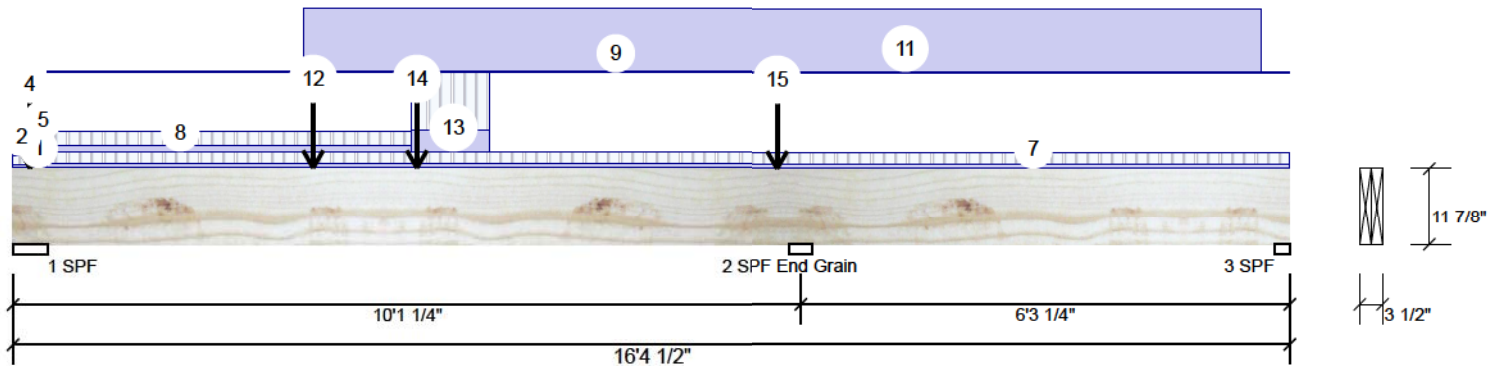




Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**F12-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Ground Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-4	0-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-4	0-4-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-2-10		Top	190 lb	453 lb	0 lb	0 lb	B7 B7
4	Point	0-2-10		Top	20 lb	0 lb	0 lb	0 lb	Wall Self Weight
5	Part. Uniform	0-2-13 to 0-5-4		Top	1 PLF	0 PLF	0 PLF	0 PLF	
7	Tie-In	0-5-4 to 16-4-8	0-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
8	Tie-In	0-5-4 to 5-1-3	0-5-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
9	Part. Uniform	0-5-4 to 16-4-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	
11	Part. Uniform	3-8-10 to 16-0-2		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
12	Point	3-10-2		Top	683 lb	1672 lb	0 lb	0 lb	B7 B7
13	Tie-In	5-1-3 to 6-1-5	1-9-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
14	Point	5-2-1		Near Face	108 lb	268 lb	0 lb	0 lb	F5
15	Point	9-9-10		Top	121 lb	239 lb	0 lb	0 lb	B6 B6
	Self Weight				10 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER  
CONNECTION DETAIL FOR PLY TO PLY  
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Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

#### Notes

Calculated Structural 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

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

chemicals

#### Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information 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

6. For flat roofs provide proper drainage to prevent ponding

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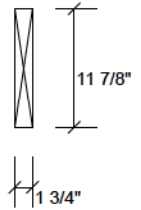
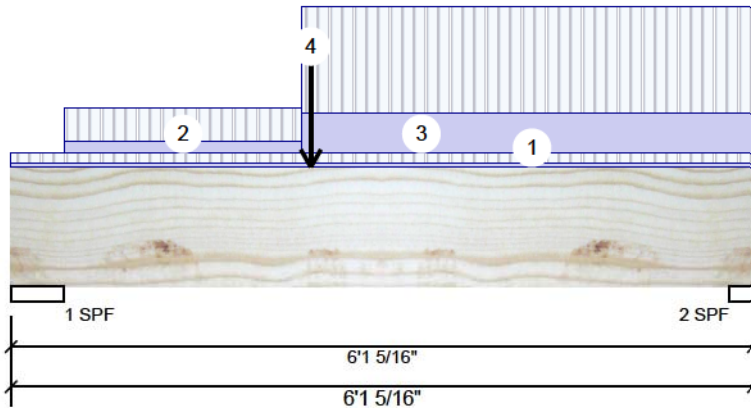


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Project #:

# F4-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



## Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

## Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	478	200	0	0
2	426	177	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	17%	250 / 717	966 L	1.25D+1.5L
2 - SPF	2.375"	34%	221 / 639	860 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1862 ft-lb	2'5 5/8"	17130 ft-lb	0.109 (11%)	1.25D+1.5L	L
Unbraced	1862 ft-lb	2'5 5/8"	8030 ft-lb	0.232 (23%)	1.25D+1.5L	L
Shear	894 lb	1'4 3/8"	5798 lb	0.154 (15%)	1.25D+1.5L	L
Perm Defl in. (L/11636)	0.006	2'9 13/16"	0.187 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.014 (L/4751)	2'9 11/16"	0.187 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.020 (L/3374)	2'9 11/16"	0.280 (L/240)	0.070 (7%)	D+L	L

## Design Notes

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 6-1-5	0-2-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-5-4 to 2-4-12	0-7-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	2-4-12 to 6-1-5	1-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	2-5-10		Near Face	204 lb	521 lb	0 lb	0 lb	F5
	Self Weight				5 PLF				



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## Notes

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## Lumber

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

## chemicals

## Handling & Installation

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

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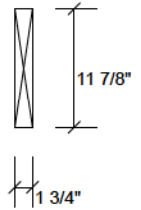
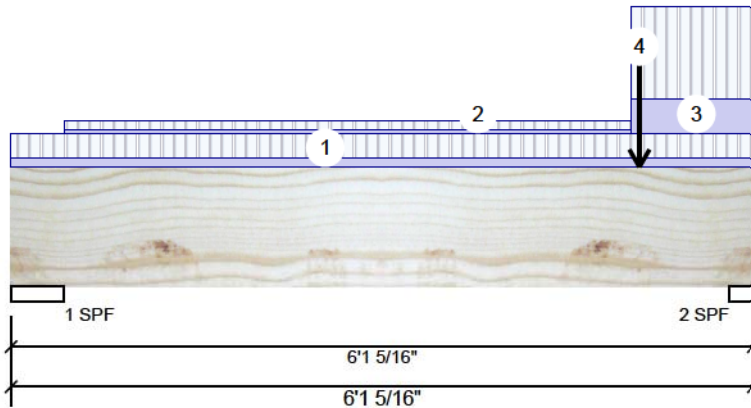


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# F4-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



## Member Information

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Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

## Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	128	64	0	0
2	390	167	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	5%	80 / 192	272 L	1.25D+1.5L
2 - SPF	2.375"	31%	209 / 585	794 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	562 ft-lb	4'9 1/8"	17130 ft-lb	0.033 (3%)	1.25D+1.5L	L
Unbraced	562 ft-lb	4'9 1/8"	8030 ft-lb	0.070 (7%)	1.25D+1.5L	L
Shear	599 lb	4'11 13/16"	5798 lb	0.103 (10%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/33372)	3'6 5/8"	0.187 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.004 (L/15426)	3'7 1/2"	0.187 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.006 (L/10551)	3'7 3/16"	0.280 (L/240)	0.020 (2%)	D+L	L

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

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

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



## Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 6-1-5	0-5-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-5-4 to 5-1-3	0-2-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	5-1-3 to 6-1-5	1-9-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	5-2-1		Far Face	118 lb	292 lb	0 lb	0 lb	F5
	Self Weight				5 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

## Notes

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

## Lumber

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

## chemicals

## Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code 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 Inc.  
3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023



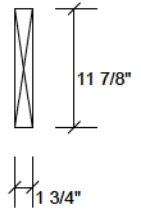
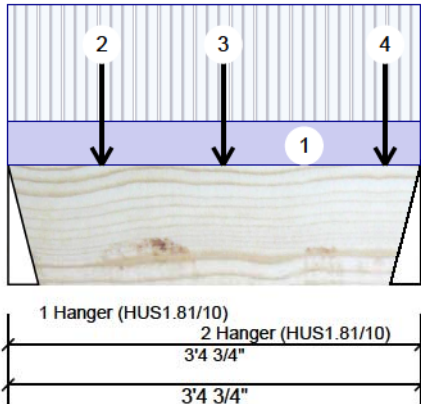


Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

# F5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



## Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

## Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	268	108	0	0
2	292	118	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - Hanger	3.000"	14%	135 / 401	537 L 1.25D+1.5L
2 - Hanger	3.000"	15%	147 / 438	585 L 1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	413 ft-lb	1'9 1/4"	17130 ft-lb	0.024 (2%)	1.25D+1.5L	L
Unbraced	413 ft-lb	1'9 1/4"	13730 ft-lb	0.030 (3%)	1.25D+1.5L	L
Shear	393 lb	2'2 5/8"	5798 lb	0.068 (7%)	1.25D+1.5L	L
Perm Defl in. (L/50245)	0.001	1'9 1/4"	0.101 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch (L/20138)	0.002	1'9 1/4"	0.101 (L/360)	0.020 (2%)	L	L
TL Defl inch (L/14376)	0.003	1'9 1/4"	0.151 (L/240)	0.020 (2%)	D+L	L

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

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



## Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-4-12		Top	30 PLF	80 PLF	0 PLF	0 PLF	
2	Point	0-9-4		Near Face	35 lb	93 lb	0 lb	0 lb	J3
3	Point	1-9-4		Near Face	42 lb	113 lb	0 lb	0 lb	J3
4	Point	3-1-4		Near Face	31 lb	82 lb	0 lb	0 lb	J3
	Self Weight				5 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

## Notes

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## Lumber

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

chemicals

## Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information 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

6. For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

Forex  
APA: PR-L318

Kott Inc.  
3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

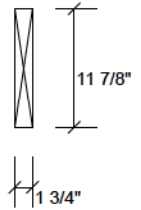
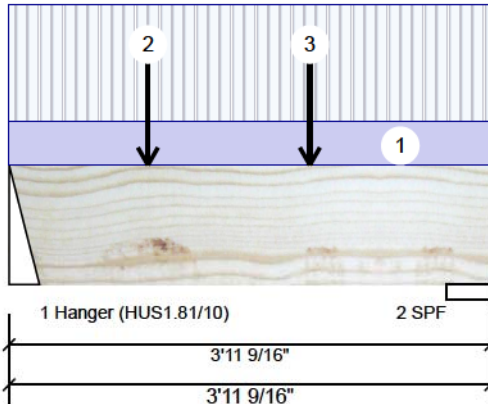


Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

# F5-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



## Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

## Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	521	204	0	0
2	543	213	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	27%	256 / 782	1037 L	1.25D+1.5L
2 - SPF	4.375"	23%	267 / 814	1081 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	841 ft-lb	1'11 3/8"	17130 ft-lb	0.049 (5%)	1.25D+1.5L	L
Unbraced	841 ft-lb	1'11 3/8"	12633 ft-lb	0.067 (7%)	1.25D+1.5L	L
Shear	474 lb	1'2 1/8"	5798 lb	0.082 (8%)	1.25D+1.5L	L
Perm Defl in. (L/25114)	0.002	1'11 1/4"	0.116 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.004 (L/9846)	1'11 3/16"	0.116 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.006 (L/7073)	1'11 3/16"	0.174 (L/240)	0.030 (3%)	D+L	L

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



## Design Notes

- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-11-9		Top	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	1-1-11		Near Face	20 lb	54 lb	0 lb	0 lb	J2
3	Point	2-5-11		Near Face	22 lb	58 lb	0 lb	0 lb	J2
	Self Weight				5 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

## Notes

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## Lumber

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

chemicals

## Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code 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 Inc.  
3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

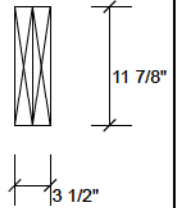
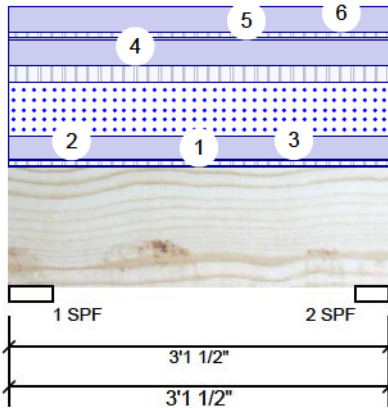


Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

# F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



## Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

## Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	134	411	273	0
2	127	388	259	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.261"	12%	513 / 543	1057	L	1.25D+1.5S +L
2 - SPF	3.251"	15%	486 / 515	1000	L	1.25D+1.5S +L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	567 ft-lb	1'7 1/4"	32890 ft-lb	0.017 (2%)	1.25D+1.5S +L	L
Unbraced	567 ft-lb	1'7 1/4"	32890 ft-lb	0.017 (2%)	1.25D+1.5S +L	L
Shear	212 lb	1'11 1/8"	11132 lb	0.019 (2%)	1.25D+1.5S +L	L
Perm Defl in.	0.001 (L/35421)	1'7 5/16"	0.088 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/42743)	1'7 5/16"	0.088 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.002 (L/19370)	1'7 5/16"	0.131 (L/240)	0.010 (1%)	D+S+0.5L	L

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



## Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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 3-1-8	0-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 1-0-5		Top	1 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 3-1-8		Top	73 PLF	51 PLF	170 PLF	0 PLF	

Continued on page 2....

## Notes

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## Lumber

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

chemicals

## Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code 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 Inc.  
3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400





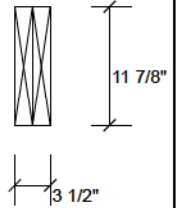
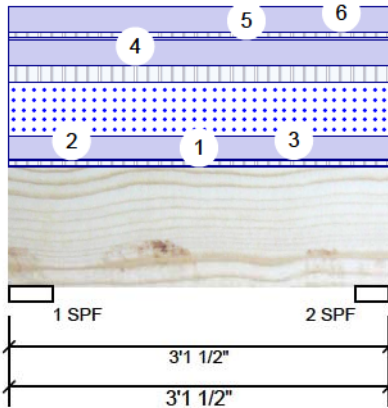


Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-0-0 to 3-1-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Tapered Start	0-0-0		Top	7 PLF	17 PLF	0 PLF	0 PLF	
	End	3-1-8			7 PLF	17 PLF	0 PLF	0 PLF	
6	Part. Uniform	0-0-0 to 3-1-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 PLF				

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

#### Notes

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#### Lumber

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

#### chemicals

#### Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information 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

6. For flat roofs provide proper drainage to prevent ponding

#### Manufacturer Info

Forex  
APA: PR-L318

This design is valid until 4/24/2023

Kott Inc.  
3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400



**F10-A**

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 15:26:27

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Address:

GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

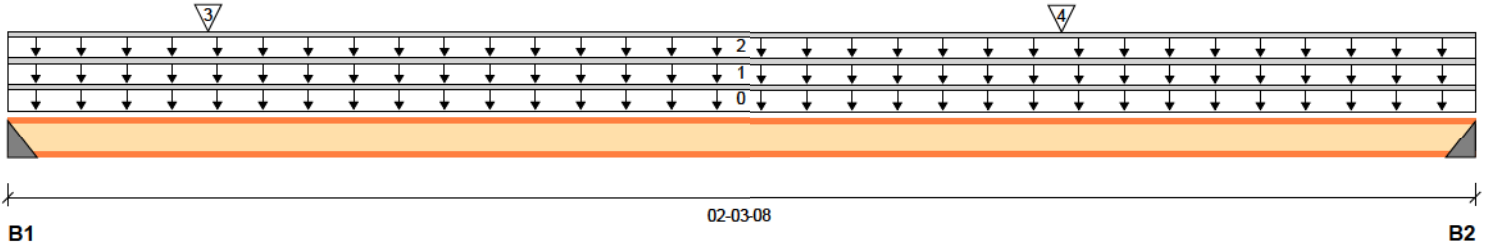
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



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

Bearing	Live	Dead	Snow	Wind
B1, 2"	208 / 0	105 / 0		
B2, 2"	175 / 0	89 / 0		

**Load Summary**

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	02-03-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	02-03-08	Top		3			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	02-03-08	Top	26	10			n/a
3	J5	Conc. Pt. (lbs)	L	00-03-12	00-03-12	Back	148	72			n/a
4	J5	Conc. Pt. (lbs)	L	01-07-12	01-07-12	Back	176	87			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	190 ft-lbs	5305 ft-lbs	3.6%	1	01-07-12
End Reaction	443 lbs	1607 lbs	27.6%	1	00-00-00
End Shear	434 lbs	2350 lbs	18.5%	1	00-02-00
Total Load Deflection	L/999 (0.002")	n/a	n/a	4	01-07-12
Live Load Deflection	L/999 (0.001")	n/a	n/a	5	01-07-12
Max Defl.	0.002"	n/a	n/a	4	01-07-12
Span / Depth	2.1				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1 Hanger	2" x 2-1/2"	443 lbs	20.0%	27.6%	LF2511
B2 Hanger	2" x 2-1/2"	373 lbs	16.9%	23.2%	LF2511

**Cautions**

Hanger LF2511 requires (12) 10dx1.5 face nails, (1) #8x1.25 joist nails.

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

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

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**F10-A**

Dry | 1 span | No cant.

December 17, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Description: Level - Ground Floor

Specifier:

Designer: S B

Company:

**Notes**

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

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

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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Completeness:  **East Gwillimbury**  
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

properties and Installation of B engineered work accordance with Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

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

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

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

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



**F10-B**

Dry | 1 span | No cant.

December 17, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Description: Level - Ground Floor

City, Province, Postal Code:

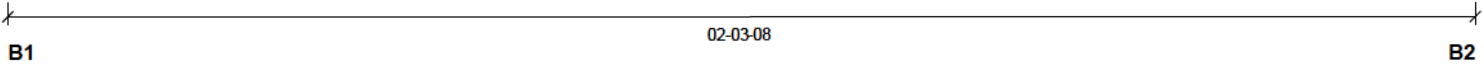
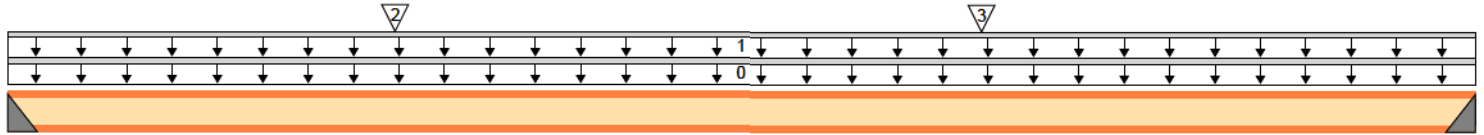
Specifier:

Customer:

Designer: S B

Code reports: CCMC 12787-R

Company:



Total Horizontal Product Length = 02-03-08

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

Bearing	Live	Dead	Snow	Wind
B1, 2"	233 / 0	91 / 0		
B2, 2"	211 / 0	82 / 0		

**Load Summary**

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	02-03-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	02-03-08	Top	26	10			n/a
2	J6	Conc. Pt. (lbs)	L	00-07-04	00-07-04	Back	183	69			n/a
3	J6	Conc. Pt. (lbs)	L	01-06-04	01-06-04	Back	202	76			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	263 ft-lbs	5305 ft-lbs	5.0%	1	01-06-04
End Reaction	463 lbs	1607 lbs	28.8%	1	00-00-00
End Shear	454 lbs	2350 lbs	19.3%	1	00-02-00
Total Load Deflection	L/999 (0.003")	n/a	n/a	4	01-04-14
Live Load Deflection	L/999 (0.002")	n/a	n/a	5	01-05-02
Max Defl.	0.003"	n/a	n/a	4	01-04-14
Span / Depth	2.1				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Hanger 2" x 2-1/2"	463 lbs	20.9%	28.8%	LF2511
B2	Hanger 2" x 2-1/2"	419 lbs	18.9%	26.0%	LF2511

**Cautions**

Hanger LF2511 requires (12) 10dx1.5 face nails, (1) #8x1.25 joist nails.

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist

**READ ALL NOTES ON THIS PAGE AND ON  
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**REFER TO MULTIPLE MEMBER TO MEMBER  
CONNECTION DETAIL FOR PLY TO PLY  
NAILING OR BOLTING REQUIREMENTS.**

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



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

**F10-B**

Dry | 1 span | No cant.

December 17, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Description: Level - Ground Floor

Specifier:

Designer: S B

Company:

**Notes**

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

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

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

**Disclosure**

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Completeness:  **East Gwillimbury**  
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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F8-A

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 15:26:27

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Address:

GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

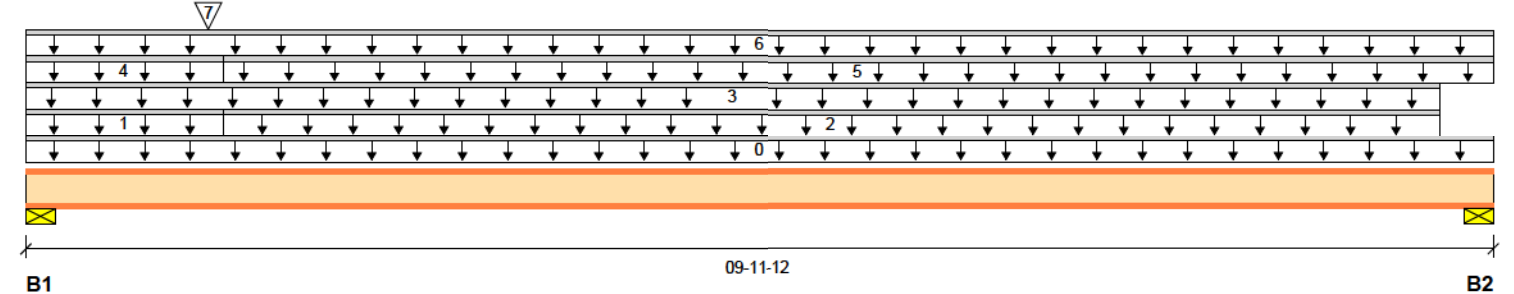
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	387 / 0	208 / 0		
B2, 4-3/8"	217 / 0	121 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	09-11-12	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top		6			n/a
2		Unf. Lin. (lb/ft)	L	01-04-02	09-07-06	Top		2			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	09-07-06	Top		3			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	50	19			n/a
5		Unf. Lin. (lb/ft)	L	01-04-02	09-11-12	Top	15	6			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	09-11-12	Top	23	9			n/a
7	F10	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Back	175	89			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1213 ft-lbs	5305 ft-lbs	22.9%	1	04-03-10
End Reaction	840 lbs	1684 lbs	49.9%	1	00-00-00
End Shear	809 lbs	2350 lbs	34.4%	1	00-02-06
Total Load Deflection	L/999 (0.058")	n/a	n/a	4	04-07-11
Live Load Deflection	L/999 (0.038")	n/a	n/a	5	04-07-11
Max Defl.	0.058"	n/a	n/a	4	04-07-11
Span / Depth	9.6				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	840 lbs	23.0%	49.9%	Spruce-Pine-Fir
B2	Wall/Plate 4-3/8" x 2-1/2"	477 lbs	7.1%	24.9%	Spruce-Pine-Fir



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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**F8-A**

Dry | 1 span | No cant.

December 17, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Description: Level - Ground Floor

Specifier:

Designer: S B

Company:

**Notes**

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

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

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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**F8-B**

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Dry | 1 span | No cant.

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Build 7364

Job name:

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Address:

GREENPARK HOMES  
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Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

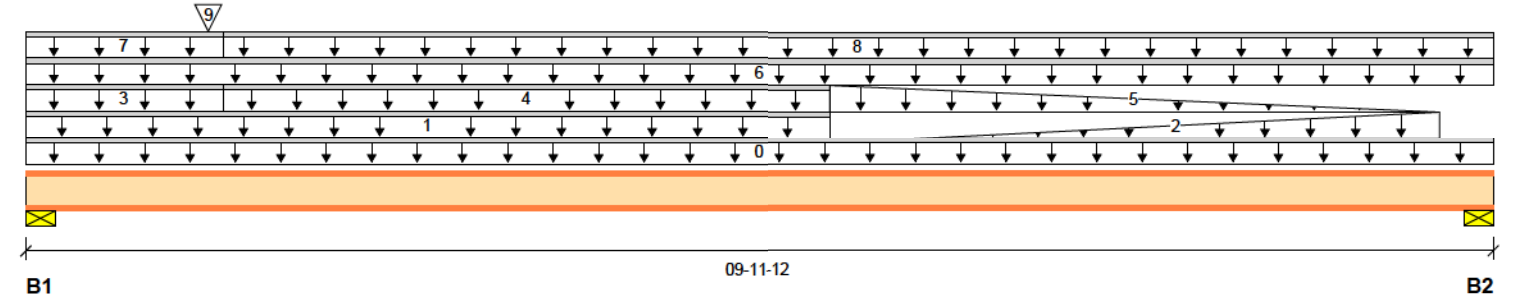
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



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

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	392 / 0	206 / 0		
B2, 4-3/8"	188 / 0	97 / 0		

**Load Summary**

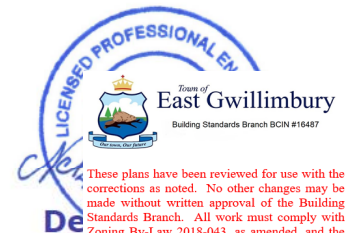
Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	09-11-12	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	05-05-10	Top		3			n/a
2		Trapezoidal (lb/ft)	L	06-00-08	09-07-06	Top		0			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top		6			n/a
4		Unf. Lin. (lb/ft)	L	01-04-02	05-05-10	Top		1			n/a
5		Trapezoidal (lb/ft)	L	05-05-10	09-07-06	Top		1			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	09-11-12	Top	23	9			n/a
7		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	50	19			n/a
8		Unf. Lin. (lb/ft)	L	01-04-02	09-11-12	Top	8	3			n/a
9	F10	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Front	208	105			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1090 ft-lbs	5305 ft-lbs	20.6%	1	04-00-10
End Reaction	846 lbs	1684 lbs	50.2%	1	00-00-00
End Shear	815 lbs	2350 lbs	34.7%	1	00-02-06
Total Load Deflection	L/999 (0.052")	n/a	n/a	4	04-06-13
Live Load Deflection	L/999 (0.034")	n/a	n/a	5	04-06-13
Max Defl.	0.052"	n/a	n/a	4	04-06-13
Span / Depth	9.6				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	846 lbs	23.2%	50.2%	Spruce-Pine-Fir
B2	Wall/Plate 4-3/8" x 2-1/2"	403 lbs	6.0%	21.1%	Spruce-Pine-Fir



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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**F8-B**

Dry | 1 span | No cant.

December 17, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Description: Level - Ground Floor

Specifier:

Designer: S B

Company:

**Notes**

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

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

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

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Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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**F9-A**

Dry | 1 span | No cant.

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Build 7364

Job name:

Address: GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Description: Level - Ground Floor

City, Province, Postal Code:

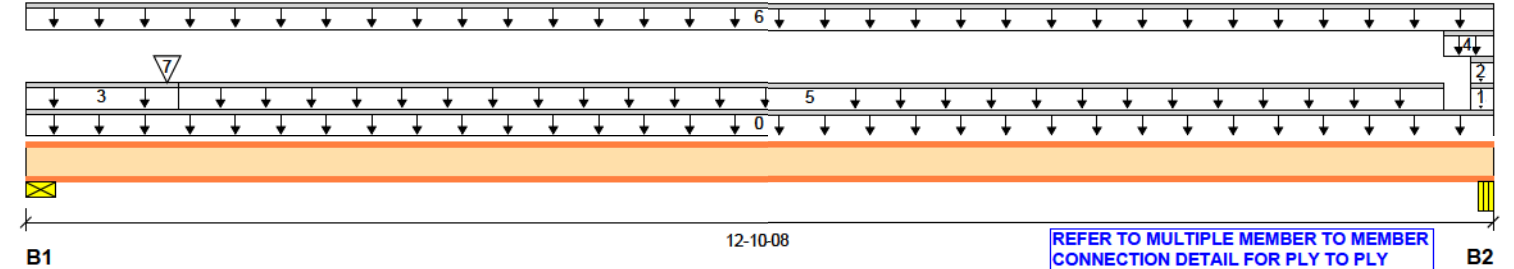
Specifier:

Customer:

Designer: S B

Code reports: CCMC 12787-R

Company:



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

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	402 / 0	169 / 0		
B2, 5-1/4"	194 / 0	90 / 0		

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

PASS THRU FRAMING SQUASH  
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POINT LOADS OVER BEARINGS.

**Load Summary**

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	12-10-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	12-08-01	12-10-08	Top		2			n/a
2		Unf. Lin. (lb/ft)	L	12-08-01	12-10-08	Top		1			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	50	19			n/a
4		Unf. Lin. (lb/ft)	L	12-05-04	12-10-08	Top	13	5			n/a
5		Unf. Lin. (lb/ft)	L	01-04-02	12-05-04	Top	18	7			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	12-10-08	Top	9	3			n/a
7	F10	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Back	211	82			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1334 ft-lbs	5305 ft-lbs	25.1%	1	05-07-05
End Reaction	815 lbs	1684 lbs	48.4%	1	00-00-00
End Shear	791 lbs	2350 lbs	33.7%	1	00-02-06
Total Load Deflection	L/999 (0.098")	n/a	n/a	4	06-01-00
Live Load Deflection	L/999 (0.068")	n/a	n/a	5	06-01-00
Max Defl.	0.098"	n/a	n/a	4	06-01-00
Span / Depth	12.5				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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Bearing Supports	Dim. (LxW)	Demand	Demand/ Resistance	Demand/ Resistance	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	815 lbs	22.3%	48.4%	Spruce-Pine-Fir
B2	Beam 5-1/4" x 2-1/2"	403 lbs	5.0%	21.1%	Spruce-Pine-Fir

**Notes**

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total load deflection criteria.  
Design meets User specified (0.72") Maximum live load deflection criteria.  
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Importance Factor : Normal Part code : Part 9

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



F9-B

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 15:26:27

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Address:

GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

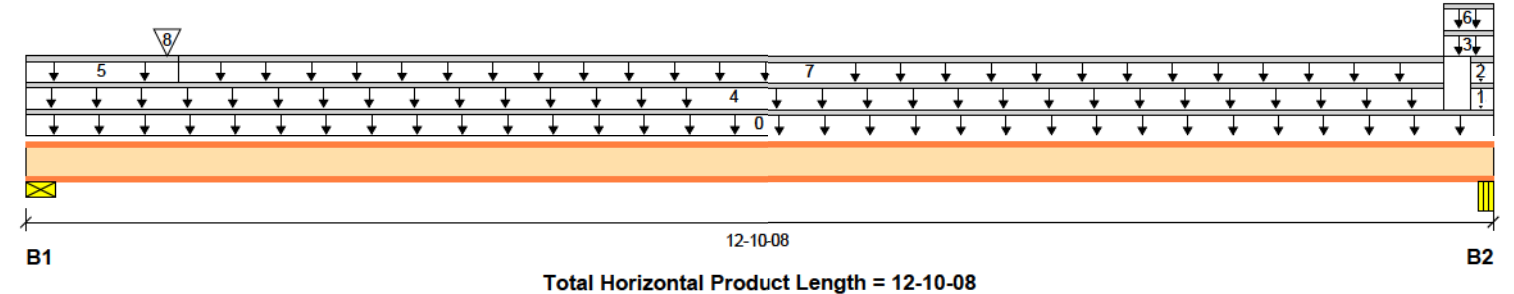
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



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

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	479 / 0	199 / 0		
B2, 5-1/4"	249 / 0	111 / 0		

**Load Summary**

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	12-10-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	12-08-01	12-10-08	Top		2			n/a
2		Unf. Lin. (lb/ft)	L	12-08-01	12-10-08	Top		1			n/a
3		Unf. Lin. (lb/ft)	L	12-05-04	12-10-08	Top	17	6			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	12-05-04	Top	21	8			n/a
5		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	50	19			n/a
6		Unf. Lin. (lb/ft)	L	12-05-04	12-10-08	Top	10	4			n/a
7		Unf. Lin. (lb/ft)	L	01-04-02	12-05-04	Top	14	5			n/a
8	F10	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Front	233	91			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1673 ft-lbs	5305 ft-lbs	31.5%	1	05-07-05
End Reaction	968 lbs	1684 lbs	57.4%	1	00-00-00
End Shear	939 lbs	2350 lbs	40.0%	1	00-02-06
Total Load Deflection	L/999 (0.123")	n/a	n/a	4	06-01-00
Live Load Deflection	L/999 (0.086")	n/a	n/a	5	06-01-00
Max Defl.	0.123"	n/a	n/a	4	06-01-00
Span / Depth	12.5				



Bearing Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1 Wall/Plate	2-3/8" x 2-1/2"	968 lbs	26.5%	57.4%	Spruce-Pine-Fir
B2 Beam	5-1/4" x 2-1/2"	512 lbs	6.3%	26.7%	Spruce-Pine-Fir

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

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**F9-B**

Dry | 1 span | No cant.

December 17, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: GREENPARK HOMES  
TRINA...LL,EAST GWILLIMBURY,ON

File name: C:\Data\SAUMIL\GREENP...BRENTWOOD-2 EL-2).isl

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

Customer:

Designer: S B

Code reports: CCMC 12787-R

Company:

**Notes**

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

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

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9



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Zoning			

**Disclosure**

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

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

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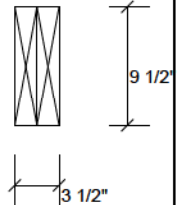
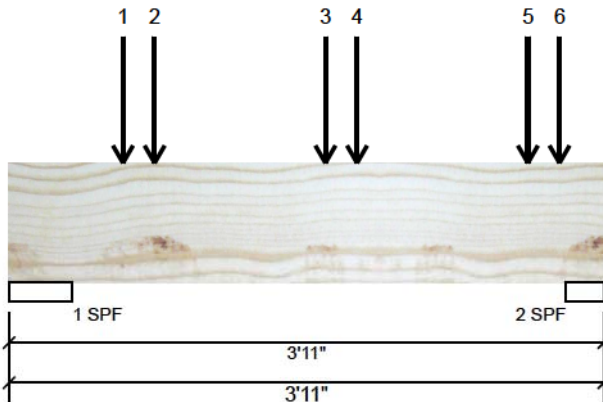


Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

# B4-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



## Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

## Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1034	402	0	0
2	1089	422	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.000"	19%	503 / 1551	2053 L	1.25D+1.5L
2 - SPF	3.000"	33%	527 / 1634	2161 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1681 ft-lb	2'1"	22724 ft-lb	0.074 (7%)	1.25D+1.5L	L
Unbraced	1681 ft-lb	2'1"	22724 ft-lb	0.074 (7%)	1.25D+1.5L	L
Shear	1470 lb	1'1 3/4"	9277 lb	0.158 (16%)	1.25D+1.5L	L
Perm Defl in. (L/16922)	0.002	2'1 1/16"	0.112 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.006 (L/6550)	2'1 1/16"	0.112 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.009 (L/4722)	2'1 1/16"	0.169 (L/240)	0.050 (5%)	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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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

Continued on page 2...

## Notes

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## Lumber

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

## chemicals

## Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information 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

6. For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

Forex  
APA: PR-L318

Kott Inc.  
3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023



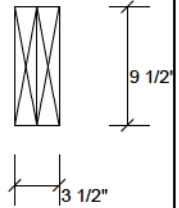
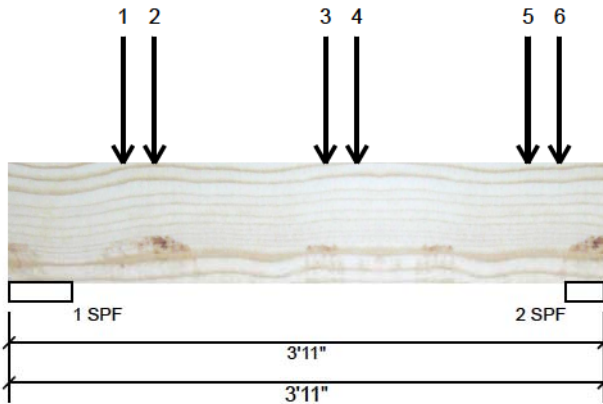


Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**B4-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED**

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-7-8		Top	115 lb	306 lb	0 lb	0 lb	J7
	Self Weight				8 PLF				

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

#### Notes

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#### Lumber

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

#### chemicals

#### Handling & Installation

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APA: PR-L318

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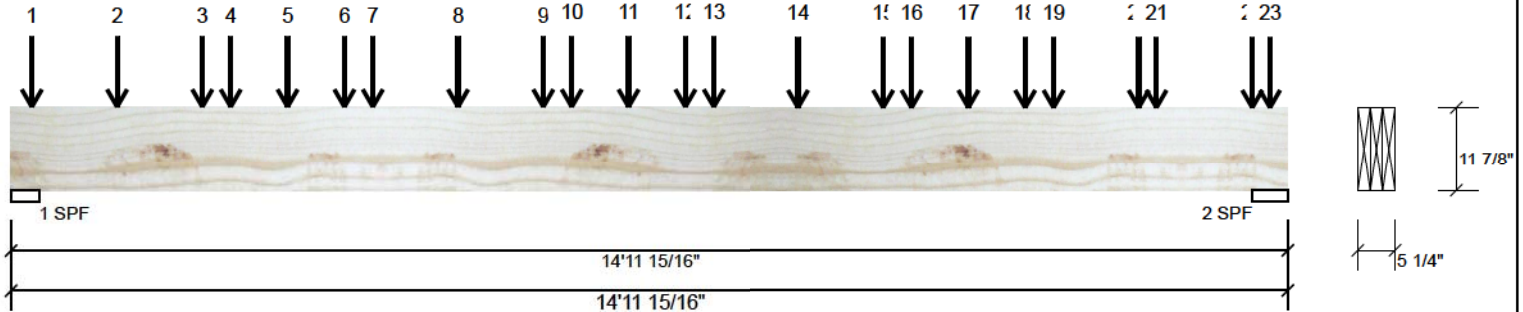


Client:  
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Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**B5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED**

Level: Second Floor



### Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	4028	1788	0	0
2	4124	1719	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.938"	65% 2235 / 6043	8278	L	1.25D+1.5L
2 - SPF	5.000"	52% 2149 / 6185	8334	L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	30010 ft-lb	7'2 15/16"	53447 ft-lb	0.561 (56%)	1.25D+1.5L	L
Unbraced	30010 ft-lb	7'2 15/16"	50243 ft-lb	0.597 (60%)	1.25D+1.5L	L
Shear	7979 lb	1'3 1/16"	17394 lb	0.459 (46%)	1.25D+1.5L	L
Perm Defl in.	0.172 (L/1005)	7'4 15/16"	0.479 (L/360)	0.360 (36%)	D	Uniform
LL Defl inch	0.402 (L/429)	7'5 3/8"	0.479 (L/360)	0.840 (84%)	L	L
TL Defl inch	0.574 (L/301)	7'5 1/4"	0.719 (L/240)	0.800 (80%)	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.
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- 7 Lateral slenderness ratio based on full section width.

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

Continued on page 2...

### Notes

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### Lumber

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

chemicals

### Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information 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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Forex  
APA: PR-L318

Kott Inc.  
3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400



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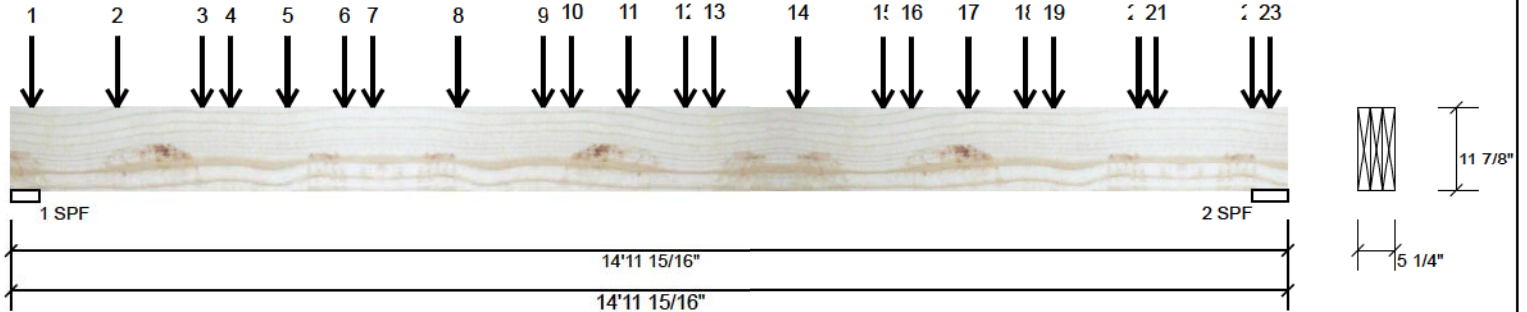


Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**B5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED**

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-10-15		Top	170 lb	423 lb	0 lb	0 lb	J9
7	Point	4-2-15		Top	120 lb	253 lb	0 lb	0 lb	J7
8	Point	5-2-15		Top	297 lb	691 lb	0 lb	0 lb	J9 J7
9	Point	6-2-15		Top	109 lb	253 lb	0 lb	0 lb	J7
10	Point	6-6-15		Top	160 lb	423 lb	0 lb	0 lb	J9
11	Point	7-2-15		Top	100 lb	253 lb	0 lb	0 lb	J7
12	Point	7-10-15		Top	159 lb	423 lb	0 lb	0 lb	J9
13	Point	8-2-15		Top	100 lb	253 lb	0 lb	0 lb	J7
14	Point	9-2-15		Top	264 lb	691 lb	0 lb	0 lb	J9 J7
15	Point	10-2-15		Top	100 lb	253 lb	0 lb	0 lb	J7
16	Point	10-6-15		Top	159 lb	423 lb	0 lb	0 lb	J9
17	Point	11-2-15		Top	100 lb	253 lb	0 lb	0 lb	J7
18	Point	11-10-15		Top	159 lb	423 lb	0 lb	0 lb	J9
19	Point	12-2-15		Top	110 lb	278 lb	0 lb	0 lb	J7
20	Point	13-2-15		Top	159 lb	425 lb	0 lb	0 lb	J9
21	Point	13-5-7		Top	121 lb	318 lb	0 lb	0 lb	J7
22	Point	14-6-15		Top	78 lb	209 lb	0 lb	0 lb	J9
23	Point	14-9-7		Top	61 lb	163 lb	0 lb	0 lb	J7
Self Weight					14 PLF				

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Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

#### Notes

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#### Lumber

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chemicals

#### Handling & Installation

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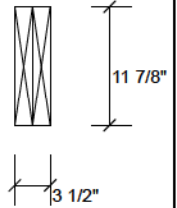
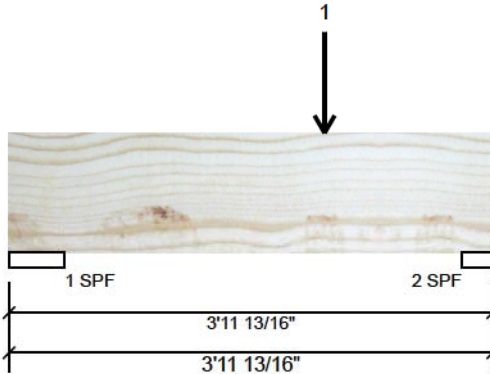


Client:  
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Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**B7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Second Floor



### Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	906	380	0	0
2	1672	683	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	15%	476 / 1359	1835 L	1.25D+1.5L
2 - SPF	3.063"	51%	854 / 2508	3362 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3998 ft-lb	2'7 3/16"	34261 ft-lb	0.117 (12%)	1.25D+1.5L	L
Unbraced	3998 ft-lb	2'7 3/16"	34261 ft-lb	0.117 (12%)	1.25D+1.5L	L
Shear	3348 lb	2'9 5/8"	11596 lb	0.289 (29%)	1.25D+1.5L	L
Perm Defl in. (L/11689)	0.003	2'7 3/16"	0.113 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.009 (L/4734)	2'7 3/16"	0.113 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.012 (L/3370)	2'7 3/16"	0.170 (L/240)	0.070 (7%)	D+L	L

### Design Notes

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	2-7-3		Top	1026 lb	2578 lb	0 lb	0 lb	F7
	Self Weight				10 PLF				

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

### Notes

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### Lumber

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

chemicals

### Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code 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 Inc.  
3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023



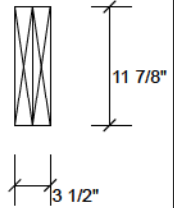
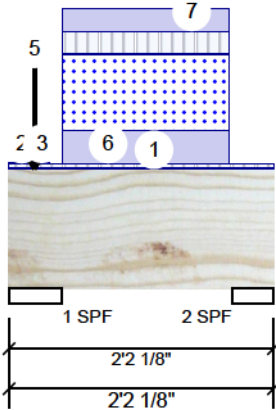


Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**F6-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Second Floor



### Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	74	190	189	0
2	71	149	184	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.250"	5% 238 / 357	595 L	1.25D+1.5S +L
2 - SPF	4.125"	6% 187 / 347	533 L	1.25D+1.5S +L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	220 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Unbraced	220 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Shear	177 lb	1'4 3/8"	11596 lb	0.015 (2%)	1.25D+1.5S +L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/62384)	1'1 5/8"	0.051 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.000 (L/37484)	1'1 5/8"	0.076 (L/240)	0.010 (1%)	D+S+0.5L	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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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

### Notes

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### Lumber

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2. LVL not to be treated with fire retardant or corrosive

chemicals

### Handling & Installation

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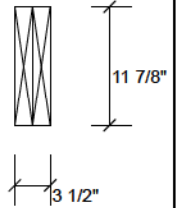
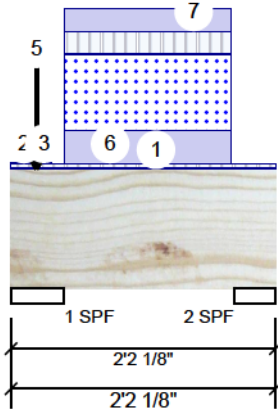


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Date: 12/17/2020  
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Project #:

**F6-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-2-2	0-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-4-1		Top	1 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 0-4-0		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Point	0-2-8		Top	2 lb	0 lb	0 lb	0 lb	Wall Self Weight
5	Point	0-2-8		Top	33 lb	0 lb	0 lb	0 lb	Wall Self Weight
6	Part. Uniform	0-5-4 to 1-9-12		Top	117 PLF	82 PLF	271 PLF	0 PLF	
7	Part. Uniform	0-5-4 to 1-9-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 PLF				

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Zoning			

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#### Lumber

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#### chemicals

#### Handling & Installation

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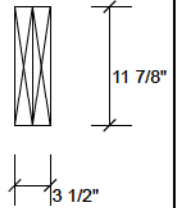
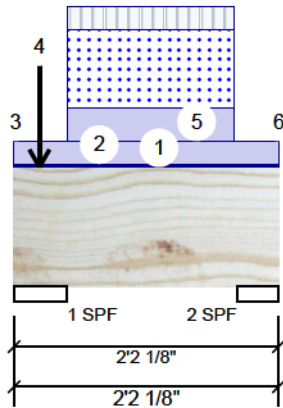


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Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**F6-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Second Floor



### Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	141	308	440	0
2	64	176	184	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	10%	385 / 801	1186 L	1.25D+1.5S +L
2 - SPF	4.125"	6%	220 / 340	559 L	1.25D+1.5S +L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	218 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Unbraced	218 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Shear	174 lb	1'4 3/8"	11596 lb	0.015 (2%)	1.25D+1.5S +L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/63061)	1'1 5/8"	0.051 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.000 (L/37856)	1'1 5/8"	0.076 (L/240)	0.010 (1%)	D+S+0.5L	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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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

### Notes

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### Lumber

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

### chemicals

### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

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3228 Moodie Dr, Ottawa, Ontario  
613-838-2775 / 905-642-4400



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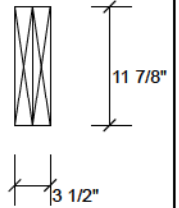
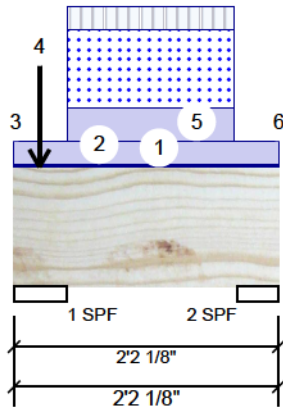


Client:  
Project:  
Address: GREENPARK HOMES  
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020  
Input by: S B  
Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**F6-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-2-2	0-2-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-2-2		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 0-0-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Point	0-2-8		Top	120 lb	75 lb	251 lb	0 lb	F1 F1
5	Part. Uniform	0-5-4 to 1-9-12		Top	117 PLF	82 PLF	271 PLF	0 PLF	
6	Part. Uniform	2-2-2 to 2-2-2		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 PLF				

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#### Lumber

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chemicals

#### Handling & Installation

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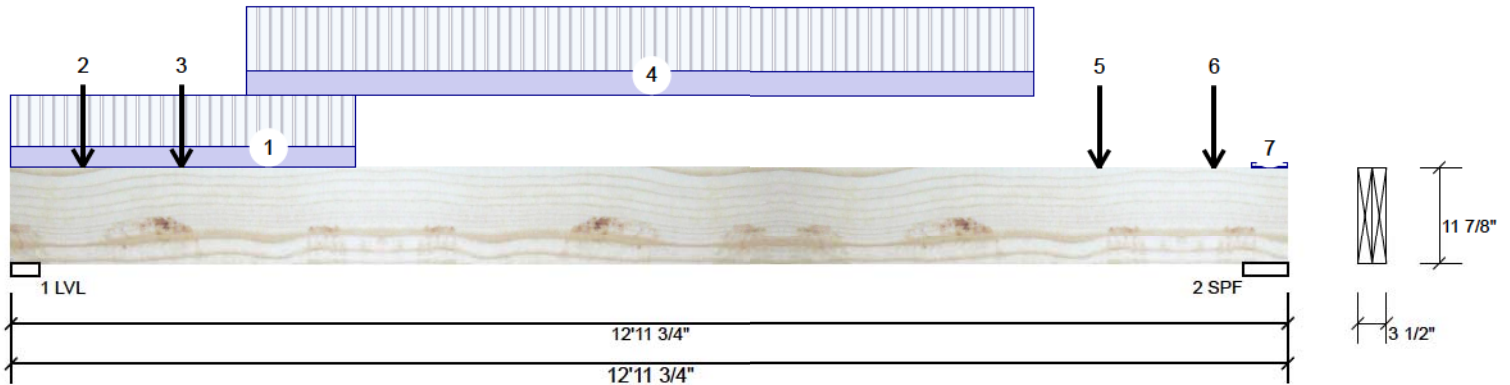


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Job Name: LOT-19(BRENTWOOD-2 EL-2)  
Project #:

**F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Second Floor



### Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	2578	1026	0	0
2	1999	812	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - LVL	3.500"	57% 1283 / 3866	5149 L	1.25D+1.5L
2 - SPF	5.500"	34% 1015 / 2998	4013 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12527 ft-lb	6' 11/16"	34261 ft-lb	0.366 (37%)	1.25D+1.5L	L
Unbraced	12527 ft-lb	6' 11/16"	27160 ft-lb	0.461 (46%)	1.25D+1.5L	L
Shear	4559 lb	1'2 5/8"	11596 lb	0.393 (39%)	1.25D+1.5L	L
Perm Defl in.	0.079 (L/1884)	6'3 11/16"	0.412 (L/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.195 (L/759)	6'3 9/16"	0.412 (L/360)	0.470 (47%)	L	
TL Defl inch	0.274 (L/541)	6'3 9/16"	0.618 (L/240)	0.440 (44%)	D+L	L

### Design Notes

- Girders are designed to be supported on the bottom edge only.
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Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

Continued on page 2...

### Notes

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### Lumber

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### Handling & Installation

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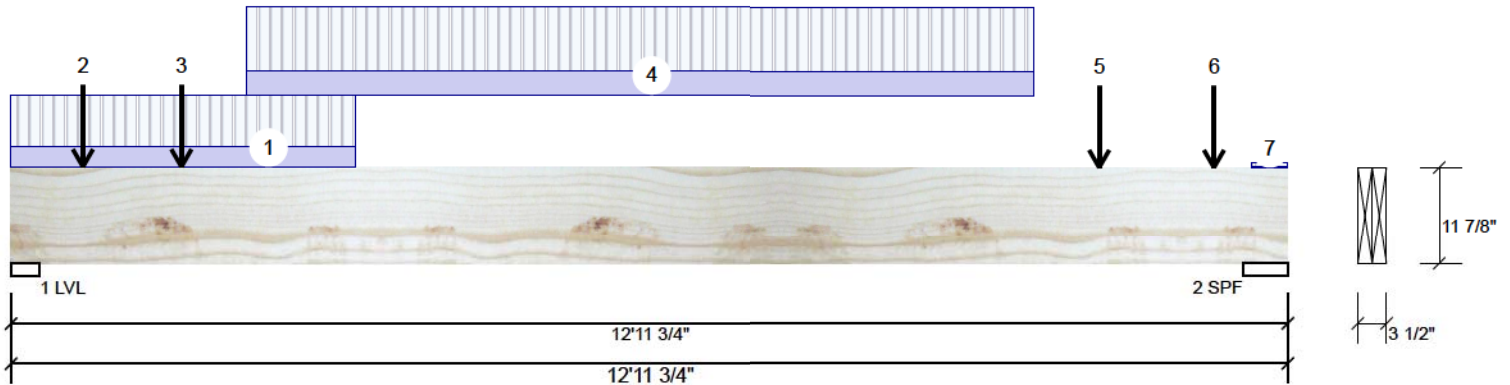


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Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Tie-In	12-7-6 to 12-11-12	0-5-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
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