

GREENPARK-TRINAR HALL-  
GLENWAY 7A-ELEV 1-R1

## **Engineering Note Page (ENP-2)**

REVISION 2018-10-17

**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-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 authorization.

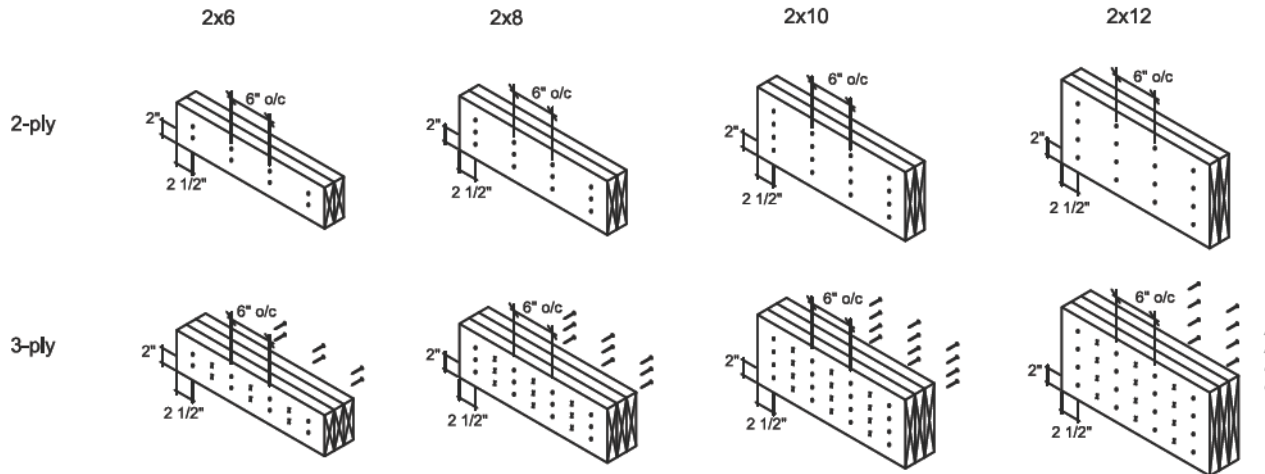


These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept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

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

GREENPARK-TRINAR HALL-  
GLENWAY 7A-ELEV 1-R1

## Conventional Connections



Conventional connection notes:

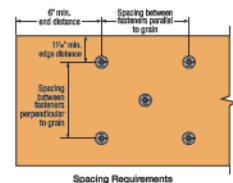
- Nails to be 3" long wire nails.
- Nails to be located 2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

### SIMPSON SDW SPACING REQUIREMENT

Table 9 – Spacing Requirements

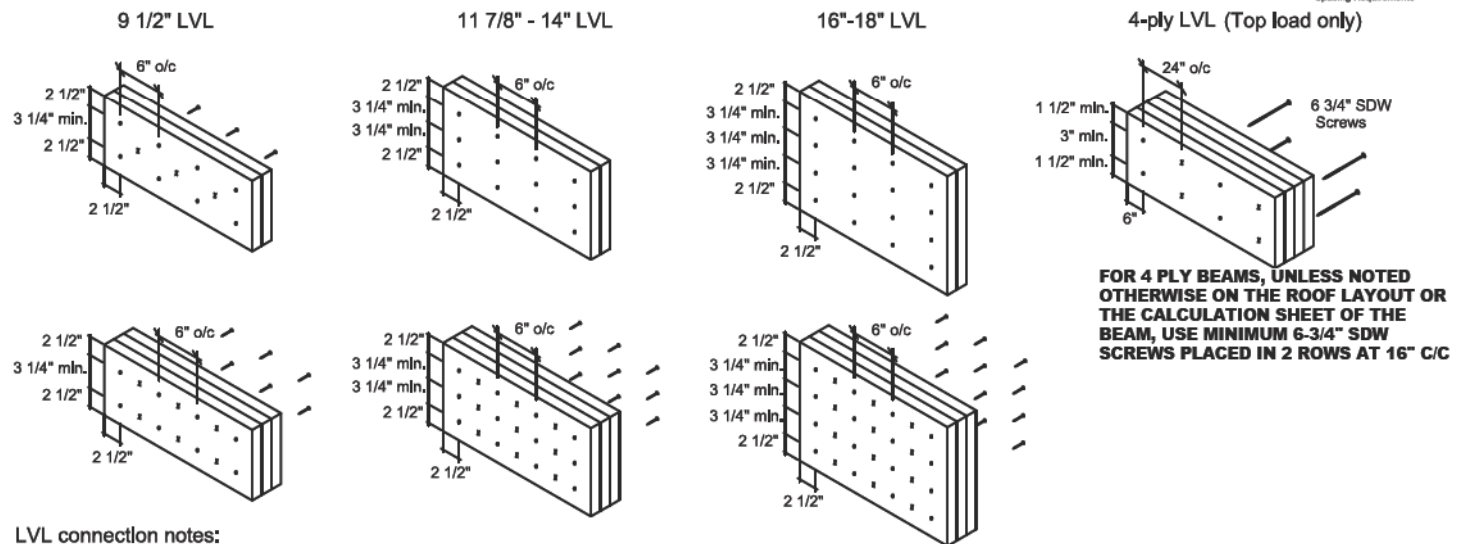
Geometry	Minimum Dimensions (in.)	
	D-J-L	S-P-F
Spacing parallel to grain	6	5
End distance parallel to grain	6	6
Spacing perpendicular to grain	3	2 1/2
Edge distance perpendicular to grain	1 1/2	1 1/2

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.

**FOR 4 PLY BEAMS, UNLESS NOTED  
OTHERWISE ON THE ROOF LAYOUT OR  
THE CALCULATION SHEET OF THE  
BEAM, USE MINIMUM 6-3/4\"/>**

## Multiple Member Connections

All connections are for uniformly distributed loads.

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

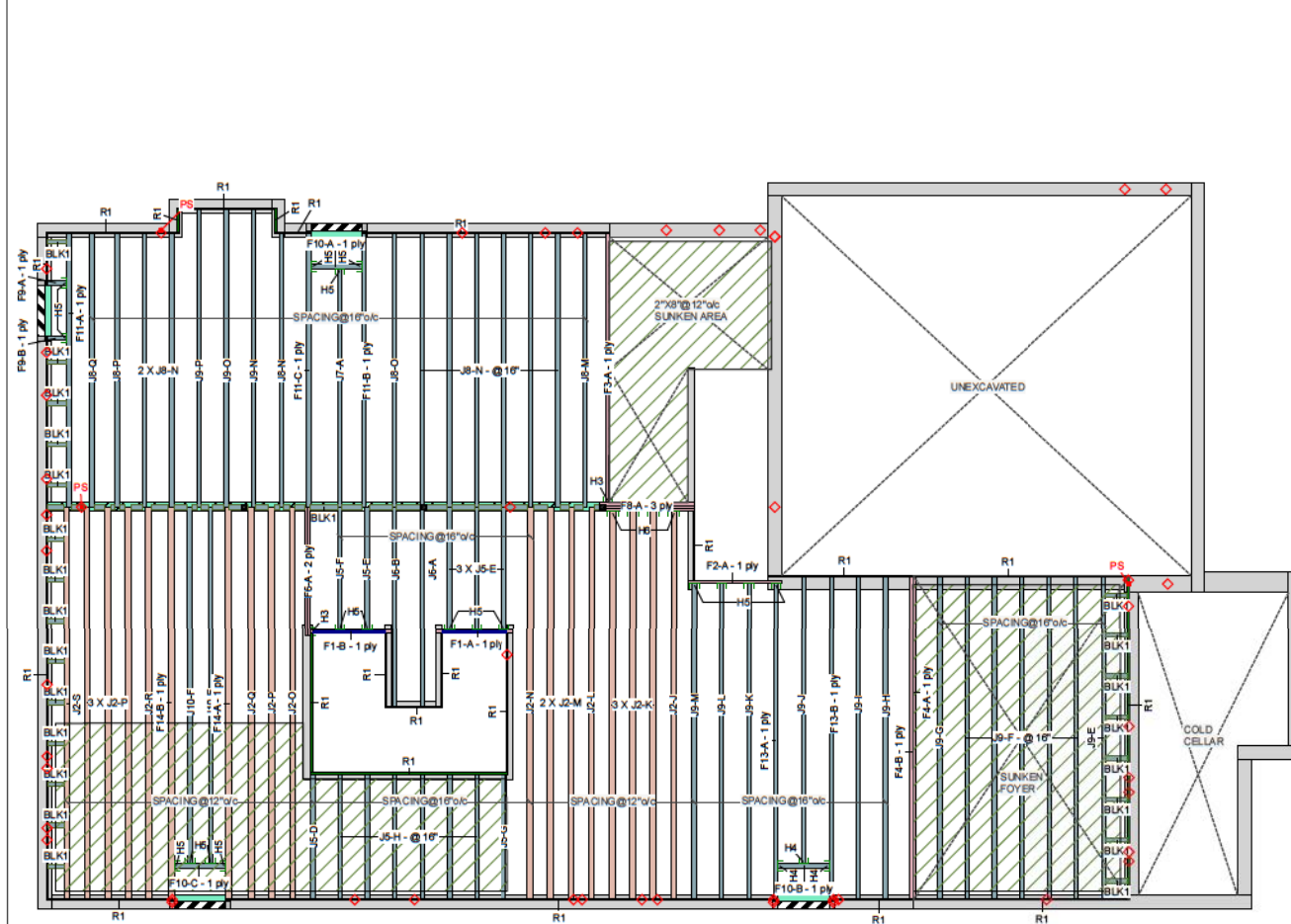


KOTT	Discipline	Reviewer	BCIN	Date
3228	Building Code	H. Authier	43236	2021-02-03
Ottawa	Sewage System			
K2H 7V1	Zoning			
613-838-2775				



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Ground Floor



Ground Floor LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F4	Forex 2.0E-3000Fb LVL	1.75	11.875			2	16-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	11.875			1	14-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	8-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	6-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	11.875			2	4-0-0

Joist (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F13	AJS 140	2.5	11.875			2	16-0-0
F11	AJS 140	2.5	11.875			3	14-0-0
F10	AJS 140	2.5	11.875			3	4-0-0
F9	AJS 140	2.5	11.875			2	2-0-0
J10	AJS 140	2.5	11.875			2	18-0-0
J9	AJS 140	2.5	11.875			16	16-0-0
J8	AJS 140	2.5	11.875			13	14-0-0
J7	AJS 140	2.5	11.875			1	12-0-0
J6	AJS 140	2.5	11.875			2	10-0-0
J5	AJS 140	2.5	11.875			13	8-0-0
F14	AJS 24	3.5	11.875			2	20-0-0
J2	AJS 24	3.5	11.875			16	20-0-0

Rim Board

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			15	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinR		Varies	40-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member	fasteners
H3	2	HUS1.91/10			30 16d		10 16d
H4	3	HUS310					
H5	18	LF2511			12 10d	1 #8x1 1/4WS	
H6	4	LF3511			12 10d	2 #8x1 1/4WS	

Beam/Girder

Supported Member

1. 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.

JOB INFORMATION

Builder  
GREENPARK

Project  
Shipping

Sales Rep  
Designer  
R O

Plotted  
December 18, 2020

Layout Name  
GLENWAY 7A-LOT 30

Job Path  
S:\CUSTOMERS\GREENPARK\TRINAR HALL  
MODEL\LOT 30\FLOORS\GLENWAY 7A-LOT 30\J

DESIGN CRITERIA

Ground Floor

Design Method  
Building Code

Floor  
Loads

Live  
Dead

Deflection Joist

LL Span /  
TL Span /  
LL Cant 2L/  
TL Cant 2L/

Deflection Girder

LL Span /  
TL Span /  
LL Cant 2L/  
TL Cant 2L/

Decking

Decking  
Thickness  
Fastener

Vibration  
Strapping

LSD (Canada)  
NBCC 2015 / OBC 2012

40  
15

360  
240  
480  
240

OSB  
3/4"  
Nailed & Glued

1"X4", 1 Row at Midspan

CCMC References

Boise - 12472-R, 12787-R  
LP - 12412-R  
Forex - 14055-R

Kott Lumber Company

14 Anderson Blvd  
Stouffville, Ontario  
Canada  
K2H7V1



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

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

Version 20.20.002 Powered by IStruct™

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



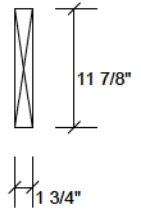
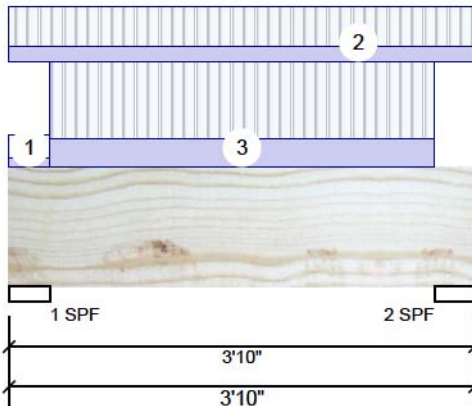


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

# F1-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	644	251	0	0
2	620	242	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	30%	314 / 966	1280 L	1.25D+1.5L
2 - SPF	4.000"	29%	302 / 929	1232 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	981 ft-lb	1'11"	17130 ft-lb	0.057 (6%)	1.25D+1.5L	L
Unbraced	981 ft-lb	1'11"	13098 ft-lb	0.075 (7%)	1.25D+1.5L	L
Shear	719 lb	2'6 7/8"	5798 lb	0.124 (12%)	1.25D+1.5L	L
Perm Defl in. (L/21591)	0.002	1'11"	0.110 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/8386)	1'11"	0.110 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.007 (L/6040)	1'11"	0.165 (L/240)	0.040 (4%)	D+L	L

## Design Notes

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

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-0	1-10-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-10-0		Far Face	47 PLF	125 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-4-0 to 3-6-0		Top	90 PLF	240 PLF	0 PLF	0 PLF	
	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

Forex  
APA: PR-L318

This design is valid until 1/8/2023

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



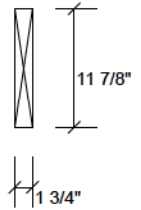
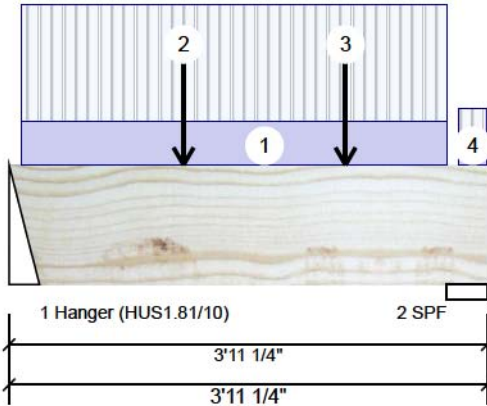


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

# F1-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	535	210	0	0
2	550	217	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	27%	263 / 803	1066 L	1.25D+1.5L
2 - SPF	4.000"	25%	271 / 826	1096 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	991 ft-lb	1'9 15/16"	17130 ft-lb	0.058 (6%)	1.25D+1.5L	L
Unbraced	991 ft-lb	1'9 15/16"	12625 ft-lb	0.079 (8%)	1.25D+1.5L	L
Shear	671 lb	2'8 1/8"	5798 lb	0.116 (12%)	1.25D+1.5L	L
Perm Defl in. (L/21374)	0.002	1'10 11/16"	0.116 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/8339)	1'10 5/8"	0.116 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.007 (L/5999)	1'10 5/8"	0.174 (L/240)	0.040 (4%)	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

- 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	0-1-4 to 3-7-4		Top	79 PLF	210 PLF	0 PLF	0 PLF	
2	Point	1-5-4		Far Face	65 lb	174 lb	0 lb	0 lb	J5
3	Point	2-9-4		Far Face	60 lb	159 lb	0 lb	0 lb	J5
4	Tie-In	3-8-6 to 3-11-4	1-10-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				



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## 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

- 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

This design is valid until 1/8/2023

Discipline	Reviewer	BCIN	Date
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Sewage System			
Zoning			







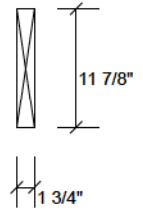
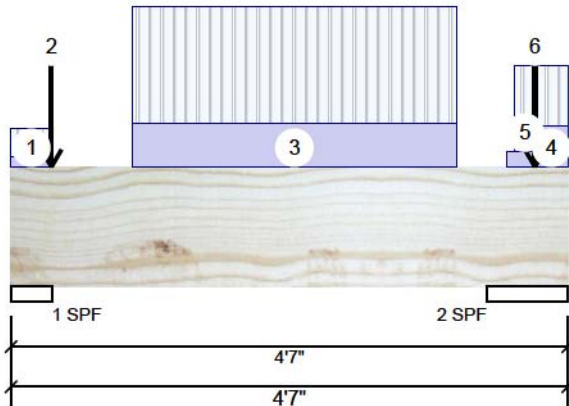
Client: GREENPARK  
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Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

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## F2-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	526	206	0	0
2	691	301	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	24%	258 / 789	1047 L	1.25D+1.5L
2 - SPF	8.000"	16%	376 / 1037	1413 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	957 ft-lb	2'2 3/16"	17130 ft-lb	0.056 (6%)	1.25D+1.5L	L
Unbraced	957 ft-lb	2'2 3/16"	12012 ft-lb	0.080 (8%)	1.25D+1.5L	L
Shear	973 lb	1'3 1/8"	5798 lb	0.168 (17%)	1.25D+1.5L	L
Perm Defl in. (L/22494)	0.002	2'1 15/16"	0.124 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/8784)	2'1 15/16"	0.124 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.007 (L/6317)	2'1 15/16"	0.185 (L/240)	0.040 (4%)	D+L	L

### Design Notes

- Girders are designed to be supported on the bottom edge only.
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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 0-4-0	1-9-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-4-0		Near Face	51 lb	137 lb	0 lb	0 lb	J9
3	Part. Uniform	1-0-0 to 3-8-0		Near Face	115 PLF	308 PLF	0 PLF	0 PLF	
4	Part. Uniform	4-1-0 to 4-7-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self V
5	Part. Uniform	4-1-12 to 4-7-0		Top	67 PLF	159 PLF	0 PLF	0 PLF	J9
6	Point	4-3-12		Near Face	69 lb	165 lb	0 lb	0 lb	F13
	Self Weight				5 PLF				



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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
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### Manufacturer Info

Forex  
APA: PR-L318

This design is valid until 1/8/2023

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





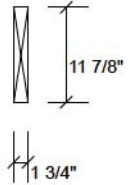
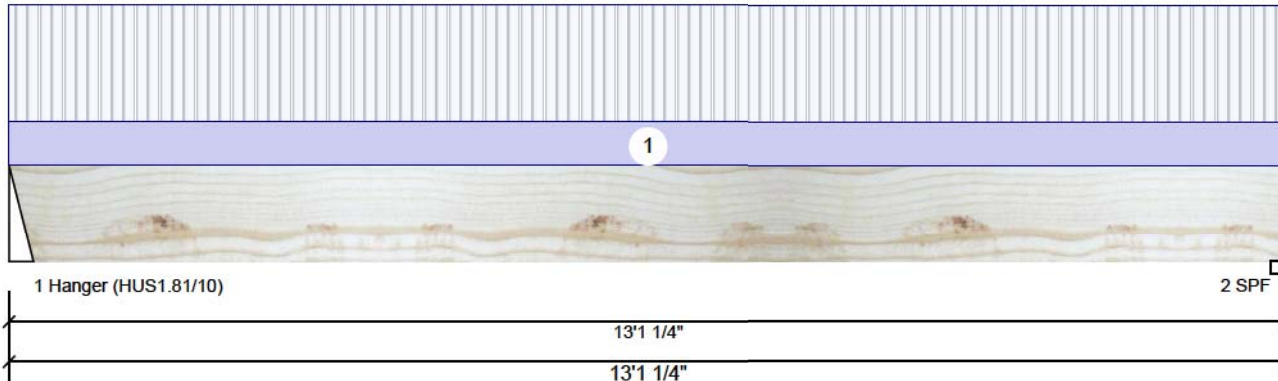
Client: GREENPARK  
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Date: 12/17/2020  
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Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

Page 4 of 21

# F3-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	145	86	0	0
2	142	84	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	8%	107 / 217	324 L	1.25D+1.5L
2 - SPF	1.875"	16%	106 / 214	319 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1009 ft-lb	6'7 3/16"	17130 ft-lb	0.059 (6%)	1.25D+1.5L	L
Unbraced	1009 ft-lb	6'7 3/16"	3506 ft-lb	0.288 (29%)	1.25D+1.5L	L
Shear	266 lb	1'2 1/8"	5798 lb	0.046 (5%)	1.25D+1.5L	L
Perm Defl in.	0.018 (L/8724)	6'7 3/16"	0.427 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.030 (L/5169)	6'7 3/16"	0.427 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.047 (L/3246)	6'7 3/16"	0.641 (L/240)	0.070 (7%)	D+L	L

## 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.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-1-4	0-6-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

## 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

- 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

This design is valid until 1/8/2023



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.

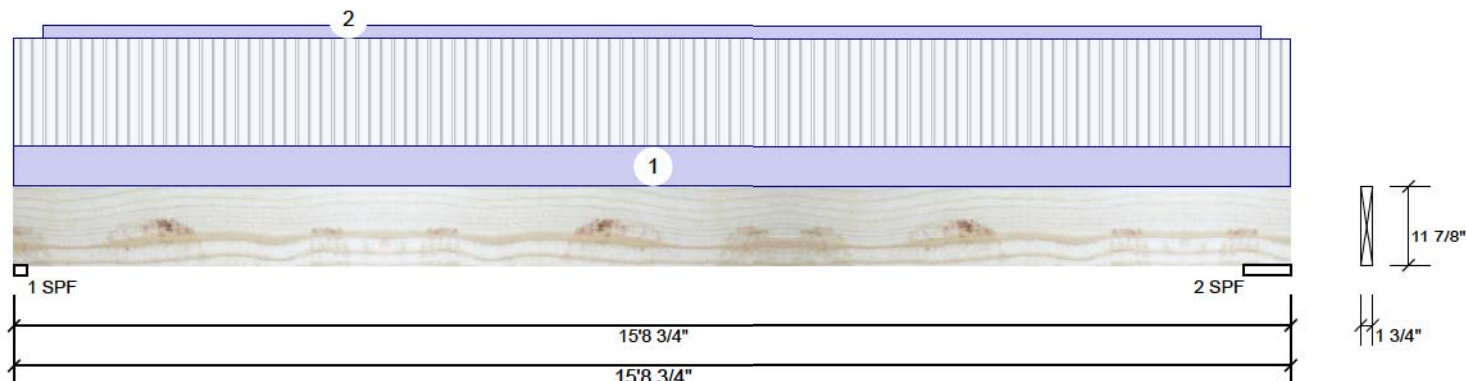
Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			





F4-A	Forex 2.0E-3000Fb LVL	1.750" X 11.875"	- PASSED
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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 Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	190	129	0	0
2	200	137	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	1.875"	22%	162 / 284	446	L	1.25D+1.5L
2 - SPE	6.875"	6%	171 / 300	471	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1672 ft-lb	7'7 7/8"	17130 ft-lb	0.098 (10%)	1.25D+1.5L	L
Unbraced	1672 ft-lb	7'7 7/8"	2973 ft-lb	0.562 (56%)	1.25D+1.5L	L
Shear	384 lb	1'1"	5798 lb	0.066 (7%)	1.25D+1.5L	L
Perm Defl in.	0.044 (L/4144)	7'7 15/16"	0.504 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.064 (L/2852)	7'7 15/16"	0.504 (L/360)	0.130 (13%)	L	L
TL Defl inch	0.107 (L/1689)	7'7 15/16"	0.756 (L/240)	0.140 (14%)	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.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-8-12	0-7-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-4-6 to 15-4-6		Top	3 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				5 PLF				

## Notes

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

**Lumber**

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

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.

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-0
Sewage System			
Zoning			



This design is valid until 1/8/2023



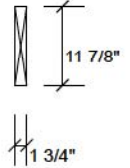
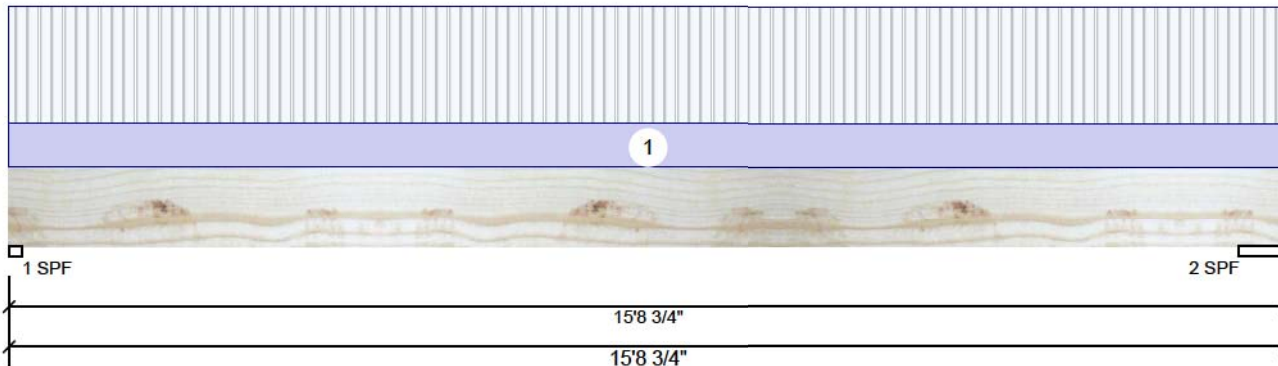


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

# F4-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	193	109	0	0
2	204	115	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	1.875"	21%	136 / 290	426 L	1.25D+1.5L
2 - SPF	6.875"	6%	144 / 306	449 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1591 ft-lb	7'7 7/8"	17130 ft-lb	0.093 (9%)	1.25D+1.5L	L
Unbraced	1591 ft-lb	7'7 7/8"	2973 ft-lb	0.535 (54%)	1.25D+1.5L	L
Shear	366 lb	1'1"	5798 lb	0.063 (6%)	1.25D+1.5L	L
Perm Defl in.	0.037 (L/4966)	7'7 15/16"	0.504 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.065 (L/2799)	7'7 15/16"	0.504 (L/360)	0.130 (13%)	L	
TL Defl inch	0.101 (L/1790)	7'7 15/16"	0.756 (L/240)	0.130 (13%)	D+L	L

## Design Notes

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

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-8-12	0-7-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

## 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

- 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

This design is valid until 1/8/2023



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



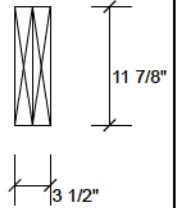
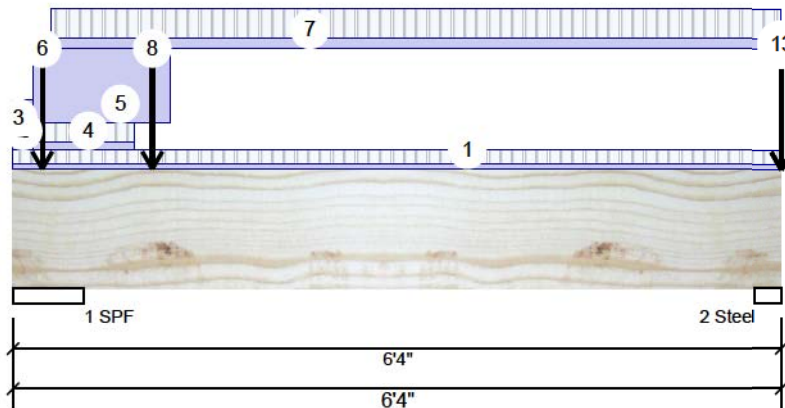


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
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	1538	747	0	0
2	324	171	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	7.000"	24%	934 / 2307	3241 L	1.25D+1.5L
2 - Steel	2.625"	10%	214 / 486	700 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1509 ft-lb	1'1 3/4"	34261 ft-lb	0.044 (4%)	1.25D+1.5L	L
Unbraced	1509 ft-lb	1'1 3/4"	32772 ft-lb	0.046 (5%)	1.25D+1.5L	L
Shear	1418 lb	1'6 1/8"	11596 lb	0.122 (12%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/26040)	2'10 3/16"	0.189 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.005 (L/12622)	2'9 1/2"	0.189 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.008 (L/8502)	2'9 11/16"	0.283 (L/240)	0.030 (3%)	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.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comment
1	Tie-In	0-0-0 to 6-4-0	0-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tapered Start	0-0-0		Top	4 PLF	10 PLF	0 PLF	0 PLF	
	End	0-2-0			4 PLF	10 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 0-2-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self V

Continued on page 2...

## 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

## Manufacturer Info

Forex  
APA: PR-L318

This design is valid until 1/8/2023



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







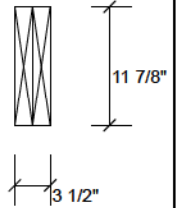
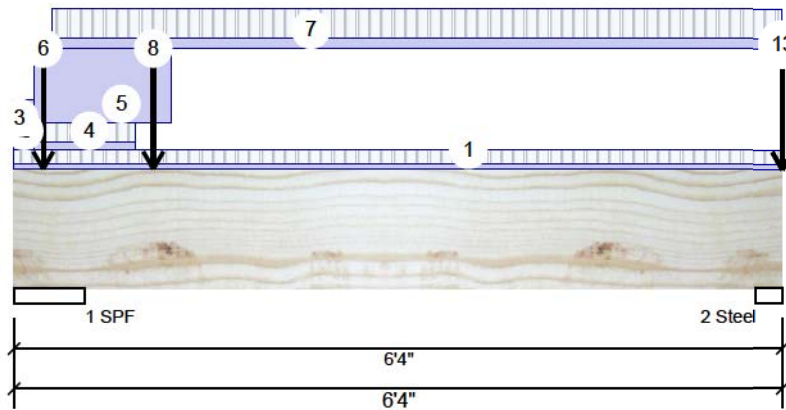
Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

Page 8 of 21

**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	Tapered Start	0-2-0		Top	8 PLF	21 PLF	0 PLF	0 PLF	
	End	1-0-0			8 PLF	21 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-2-0 to 1-3-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	0-2-14		Near Face	129 lb	329 lb	0 lb	0 lb	F1
7	Tie-In	0-3-12 to 6-4-0	0-9-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
8	Point	1-1-12		Top	486 lb	1174 lb	0 lb	0 lb	F7 F7
11	Point	6-4-0		Top	15 lb	40 lb	0 lb	0 lb	J8
12	Point	6-4-0		Top	6 lb	15 lb	0 lb	0 lb	J4
13	Point	6-4-0		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				10 PLF				

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



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#### 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 1/8/2023

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



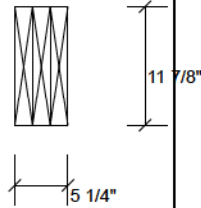
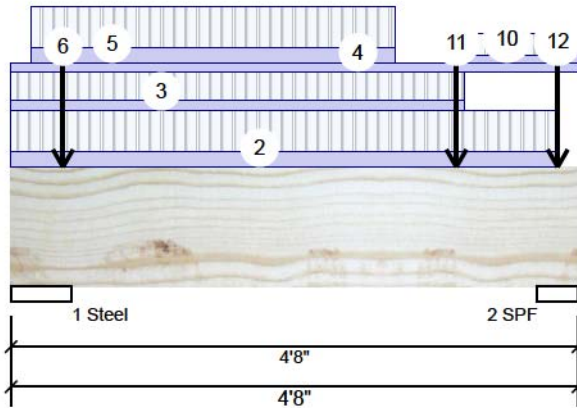


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

# F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Ground 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	2551	1218	0	0
2	3239	1458	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Steel	6.000"	23%	1522 / 3827	5349 L	1.25D+1.5L
2 - SPF	4.000"	52%	1823 / 4858	6681 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4169 ft-lb	2'5"	53447 ft-lb	0.078 (8%)	1.25D+1.5L	L
Unbraced	4169 ft-lb	2'5"	53447 ft-lb	0.078 (8%)	1.25D+1.5L	L
Shear	3405 lb	3'4 7/8"	17394 lb	0.196 (20%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/13447)	2'5 1/16"	0.132 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.008 (L/6292)	2'5 1/16"	0.132 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.011 (L/4287)	2'5 1/16"	0.198 (L/240)	0.060 (6%)	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.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comment
2	Part. Uniform	0-0-0 to 4-5-12		Top	143 PLF	380 PLF	0 PLF	0 PLF	J2
3	Part. Uniform	0-0-0 to 3-8-12		Top	99 PLF	263 PLF	0 PLF	0 PLF	J8
4	Part. Uniform	0-0-0 to 4-8-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self v
5	Part. Uniform	0-2-0 to 3-2-0		Near Face	142 PLF	379 PLF	0 PLF	0 PLF	
6	Point	0-5-2		Far Face	86 lb	145 lb	0 lb	0 lb	F3

Continued on page 2...

## 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

## Manufacturer Info

Forex  
APA: PR-L318

This design is valid until 1/8/2023



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







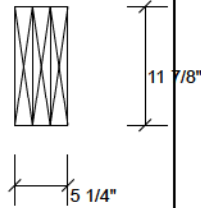
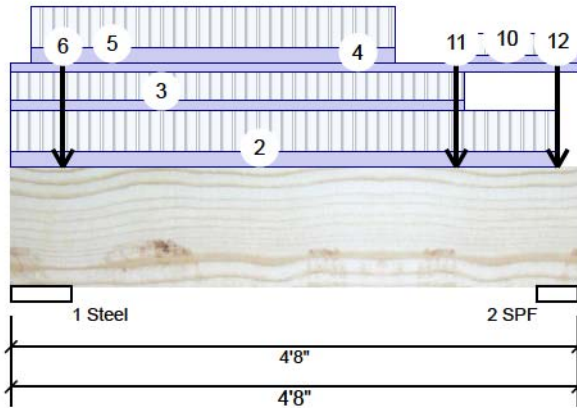
Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

Page 10 of 21

**F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED**

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
10	Part. Uniform	3-6-12 to 4-8-0		Top	73 PLF	196 PLF	0 PLF	0 PLF	J8
11	Point	3-8-0		Near Face	140 lb	374 lb	0 lb	0 lb	J2
12	Point	4-6-0		Top	494 lb	1235 lb	0 lb	0 lb	F5 F5
	Self Weight				14 PLF				

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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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#### 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

This design is valid until 1/8/2023



F9-A

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

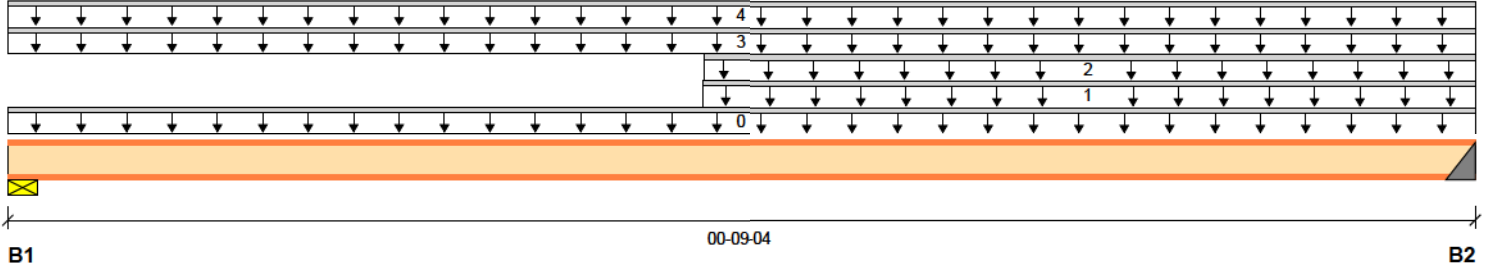
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 00-09-04

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

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	49 / 0	20 / 0		
B2, 2"	50 / 0	25 / 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	00-09-04	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	00-09-04	Top		7			n/a
2		Unf. Lin. (lb/ft)	L	00-04-06	00-09-04	Top		9			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	00-09-04	Top	54	20			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	00-09-04	Top	74	28			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	11 ft-lbs	5305 ft-lbs	0.2%	1	00-04-10
End Reaction	106 lbs	1607 lbs	6.6%	1	00-09-04
End Shear	60 lbs	2350 lbs	2.6%	1	00-07-04
Total Load Deflection	L/999 (0")	n/a	n/a	4	00-04-10
Live Load Deflection	L/999 (0")	n/a	n/a	5	00-04-09
Max Defl.	0"	n/a	n/a	4	00-04-10
Span / Depth	0.6				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	98 lbs	3.4%	6.2%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	106 lbs	3.7%	6.6%	LF2511

**Cautions**

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

Header for the hanger LF2511 is a Single 3-1/2" 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			

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**F9-A**

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report  
Build 7364  
Job name:  
Address:  
City, Province, Postal Code:  
Customer:  
Code reports:

CCMC 12787-R

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl  
Description: Level - Ground Floor  
Specifier:  
Designer: R O  
Company: GREENPARK

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

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F9-B

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

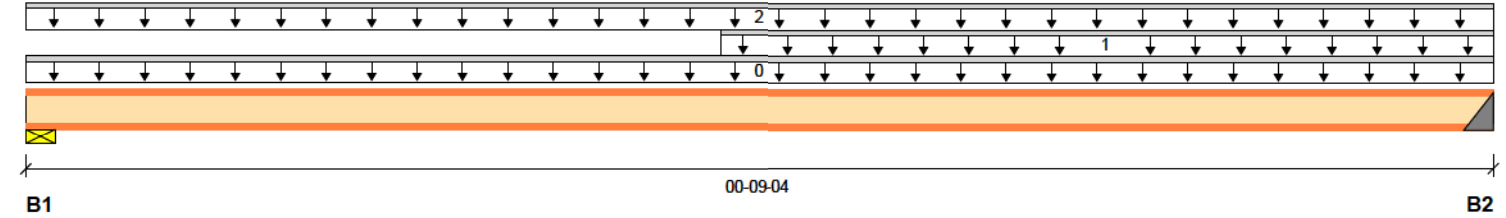
File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK



Total Horizontal Product Length = 00-09-04

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

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	21 / 0	9 / 0		
B2, 2"	21 / 0	11 / 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	00-09-04	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	00-09-04	Top		7			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	00-09-04	Top	54	20			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	5 ft-lbs	5305 ft-lbs	n/a	1	00-04-10
End Reaction	46 lbs	1607 lbs	2.8%	1	00-09-04
End Shear	26 lbs	2350 lbs	1.1%	1	00-07-04
Total Load Deflection	L/999 (0")	n/a	n/a	4	00-04-10
Max Defl.	0"	n/a	n/a	4	00-04-10
Span / Depth	0.6				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	42 lbs	1.5%	2.7%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	46 lbs	1.6%	2.8%	LF2511

**Cautions**

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

Header for the hanger LF2511 is a Single 3-1/2" x 11-7/8" I-joist

**Notes**

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

Design meets User specified (1") Maximum Total 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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anyone rel evidence o application building co properties Installation engineered accordance Guide and obtain Insta questions, before insta

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

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

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F9-C

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

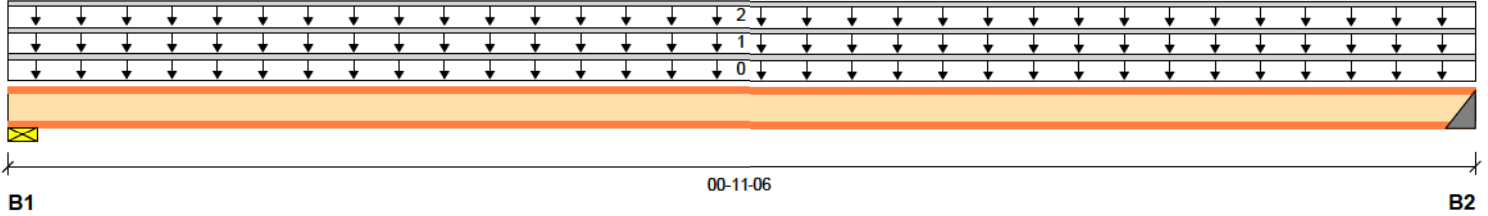
File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK



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

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	48 / 0	19 / 0		
B2, 2"	49 / 0	20 / 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	00-11-06	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	00-11-06	Top	49	18			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	00-11-06	Top	54	20			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	14 ft-lbs	5305 ft-lbs	0.3%	1	00-05-10
End Reaction	98 lbs	1607 lbs	6.1%	1	00-11-06
End Shear	64 lbs	2350 lbs	2.7%	1	00-01-14
Total Load Deflection	L/999 (0")	n/a	n/a	4	00-05-10
Live Load Deflection	L/999 (0")	n/a	n/a	5	00-05-10
Max Defl.	0"	n/a	n/a	4	00-05-10
Span / Depth	0.8				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	96 lbs	3.3%	6.1%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	98 lbs	4.4%	6.1%	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

**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.

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

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



F9-D

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

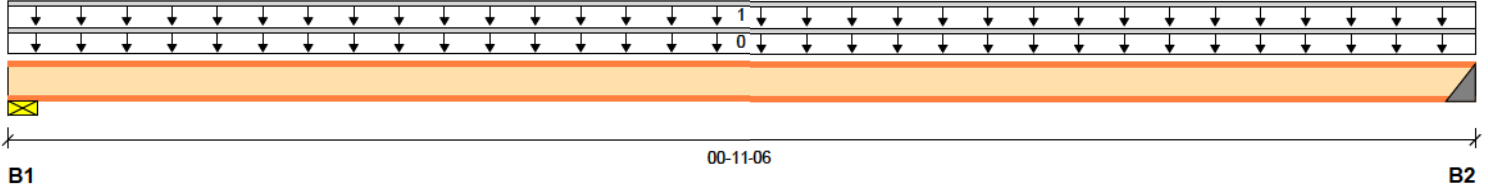
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



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

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	25 / 0	11 / 0		
B2, 2"	26 / 0	11 / 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	00-11-06	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	00-11-06	Top	54	20			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	8 ft-lbs	5305 ft-lbs	0.1%	1	00-05-10
End Reaction	53 lbs	1607 lbs	3.3%	1	00-11-06
End Shear	34 lbs	2350 lbs	1.5%	1	00-01-14
Total Load Deflection	L/999 (0")	n/a	n/a	4	00-05-10
Live Load Deflection	L/999 (0")	n/a	n/a	5	00-05-10
Max Defl.	0"	n/a	n/a	4	00-05-10
Span / Depth	0.8				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	51 lbs	1.8%	3.2%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	53 lbs	2.4%	3.3%	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

**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.

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.

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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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F10-A

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

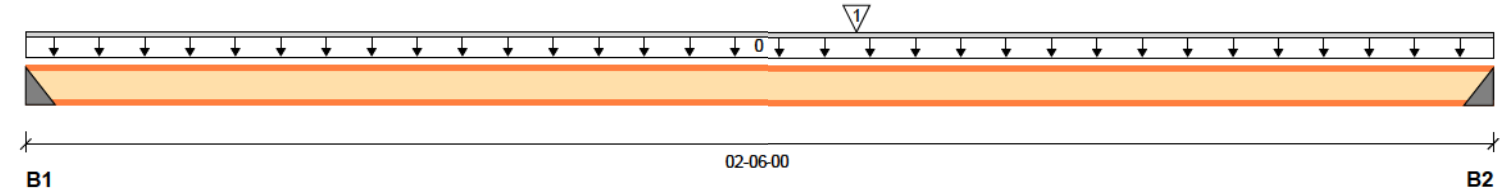
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



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

Bearing	Live	Dead	Snow	Wind
B1, 2"	134 / 0	54 / 0		
B2, 2"	179 / 0	71 / 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	02-06-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	J7	Conc. Pt. (lbs)	L	01-05-00	01-05-00	Front	313	118			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	348 ft-lbs	5305 ft-lbs	6.6%	1	01-05-00
End Reaction	357 lbs	1607 lbs	22.2%	1	02-06-00
End Shear	357 lbs	2350 lbs	15.2%	1	02-04-00
Total Load Deflection	L/999 (0.004")	n/a	n/a	4	01-05-00
Live Load Deflection	L/999 (0.003")	n/a	n/a	5	01-05-00
Max Defl.	0.004"	n/a	n/a	4	01-05-00
Span / Depth	2.3				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	268 lbs	12.1%	16.6%	LF2511
B2	Hanger 2" x 2-1/2"	357 lbs	16.1%	22.2%	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

**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.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

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Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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Installation engineer's accordance Guide and obtain Insta questions, before insta

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Zoning			

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F10-B

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

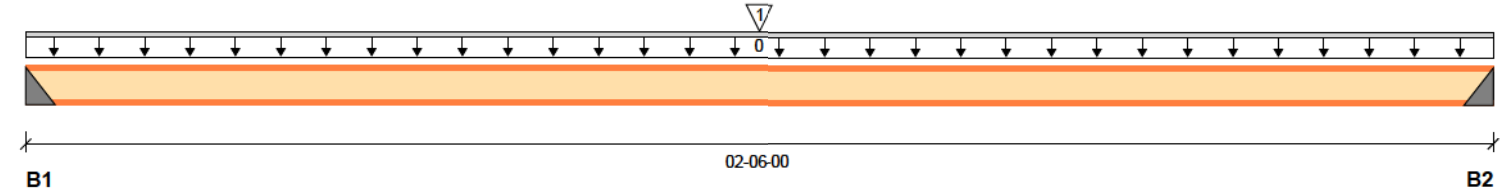
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



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

Bearing	Live	Dead	Snow	Wind
B1, 2"	185 / 0	72 / 0		
B2, 2"	184 / 0	72 / 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	02-06-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	J9	Conc. Pt. (lbs)	L	01-03-00	01-03-00	Back	369	138			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	418 ft-lbs	5305 ft-lbs	7.9%	1	01-03-00
End Reaction	367 lbs	1607 lbs	22.8%	1	00-00-00
End Shear	367 lbs	2350 lbs	15.6%	1	00-02-00
Total Load Deflection	L/999 (0.005")	n/a	n/a	4	01-03-00
Live Load Deflection	L/999 (0.003")	n/a	n/a	5	01-03-00
Max Defl.	0.005"	n/a	n/a	4	01-03-00
Span / Depth	2.3				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	367 lbs	16.6%	22.8%	LF2511
B2	Hanger 2" x 2-1/2"	367 lbs	16.6%	22.8%	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

**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.

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 and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to a

anyone rel evidence o application building co properties i 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.

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

BC CALC®, 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.

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**F10-C**

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

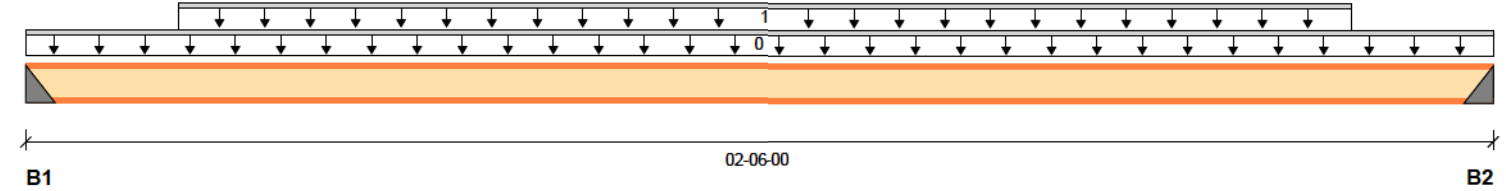
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



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

Bearing	Live	Dead	Snow	Wind
B1, 2"	328 / 0	148 / 0		
B2, 2"	333 / 0	150 / 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	02-06-00	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-03-02	02-03-02	Back	330	146			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	440 ft-lbs	5305 ft-lbs	8.3%	1	01-03-00
End Reaction	687 lbs	1607 lbs	42.7%	1	02-06-00
End Shear	687 lbs	2350 lbs	29.2%	1	02-04-00
Total Load Deflection	L/999 (0.005")	n/a	n/a	4	01-03-00
Live Load Deflection	L/999 (0.004")	n/a	n/a	5	01-03-00
Max Defl.	0.005"	n/a	n/a	4	01-03-00
Span / Depth	2.3				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	677 lbs	23.5%	42.1%	LF2511
B2	Hanger 2" x 2-1/2"	687 lbs	23.9%	42.7%	LF2511

**Cautions**

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

Header for the hanger LF2511 is a Single 3-1/2" x 11-7/8" I-joist

Header for the hanger LF2511 is a Single 3-1/2" x 11-7/8" I-joist

**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.

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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anyone rel evidence o application building co properties i

Installation engineer's accordance Guide and obtain Insta questions, before insta

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

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

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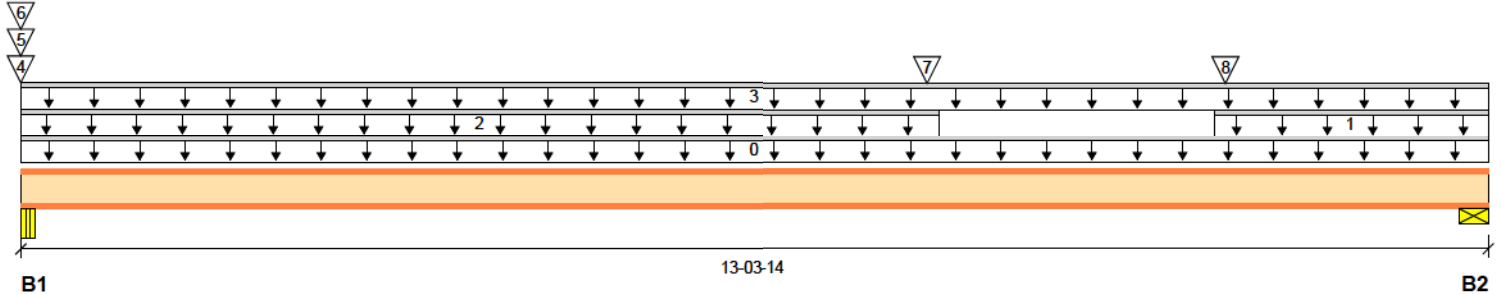
F11-A

BC CALC® Member Report  
Build 7364  
Job name:  
Address:  
City, Province, Postal Code:  
Customer:  
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 12:29:49

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl  
Description: Level - Ground Floor  
Specifier:  
Designer: R O  
Company: GREENPARK



Total Horizontal Product Length = 13'-03-14"

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

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	315 / 0	139 / 0		
B2, 1-7/8"	310 / 0	135 / 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	13-03-14	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	10-10-00	13-03-14	Top	22	8			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	08-04-00	Top	22	8			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	13-03-14	Top	22	8			n/a
4	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	7	3			n/a
5	J2	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	9	3			n/a
6	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top		3			n/a
7	F9	Conc. Pt. (lbs)	L	08-02-12	08-02-12	Back	26	11			n/a
8	F9	Conc. Pt. (lbs)	L	10-11-04	10-11-04	Back	49	20			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1975 ft-lbs	5305 ft-lbs	37.2%	1	06-08-05
End Reaction	634 lbs	1582 lbs	40.1%	1	13-03-14
End Shear	620 lbs	2350 lbs	26.4%	1	13-02-00
Total Load Deflection	L/1000 (0.157")	n/a	24.0%	4	06-08-05
Live Load Deflection	L/999 (0.109")	n/a	n/a	5	06-08-05
Max Defl.	0.157"	n/a	15.7%	4	06-08-05
Span / Depth	13.2				



**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam 2-5/8" x 2-1/2"	646 lbs	0.2%	37.2%	Steel
B2	Wall/Plate 1-7/8" x 2-1/2"	634 lbs	22.0%	40.1%	Spruce-Pine-Fir



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.

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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**F11-A**

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report  
Build 7364  
Job name:  
Address:  
City, Province, Postal Code:  
Customer:  
Code reports:

CCMC 12787-R


File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl  
Description: Level - Ground Floor  
Specifier:  
Designer: R O  
Company: GREENPARK

**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.  
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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 **Town of 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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**F11-B**

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

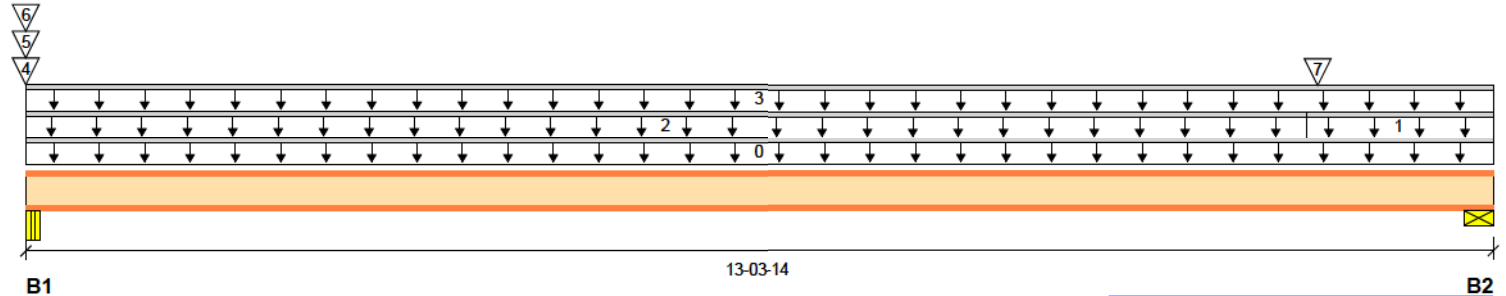
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



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

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	488 / 0	224 / 0		
B2, 1-7/8"	561 / 0	230 / 0		

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.

**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	13-03-14	Top	3				00-00-00
1		Unf. Lin. (lb/ft)	L	11-07-08	13-03-14	Top	54	20			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	11-07-08	Top	24	9			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	13-03-14	Top	30	11			n/a
4	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	78	29			n/a
5	J4	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	30	11			n/a
6	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top		24			n/a
7	F10	Conc. Pt. (lbs)	L	11-08-12	11-08-12	Back	179	71			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2626 ft-lbs	5305 ft-lbs	49.5%	1	07-00-13
End Reaction	1129 lbs	1582 lbs	71.4%	1	13-03-14
End Shear	1103 lbs	2350 lbs	46.9%	1	13-02-00
Total Load Deflection	L/742 (0.211")	n/a	32.3%	4	06-10-14
Live Load Deflection	L/1053 (0.149")	n/a	34.2%	5	06-10-14
Max Defl.	0.211"	n/a	21.1%	4	06-10-14
Span / Depth	13.2				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam 2-5/8" x 2-1/2"	1013 lbs	0.4%	58.3%	Steel
B2	Wall/Plate 1-7/8" x 2-1/2"	1129 lbs	39.1%	71.4%	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.  
 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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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

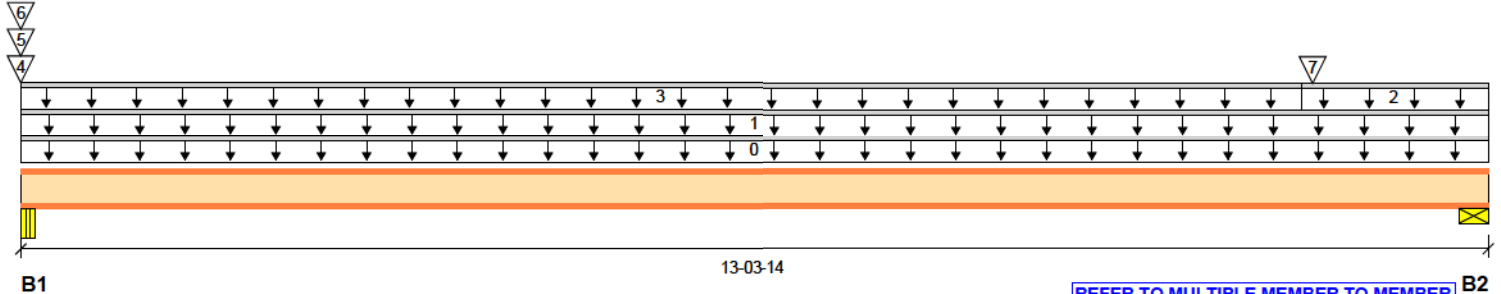
**F11-C**

BC CALC® Member Report  
Build 7364  
Job name:  
Address:  
City, Province, Postal Code:  
Customer:  
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 12:29:49

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl  
Description: Level - Ground Floor  
Specifier:  
Designer: R O  
Company: GREENPARK



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

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	406 / 0	171 / 0		
B2, 1-7/8"	535 / 0	221 / 0		

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.

**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	13-03-14	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	13-03-14	Top	27	10			n/a
2		Unf. Lin. (lb/ft)	L	11-07-08	13-03-14	Top	54	20			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	11-07-08	Top	30	11			n/a
4	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	4	2			n/a
5	J4	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	2	1			n/a
6	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top		1			n/a
7	F10	Conc. Pt. (lbs)	L	11-08-12	11-08-12	Front	134	54			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2705 ft-lbs	5305 ft-lbs	51.0%	1	06-11-13
End Reaction	1078 lbs	1582 lbs	68.2%	1	13-03-14
End Shear	1053 lbs	2350 lbs	44.8%	1	13-02-00
Total Load Deflection	L/723 (0.217")	n/a	33.2%	4	06-08-14
Live Load Deflection	L/1025 (0.153")	n/a	35.1%	5	06-08-14
Max Defl.	0.217"	n/a	21.7%	4	06-08-14
Span / Depth	13.2				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam 2-5/8" x 2-1/2"	822 lbs	0.3%	47.4%	Steel
B2	Wall/Plate 1-7/8" x 2-1/2"	1078 lbs	37.4%	68.2%	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.  
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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NOTE PAGE IS AN INTEGRAL PART OF THIS  
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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

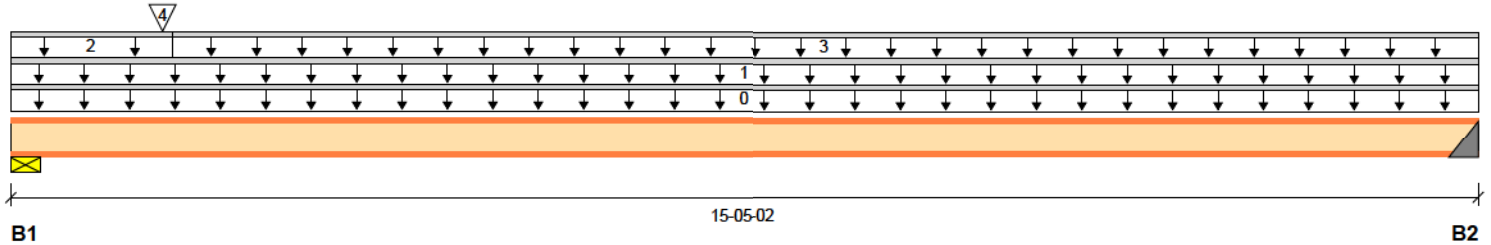
F13-A

BC CALC® Member Report  
Build 7364  
Job name:  
Address:  
City, Province, Postal Code:  
Customer:  
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 12:29:49

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl  
Description: Level - Ground Floor  
Specifier:  
Designer: R O  
Company: GREENPARK



Total Horizontal Product Length = 15-05-02

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

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	622 / 0	255 / 0		
B2, 2"	432 / 0	182 / 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	15-05-02	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	15-05-02	Top	26	10			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	54	20			n/a
3		Unf. Lin. (lb/ft)	L	01-08-06	15-05-02	Top	27	10			n/a
4	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Front	185	72			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	3452 ft-lbs	5305 ft-lbs	65.1%	1	07-04-12
End Reaction	1251 lbs	1582 lbs	79.1%	1	00-00-00
End Shear	1226 lbs	2350 lbs	52.2%	1	00-01-14
Total Load Deflection	L/502 (0.364")	n/a	47.8%	4	07-07-02
Live Load Deflection	L/712 (0.257")	n/a	50.5%	5	07-07-02
Max Defl.	0.364"	n/a	36.4%	4	07-07-02
Span / Depth	15.4				



**Bearing Supports**

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	1251 lbs	43.4%	79.1%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	875 lbs	39.5%	54.4%	LF2511

**Cautions**

Hanger LF2511 requires (12) 10dx1.5 face nails, (1) #8x1.25 joist nails.  
Header for the hanger LF2511 is a Single 1-3/4" x 11-7/8" LVL beam



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

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**F13-A**

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK

**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.

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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anyone relying on the evidence of application of building code properties. Installation of engineered components in accordance with the Guide and obtain Instructions, questions, before installation.



**Town of 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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F13-B

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

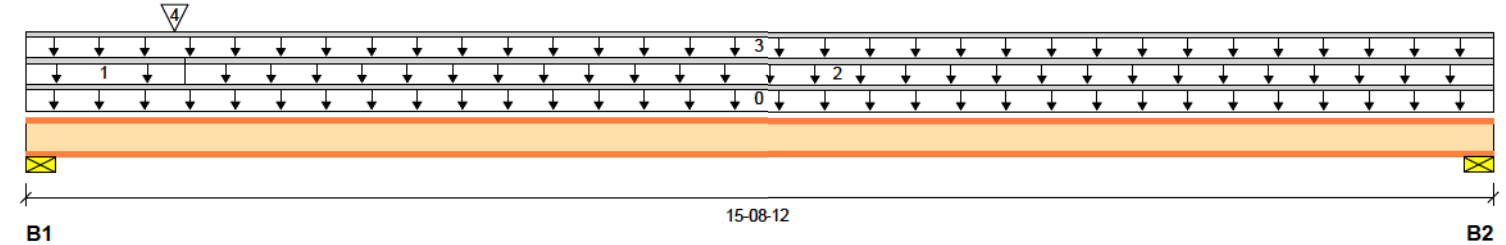
File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK



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

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	618 / 0	253 / 0		
B2, 6-7/8"	451 / 0	190 / 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	15-08-12	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	54	20			n/a
2		Unf. Lin. (lb/ft)	L	01-08-06	15-08-12	Top	27	10			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	15-08-12	Top	26	10			n/a
4	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Back	184	72			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3408 ft-lbs	5305 ft-lbs	64.2%	1	07-04-03
End Reaction	1243 lbs	1582 lbs	78.6%	1	00-00-00
End Shear	1218 lbs	2350 lbs	51.8%	1	00-01-14
Total Load Deflection	L/512 (0.355")	n/a	46.9%	4	07-06-08
Live Load Deflection	L/726 (0.25")	n/a	49.6%	5	07-06-08
Max Defl.	0.355"	n/a	35.5%	4	07-06-08
Span / Depth	15.3				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	1243 lbs	43.1%	78.6%	Spruce-Pine-Fir
B2	Wall/Plate 6-7/8" x 2-1/2"	914 lbs	8.6%	47.7%	Spruce-Pine-Fir

**Notes**

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets User specified (1") Maximum Total 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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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

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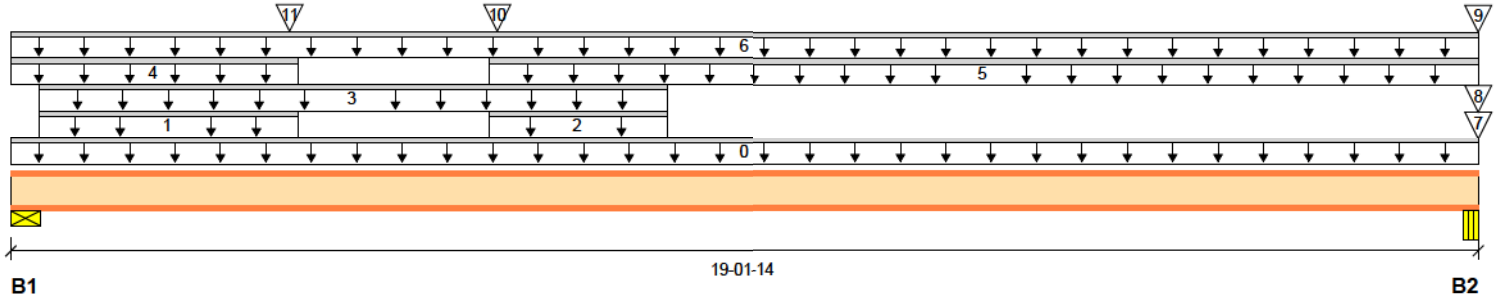
F15-A

BC CALC® Member Report  
Build 7364  
Job name:  
Address:  
City, Province, Postal Code:  
Customer:  
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 12:29:49

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl  
Description: Level - Ground Floor  
Specifier:  
Designer: R O  
Company: GREENPARK



Total Horizontal Product Length = 19-01-14

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

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	394 / 0	209 / 0		
B2, 2-5/8"	504 / 0	256 / 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	19-01-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	03-08-14	Top		2			n/a
2		Unf. Lin. (lb/ft)	L	06-02-14	08-06-11	Top		2			n/a
3		Unf. Lin. (lb/ft)	L	00-04-06	08-06-12	Top		2			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	03-08-14	Top	19	7			n/a
5		Unf. Lin. (lb/ft)	L	06-02-14	19-01-14	Top	19	7			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	19-01-14	Top	20	8			n/a
7	J8	Conc. Pt. (lbs)	L	19-01-14	19-01-14	Top	51	23			n/a
8	J2	Conc. Pt. (lbs)	L	19-01-14	19-01-14	Top	72	27			n/a
9	Wall Self Weight	Conc. Pt. (lbs)	L	19-01-14	19-01-14	Top		22			n/a
10	F9	Conc. Pt. (lbs)	L	06-04-02	06-04-02	Back	21	11			n/a
11	F9	Conc. Pt. (lbs)	L	03-07-10	03-07-10	Back	50	25			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3816 ft-lbs	8640 ft-lbs	44.2%	1	09-05-05
End Reaction	1076 lbs	1736 lbs	62.0%	1	19-01-14
End Shear	839 lbs	2350 lbs	35.7%	1	00-01-14
Total Load Deflection	L/543 (0.418")	n/a	44.2%	4	09-05-05
Live Load Deflection	L/818 (0.277")	n/a	44.0%	5	09-05-05
Max Defl.	0.418"	n/a	41.8%	4	09-05-05
Span / Depth	19.1				



**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 3-1/2"	852 lbs	21.1%	53.8%	Spruce-Pine-Fir
B2	Beam 2-5/8" x 3-1/2"	1076 lbs	0.3%	62.0%	Steel

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

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**F15-A**

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK

**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.

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

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F15-B

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

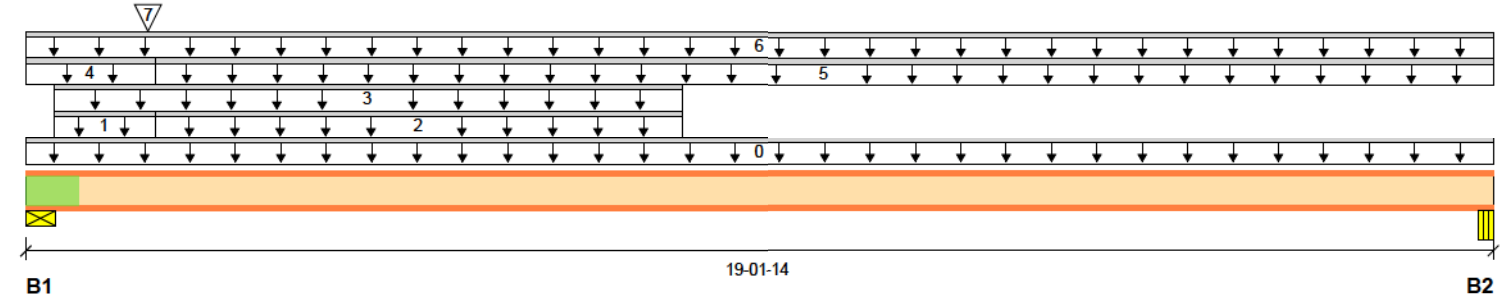
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	751 / 0	375 / 0		
B2, 2-5/8"	413 / 0	199 / 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	19-01-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	01-08-06	Top		7			n/a
2		Unf. Lin. (lb/ft)	L	01-08-06	08-06-13	Top		2			n/a
3		Unf. Lin. (lb/ft)	L	00-04-06	08-06-13	Top		3			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	56	21			n/a
5		Unf. Lin. (lb/ft)	L	01-08-06	19-01-14	Top	18	7			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	19-01-14	Top	22	8			n/a
7	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Back	333	150			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	4418 ft-lbs	8640 ft-lbs	51.1%	1	08-06-13
End Reaction	1594 lbs	2182 lbs	73.1%	1	00-00-00
End Shear	1570 lbs	2350 lbs	66.8%	1	00-01-14
Total Load Deflection	L/462 (0.491")	n/a	51.9%	4	09-01-14
Live Load Deflection	L/695 (0.326")	n/a	51.8%	5	09-05-06
Max Defl.	0.491"	n/a	49.1%	4	09-01-14
Span / Depth	19.1				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 3-1/2"	1594 lbs	39.5%	73.1%	Spruce-Pine-Fir
B2	Beam 2-5/8" x 3-1/2"	869 lbs	0.2%	50.1%	Steel



Cautions

Web stiffeners required at bearing B1.

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

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**F15-B**

Dry | 1 span | No cant.

December 17, 2020 12:29:49

BC CALC® Member Report

Build 7364

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK

**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.

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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F15-C

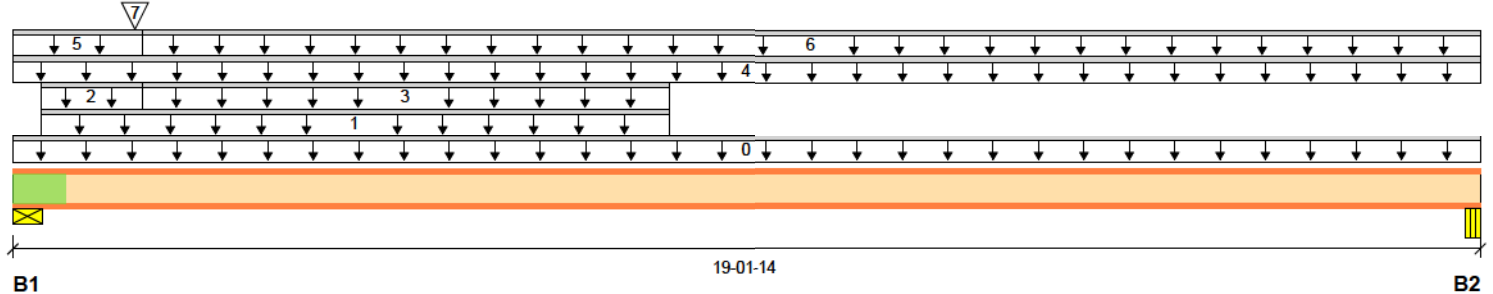
BC CALC® Member Report  
Build 7364  
Job name:  
Address:  
City, Province, Postal Code:  
Customer:  
Code reports:

Dry | 1 span | No cant.

December 17, 2020 12:29:49

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl  
Description: Level - Ground Floor  
Specifier:  
Designer: R O  
Company: GREENPARK

CCMC 12787-R



Total Horizontal Product Length = 19-01-14

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

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	745 / 0	373 / 0		
B2, 2-5/8"	413 / 0	199 / 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	19-01-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	08-06-12	Top		3			n/a
2		Unf. Lin. (lb/ft)	L	00-04-06	01-08-06	Top		7			n/a
3		Unf. Lin. (lb/ft)	L	01-08-06	08-06-12	Top		2			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	19-01-14	Top	22	8			n/a
5		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	56	21			n/a
6		Unf. Lin. (lb/ft)	L	01-08-06	19-01-14	Top	18	7			n/a
7	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Front	328	148			n/a

**Controls Summary**

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	4409 ft-lbs	8640 ft-lbs	51.0%	1	08-06-13
End Reaction	1584 lbs	2182 lbs	72.6%	1	00-00-00
End Shear	1560 lbs	2350 lbs	66.4%	1	00-01-14
Total Load Deflection	L/463 (0.49")	n/a	51.8%	4	09-01-13
Live Load Deflection	L/697 (0.326")	n/a	51.7%	5	09-05-06
Max Defl.	0.49"	n/a	49.0%	4	09-01-13
Span / Depth	19.1				



**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 3-1/2"	1584 lbs	39.2%	72.6%	Spruce-Pine-Fir
B2	Beam 2-5/8" x 3-1/2"	869 lbs	0.2%	50.0%	Steel



**Cautions**

Web stiffeners required at bearing B1.

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Sewage System			
Zoning			

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Build 7364

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Code reports: CCMC 12787-R

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK

## 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.

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

**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.**

## 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 a:

anyone relying on the evidence of application building code properties i

Installation 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.

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

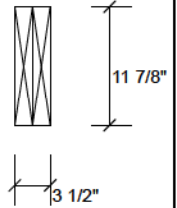
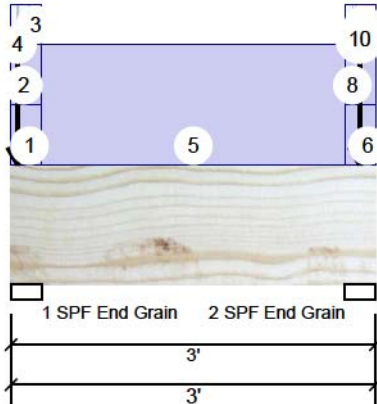
BC CALC®, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,



Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

**FH5-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	80	318	0	0
2	52	307	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	10%	398 / 120	517 L	1.25D+1.5L
2 - SPF End Grain	3.000"	9%	384 / 78	461 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	108 ft-lb	1'6"	22269 ft-lb	0.005 (0%)	1.4D	Uniform
Unbraced	108 ft-lb	1'6"	22269 ft-lb	0.005 (0%)	1.4D	Uniform
Shear	45 lb	1'9 7/8"	7537 lb	0.006 (1%)	1.4D	Uniform
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comment
1	Part. Uniform	0-0-0 to 0-3-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self v
2	Part. Uniform	0-0-0 to 0-3-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self v
3	Tapered Start	0-0-0		Near Face	7 PLF	19 PLF	0 PLF	0 PLF	
	End	0-3-0			7 PLF	19 PLF	0 PLF	0 PLF	
4	Point	0-0-10		Top	182 lb	75 lb	0 lb	0 lb	Header Cc

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

This design is valid until 1/8/2023



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



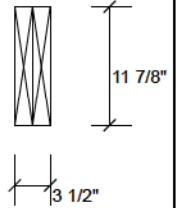
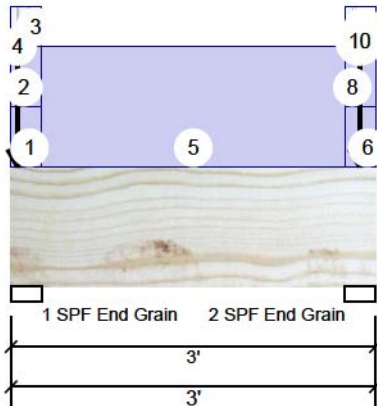




Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

FH5-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
5	Part. Uniform	0-3-0 to 2-9-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Part. Uniform	2-9-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	2-9-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Tapered Start	2-9-0		Near Face	7 PLF	19 PLF	0 PLF	0 PLF	
	End	3-0-0			7 PLF	19 PLF	0 PLF	0 PLF	
10	Point	2-10-7		Top	171 lb	47 lb	0 lb	0 lb	F9 Header Column Header Column
	Self Weight				10 PLF				

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#### 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

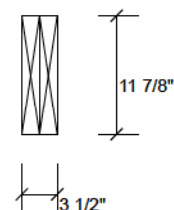
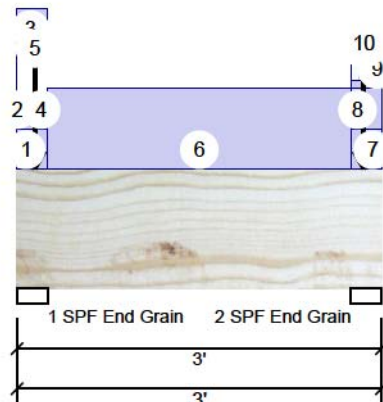
This design is valid until 1/8/2023

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



FH5-B	Forex 2.0E-3000Fb LVL	1.750" X 11.875"	2-Ply - PASSED	Level: Ground Floor
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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	30	147	0	0
2	54	155	0	0

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	108 ft-lb	1'6"	22269 ft-lb	0.005 (0%)	1.4D	Uniform
Unbraced	108 ft-lb	1'6"	22269 ft-lb	0.005 (0%)	1.4D	Uniform
Shear	45 lb	1'2 1/8"	7537 lb	0.006 (1%)	1.4D	Uniform
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

## Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	4%	184 / 46	230	L	1.25D+1.5L
2 - SPF End Grain	3.000"	5%	194 / 80	274	L	1.25D+1.5L

### Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top 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.


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POINT LOADS OVER BEARINGS.**



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-3-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 0-0-0		Near Face	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self V
3	Part. Uniform	0-0-0 to 0-3-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self V
4	Tapered Start	0-0-0		Near Face	8 PLF	22 PLF	0 PLF	0 PLF	
	End	0-3-0			8 PLF	22 PLF	0 PLF	0 PLF	
5	Point	0-1-12		Near Face	11 lb	25 lb	0 lb	0 lb	F9



**Town of East Gwillimbury**  
Building Standards Branch #16487

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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
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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

Forex  
APA: PR-L318

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-0
Sewage System			
Zoning			



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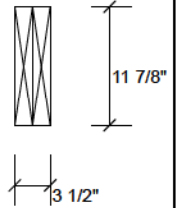
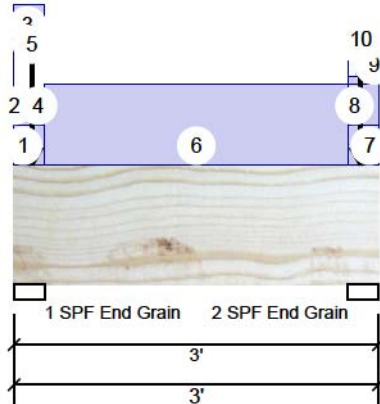
This design is valid until 1/8/2023



Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

FH5-B 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
6	Part. Uniform	0-3-0 to 2-9-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	2-9-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	2-9-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Tapered Start	2-9-0		Near Face	8 PLF	22 PLF	0 PLF	0 PLF	
	End	3-0-0			8 PLF	22 PLF	0 PLF	0 PLF	
10	Point	2-10-4		Near Face	19 lb	48 lb	0 lb	0 lb	F9
	Self Weight				10 PLF				

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#### 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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#### Manufacturer Info

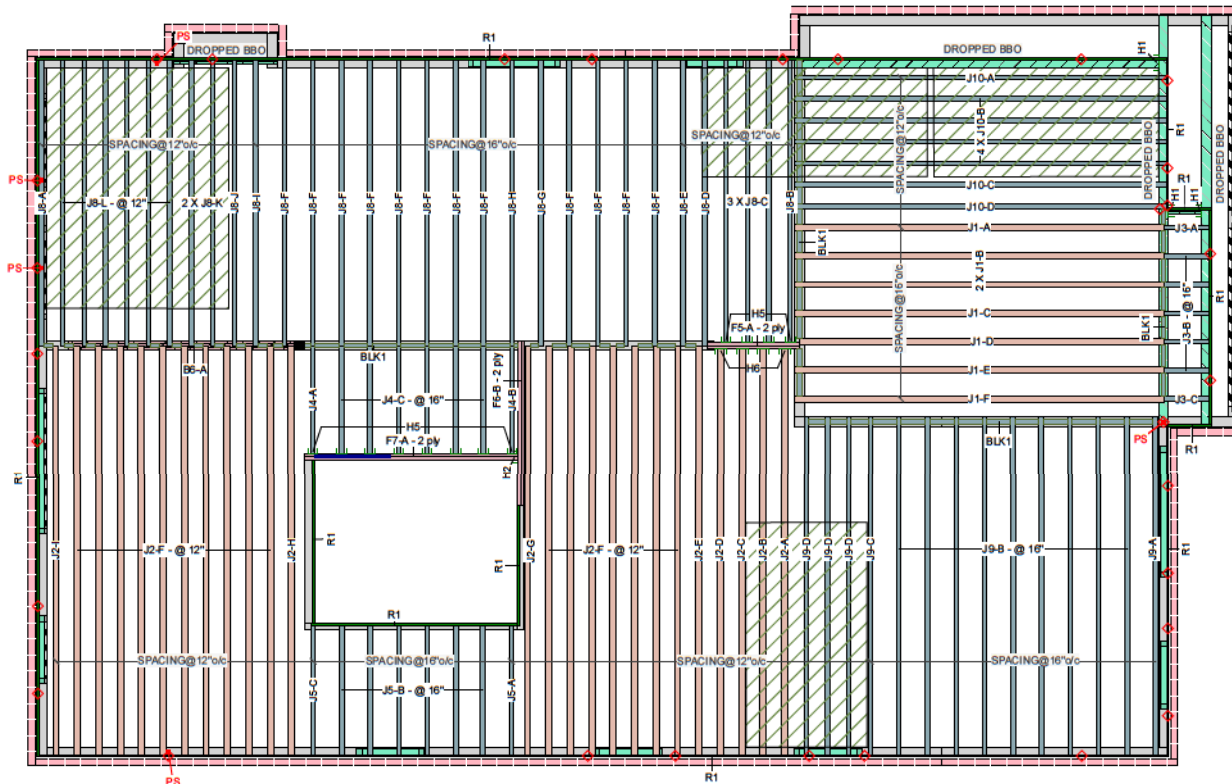
Forex  
APA: PR-L318

This design is valid until 1/8/2023





Second Floor



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

Version 20.20.002 Powered by IStruct™

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

Second Floor  
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Pieces	Pcs	Length
F7	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	12-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	8-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	6-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Pieces	Pcs	Length
B6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	12-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Pieces	Pcs	Length
J10	AJS 140	2.5	11.875		7	7	18-0-0
J9	AJS 140	2.5	11.875		14	14	16-0-0
J8	AJS 140	2.5	11.875		31	31	14-0-0
J5	AJS 140	2.5	11.875		8	8	8-0-0
J4	AJS 140	2.5	11.875		8	8	6-0-0
J3	AJS 140	2.5	11.875		7	7	4-0-0
J2	AJS 24	3.5	11.875		25	25	20-0-0
J1	AJS 24	3.5	11.875		7	7	18-0-0

Rim Board

Label	Description	Width	Depth	Qty	Pieces	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			17	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Pieces	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinRt		Varies	52-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H1	3	Unknown Hanger				
H2	1	HGUS410			46 16d	16 16d
H5	12	LF2511			12 10d	1 #8x1 1/4WS
H6	4	LF3511			12 10d	2 #8x1 1/4WS

- All blocking to be cut from 12' joists
- 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
- Ends of joists to be laterally supported
- Packing of Steel beams and attachment by others
- Showers and water closet flange locations are approximate only, consult architectural drawing for exact locations
- Beams identified as "B" are dropped and supplied by others
- Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
- Load transfer blocks to be installed under all point loads
- Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
- Hangers and Fasteners to be installed as per manufacturer
- Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.

JOB INFORMATION

<b>Builder</b>	GREENPARK
<b>Project</b>	
<b>Shipping</b>	
<b>Sales Rep</b>	
<b>Designer</b>	R O
<b>Plotted</b>	December 18, 2020
<b>Layout Name</b>	GLENWAY 7A-LOT 30
<b>Job Path</b>	S:\CUSTOMERS\GREENPARK\TRINAR HALL MODEL\LOT 30\FLOORS\GLENWAY 7A-LOT 30.dwg

DESIGN CRITERIA

<b>Second Floor</b>	LSD (Canada)
<b>Design Method</b>	
<b>Building Code</b>	NBCC 2015 / OBC 2012
<b>Floor</b>	
<b>Loads</b>	
Live	40
Dead	15
<b>Deflection Joist</b>	
LL Span U/	480
TL Span U/	360
LL Cant 2L/	480
TL Cant 2L/	360
<b>Deflection Girder</b>	
LL Span U/	360
TL Span U/	240
LL Cant 2L/	480
TL Cant 2L/	240
<b>Decking</b>	OSB
Thickness	5/8"
Fastener	Nailed & Glued
<b>Vibration</b>	
Ceiling:	Gypsum 1/2"

CCMC References

Boise - 12472-R, 12787-R  
LP - 12412-R  
Forex - 14056-R

Kott Lumber Company

14 Anderson Blvd  
Stouffville, Ontario  
Canada  
K2H7V1



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

Legend

PS Point Load Support  
○ Load from Above

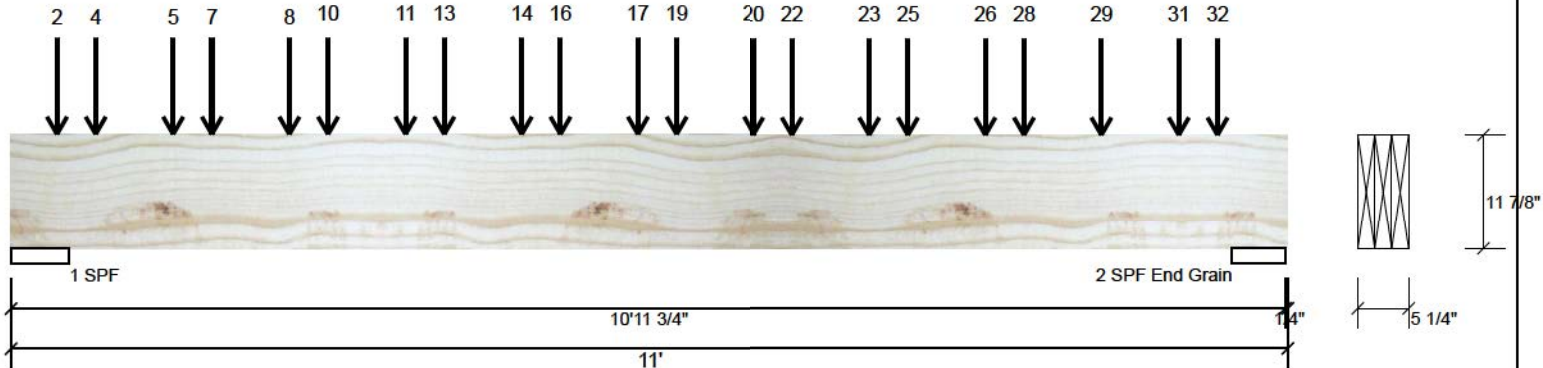


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

# B6-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	3399	1454	0	0
2	3368	1391	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	36% 1817 / 5098	6915	L_	1.25D+1.5L
2 - SPF	5.500"	32% 1739 / 5052	6792	L_	1.25D+1.5L
End Grain					

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17454 ft-lb	5'4 3/4"	53447 ft-lb	0.327 (33%)	1.25D+1.5L	L_
Unbraced	17454 ft-lb	5'4 3/4"	51798 ft-lb	0.337 (34%)	1.25D+1.5L	L_
Shear	6114 lb	1'5 1/8"	17394 lb	0.351 (35%)	1.25D+1.5L	L_
Perm Defl in.	0.054 (L/2288)	5'7"	0.344 (L/360)	0.160 (16%)	D	Uniform
LL Defl inch	0.128 (L/965)	5'7 1/8"	0.344 (L/360)	0.370 (37%)	L	LL
TL Defl inch	0.182 (L/679)	5'7 1/8"	0.516 (L/240)	0.350 (35%)	D+L	LL
LL Cant	-0.001 (2L/687)	Rt Cant	0.200 (2L/480)	0.004 (0%)	L	LL
TL Cant	-0.001 (2L/484)	Rt Cant	0.300 (2L/360)	0.003 (0%)	D+L	LL

## 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.

**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.**



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## 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 1/8/2023

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





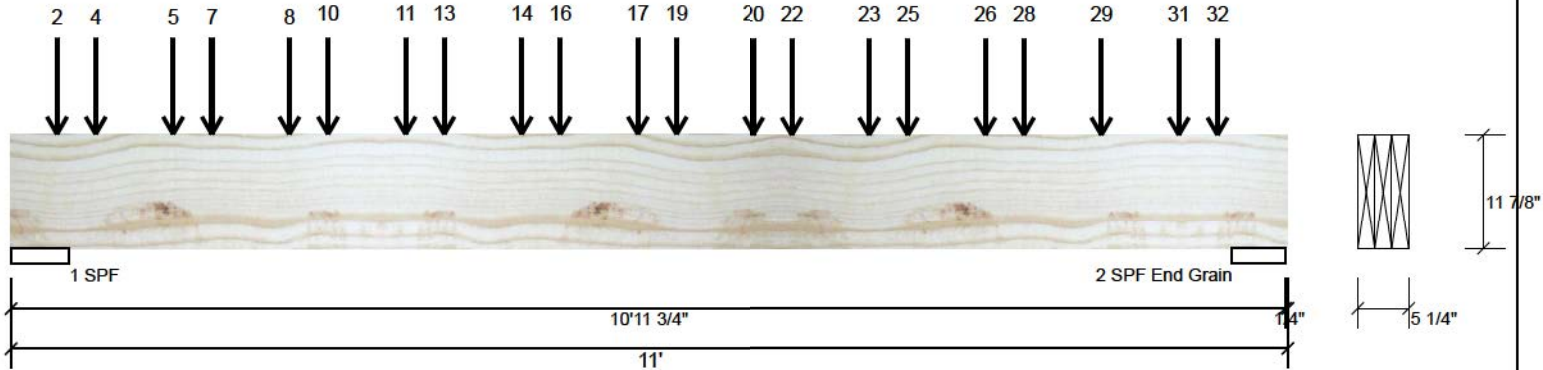


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

**B6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED**

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
2	Point	0-4-12		Top	70 lb	186 lb	0 lb	0 lb	J2
4	Point	0-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
5	Point	1-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
7	Point	1-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
8	Point	2-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
10	Point	2-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
11	Point	3-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
13	Point	3-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
14	Point	4-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
16	Point	4-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
17	Point	5-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
19	Point	5-8-12		Top	120 lb	267 lb	0 lb	0 lb	J8
20	Point	6-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
22	Point	6-8-12		Top	120 lb	267 lb	0 lb	0 lb	J8
23	Point	7-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
25	Point	7-8-12		Top	105 lb	267 lb	0 lb	0 lb	J8
26	Point	8-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
28	Point	8-8-12		Top	117 lb	311 lb	0 lb	0 lb	J8
29	Point	9-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
31	Point	10-0-12		Top	132 lb	351 lb	0 lb	0 lb	J8
32	Point	10-4-12		Top	142 lb	378 lb	0 lb	0 lb	J2
Self Weight					14 PLF				

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**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

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 1/8/2023

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





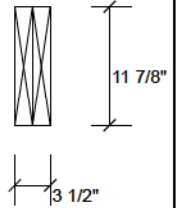
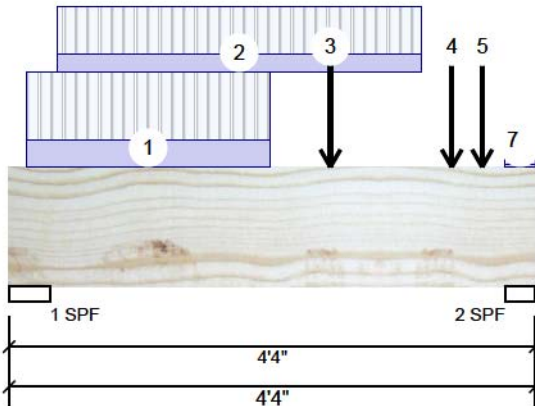


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

**F5-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	1235	494	0	0
2	1187	484	0	0

**Bearings and Factored Reactions**

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	29%	618 / 1853	2470 L	1.25D+1.5L
2 - SPF	3.000"	37%	605 / 1781	2386 L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2341 ft-lb	2'3 1/8"	34261 ft-lb	0.068 (7%)	1.25D+1.5L	L
Unbraced	2341 ft-lb	2'3 1/8"	34261 ft-lb	0.068 (7%)	1.25D+1.5L	L
Shear	3403 lb	3'1 7/8"	11596 lb	0.293 (29%)	1.25D+1.5L	L
Perm Defl in. (L/17823)	0.003	2'2 13/16"	0.129 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.006 (L/7169)	2'2 11/16"	0.129 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.009 (L/5113)	2'2 11/16"	0.194 (L/240)	0.050 (5%)	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	Part. Uniform	0-1-12 to 2-1-12		Near Face	144 PLF	376 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-4-12 to 3-4-12		Far Face	97 PLF	260 PLF	0 PLF	0 PLF	
3	Point	2-7-12		Near Face	153 lb	376 lb	0 lb	0 lb	J2
4	Point	3-7-12		Near Face	141 lb	343 lb	0 lb	0 lb	J2
5	Point	3-10-12		Far Face	59 lb	158 lb	0 lb	0 lb	J8
6	Tie-In	4-1-0 to 4-4-0	0-9-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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

This design is valid until 1/8/2023



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



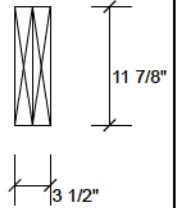
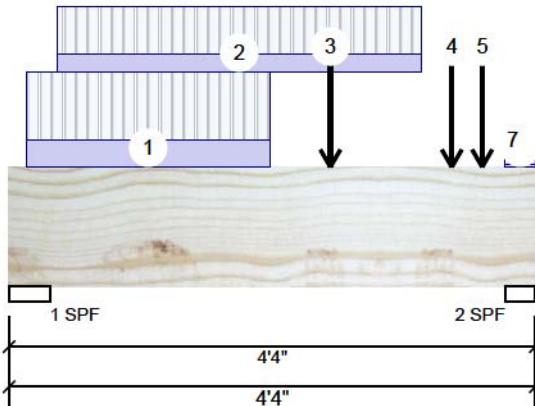


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

F5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Tie-In	4-1-0 to 4-4-0	0-6-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

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#### 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 1/8/2023

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



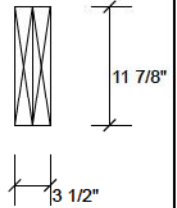
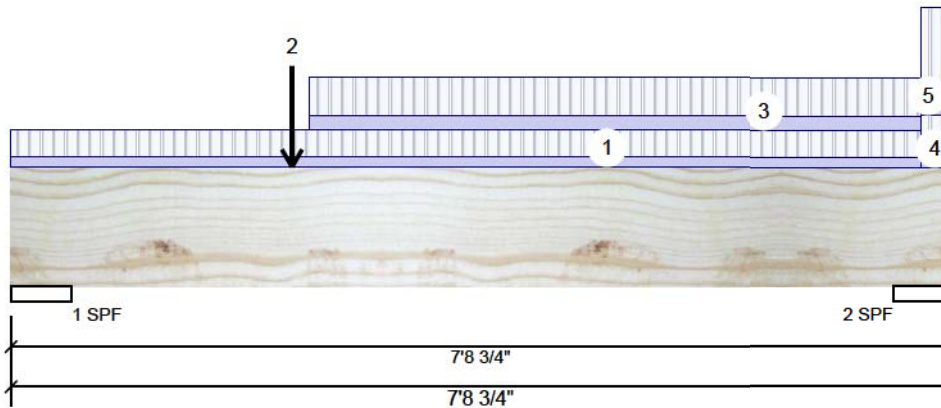


Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
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	527	268	0	0
2	240	139	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	6.000"	9% 335 / 791	1126 L	1.25D+1.5L
2 - SPF	5.500"	5% 174 / 360	534 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2048 ft-lb	2'3 3/4"	34261 ft-lb	0.060 (6%)	1.25D+1.5L	L
Unbraced	2048 ft-lb	2'3 3/4"	32048 ft-lb	0.064 (6%)	1.25D+1.5L	L
Shear	1091 lb	1'5 1/8"	11596 lb	0.094 (9%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/18271)	3'3 3/4"	0.230 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.009 (L/9264)	3'2 9/16"	0.230 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.013 (L/6148)	3'2 15/16"	0.345 (L/240)	0.040 (4%)	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	Tie-In	0-0-0 to 7-6-0	0-1-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	2-3-12		Far Face	297 lb	670 lb	0 lb	0 lb	F7
3	Tie-In	2-5-8 to 7-6-0	0-2-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	7-6-0 to 7-8-12	0-2-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	7-6-0 to 7-8-12	0-5-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

### 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

This design is valid until 1/8/2023



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



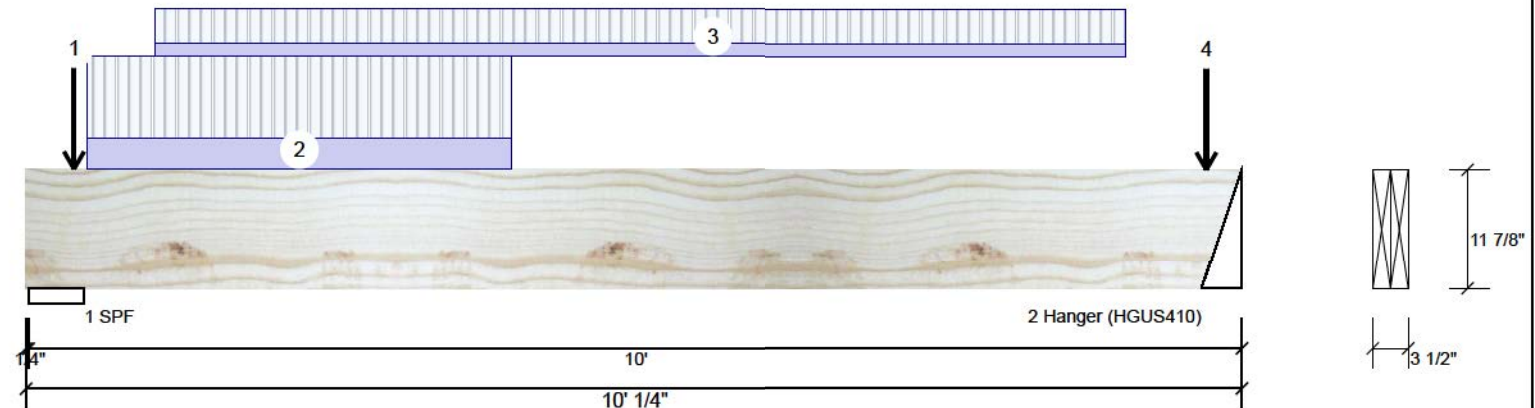




Client: GREENPARK  
Project:  
Address:

Date: 12/17/2020  
Input by: R O  
Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
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	1174	486	0	0
2	670	297	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	20%	608 / 1761	2369	_L	1.25D+1.5L
2 - Hanger	4.000"	13%	371 / 1005	1376	_L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4203 ft-lb	3'9 9/16"	34261 ft-lb	0.123 (12%)	1.25D+1.5L	_L
Unbraced	4203 ft-lb	3'9 9/16"	30062 ft-lb	0.140 (14%)	1.25D+1.5L	_L
Shear	1800 lb	1'2 7/8"	11596 lb	0.155 (16%)	1.25D+1.5L	_L
Perm Defl in.	0.017 (L/6900)	4'8 7/16"	0.317 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.039 (L/2937)	4'7 7/8"	0.317 (L/360)	0.120 (12%)	L	LL
TL Defl inch	0.055 (L/2060)	4'8 1/16"	0.475 (L/240)	0.120 (12%)	D+L	LL
LL Cant	-0.000 (2L/1978)	Lt Cant	0.200 (2L/480)	0.001 (0%)	L	LL
TL Cant	-0.000 (2L/1391)	Lt Cant	0.300 (2L/240)	0.001 (0%)	D+L	LL

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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.
- 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	Comment
1	Point	0-4-12		Far Face	44 lb	116 lb	0 lb	0 lb	J4
2	Part. Uniform	0-6-0 to 4-0-0		Top	90 PLF	240 PLF	0 PLF	0 PLF	
3	Part. Uniform	1-0-12 to 9-0-12		Far Face	37 PLF	100 PLF	0 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

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Sewage System			
Zoning			



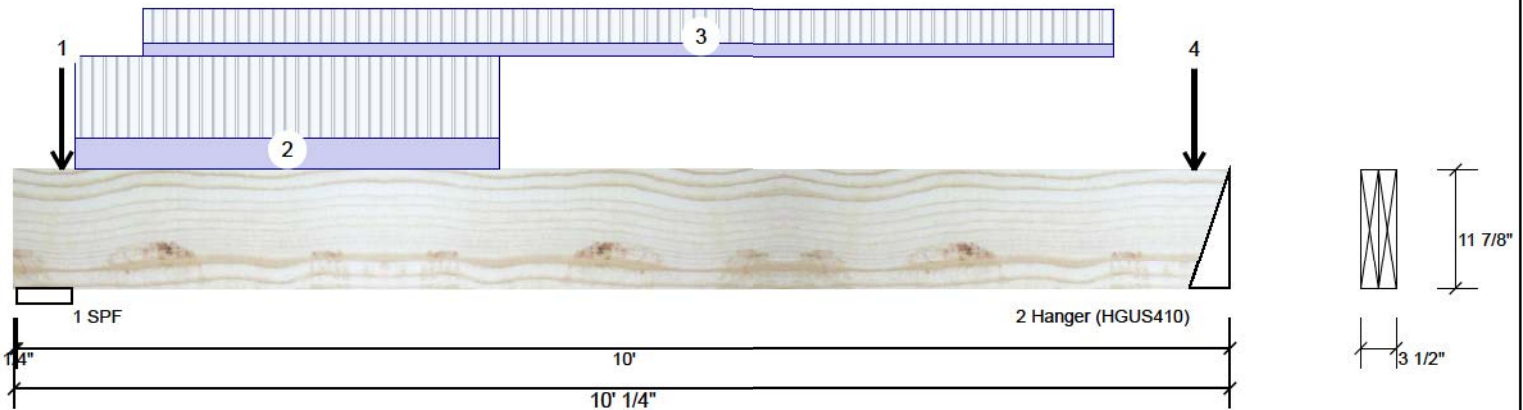


Client: GREENPARK  
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Job Name: GLENWAY 7A-ELEV. 1-DECK-R1  
Project #:

Page 21 of 21

F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Point	9-8-12		Far Face	33 lb	88 lb	0 lb	0 lb	J4
	Self Weight				10 PLF				

**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.**



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.

#### 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

#### Manufacturer Info

Forex  
APA: PR-L318

This design is valid until 1/8/2023



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