

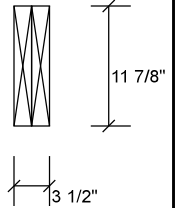
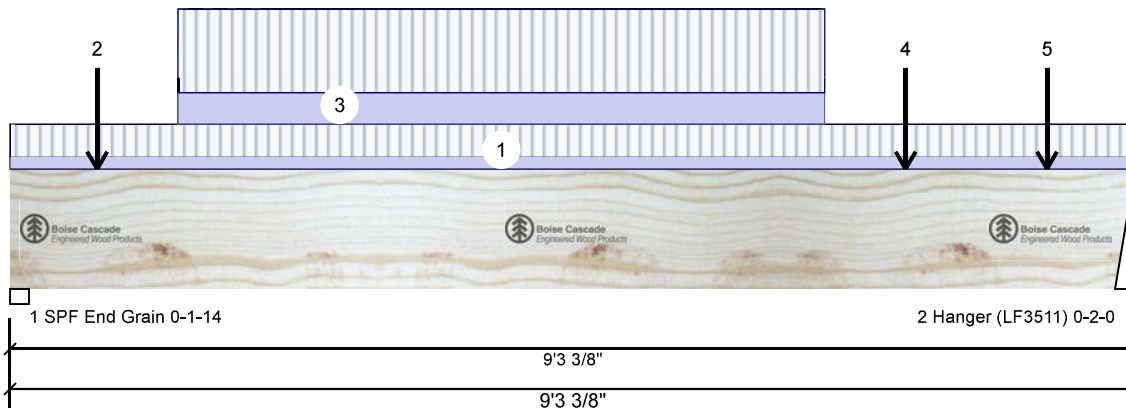


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
PER: C. M...
00 SP 1750' X 11.875'

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F7 Versa-Lam LVL 2.1E 3100 SP **1.750" X 11.875"** 2-Pl **PASSED** Level: Ground Floor

MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1218	511	0	0
2	Vertical	1220	512	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	1.875"	Vert	36%	639 / 1828	2467	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	32%	640 / 1829	2470	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5676 ft-lb	4'7 5/8"	35392 ft-lb	0.160 (16%)	1.25D+1.5L	L
Unbraced	5676 ft-lb	4'7 5/8"	35392 ft-lb	0.160 (16%)	1.25D+1.5L	L
Shear	2292 lb	8'1 1/2"	13217 lb	0.173 (17%)	1.25D+1.5L	L
Perm Defl in.	0.017 (L/6307)	4'7 5/8"	0.303 (L/360)	0.057 (6%)	D	Uniform
LL Defl inch	0.041 (L/2636)	4'7 5/8"	0.303 (L/360)	0.137 (14%)	L	L
TL Defl inch	0.059 (L/1859)	4'7 5/8"	0.454 (L/240)	0.129 (13%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Right Header: DF, Thickness: 3 1/2"
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Multiple plies must be fastened together as per manufacturer's details.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be continuously laterally braced.
- 8 Bottom must have sheathing attached or be continuously braced.
- 9 Lateral slenderness ratio based on full section width.



JULY 13, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 9-3-6	1-11-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-8-10		Far Face	82 lb	218 lb	0 lb	0 lb	J3
3	Part. Uniform	1-4-10 to 6-8-10		Far Face	74 PLF	198 PLF	0 PLF	0 PLF	
4	Point	7-4-10		Far Face	93 lb	247 lb	0 lb	0 lb	J3

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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



This design is valid until 4/17/2026



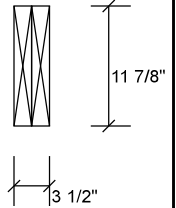
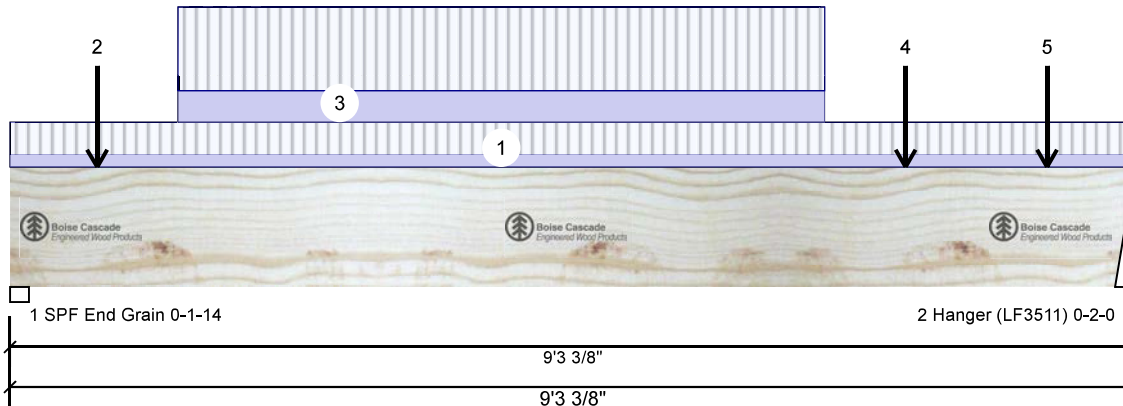
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F7 Versa-Lam LVL 2.1E 3100 SP 1.750' X 11.875" 2-Pl. Level: Ground Floor

MHP 23029



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	8-6-10		Far Face	76 lb	202 lb	0 lb	0 lb	J3
	Self Weight				12 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
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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

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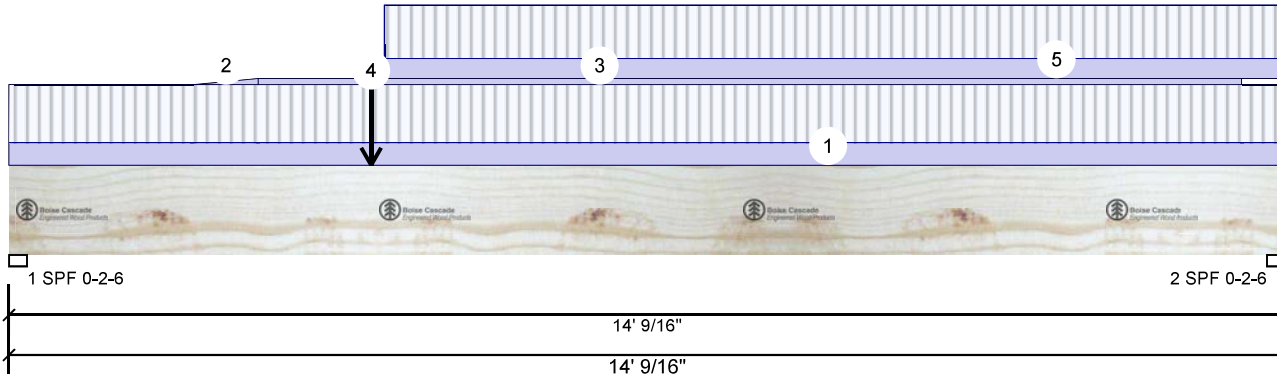
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F8 Versa-Lam LVL 2.1E 3100 SP 1-750" X 11.875" 2-Pl - PASSED Level: Ground Floor
MHP 23029

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1074	535	0	0
2	Vertical	588	332	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	45%	669 / 1611	2280	L	1.25D+1.5L
2 - SPF	2.375"	Vert	25%	415 / 883	1297	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8361 ft-lb	3'11 7/8"	35392 ft-lb	0.236 (24%)	1.25D+1.5L	L
Unbraced	8361 ft-lb	3'11 7/8"	35392 ft-lb	0.236 (24%)	1.25D+1.5L	L
Shear	2232 lb	1'2 1/4"	13217 lb	0.169 (17%)	1.25D+1.5L	L
Perm Defl in.	0.057 (L/2914)	6'6 11/16"	0.459 (L/360)	0.124 (12%)	D	Uniform
LL Defl inch	0.112 (L/1474)	6'5 1/2"	0.459 (L/360)	0.244 (24%)	L	
TL Defl inch	0.169 (L/979)	6'5 7/8"	0.689 (L/240)	0.245 (25%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 10' 11/16" o.c.
- 7 Lateral slenderness ratio based on full section width.



JULY 13, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-0-9	0-5-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tapered Start	2-0-7		Top	0 PLF	0 PLF	0 PLF	0 PLF	
	End	2-8-15			2 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	2-8-15 to 13-6-13		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Point	3-11-14		Far Face	512 lb	1220 lb	0 lb	0 lb	F7

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

This design is valid until 4/17/2026

Manufacturer Info

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Boise, ID 83702
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www.bc.com
CCMC: 12472

Kott Inc.

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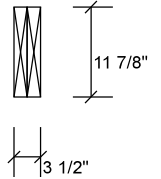
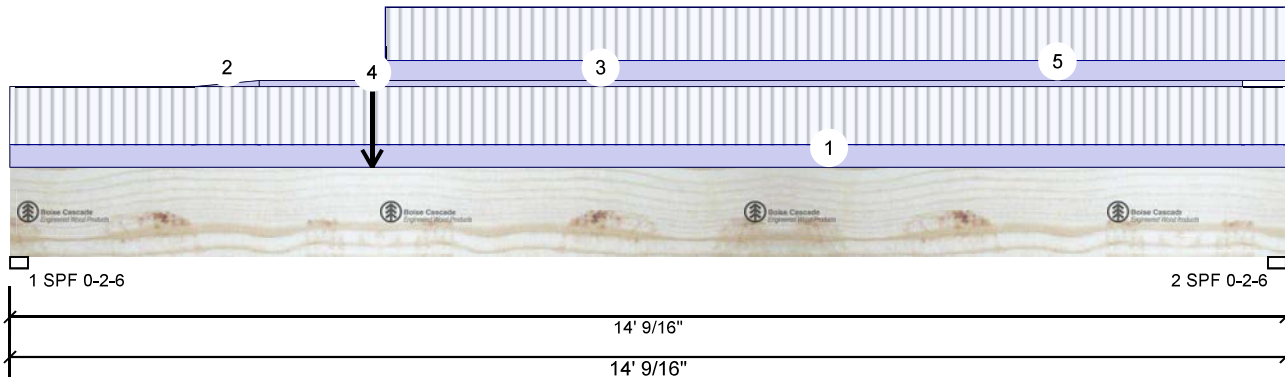


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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F8 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Pl. PASSED Level: Ground Floor
MHP 23029



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Tie-In	4-1-10 to 14-0-9	0-5-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				12 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
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6. For flat roofs provide proper drainage to prevent ponding

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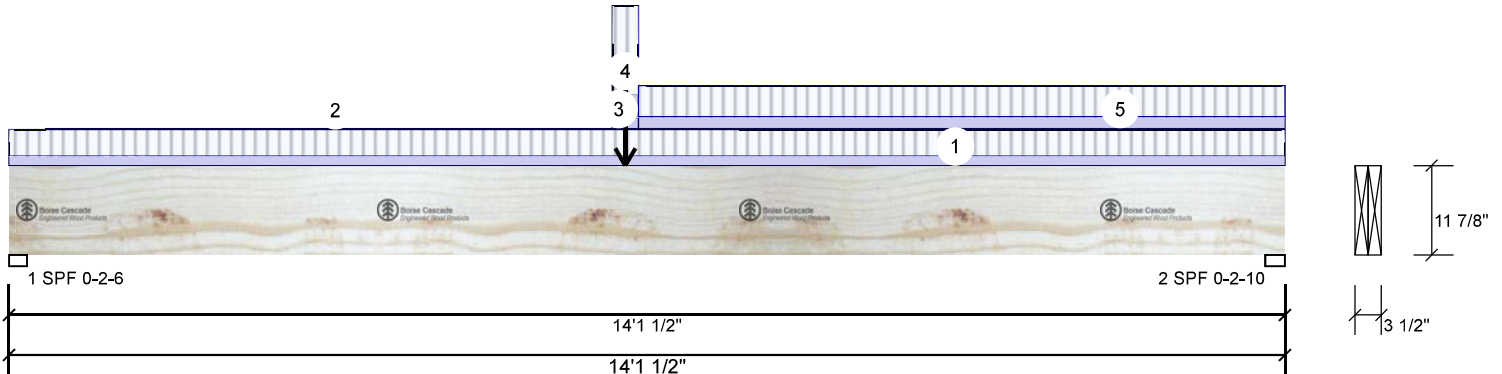


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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F8-A Versa-Lam LVL 2.1E 3100 SP 17/50" X 11.875" 2-Ply - PASSED Level: Ground Floor

MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	343	228	0	0
2	Vertical	428	257	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	16%	285 / 515	800	L	1.25D+1.5L
2 - SPF	2.625"	Vert	17%	321 / 642	962	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3979 ft-lb	6'9 7/8"	35392 ft-lb	0.112 (11%)	1.25D+1.5L	L
Unbraced	3979 ft-lb	6'9 7/8"	35392 ft-lb	0.112 (11%)	1.25D+1.5L	L
Shear	846 lb	12'11"	13217 lb	0.064 (6%)	1.25D+1.5L	L
Perm Defl in.	0.032 (L/5120)	7' 15/16"	0.461 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.054 (L/3055)	7'1 1/4"	0.461 (L/360)	0.118 (12%)	L	L
TL Defl inch	0.087 (L/1913)	7'1 1/8"	0.692 (L/240)	0.125 (13%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 7'3 5/8" o.c.
- 7 Lateral slenderness ratio based on full section width.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-1-8	0-6-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-4-14 to 8-0-15		Top	1 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	6-8-2 to 6-11-10	1-10-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	6-9-14		Near Face	117 lb	256 lb	0 lb	0 lb	F5
5	Tie-In	6-11-10 to 14-1-8	0-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				12 PLF				

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

This design is valid until 4/17/2026

Manufacturer Info

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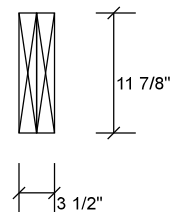
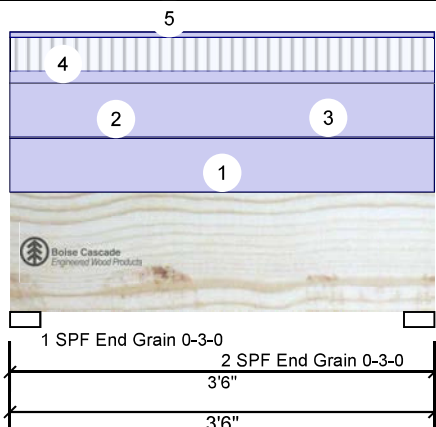
Client: GREENPARK
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Date: 7/11/2023
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Job Name: ROSE 3-1 STD
Project #:

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FH2 Versa-Lam LVL 2.1E 3100 SP 1750" X 11.875" 2-Ply - PASSED Level: Ground Floor

MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 CBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	44	185	0	0
2	Vertical	44	185	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	4%	232 / 66	297	L	1.25D+1.5L
2 - SPF End Grain	3.000"	Vert	4%	232 / 66	297	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	207 ft-lb	1'9"	24420 ft-lb	0.008 (1%)	1.25D+1.5L	L
Unbraced	207 ft-lb	1'9"	24420 ft-lb	0.008 (1%)	1.25D+1.5L	L
Shear	205 lb	2'3 1/8"	9120 lb	0.023 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/146763)	1'9"	0.104 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/621299)	1'9"	0.104 (L/360)	0.001 (0%)	L	L
TL Defl inch	0.000 (L/118719)	1'9"	0.156 (L/240)	0.002 (0%)	D+L	L



Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must have sheathing attached or be continuously braced.
- 7 Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-6-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-6-0		Near Face	1 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 3-6-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Tapered Start	0-0-0		Near Face	9 PLF	25 PLF	0 PLF	0 PLF	

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

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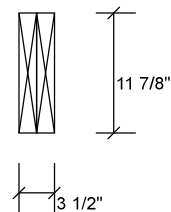
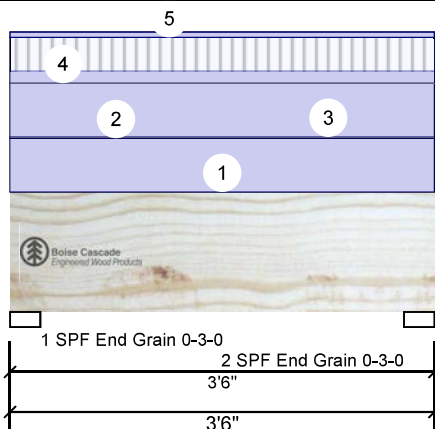


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FH2 Versa-Lam LVL 2.1E 3100 SP 11.750" X 11.875" 2-Ply - PASSED Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	End	3-6-0			9 PLF	25 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-0-0 to 3-6-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
	Self Weight				12 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

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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



This design is valid until 4/17/2026

MHP 23029

Page 18 of 57

Ground Floor

ENG-M0723-068-KT2-GREENPARK-ZADORRA ESTATES-ROSE 3-1

Ground Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F10	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	1	2	2	18-0
F8	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	2	2	4	16-0
F13	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	1	2	2	12-0
F7	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	1	2	2	10-0
F6	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	2	2	4	8-0
FH2	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	2	2	4	4-0
F5	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	1	2	2	4-0

Joist (Flush)

Label	Description	Width	Depth	Pcs	Length
J7	AJS 140	2.5	11.875	18	18-0
J8	AJS 140	2.5	11.875	28	16-0
J5	AJS 140	2.5	11.875	4	14-0
J4	AJS 140	2.5	11.875	4	12-0
J3	AJS 140	2.5	11.875	7	10-0
J2	AJS 140	2.5	11.875	2	8-0
J1	AJS 140	2.5	11.875	4	2-0
F4	AJS 140	2.5	11.875	3	18-0
F3	AJS 140	2.5	11.875	6	16-0
F2	AJS 140	2.5	11.875	1	6-0
F1	AJS 140	2.5	11.875	3	4-0

Rim Board

Label	Description	Width	Depth	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875	13	12-0

Blocking

Label	Description	Width	Depth	Qty	Pcs	Length
BLK1	AJS 140	2.5	11.875	Unf/L	Varies	53-0

Hanger

Label	Pcs	Description	fasteners	fasteners
H1	29	LF2511	12 10dX1 1/2	1 #6X1 1/4WS
H2	5	LF3511	12 10d	2 #6X1 1/4WS

JOB INFORMATION

Builder	GREENPARK
Project	ZADORRA ESTATES OSHAWA, ON
Shipping	
Sales Rep	RALPH MIRIGELLO
Designer	
Plotted	July 11, 2023
Layout Name	ROSE 3-1 DC
Job Path	S:\CUSTOMERS\GREENPARK\ZADORRA ESTATES MODELS\ROSE 3\ROSE 3-1W-ROSE 3-1DC\ROSE 3-1 DC.dwg

DESIGN CRITERIA

Ground Floor	
Design Method	LSD (Canada)
Bulking Code	NBCC 2015 CBC 2012(2020 Update)

Floor Loads

Live	40
Dead	15

Deflection Joist

LL Span /	360
TL Span /	240

Deflection Flush Girder

LL Span /	360
TL Span /	240

Deflection Dropped Girder

LL Span /	360
TL Span /	240

Deflection Header

LL Span /	360
TL Span /	240

Decking

Decking	OSB
Thickness	3/4"
Fastener	Nailed & Glued

CCMC References

Boise - 12472-R, 12787-R
LP - 12412-R, Roseburg - 13310-R
Forex - 14035-R

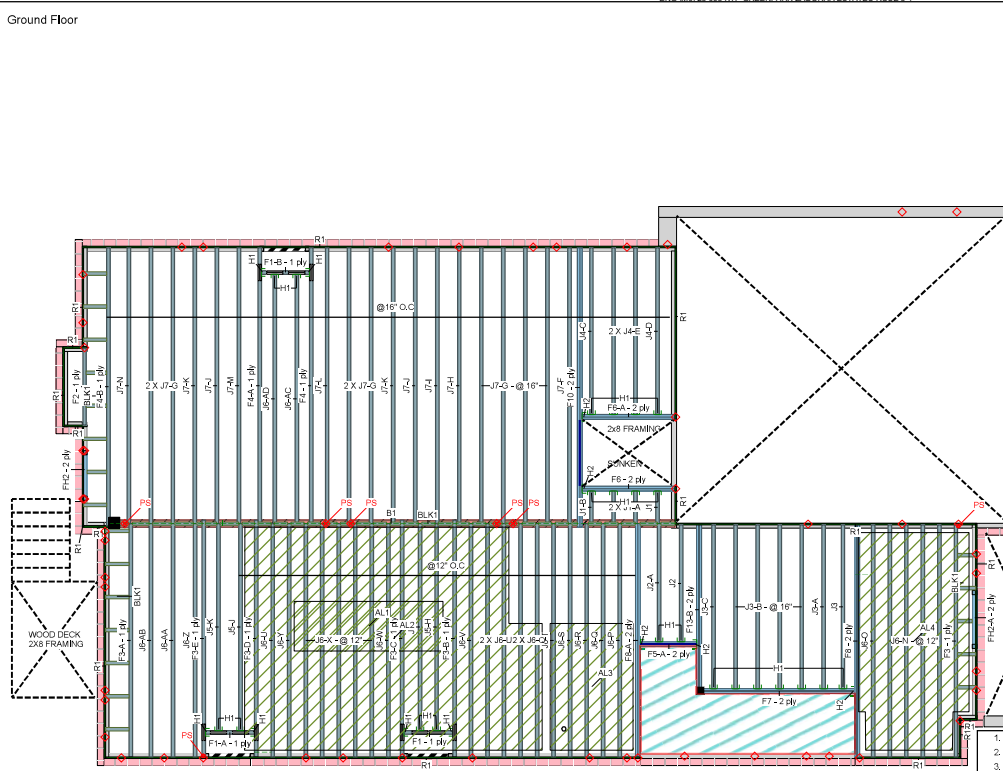
Kott Inc.

3228 Moode Dr. Ottawa
14 Anderson Blvd. Unbridge
Ontario
613-838-2775 /
805-642-4400



Legend

PS	Point Load Support
Load from Above	
Wall Opening	
Norbord Rimboard Plus 1.125 X 11.875	
AJS 140 11.875	
Versa-Lam LVL 2.1E 3100 SP 1.75 X 11.875	
O X O (Dropped)	



Installation Guide



(Open your phone's camera and
hover over this QR code to access it)

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

- 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
- Shower 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.
- Multi ply beams with side loading to have all fasteners installed with the head on the side of the applied load.
- Confirmation of adequate support & anchorage of components is the responsibility of the building designer, suggested uplift connectors are as shown.
- Where beam hangs on side of 3-ply member, it is recommended that the equivalent quantity and size of nails required for the hanger attachment also be installed on opposite side of the 3-ply member



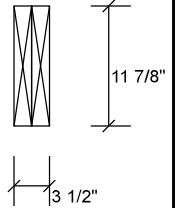
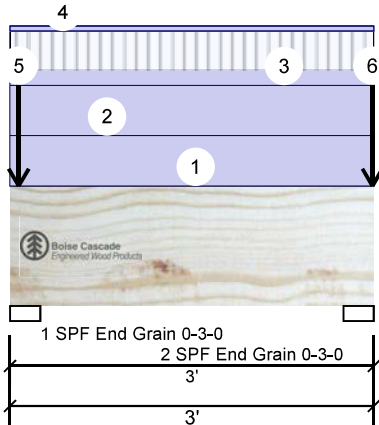
Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
PER: CHIEF BUILDING OFFICIAL

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 DC
Project #:

Page 1 of 4

FH2 Versa-Lam LVL 2.1E 3100 SP 11.750" X 11.875" 2-Ply - PASSED Level: Ground Floor

MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	88	456	276	0
2	Vertical	88	456	276	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	11%	570 / 502	1071	L	1.25D+1.5S +L
2 - SPF End Grain	3.000"	Vert	11%	570 / 502	1071	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	156 ft-lb	1'6"	23005 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	156 ft-lb	1'6"	23005 ft-lb	0.007 (1%)	1.25D+1.5L	L
Shear	177 lb	1'9 1/8"	8591 lb	0.021 (2%)	1.25D+1.5L	L
Perm Defl in. (L/230204)	0.000	1'6"	0.088 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch (L/800767)	0.000	1'6"	0.088 (L/360)	0.000 (0%)	L+0.5S	L
TL Defl inch (L/178802)	0.000	1'6"	0.131 (L/240)	0.001 (0%)	D+L+0.5S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must have sheathing attached or be continuously braced.
- 7 Lateral slenderness ratio based on full section width.



JULY 13, 2023

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-0-0		Near Face	12 PLF	31 PLF	0 PLF	0 PLF	
	End	3-0-0			12 PLF	31 PLF	0 PLF	0 PLF	

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

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

This design is valid until 4/17/2026

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

Kott Inc.

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





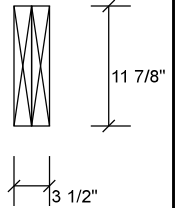
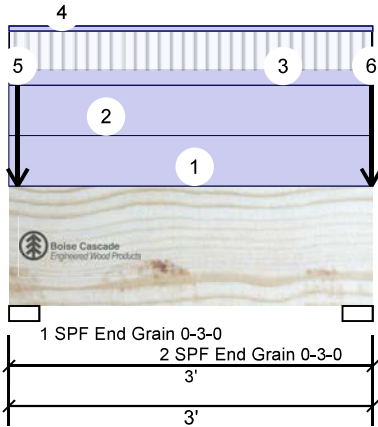
Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 DC
Project #:

Page 2 of 4

FH2 Versa-Lam LVL 2.1E 3100 SP 1750" X 11.875" 2-Ply - PASSED Level: Ground Floor

MHP 23029



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-0-0 to 3-0-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
5	Point	0-0-14		Top	294 lb	41 lb	276 lb	0 lb	Header Column Header Column
	Bearing Length	0-3-8							
6	Point	2-11-14		Top	294 lb	41 lb	276 lb	0 lb	Header Column Header Column
	Bearing Length	0-3-8							
	Self Weight				12 PLF				



JULY 13, 2023

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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

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(800) 232-0788
www.bc.com
CCMC: 12472

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



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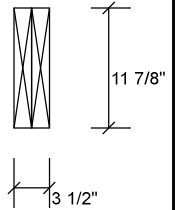
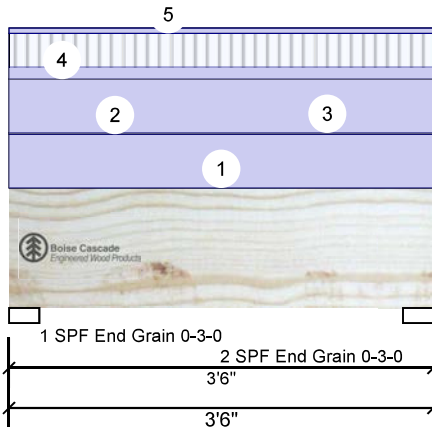


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES
CHIEF BUILDING OFFICIAL

Date: 7/11/2023
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Job Name: ROSE 3-1 DC
Project #:

Page 3 of 4

FH2-A Versa-Lam LVL 2.1E 3100 SP 11.750" X 11.875" 2-Ply PASSED Level: Ground Floor
MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	44	185	0	0
2	Vertical	44	185	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	4%	232 / 66	297	L	1.25D+1.5L
2 - SPF End Grain	3.000"	Vert	4%	232 / 66	297	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	207 ft-lb	1'9"	24420 ft-lb	0.008 (1%)	1.25D+1.5L	L
Unbraced	207 ft-lb	1'9"	24420 ft-lb	0.008 (1%)	1.25D+1.5L	L
Shear	205 lb	1'2 7/8"	9120 lb	0.023 (2%)	1.25D+1.5L	L
Perm Defl in. (L/146763)	0.000	1'9"	0.104 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch (L/621299)	0.000	1'9"	0.104 (L/360)	0.001 (0%)	L	L
TL Defl inch (L/118719)	0.000	1'9"	0.156 (L/240)	0.002 (0%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must have sheathing attached or be continuously braced.
- 7 Lateral slenderness ratio based on full section width.



JULY 13, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-6-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-6-0		Near Face	1 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 3-6-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Tapered Start	0-0-0		Near Face	9 PLF	25 PLF	0 PLF	0 PLF	

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

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

This design is valid until 4/17/2026

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
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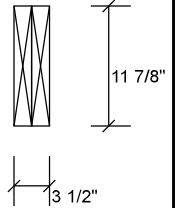
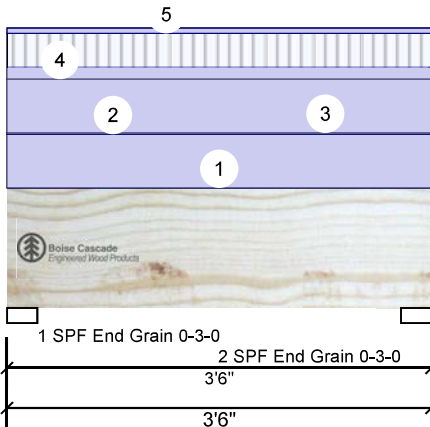


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 DC
Project #:

Page 4 of 4

FH2-A Versa-Lam LVL 2.1E 3100 SP 1750" X 11.875" 2-Ply PASSED Level: Ground Floor
MHP 23029



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	End	3-6-0			9 PLF	25 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-0-0 to 3-6-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
	Self Weight				12 PLF				



JULY 13, 2023

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Lumber

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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

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Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



This design is valid until 4/17/2026

MHP 23029

Second Floor

ENG-M0723-068-KTZ-GREENPARK-ZADORRA ESTATES-ROSE 3-1

Page 11 of 57



Second Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F12	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	3	2	6	14-0
F13	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	2	2	4	12-0
F5	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	1	2	2	4-0
F11	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875			1	4-0

LVL/LSL (Dropped)							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
B5	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	1	2	2	14-0
B4	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	1	2	2	10-0

Joist (Flush)							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
J9	AJS 140	2.5	11.875	14		20-0	4
J7	AJS 140	2.5	11.875	26		18-0	4
J6	AJS 140	2.5	11.875	22		16-0	4
J5	AJS 140	2.5	11.875	13		14-0	4
J4	AJS 140	2.5	11.875	4		12-0	4
J8	AJS 140	2.5	11.875	7		6-0	4

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	4

Blocking							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	AJS 140	2.5	11.875	Varies		38-0	4

Hanger							
Label	Pcs	Description	Skew	fasteners	Supported Member	fasteners	
H1	27	LF2511		12 10d	1 #8x1 1/4WS		
H2	3	LF3511		12 10d	2 #8x1 1/4WS		
H3	1	SUL1.81/8 (Min)	Right	12 16d	2 10dX1 1/2		
H4	1	SUL1.81/8 (Min)	Left	12 16d	2 10dX1 1/2		

JOB INFORMATION	
Builder	GREENPARK
Project	ZADORRA ESTATES OSHAWA, ON
Shipping	
Sales Rep	RALPH MIRIGELLO
Designer	
Plotted	July 11, 2023
Layout Name	ROSE 3-1 ALL OPT
Job Path	S:\CUSTOMERS\GREENPARK\ZADORRA ESTATES MODELS\ROSE 3\ROSE 3-1\ROSE 3-1 STD.dwg

DESIGN CRITERIA	
Second Floor	LSD (Canada)
Design Method	NBCC 2015
Building Code	IBC 2012(2020 Update)

Floor Loads	
Live	40
Dead	15
Deflection Joist	
LL Span /L	360
TL Span /L	240
Deflection Flush Girder	
LL Span /L	360
TL Span /L	240
Deflection Dropped Girder	
LL Span /L	360
TL Span /L	240
Deflection Header	
LL Span /L	360
TL Span /L	240
Decking	
Thickness	5/8"
Fastener	Nailed & Glued

CCMC References	
Boise - 12472-R, 12787-R	
LP - 12412-R, Roseburg - 13310-R	
Forex - 14055-R	
Kott Inc.	
3228 Moodie Dr. Ottawa 14 Anderson Blvd. Unbridge Ontario	
613-838-2775 / 905-642-4400	

Installation Guide



(Open your phone's camera and
hover over this QR code to access it)

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

- 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
- Shower 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.
- Multi ply beams with side loading to have all fasteners installed with the head on the side of the applied load
- Confirmation of adequate support & anchorage of components is the responsibility of the building designer; suggested uplift connectors are as shown
- Where beam hangs on side of 3-ply member, it is recommended that the equivalent quantity and size of nails required for the hanger attachment also be installed on opposite side of the 3-ply member

Legend

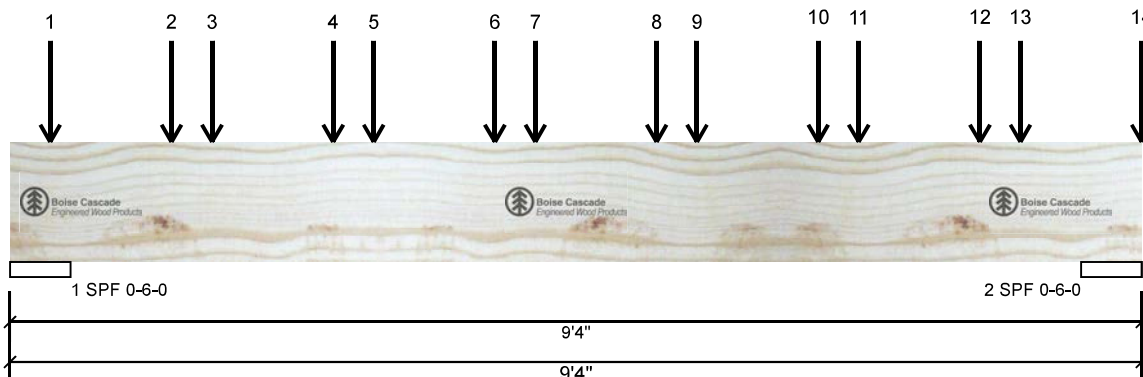
PS	Point Load Support
Load from Above	
Wall	
Wall Opening	
Norbord Rimboard Plus 1.125 X 11.875	
AJS 140 11.875	
Versa-Lam LVL 2.1E 3100 SP 1.75 X 11.875	
Versa-Lam LVL 2.1E 3100 SP 1.75 X 11.875 (Dropped)	

Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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B4 Versa-Lam LVL 2.1E 3100 SP 17'50" X 11.875" 2-Plv PASSED Level: Second Floor

MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	2470	985	0	0
2	Vertical	2687	1064	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	Vert	38%	1231 / 3705	4936	L	1.25D+1.5L
2 - SPF	6.000"	Vert	41%	1330 / 4031	5360	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	10855 ft-lb	4'4"	35392 ft-lb	0.307 (31%)	1.25D+1.5L	L
Unbraced	10855 ft-lb	4'4"	35392 ft-lb	0.307 (31%)	1.25D+1.5L	L
Shear	4538 lb	1'5 7/8"	13217 lb	0.343 (34%)	1.25D+1.5L	L
Perm Defl in.	0.028 (L/3681)	4'7 15/16"	0.282 (L/360)	0.098 (10%)	D	Uniform
LL Defl inch	0.070 (L/1453)	4'7 15/16"	0.282 (L/360)	0.248 (25%)	L	
TL Defl inch	0.097 (L/1042)	4'7 15/16"	0.423 (L/240)	0.230 (23%)	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 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 3 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Multiple plies must be fastened together as per manufacturer's details.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be continuously laterally braced.
- 8 Bottom must be laterally braced at bearings.
- 9 Lateral slenderness ratio based on full section width.



JULY 13, 2023

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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

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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

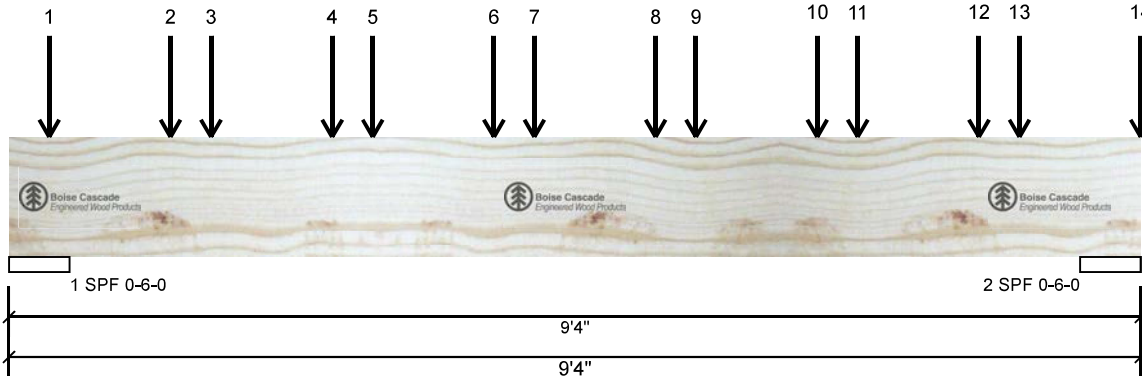
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3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/17/2026

Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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B4 Versa-Lam LVL 2.1E 3100 SP 17'50" X 11.875" 2-PLY PASSED Level: Second Floor
MHP 23029

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-4-0		Top	50 lb	127 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
2	Point	1-4-0		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
3	Point	1-8-0		Top	139 lb	371 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
4	Point	2-8-0		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
5	Point	3-0-0		Top	139 lb	371 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
6	Point	4-0-0		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
7	Point	4-4-0		Top	139 lb	371 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
8	Point	5-4-0		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
9	Point	5-8-0		Top	139 lb	371 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
10	Point	6-8-0		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
11	Point	7-0-0		Top	139 lb	371 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
12	Point	8-0-0		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
13	Point	8-4-0		Top	139 lb	371 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
14	Point	9-4-0		Top	64 lb	170 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
	Self Weight				12 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

This design is valid until 4/17/2026

Manufacturer Info

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Boise, ID 83702
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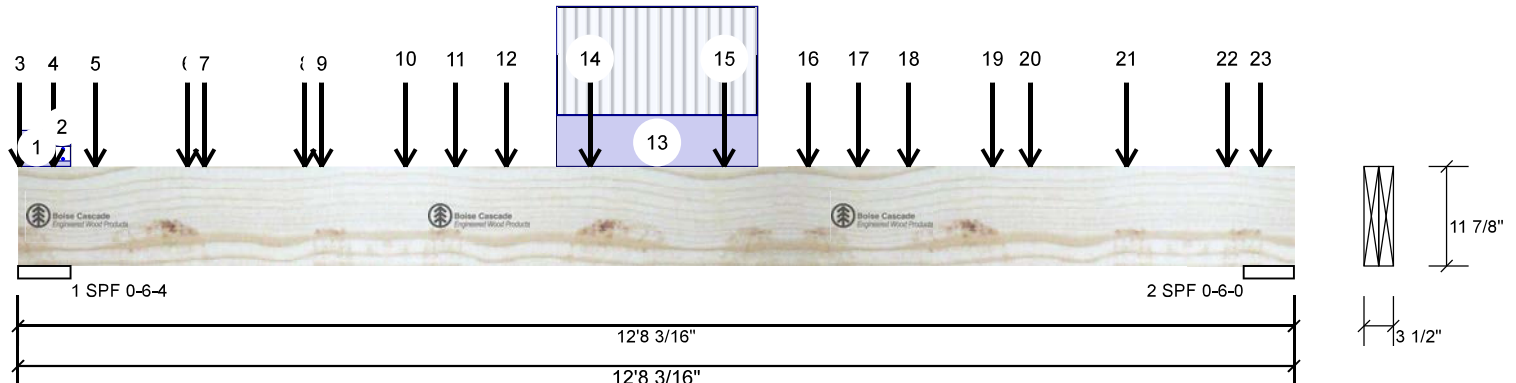


Client: GREENPARK
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Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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B5 Versa-Lam LVL 2.1E 3100 SP 17.50' X 11.875" 2-Ply PASSED Level: Second Floor

MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 CBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	3681	1663	20	0
2	Vertical	3642	1567	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.270"	Vert	56%	2079 / 5541	7619	L	1.25D+1.5L +S
2 - SPF	6.000"	Vert	57%	1959 / 5464	7423	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	21434 ft-lb	6'4 1/16"	35392 ft-lb	0.606 (61%)	1.25D+1.5L +S	L
Unbraced	21434 ft-lb	6'4 1/16"	35392 ft-lb	0.606 (61%)	1.25D+1.5L +S	L
Shear	6610 lb	11'2 5/16"	13217 lb	0.500 (50%)	1.25D+1.5L +S	L
Perm Defl in.	0.113 (L/1253)	6'4 1/8"	0.393 (L/360)	0.287 (29%)	D	Uniform
LL Defl inch	0.259 (L/546)	6'4 1/4"	0.393 (L/360)	0.659 (66%)	L+0.5S	L
TL Defl inch	0.372 (L/381)	6'4 3/16"	0.589 (L/240)	0.631 (63%)	D+L+0.5S	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 3 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Multiple plies must be fastened together as per manufacturer's details.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be continuously laterally braced.
- 8 Bottom must be laterally braced at bearings.
- 9 Lateral slenderness ratio based on full section width.



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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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

Kott Inc.
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613-838-2775 / 905-642-4400

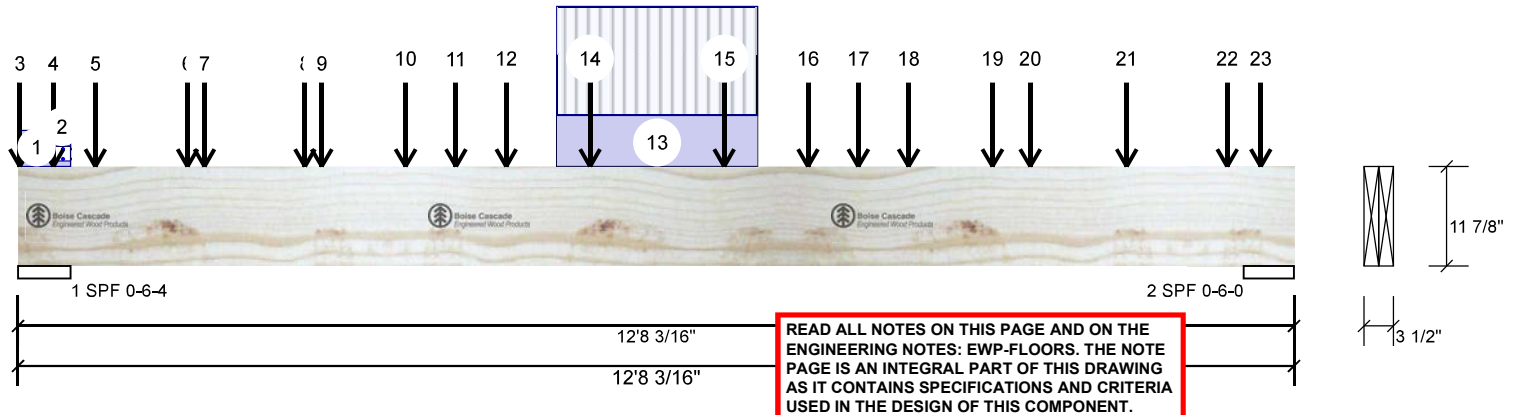


This design is valid until 4/17/2026

Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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B5 Versa-Lam LVL 2.1E 3100 SP 17'50" X 11.875" 2-PLY PASSED MHP 23029 Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-6-4		Top	14 PLF	0 PLF	38 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 0-6-4		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Point	0-0-4		Top	46 lb	95 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
4	Point	0-4-4		Top	64 lb	172 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
5	Point	0-9-4		Top	129 lb	255 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
6	Point	1-8-4		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
7	Point	1-10-4		Top	142 lb	290 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
8	Point	2-10-4		Top	132 lb	278 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
9	Point	3-0-4		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
10	Point	3-10-4		Top	132 lb	278 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
11	Point	4-4-4		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
12	Point	4-10-4		Top	132 lb	278 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
13	Part. Uniform	5-4-4 to 7-4-4		Top	130 PLF	278 PLF	0 PLF	0 PLF	
14	Point	5-8-4		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
15	Point	7-0-4		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
16	Point	7-10-4		Top	126 lb	278 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
17	Point	8-4-4		Top	165 lb	439 lb	0 lb	0 lb	J7

Continued on page 3...

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

This design is valid until 4/17/2026

Manufacturer Info

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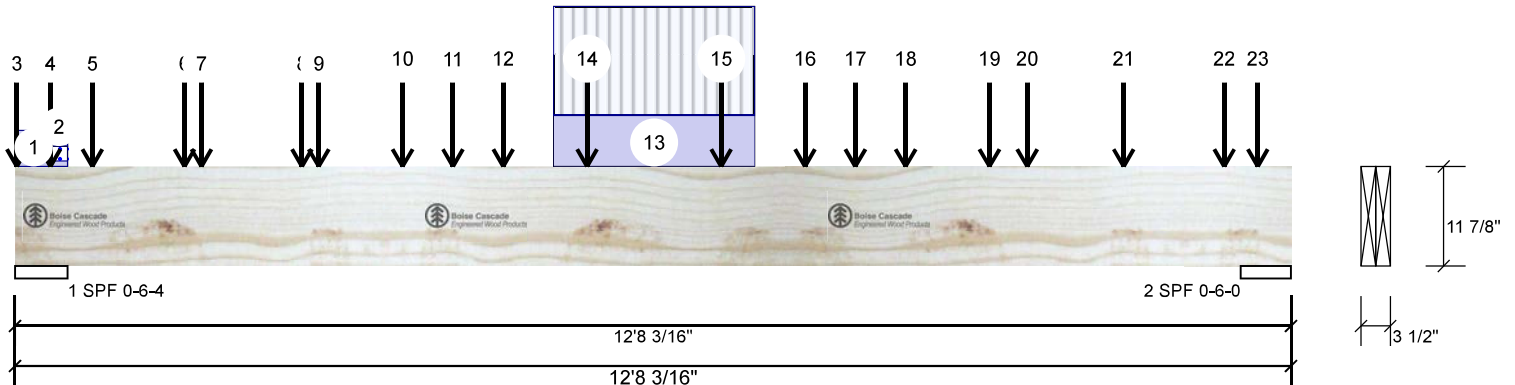
Kott Inc.

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



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Project #:

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B5 Versa-Lam LVL 2.1E 3100 SP 17'50" X 11'875" 2-PLY PASSED Level: Second Floor
MHP 23029

...Continued from page 2

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	Bearing Length	0-3-8							
18	Point	8-10-4		Top	138 lb	307 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
19	Point	9-8-4		Top	165 lb	439 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
20	Point	10-0-12		Top	141 lb	302 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
21	Point	11-0-4		Top	277 lb	711 lb	0 lb	0 lb	J7 J6
	Bearing Length	0-3-8							
22	Point	12-0-4		Top	114 lb	278 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8							
23	Point	12-4-4		Top	64 lb	172 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8							
	Self Weight				12 PLF				



JULY 13, 2023

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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

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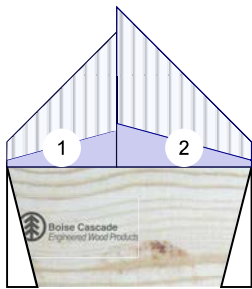


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES

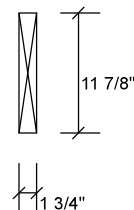
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Job Name: ROSE 3-1 STD
Project #:

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F11 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" - PASSED Level: Second Floor
MHP 23029



1 Hanger (SUR/L1.81/9 (Min)) 0-3-0
2 Hanger (SUR/L1.81/9 (Min)) 0-3-0
2' 3/16"
2' 3/16"



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	14	11	0	0
2	Vertical	14	11	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	1%	14 / 22	36	L	1.25D+1.5L
2 - Hanger	3.000"	Vert	1%	14 / 22	36	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15 ft-lb	1' 1/16"	17696 ft-lb	0.001 (0%)	1.25D+1.5L	L
Unbraced	15 ft-lb	1' 1/16"	17696 ft-lb	0.001 (0%)	1.25D+1.5L	L
Shear	6 lb	9 5/16"	6608 lb	0.001 (0%)	0.9D+1.5L	L
Perm Defl in.	0.000 (L/3063274)	1' 1/16"	0.055 (L/360)	0.000 (0%)	D	Uniform
LL Defl inch	0.000 (L/2115102)	1' 1/16"	0.055 (L/360)	0.000 (0%)	L	L
TL Defl inch	0.000 (L/1251191)	1' 1/16"	0.082 (L/240)	0.000 (0%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Left Header: DF, Thickness: 3 1/2"
- 4 Right Header: DF, Thickness: 3 1/2"
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top must be continuously laterally braced.
- 7 Bottom must be laterally braced at bearings.



JULY 13, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-10-14	0-1-4 to 0-6-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-10-14 to 2-0-3	0-7-15 to 0-1-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				6 PLF				

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

This design is valid until 4/17/2026

Manufacturer Info

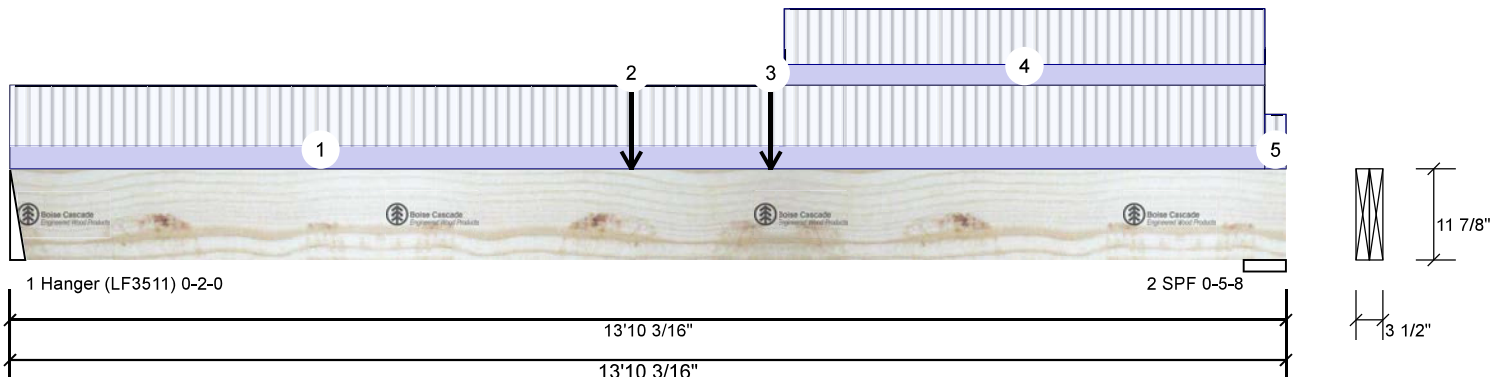
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ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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F12-A Versa-Lam LVL 2.1E 3'10 3/16" SP 1.750" X 11.875" 2-PLY PASSED Level: Second Floor
MHP 23029

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	403	260	0	0
2	Vertical	600	352	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	12%	325 / 605	930	L	1.25D+1.5L
2 - SPF	5.500"	Vert	11%	440 / 899	1339	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5293 ft-lb	8'3 1/16"	35392 ft-lb	0.150 (15%)	1.25D+1.5L	L
Unbraced	5293 ft-lb	8'3 1/16"	35392 ft-lb	0.150 (15%)	1.25D+1.5L	L
Shear	1206 lb	12'4 13/16"	13217 lb	0.091 (9%)	1.25D+1.5L	L
Perm Defl in.	0.038 (L/4181)	7' 3/4"	0.445 (L/360)	0.086 (9%)	D	Uniform
LL Defl inch	0.065 (L/2475)	7'1 7/16"	0.445 (L/360)	0.145 (15%)	L	L
TL Defl inch	0.103 (L/1555)	7'1 3/16"	0.667 (L/240)	0.154 (15%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Left Header: DF, Thickness: 3 1/2"
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Multiple plies must be fastened together as per manufacturer's details.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be continuously laterally braced.
- 8 Bottom must be laterally braced at a maximum of 6'6 1/2" o.c.
- 9 Lateral slenderness ratio based on full section width.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-7-7	0-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	6-8-15		Far Face	11 lb	14 lb	0 lb	0 lb	F11
3	Point	8-3-1		Far Face	258 lb	510 lb	0 lb	0 lb	F13
4	Tie-In	8-4-13 to 13-7-7	0-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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

This design is valid until 4/17/2026

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



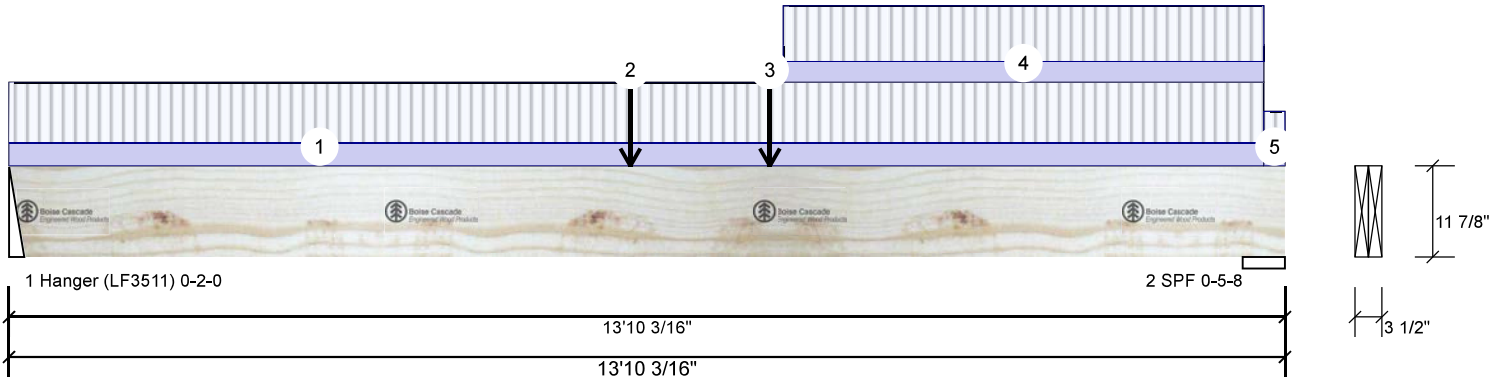


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

Page 39 of 47

F12-A Versa-Lam LVL 2.1E 3'10 00 SP 17'50" X 11.875" 2-Plw PASSED Level: Second Floor
MHP 23029



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Tie-In	13-7-7 to 13-10-3	0-5-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				12 PLF				



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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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

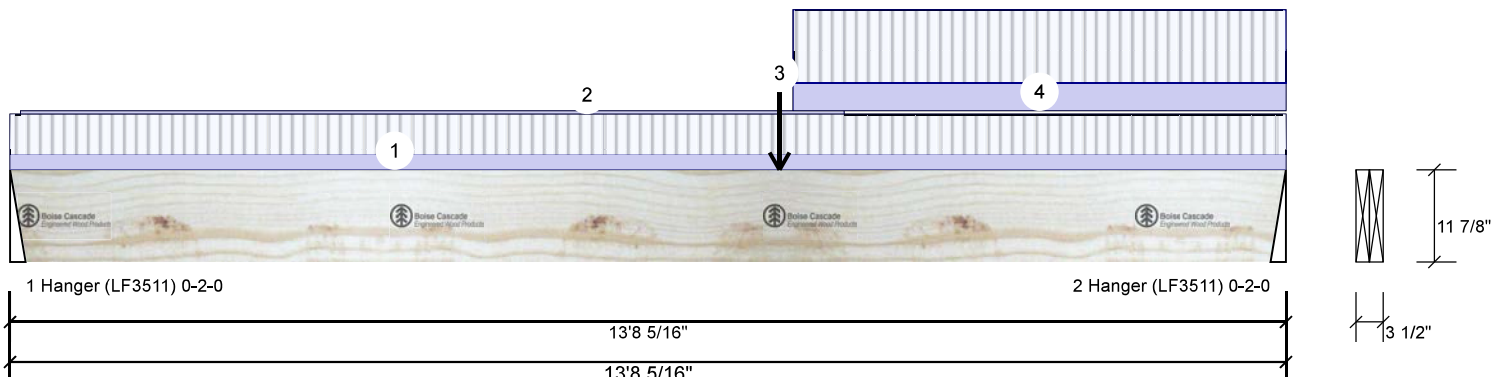
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Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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F12-B Versa-Lam LVL 2.1E 3' 00 SP 1.750" X 11.875" 2-PLY PASSED Level: Second Floor
MHP 23029

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	374	252	0	0
2	Vertical	589	343	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	11%	315 / 561	876	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	17%	429 / 884	1312	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5763 ft-lb	8'3 1/16"	35392 ft-lb	0.163 (16%)	1.25D+1.5L	L
Unbraced	5763 ft-lb	8'3 1/16"	35392 ft-lb	0.163 (16%)	1.25D+1.5L	L
Shear	1230 lb	12'6 7/16"	13217 lb	0.093 (9%)	1.25D+1.5L	L
Perm Defl in.	0.040 (L/4003)	7'2"	0.449 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.070 (L/2326)	7'3"	0.449 (L/360)	0.155 (15%)	L	
TL Defl inch	0.110 (L/1471)	7'2 5/8"	0.674 (L/240)	0.163 (16%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Left Header: DF, Thickness: 3 1/2"
- 4 Right Header: DF, Thickness: 3 1/2"
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Multiple plies must be fastened together as per manufacturer's details.
- 7 Top loads must be supported equally by all plies.
- 8 Top must be continuously laterally braced.
- 9 Bottom must be laterally braced at a maximum of 8'3 1/16" o.c.
- 10 Lateral slenderness ratio based on full section width.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-8-5	0-3-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part, Uniform	0-1-6 to 8-11-6		Top	1 PLF	0 PLF	0 PLF	0 PLF	
3	Point	8-3-1		Near Face	316 lb	674 lb	0 lb	0 lb	F13

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

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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

This design is valid until 4/17/2026

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



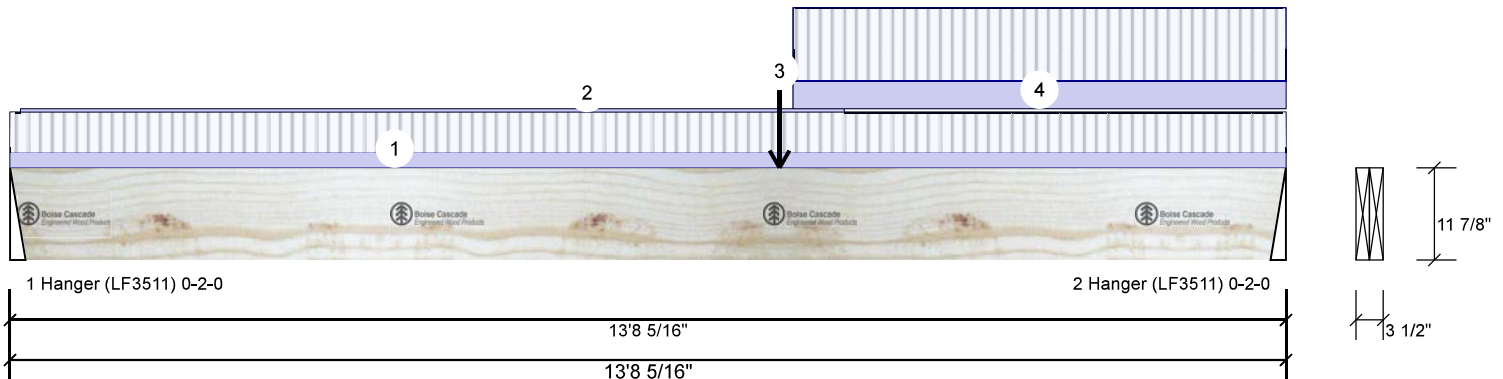


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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F12-B Versa-Lam LVL 2.1E 3' 00 SP 1.750" X 11.875" 2-Plv PASSED Level: Second Floor
MHP 23029



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Tie-In	8-4-13 to 13-8-5	0-6-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				12 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

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Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

This design is valid until 4/17/2026

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



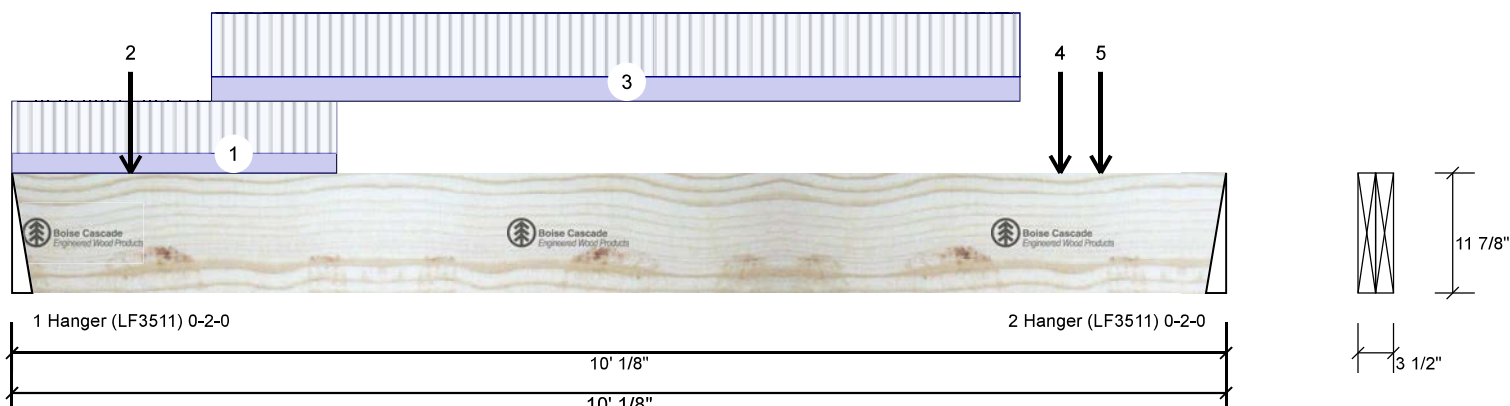


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F13	Versa-Lam LVL 2.1E 3100 SP	1.750" X 11.875"	2-Ply	PASSED	Level: Second Floor
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Ply - PASSED | Level: Second Floor
MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	674	316	0	0
2	Vertical	510	258	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	18%	394 / 1011	1406	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	14%	322 / 766	1088	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2903 ft-lb	4'9 3/16"	35392 ft-lb	0.082 (8%)	1.25D+1.5L	L
Unbraced	2903 ft-lb	4'9 3/16"	35392 ft-lb	0.082 (8%)	1.25D+1.5L	L
Shear	1211 lb	1'1 7/8"	13217 lb	0.092 (9%)	1.25D+1.5L	L
Perm Defl in.	0.012 (L/10169)	4'11 1/2"	0.327 (L/360)	0.035 (4%)	D	Uniform
LL Defl inch	0.024 (L/4919)	4'11 1/4"	0.327 (L/360)	0.073 (7%)	L	L
TL Defl inch	0.035 (L/3315)	4'11 5/16"	0.490 (L/240)	0.072 (7%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Left Header: DF, Thickness: 3 1/2"
- 4 Right Header: DF, Thickness: 3 1/2"
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Multiple plies must be fastened together as per manufacturer's details.
- 7 Top loads must be supported equally by all plies.
- 8 Top must be continuously laterally braced.
- 9 Bottom must have sheathing attached or be continuously braced.
- 10 Lateral slenderness ratio based on full section width.



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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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



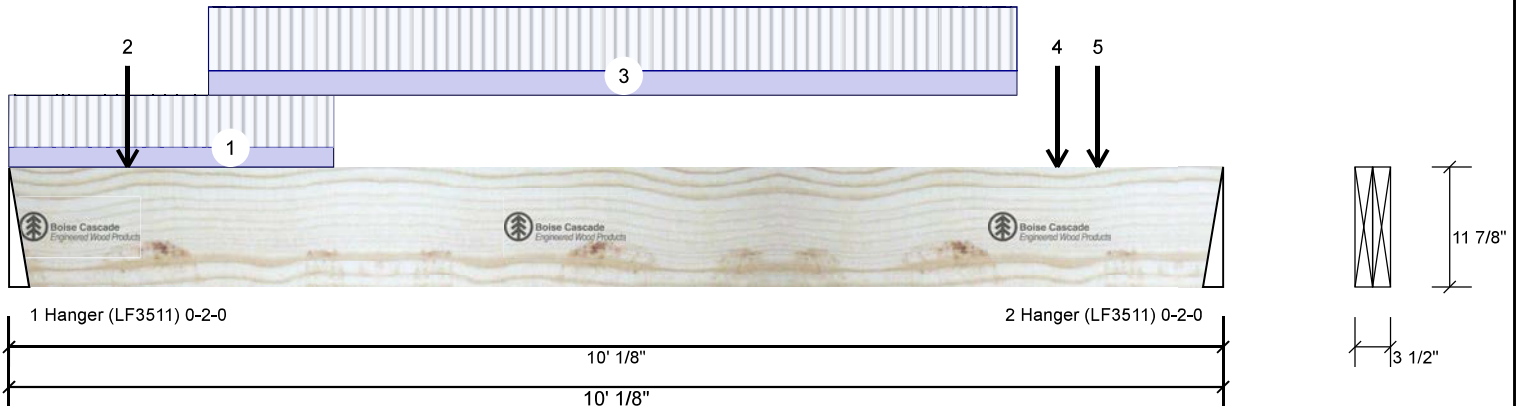
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Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

Page 43 of 47

F13 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED Level: Second Floor

MHP 23029



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 2-8-2		Top	32 PLF	84 PLF	0 PLF	0 PLF	
2	Point	0-11-12		Far Face	49 lb	130 lb	0 lb	0 lb	J8
3	Part. Uniform	1-7-12 to 8-3-12		Far Face	39 PLF	103 PLF	0 PLF	0 PLF	
4	Point	8-7-12		Near Face	11 lb	14 lb	0 lb	0 lb	F11
5	Point	8-11-12		Far Face	49 lb	129 lb	0 lb	0 lb	J8
	Self Weight				12 PLF				



JULY 13, 2023

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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
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(800) 232-0788
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CCMC: 12472

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



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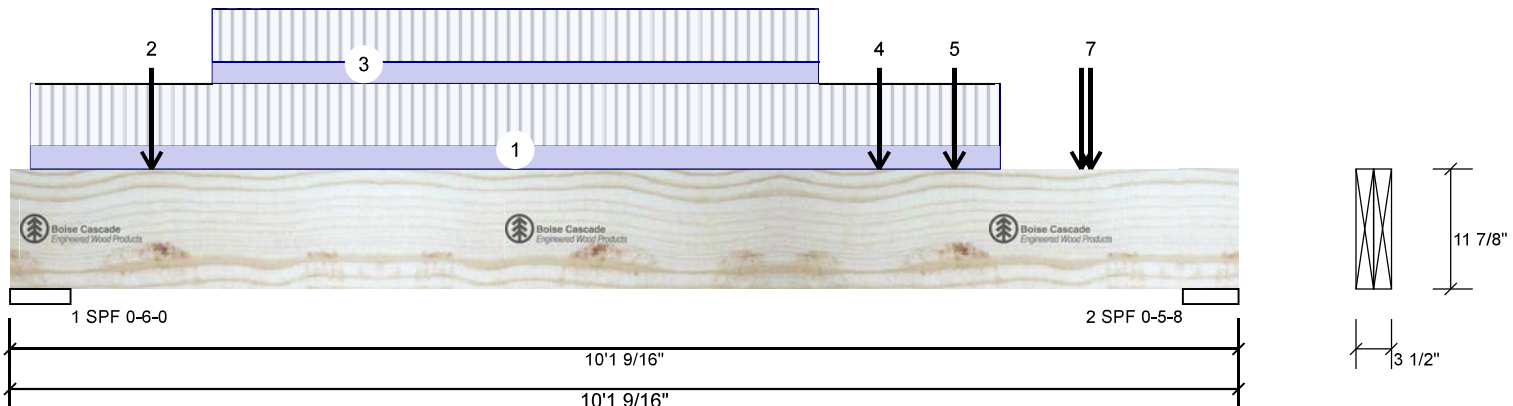


Client: GREENPARK
 Project: OF PERMIT PLANS
 Address: Nov 22 2023
 PER: CHIEF BUILDING OFFICIAL

Date: 7/11/2023
 Input by: W C
 Job Name: ROSE 3-1 STD
 Project #:

F13-A Versa-Lam LVL 2.1E 3'10" SP 1.750" X 11.875" 2-PLY PASSED Level: Second Floor

MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	2928	1229	0	0
2	Vertical	2778	1231	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	Vert	46%	1536 / 4392	5928	L	1.25D+1.5L
2 - SPF	5.500"	Vert	48%	1539 / 4167	5706	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	13831 ft-lb	5'2 3/8"	35392 ft-lb	0.391 (39%)	1.25D+1.5L	L
Unbraced	13831 ft-lb	5'2 3/8"	35392 ft-lb	0.391 (39%)	1.25D+1.5L	L
Shear	6337 lb	8'8 3/16"	13217 lb	0.479 (48%)	1.25D+1.5L	L
Perm Defl in.	0.045 (L/2463)	5'1 9/16"	0.310 (L/360)	0.146 (15%)	D	Uniform
LL Defl inch	0.105 (L/1058)	5'1 5/16"	0.310 (L/360)	0.340 (34%)	L	
TL Defl inch	0.151 (L/740)	5'1 7/16"	0.465 (L/240)	0.324 (32%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 5 Bottom must have sheathing attached or be continuously braced.
- 6 Lateral slenderness ratio based on full section width.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-2-0 to 8-2-0		Far Face	123 PLF	327 PLF	0 PLF	0 PLF	
2	Point	1-2-0		Near Face	127 lb	322 lb	0 lb	0 lb	J5
3	Part. Uniform	1-8-0 to 6-8-0		Near Face	115 PLF	276 PLF	0 PLF	0 PLF	
4	Point	7-2-0		Near Face	95 lb	222 lb	0 lb	0 lb	J5
5	Point	7-9-7		Near Face	343 lb	589 lb	0 lb	0 lb	F12
6	Point	8-10-0		Far Face	168 lb	449 lb	0 lb	0 lb	J7

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

This design is valid until 4/17/2026

Manufacturer Info

Boise Cascade Wood Products
 1111 W. Jefferson St.
 Boise, ID 83702
 (800) 232-0788
 www.bc.com
 CCMC: 12472

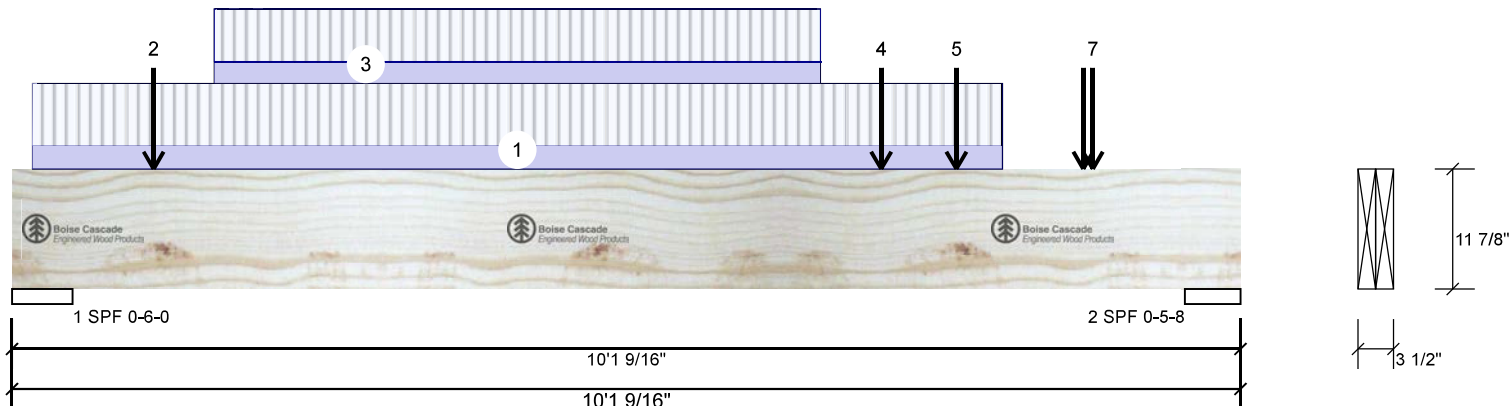
Kott Inc.
 3228 Moodie Dr, Ottawa, Ontario
 613-838-2775 / 905-642-4400





Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F13-A Versa-Lam LVL 2.1E 3' 00" SP **11.50" X 11.875"** 2-Pls **PASSED** Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	8-10-15		Near Face	48 lb	128 lb	0 lb	0 lb	J8
	Self Weight				12 PLF				



JULY 13, 2023

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USED IN THE DESIGN OF THIS COMPONENT.**

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

1. LVL beams must not be cut or drilled
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3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
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This design is valid until 4/17/2026

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(800) 232-0788
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CCMC: 12472

Kott Inc.
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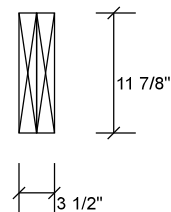
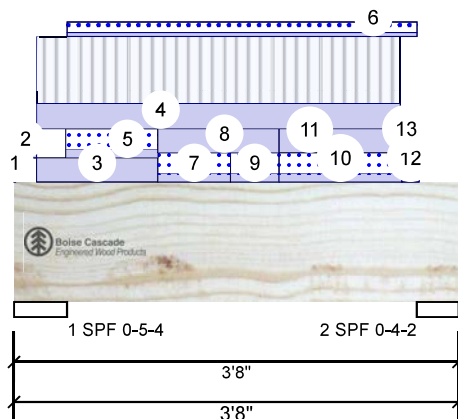


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
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Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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F5 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Pl - PASSED Level: Second Floor
MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	376	374	152	0
2	Vertical	293	307	153	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	10%	467 / 717	1184	L	1.25D+1.5L +S
2 - SPF	4.125"	Vert	11%	383 / 592	975	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	798 ft-lb	1'10 1/2"	35392 ft-lb	0.023 (2%)	1.25D+1.5L +S	L
Unbraced	798 ft-lb	1'10 1/2"	35392 ft-lb	0.023 (2%)	1.25D+1.5L +S	L
Shear	773 lb	2'4"	13217 lb	0.059 (6%)	1.25D+1.5L +S	L
Perm Defl in.	0.000 (L/80119)	1'10 1/2"	0.100 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch	0.001 (L/63026)	1'10 1/2"	0.100 (L/360)	0.006 (1%)	L+0.5S	L
TL Defl inch	0.001 (L/35276)	1'10 1/2"	0.150 (L/240)	0.007 (1%)	D+L+0.5S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must have sheathing attached or be continuously braced.
- 7 Lateral slenderness ratio based on full section width.



JULY 13, 2023

READ ALL NOTES ON THIS PAGE AND ON THE
ENGINEERING NOTES: EWP-FLOORS. THE NOTE
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AS IT CONTAINS SPECIFICATIONS AND CRITERIA
USED IN THE DESIGN OF THIS COMPONENT.

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

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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6. For flat roofs provide proper drainage to prevent ponding

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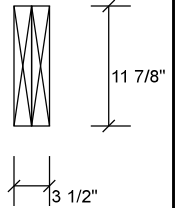
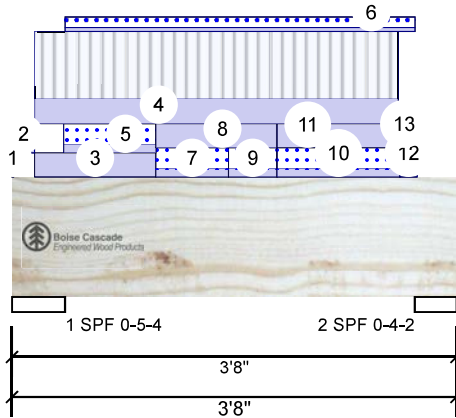


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F5 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Pl. PASSED Level: Second Floor
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-0-3		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 0-2-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-2-4 to 1-2-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Part. Uniform	0-2-4 to 3-2-4		Near Face	84 PLF	223 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-5-2 to 1-2-4		Top	27 PLF	0 PLF	70 PLF	0 PLF	
6	Part. Uniform	0-5-4 to 3-3-14		Top	13 PLF	0 PLF	35 PLF	0 PLF	
7	Part. Uniform	1-2-4 to 1-9-7		Top	27 PLF	0 PLF	70 PLF	0 PLF	
8	Part. Uniform	1-2-4 to 2-2-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Part. Uniform	1-9-7 to 2-2-4		Top	27 PLF	0 PLF	70 PLF	0 PLF	
10	Part. Uniform	2-2-4 to 3-2-6		Top	27 PLF	0 PLF	70 PLF	0 PLF	
11	Part. Uniform	2-2-4 to 3-2-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
12	Part. Uniform	3-2-6 to 3-4-1		Top	27 PLF	0 PLF	70 PLF	0 PLF	
13	Part. Uniform	3-2-6 to 3-4-1		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				12 PLF				



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