



Client: GREENPARK

Date: 7/3/2023

Page 1 of 28

Project: ZADORRA ESTATES

Input by: W C

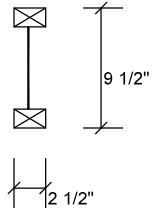
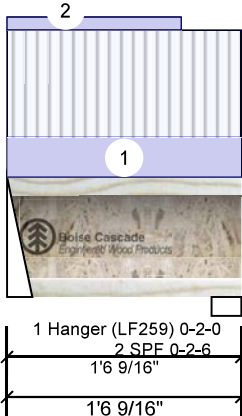
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

MHP 23026

F1 AJS 140 9.500" - PASSED

OF PERMIT PLANS  
Nov 22 2023PER:   
CHIEF BUILDING OFFICIAL

Level: Ground Floor



## 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	56	28	0	0
2	Vertical	59	26	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	7%	35 / 84	119	L	1.25D+1.5L
2 - SPF	2.375"	Vert	7%	32 / 88	120	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	34 ft-lb	9 1/16"	4095 ft-lb	0.008 (1%)	1.25D+1.5L	L
Unbraced	34 ft-lb	9 1/16"	4095 ft-lb	0.008 (1%)	1.25D+1.5L	L
Shear	103 lb	1 1/4"	1830 lb	0.056 (6%)	1.25D+1.5L	L
Perm Defl in. (L/100632)	0.000	9"	0.044 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch (L/48911)	0.000	9 1/8"	0.044 (L/360)	0.007 (1%)	L	L
TL Defl inch (L/32914)	0.000	9 1/16"	0.065 (L/240)	0.007 (1%)	D+L	L



## Design Notes

- 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.
- Fill all hanger nailing holes.
- Left Header: SPF, Thickness: 2 1/2"
- Girders are designed to be supported on the bottom edge only.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

READ ALL NOTES ON THIS PAGE AND ON THE  
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USED IN THE DESIGN OF THIS COMPONENT.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-9	1-10-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 1-1-13		Top	9 PLF	0 PLF	0 PLF	0 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
- Joist not to be treated with fire retardant or corrosive chemicals

## chemicals

## Handling &amp; Installation

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

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

## Manufacturer Info

Boise Cascade Wood Products  
1111 W. Jefferson St.  
Boise, ID 83702  
(800) 232-0788  
www.bc.com  
CCMC: 12787

## Kott Inc.

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



This design is valid until 4/17/2026

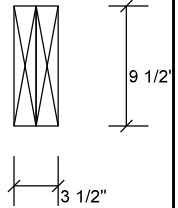
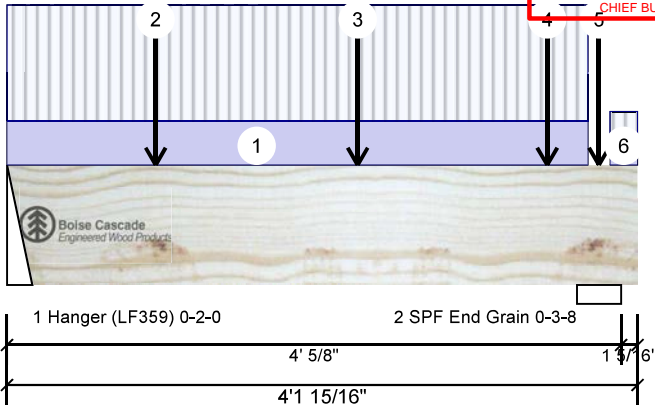


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Project: ZADORRA ESTATES  
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ON

Date: 7/3/2023  
Input by: W C  
Job Name: RIVER 9-3 STD  
Project #:

Page 2 of 28

F11 Versa-Lam LVL 2.1E 3100 SP 1.750" X 9.500" 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(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	686	278	0	0
2	Vertical	864	352	0	0

## Bearings and Factored Reactions

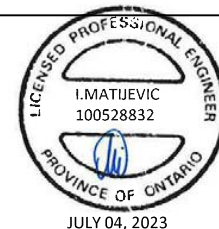
Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	18%	347 / 1029	1376	L_	1.25D+1.5L
2 - SPF End Grain	3.500"	Vert	14%	440 / 1296	1736	LL	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1433 ft-lb	2'3 3/4"	23220 ft-lb	0.062 (6%)	1.25D+1.5L	L_
Unbraced	1433 ft-lb	2'3 3/4"	23220 ft-lb	0.062 (6%)	1.25D+1.5L	L_
Shear	1345 lb	2'11 5/8"	10574 lb	0.127 (13%)	1.25D+1.5L	LL
Perm Defl in.	0.001 (L/30679)	2' 5/16"	0.127 (L/360)	0.012 (1%)	D	Uniform
LL Defl inch	0.004 (L/12293)	2' 5/16"	0.127 (L/360)	0.029 (3%)	L	L_
TL Defl inch	0.005 (L/8776)	2' 5/16"	0.190 (L/240)	0.027 (3%)	D+L	L_
LL Cant	-0.000 (2L/8113)	Rt Cant	0.200 (2L/360)	0.002 (0%)	L	L_
TL Cant	-0.000 (2L/5794)	Rt Cant	0.300 (2L/240)	0.001 (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: 5 1/4"
- 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.



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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 &amp; 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  
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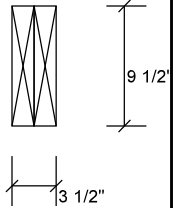
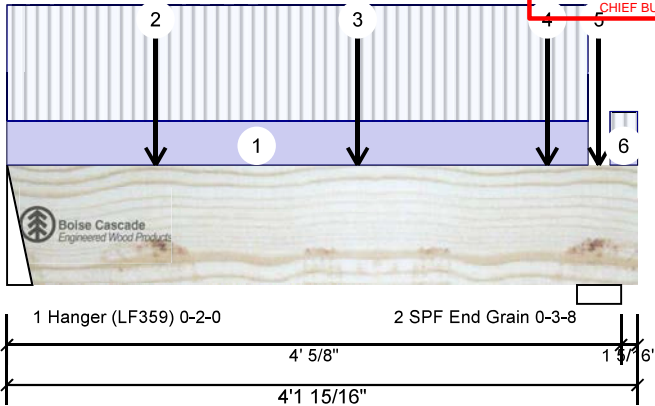


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Project #:

Page 3 of 28

F11 Versa-Lam LVL 2.1E 3100 SP 1.750" X 9.500" 2-Ply - PASSED Level: Ground Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-10-0		Top	57 PLF	150 PLF	0 PLF	0 PLF	
2	Point	0-11-12		Near Face	112 lb	299 lb	0 lb	0 lb	J2
3	Point	2-3-12		Near Face	114 lb	305 lb	0 lb	0 lb	J2
4	Point	3-6-12		Near Face	116 lb	309 lb	0 lb	0 lb	J2
5	Point	3-10-14		Far Face	26 lb	53 lb	0 lb	0 lb	F5
6	Tie-In	3-11-12 to 4-1-15	1-3-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				9 PLF				



JULY 04, 2023

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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 &amp; 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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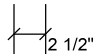
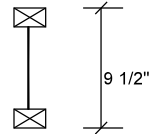
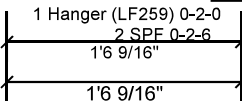
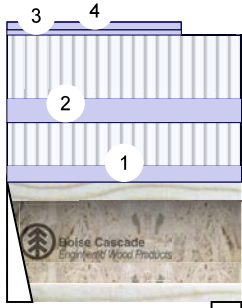
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

MHP 23026

F1-A AJS 140 9.500" - PASSED

OF PERMIT PLANS  
Nov 22 2023

Level: Ground Floor



## 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	95	46	0	0
2	Vertical	99	43	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	13%	58 / 142	200	L	1.25D+1.5L
2 - SPF	2.375"	Vert	12%	54 / 148	202	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	56 ft-lb	9 1/16"	4095 ft-lb	0.014 (1%)	1.25D+1.5L	L
Unbraced	56 ft-lb	9 1/16"	4095 ft-lb	0.014 (1%)	1.25D+1.5L	L
Shear	173 lb	1 1/4"	1830 lb	0.094 (9%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/60070)	9"	0.044 (L/360)	0.006 (1%)	D	Uniform
LL Defl inch	0.001 (L/29152)	9 1/8"	0.044 (L/360)	0.012 (1%)	L	L
TL Defl inch	0.001 (L/19627)	9 1/16"	0.065 (L/240)	0.012 (1%)	D+L	L



JULY 04, 2023

## Design Notes

- 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.
- Fill all hanger nailing holes.
- Left Header: SPF, Thickness: 2 1/2"
- Girders are designed to be supported on the bottom edge only.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-9	1-3-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-6-9	1-10-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 1-1-13		Top	6 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 1-1-13		Top	9 PLF	0 PLF	0 PLF	0 PLF	

## Notes

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## Lumber

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

## chemicals

## Handling &amp; Installation

- Joist flanges must not be cut or drilled
- Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
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- Provide lateral support at bearing points to avoid lateral displacement and rotation
- Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
- For flat roofs provide proper drainage to prevent ponding

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Project: ZADORRA ESTATES

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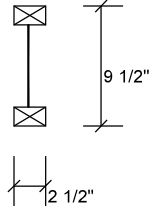
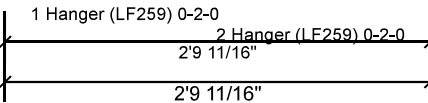
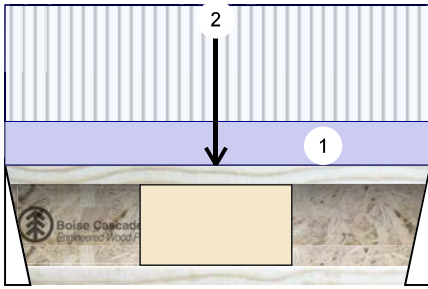
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STP  
Project:

MHP 23026

F2 AJS 140 9.500" - PASSED

OF PERMIT PLANS  
Nov 22 2023

Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL

## 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	209	78	0	0
2	Vertical	206	77	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	26%	98 / 313	411	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	26%	97 / 308	405	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	467 ft-lb	1'4 11/16"	4095 ft-lb	0.114 (11%)	1.25D+1.5L	L
Unbraced	467 ft-lb	1'4 11/16"	4095 ft-lb	0.114 (11%)	1.25D+1.5L	L
Shear	404 lb	1 1/4"	1830 lb	0.221 (22%)	1.25D+1.5L	L
Perm Defl in. (L/14633)	0.002	1'4 3/4"	0.087 (L/360)	0.025 (2%)	D	Uniform
LL Defl inch	0.006 (L/5497)	1'4 3/4"	0.087 (L/360)	0.065 (7%)	L	L
TL Defl inch	0.008 (L/3996)	1'4 3/4"	0.130 (L/240)	0.060 (6%)	D+L	L

## Design Notes

- 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.
- Fill all hanger nailing holes.
- Left Header: SPF, Thickness: 2 1/2"
- Right Header: SPF, Thickness: 2 1/2"
- Girders are designed to be supported on the bottom edge only.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.



JULY 04, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0 to 2-9-11	0-9-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-4-11		Far Face	121 lb	322 lb	0 lb	0 lb	J2

## Notes

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## Lumber

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

chemicals

## Handling &amp; Installation

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

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

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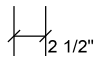
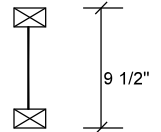
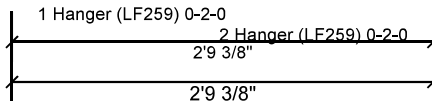
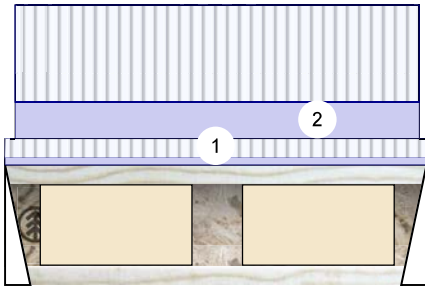
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F2-A AJ5 140 9.500" - PASSED

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Nov 22 2023

Level: Ground Floor

PER:   
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## Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	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	257	96	0	0
2	Vertical	261	97	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	32%	120 / 386	506	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	32%	121 / 391	512	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	314 ft-lb	1'4 11/16"	4095 ft-lb	0.077 (8%)	1.25D+1.5L	L
Unbraced	314 ft-lb	1'4 11/16"	4095 ft-lb	0.077 (8%)	1.25D+1.5L	L
Shear	488 lb	1 1/4"	1830 lb	0.266 (27%)	1.25D+1.5L	L
Perm Defl in. (L/20753)	0.001	1'4 11/16"	0.086 (L/360)	0.017 (2%)	D	Uniform
LL Defl inch	0.004 (L/7742)	1'4 11/16"	0.086 (L/360)	0.046 (5%)	L	L
TL Defl inch	0.005 (L/5638)	1'4 11/16"	0.129 (L/240)	0.043 (4%)	D+L	L

## Design Notes

- 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.
- Fill all hanger nailing holes.
- Left Header: SPF, Thickness: 2 1/2"
- Right Header: SPF, Thickness: 2 1/2"
- Girders are designed to be supported on the bottom edge only.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.



JULY 04, 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	Tie-In	0-0-0 to 2-9-6	0-9-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-13 to 2-8-13		Near Face	60 PLF	161 PLF	0 PLF	0 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
- Ljoist not to be treated with fire retardant or corrosive chemicals

## chemicals

## Handling &amp; Installation

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

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

## Manufacturer Info

Boise Cascade Wood Products  
1111 W. Jefferson St.  
Boise, ID 83702  
(800) 232-0788  
www.bc.com  
CCMC: 12787

## Kott Inc.

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



This design is valid until 4/17/2026



Client: GREENPARK

Date: 7/3/2023

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Project: ZADORRA ESTATES

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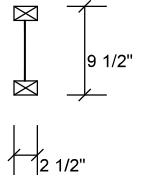
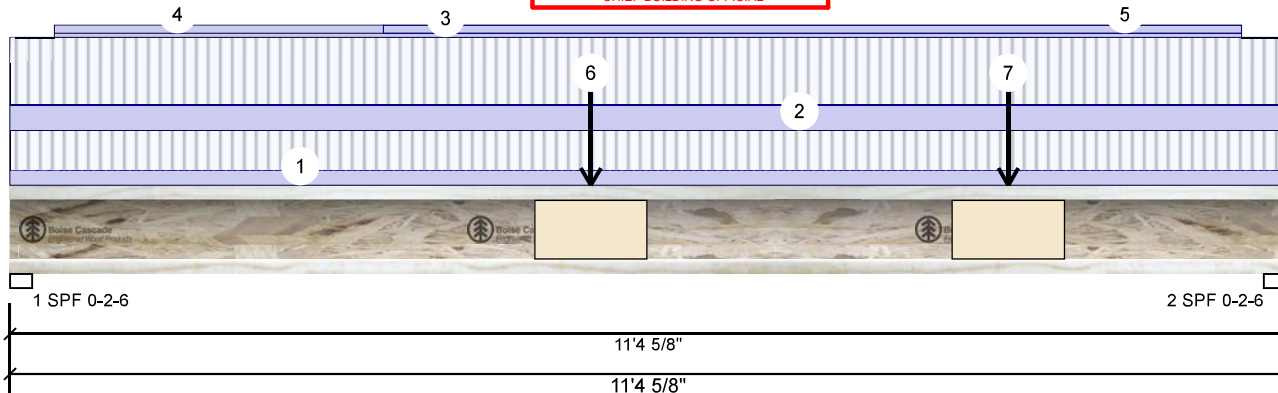
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

MHP 23026

F3 AJS 140 9.500" - PASSED

TRUE COPY  
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Nov 22 2023PER:   
CHIEF BUILDING OFFICIAL

Level: Ground Floor



## 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	358	172	0	0
2	Vertical	408	196	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%	215 / 537	752	L	1.25D+1.5L
2 - SPF	2.375"	Vert	52%	245 / 611	856	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2292 ft-lb	5'7 1/16"	4095 ft-lb	0.560 (56%)	1.25D+1.5L	L
Unbraced	2292 ft-lb	5'7 1/16"	4095 ft-lb	0.560 (56%)	1.25D+1.5L	L
Shear	842 lb	11'3"	1830 lb	0.460 (46%)	1.25D+1.5L	L
Perm Defl in.	0.074 (L/1797)	5'8 13/16"	0.371 (L/360)	0.200 (20%)	D	Uniform
LL Defl inch	0.152 (L/876)	5'8 7/8"	0.371 (L/360)	0.411 (41%)	L	
TL Defl inch	0.227 (L/589)	5'8 13/16"	0.556 (L/240)	0.408 (41%)	D+L	L



JULY 04, 2023

## 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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 5'2 3/16" o.c.

READ ALL NOTES ON THIS PAGE AND ON THE  
ENGINEERING NOTES: EWP-FLOORS. THE NOTE  
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-4-10	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 11-4-10	0-10-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-4-12 to 10-11-14		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-12 to 3-4-0		Top	4 PLF	0 PLF	0 PLF	0 PLF	
5	Part. Uniform	3-4-0 to 10-11-14		Top	4 PLF	0 PLF	0 PLF	0 PLF	
6	Point	5-2-3		Near Face	28 lb	56 lb	0 lb	0 lb	F1
7	Point	8-10-15		Near Face	46 lb	95 lb	0 lb	0 lb	F1

## 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. Joist not to be treated with fire retardant or corrosive

## chemicals

## Handling &amp; Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

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

## Manufacturer Info

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CCMC: 12787

Kott Inc.  
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This design is valid until 4/17/2026



Client: GREENPARK

Date: 7/3/2023

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Project: ZADORRA ESTATES

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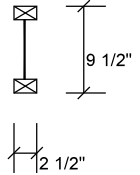
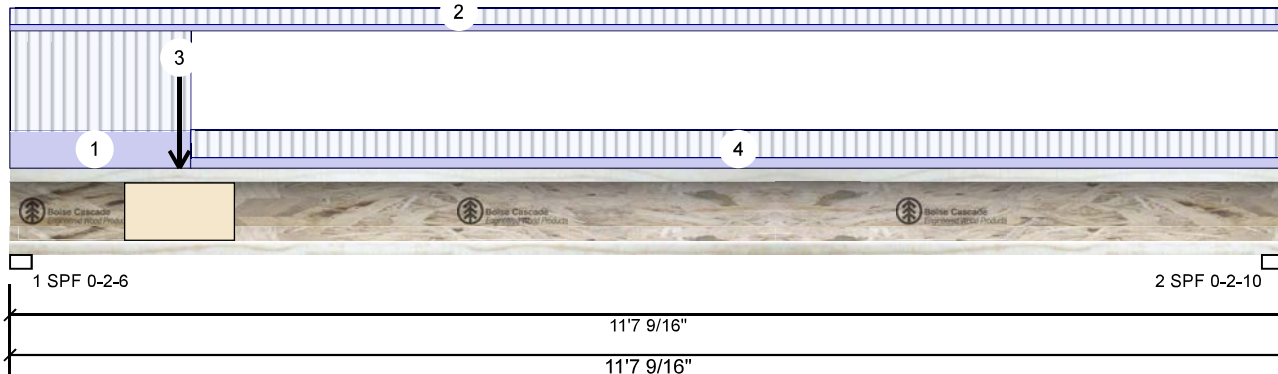
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STP  
Project #:

MHP 23026

F3-A AJS 140 9.500" - PASSED

Nov 22 2023

Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL

## 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	446	167	0	0
2	Vertical	192	72	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	53%	209 / 670	879	L	1.25D+1.5L
2 - SPF	2.625"	Vert	22%	90 / 287	377	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1297 ft-lb	4'5 3/8"	4095 ft-lb	0.317 (32%)	1.25D+1.5L	L
Unbraced	1297 ft-lb	4'5 3/8"	4095 ft-lb	0.317 (32%)	1.25D+1.5L	L
Shear	860 lb	1 5/8"	1830 lb	0.470 (47%)	1.25D+1.5L	L
Perm Defl in.	0.036 (L/3729)	5'5 1/4"	0.378 (L/360)	0.097 (10%)	D	Uniform
LL Defl inch	0.097 (L/1397)	5'5 1/4"	0.378 (L/360)	0.258 (26%)	L	
TL Defl inch	0.134 (L/1016)	5'5 1/4"	0.567 (L/240)	0.236 (24%)	D+L	L



JULY 04, 2023

## 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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 10'1 1/16" o.c.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-7-12	1-5-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 11-7-9	0-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-6-8		Far Face	96 lb	257 lb	0 lb	0 lb	F2
4	Tie-In	1-7-12 to 11-7-9	0-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	

## Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design 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. Joist not to be treated with fire retardant or corrosive

## chemicals

## Handling &amp; Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
7. 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: 12787

## Kott Inc.

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



This design is valid until 4/17/2026



Client: GREENPARK

Date: 7/3/2023

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Project: ZADORRA ESTATES

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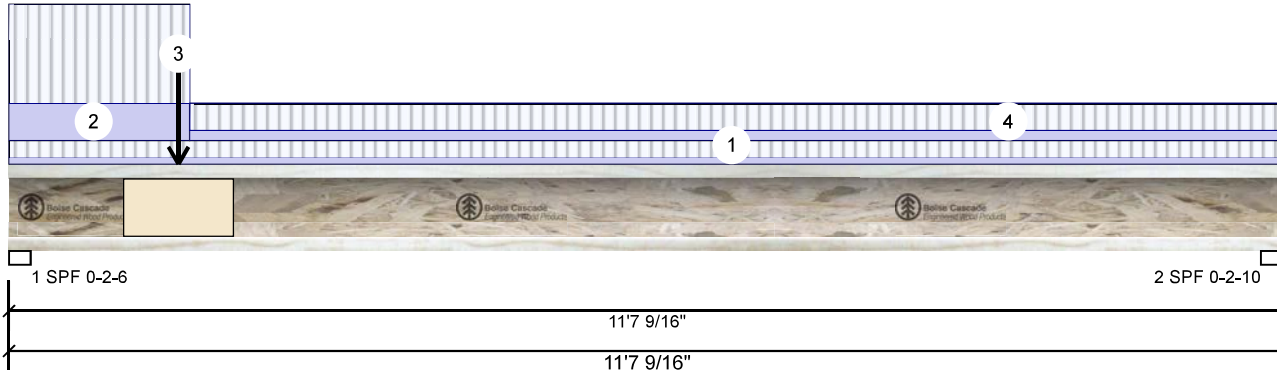
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

MHP 23026

F3-B AJS 140 9.500" - PASSED

Nov 22 2023

Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL

## 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	451	168	0	0
2	Vertical	192	72	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	54%	210 / 676	886	L	1.25D+1.5L
2 - SPF	2.625"	Vert	22%	90 / 288	378	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1304 ft-lb	4'5 1/8"	4095 ft-lb	0.318 (32%)	1.25D+1.5L	L
Unbraced	1304 ft-lb	4'5 1/8"	4095 ft-lb	0.318 (32%)	1.25D+1.5L	L
Shear	867 lb	1'5/8"	1830 lb	0.474 (47%)	1.25D+1.5L	L
Perm Defl in.	0.037 (L/3715)	5'5 1/4"	0.378 (L/360)	0.097 (10%)	D	Uniform
LL Defl inch	0.098 (L/1389)	5'5 1/4"	0.378 (L/360)	0.259 (26%)	L	
TL Defl inch	0.135 (L/1011)	5'5 1/4"	0.567 (L/240)	0.237 (24%)	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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 10'1 1/16" o.c.



JULY 04, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-7-9	0-3-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-7-12	1-5-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-6-8		Near Face	97 lb	261 lb	0 lb	0 lb	F2
4	Tie-In	1-7-12 to 11-7-9	0-4-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	

## 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. Joist not to be treated with fire retardant or corrosive chemicals

## chemicals

## Handling &amp; Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

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

## Manufacturer Info

Boise Cascade Wood Products  
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CCMC: 12787

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This design is valid until 4/17/2026





Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

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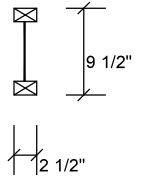
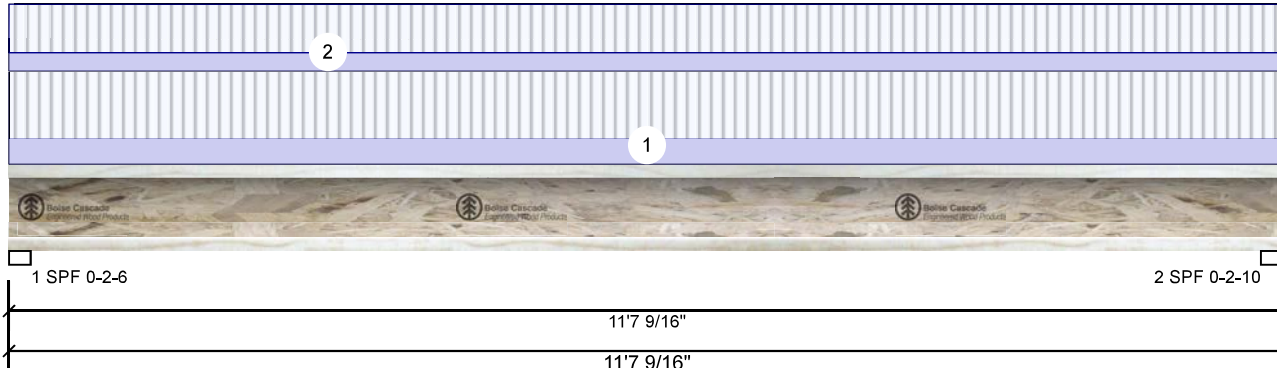
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

Page 10 of 28

F3-C AJS 140 9.500" - PASSED

Nov 22 2023

Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL

## 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	371	139	0	0
2	Vertical	372	139	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	44%	174 / 555	729	L	1.25D+1.5L
2 - SPF	2.625"	Vert	43%	174 / 558	732	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2020 ft-lb	5'9 11/16"	4095 ft-lb	0.493 (49%)	1.25D+1.5L	L
Unbraced	2020 ft-lb	5'9 11/16"	4095 ft-lb	0.493 (49%)	1.25D+1.5L	L
Shear	712 lb	1 5/8"	1830 lb	0.389 (39%)	1.25D+1.5L	L
Perm Defl in.	0.056 (L/2429)	5'9 11/16"	0.378 (L/360)	0.148 (15%)	D	Uniform
LL Defl inch	0.149 (L/911)	5'9 11/16"	0.378 (L/360)	0.395 (40%)	L	
TL Defl inch	0.205 (L/662)	5'9 11/16"	0.567 (L/240)	0.362 (36%)	D+L	L



## Design Notes

- 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.
- Girders are designed to be supported on the bottom edge only.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- Bottom flange must be laterally braced at bearings.

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	Tie-In	0-0-0 to 11-7-9	0-11-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 11-7-9	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	

## 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
- Ljoist not to be treated with fire retardant or corrosive chemicals

## chemicals

## Handling &amp; Installation

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

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

This design is valid until 4/17/2026

## Manufacturer Info

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(800) 232-0788  
www.bc.com  
CCMC: 12787

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Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

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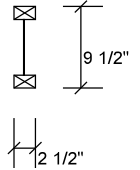
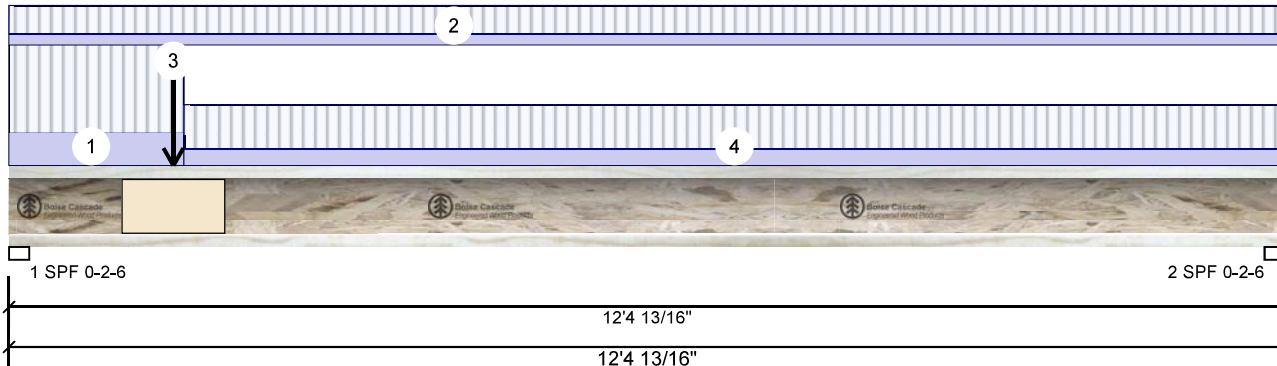
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OSHAWA, ONJob Name: RIVER 9-3 STP  
Project #:

Page 11 of 28

F4 AJS 140 9.500" - PASSED

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Nov 22 2023PER:   
CHIEF BUILDING OFFICIAL

Level: Ground Floor



## 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	539	202	0	0
2	Vertical	338	127	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	64%	252 / 809	1061	L	1.25D+1.5L
2 - SPF	2.375"	Vert	40%	158 / 507	665	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2158 ft-lb	5'7 3/4"	4095 ft-lb	0.527 (53%)	1.25D+1.5L	L
Unbraced	2158 ft-lb	5'7 3/4"	4095 ft-lb	0.527 (53%)	1.25D+1.5L	L
Shear	1040 lb	1 5/8"	1830 lb	0.568 (57%)	1.25D+1.5L	L
Perm Defl in.	0.069 (L/2121)	6' 3/16"	0.404 (L/360)	0.170 (17%)	D	Uniform
LL Defl inch	0.183 (L/795)	6' 3/16"	0.404 (L/360)	0.453 (45%)	L	
TL Defl inch	0.252 (L/578)	6' 3/16"	0.607 (L/240)	0.415 (41%)	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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 10'9 5/8" o.c.



JULY 04, 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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-8-7	1-6-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-4-13	0-5-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-7-3		Far Face	77 lb	206 lb	0 lb	0 lb	F2
4	Tie-In	1-8-7 to 12-4-13	0-9-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	

## 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. Joist not to be treated with fire retardant or corrosive chemicals

## chemicals

## Handling &amp; Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
7. 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: 12787

## Kott Inc.

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



This design is valid until 4/17/2026



Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

Input by: W C

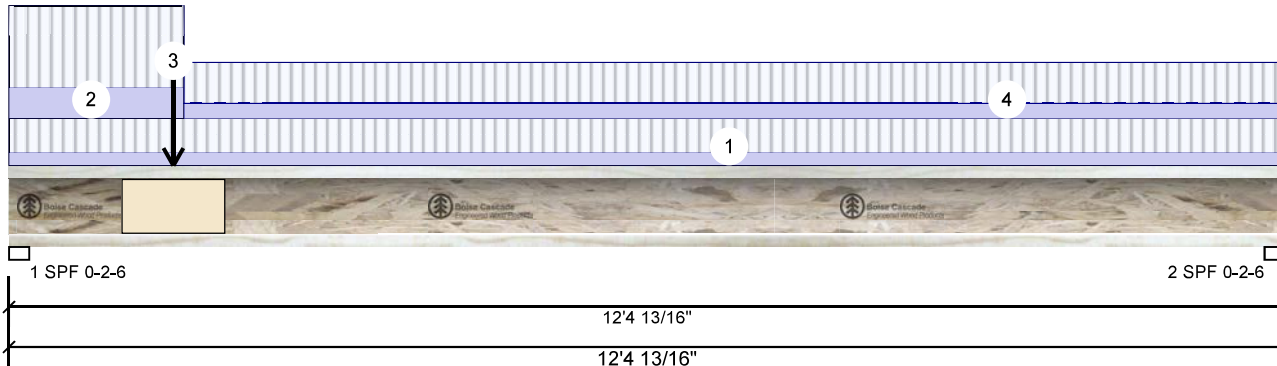
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

Page 12 of 28

F4-A AJS 140 9.500" - PASSED

Nov 22 2023

Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL

## 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	573	215	0	0
2	Vertical	369	138	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	68%	268 / 861	1129	L	1.25D+1.5L
2 - SPF	2.375"	Vert	44%	173 / 554	727	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2343 ft-lb	5'8 1/4"	4095 ft-lb	0.572 (57%)	1.25D+1.5L	L
Unbraced	2343 ft-lb	5'8 1/4"	4095 ft-lb	0.572 (57%)	1.25D+1.5L	L
Shear	1106 lb	1 5/8"	1830 lb	0.604 (60%)	1.25D+1.5L	L
Perm Defl in.	0.074 (L/1956)	6' 3/8"	0.404 (L/360)	0.184 (18%)	D	Uniform
LL Defl inch	0.199 (L/733)	6' 3/8"	0.404 (L/360)	0.491 (49%)	L	
TL Defl inch	0.273 (L/533)	6' 3/8"	0.607 (L/240)	0.450 (45%)	D+L	L

## Design Notes

- 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.
- Girders are designed to be supported on the bottom edge only.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- Bottom flange must be laterally braced at a maximum of 10'9 5/8" o.c.



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	Tie-In	0-0-0 to 12-4-13	0-7-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-8-7	1-6-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-7-3		Near Face	78 lb	209 lb	0 lb	0 lb	F2
4	Tie-In	1-8-7 to 12-4-13	0-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	

## 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
- Ljoist not to be treated with fire retardant or corrosive chemicals

chemicals

## Handling &amp; Installation

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

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

## Manufacturer Info

Boise Cascade Wood Products  
1111 W. Jefferson St.  
Boise, ID 83702  
(800) 232-0788  
www.bc.com  
CCMC: 12787

## Kott Inc.

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



This design is valid until 4/17/2026



Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

Input by: W C

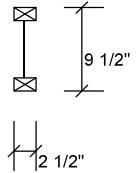
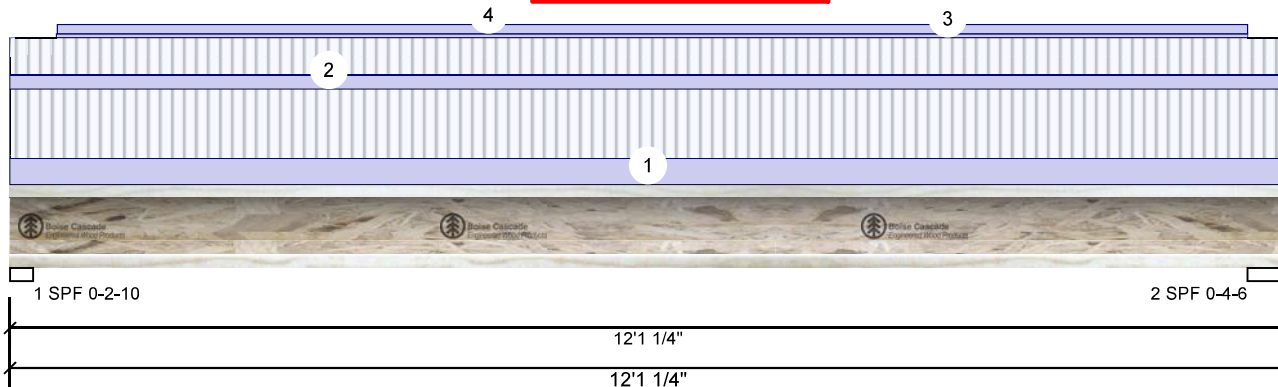
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

Page 13 of 28

**F4-B AJS 140 9.500" - PASSED** **TRUE COPY** **MHP 23026**  
**Nov 22 2023**

PER: *C. Maitre*  
 CHIEF BUILDING OFFICIAL

Level: Ground Floor



## 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	342	167	0	0
2	Vertical	350	172	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	42%	209 / 512	721	L	1.25D+1.5L
2 - SPF	4.375"	Vert	40%	215 / 525	740	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2056 ft-lb	5'11 3/4"	4095 ft-lb	0.502 (50%)	1.25D+1.5L	L
Unbraced	2056 ft-lb	5'11 3/4"	4095 ft-lb	0.502 (50%)	1.25D+1.5L	L
Shear	706 lb	11'9 5/8"	1830 lb	0.386 (39%)	1.25D+1.5L	L
Perm Defl in.	0.074 (L/1900)	5'11 13/16"	0.388 (L/360)	0.189 (19%)	D	Uniform
LL Defl inch	0.148 (L/945)	5'11 13/16"	0.388 (L/360)	0.381 (38%)	L	L
TL Defl inch	0.221 (L/631)	5'11 13/16"	0.582 (L/240)	0.380 (38%)	D+L	L



JULY 04, 2023

## 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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at bearings.

**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	Tie-In	0-0-0 to 12-1-4	0-11-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-1-4	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-5-4 to 11-8-14		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-5-6 to 11-8-14		Top	5 PLF	0 PLF	0 PLF	0 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

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

## chemicals

## Handling &amp; Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
7. 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: 12787

## Kott Inc.

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



This design is valid until 4/17/2026



Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

Input by: W C

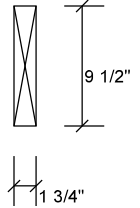
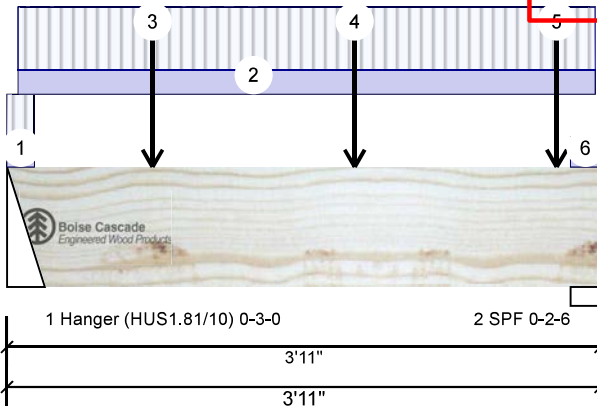
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

MHP 23026

## F5 Versa-Lam LVL 2.1E 3100 SP

1.750" X 9.500" - PASSED

Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL

## 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	595	237	0	0
2	Vertical	944	437	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	21%	296 / 892	1188	L	1.25D+1.5L
2 - SPF	2.375"	Vert	77%	547 / 1416	1963	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1191 ft-lb	2'3 1/2"	11610 ft-lb	0.103 (10%)	1.25D+1.5L	L
Unbraced	1191 ft-lb	2'3 1/2"	11610 ft-lb	0.103 (10%)	1.25D+1.5L	L
Shear	1840 lb	2'11 1/8"	5287 lb	0.348 (35%)	1.25D+1.5L	L
Perm Defl in. (L/19744)	0.002	2' 1/4"	0.120 (L/360)	0.018 (2%)	D	Uniform
LL Defl inch	0.005 (L/7938)	2' 1/8"	0.120 (L/360)	0.045 (5%)	L	L
TL Defl inch	0.008 (L/5662)	2' 3/16"	0.180 (L/240)	0.042 (4%)	D+L	L



JULY 04, 2023

## Design Notes

- 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.
- Fill all hanger nailing holes.
- Left Header: DF, Thickness: 1 3/4"
- Girders are designed to be supported on the bottom edge only.
- Top must be continuously laterally braced.
- Bottom must have sheathing attached or be continuously braced.

READ ALL NOTES ON THIS PAGE AND ON THE  
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-3	1-3-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-14 to 3-10-9		Top	23 PLF	60 PLF	0 PLF	0 PLF	
3	Point	0-11-8		Near Face	138 lb	368 lb	0 lb	0 lb	J4
4	Point	2-3-8		Near Face	144 lb	384 lb	0 lb	0 lb	J4
5	Point	3-7-8		Near Face	281 lb	545 lb	0 lb	0 lb	J4

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

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

## chemicals

## Handling &amp; 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

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



Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

Input by: W C

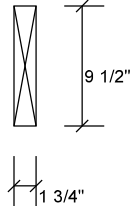
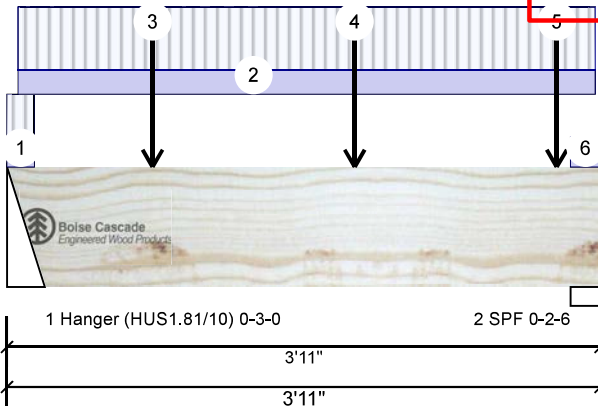
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

Page 15 of 28

## F5 Versa-Lam LVL 2.1E 3100 SP

1.750" X 9.500" - PASSED

Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL

...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Tie-In	3-8-10 to 3-11-0	0-6-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				



JULY 04, 2023

READ ALL NOTES ON THIS PAGE AND ON THE  
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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 &amp; 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

Date: 7/3/2023

Page 16 of 28

Project: ZADORRA ESTATES

Input by: W C

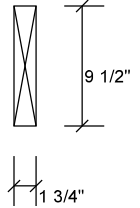
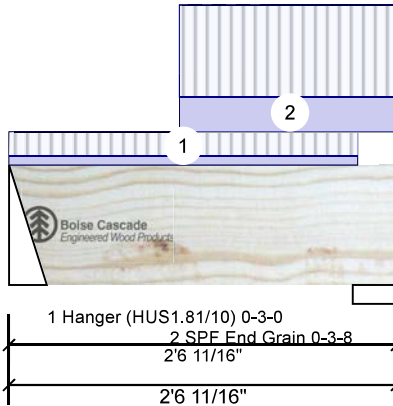
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STP  
Project:

OF PERMIT PLANS  
1.750" X 9.500" - PASSED  
NOV 22 2023

MHP 23026

F5-A Versa-Lam LVL 2.1E 3100 SP

Level: Ground Floor



## 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)

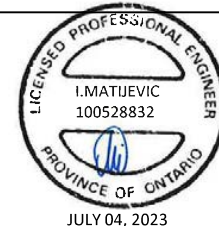
Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	53	26	0	0
2	Vertical	108	47	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	2%	32 / 79	111	L	1.25D+1.5L
2 - SPF End Grain	3.500"	Vert	3%	58 / 162	220	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	84 ft-lb	1'5"	11610 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	84 ft-lb	1'5"	11610 ft-lb	0.007 (1%)	1.25D+1.5L	L
Shear	67 lb	1' 1/2"	5287 lb	0.013 (1%)	1.25D+1.5L	L
Perm Defl in. (L/386720)	0.000	1'3 7/8"	0.071 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch (L/171614)	0.000	1'4"	0.071 (L/360)	0.002 (0%)	L	L
TL Defl inch (L/118868)	0.000	1'3 15/16"	0.107 (L/240)	0.002 (0%)	D+L	L



## Design Notes

- 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.
- Fill all hanger nailing holes.
- Left Header: DF, Thickness: 3 1/2"
- Girders are designed to be supported on the bottom edge only.
- Top must be continuously laterally braced.
- Bottom must be laterally braced at a maximum of 2'4 1/2" o.c.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-3-10	0-6-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	1-1-8 to 2-6-11	1-11-10	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

chemicals

## Handling &amp; Installation

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

- For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

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This design is valid until 4/17/2026





Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

Input by: W C

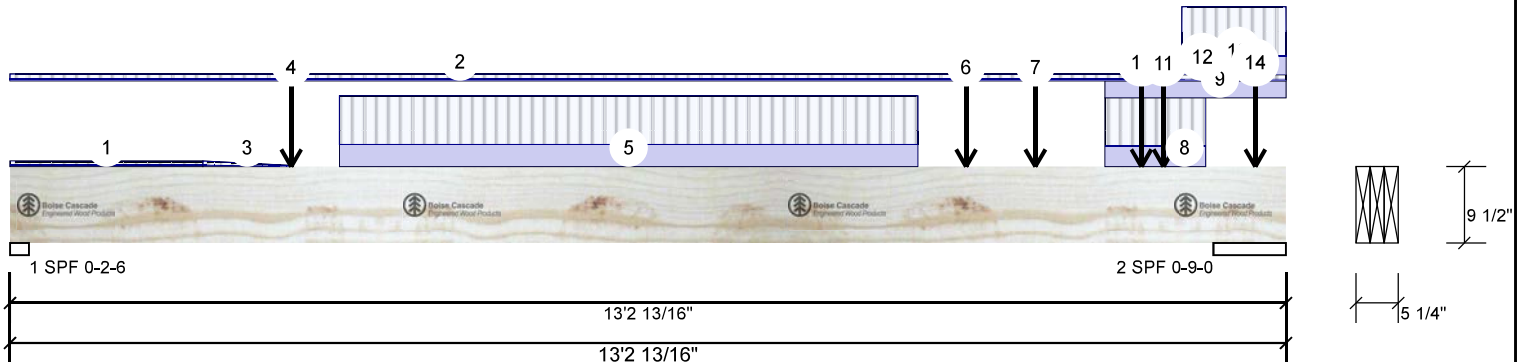
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

MHP 23026

F6 Versa-Lam LVL 2.1E 3100 SP

1.750" X 9.500" 3-Ply - PASSED

Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL

## Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	Yes
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	2103	1102	0	0
2	Vertical	4119	2226	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	59%	1378 / 3155	4533	L	1.25D+1.5L
2 - SPF	9.028"	Vert	31%	2782 / 6179	8961	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15665 ft-lb	6'6 1/16"	36222 ft-lb	0.432 (43%)	1.25D+1.5L	L
Unbraced	15665 ft-lb	6'6 1/16"	36222 ft-lb	0.432 (43%)	1.25D+1.5L	L
Shear	7319 lb	11'8 5/16"	15860 lb	0.461 (46%)	1.25D+1.5L	L
Perm Defl in.	0.140 (L/1065)	6'4 13/16"	0.414 (L/360)	0.338 (34%)	D	Uniform
LL Defl inch	0.270 (L/551)	6'4 13/16"	0.414 (L/360)	0.653 (65%)	L	L
TL Defl inch	0.410 (L/363)	6'4 13/16"	0.621 (L/240)	0.661 (66%)	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 2'11" o.c.
- 7 Lateral slenderness ratio based on full section width.



JULY 04, 2023

READ ALL NOTES ON THIS PAGE AND ON THE  
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-0-0	0-5-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 11-9-14	0-7-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	2-0-0 to 2-11-0	0-6-0 to 0-1-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	2-11-0		Far Face	598 lb	1174 lb	0 lb	0 lb	J5
5	Part. Uniform	3-5-0 to 9-5-0		Far Face	108 PLF	234 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

## Handling &amp; 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

Date: 7/3/2023

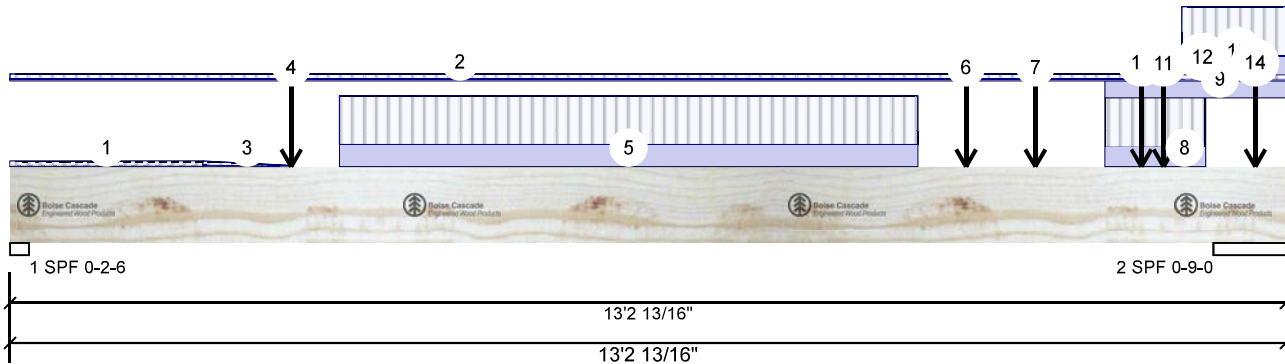
Project: ZADORRA ESTATES

Input by: W C

Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

Page 18 of 28

F6 Versa-Lam LVL 2.1E 3100 SP 1.750" X 9.500" 3-Ply - PASSED Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL

...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	9-11-0		Far Face	96 lb	201 lb	0 lb	0 lb	J2
7	Point	10-7-10		Far Face	591 lb	1187 lb	0 lb	0 lb	J5
8	Part. Uniform	11-4-5 to 12-4-13		Top	99 PLF	234 PLF	0 PLF	0 PLF	J3
9	Part. Uniform	11-4-5 to 13-2-13		Top	82 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Point	11-8-13		Far Face	289 lb	455 lb	0 lb	0 lb	J5
11	Point	11-11-10		Near Face	278 lb	686 lb	0 lb	0 lb	F11
12	Tapered Start	12-1-6		Top	8 PLF	21 PLF	0 PLF	0 PLF	
	End	13-2-13		Top	8 PLF	21 PLF	0 PLF	0 PLF	
13	Part. Uniform	12-1-14 to 13-2-13		Top	90 PLF	239 PLF	0 PLF	0 PLF	
14	Point	12-11-0		Far Face	151 lb	255 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

**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

Date: 7/3/2023

Project: ZADORRA ESTATES

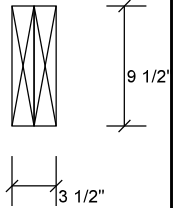
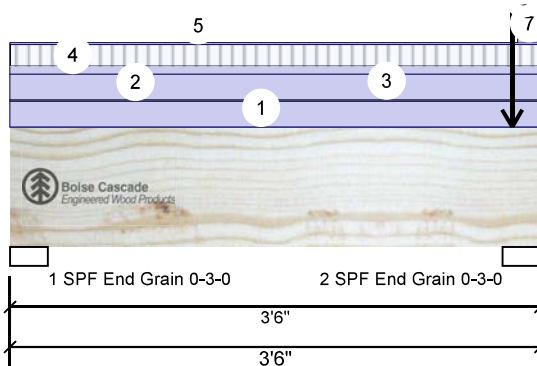
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Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STP  
Project #:

Page 19 of 28

FH5 Versa-Lam LVL 2.1E 3100 SP 1.750" X 9.500" 2-Ply - PASSED Level: Ground Floor

PER:   
CHIEF BUILDING OFFICIAL



## 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	60	192	0	0
2	Vertical	242	585	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%	239 / 89	329	L	1.25D+1.5L
2 - SPF End Grain	3.000"	Vert	13%	731 / 364	1095	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	229 ft-lb	1'9"	18343 ft-lb	0.012 (1%)	1.25D+1.5L	L
Unbraced	229 ft-lb	1'9"	18343 ft-lb	0.012 (1%)	1.25D+1.5L	L
Shear	241 lb	1' 1/2"	8353 lb	0.029 (3%)	1.25D+1.5L	L
Perm Defl in. (L/76316)	0.000	1'9"	0.104 (L/360)	0.005 (0%)	D	Uniform
LL Defl inch (L/245707)	0.000	1'9"	0.104 (L/360)	0.001 (0%)	L	L
TL Defl inch (L/58230)	0.001	1'9"	0.156 (L/240)	0.004 (0%)	D+L	L

## Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 3.
- 2 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.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Multiple plies must be fastened together as per manufacturer's details.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 3'6" o.c.
- 7 Bottom must be laterally braced at a maximum of 3'6" o.c.
- 8 Lateral slenderness ratio based on full section width.



JULY 04, 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

chemicals

## Handling &amp; 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



Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

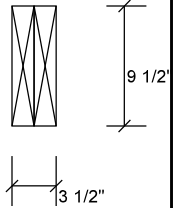
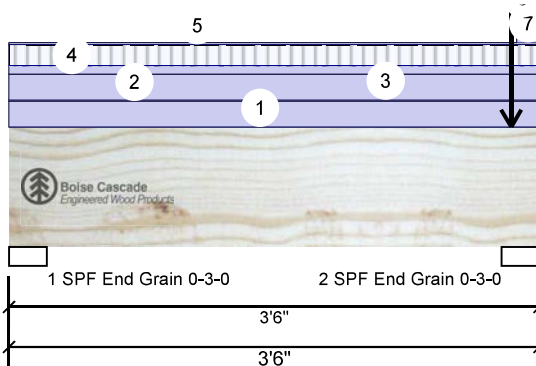
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Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

Page 20 of 28

FH5 Versa-Lam LVL 2.1E 3100 SP 1.750" X 9.500" 2-Ply - PASSED Level: Ground Floor

OF PERMIT PLANS  
NOV 22 2023  
PER: *C. Maitre*  
CHIEF BUILDING OFFICIAL



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-6-0		Top	41 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-6-0		Near Face	2 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 3-6-0		Near Face	41 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Tapered Start	0-0-0		Near Face	13 PLF	34 PLF	0 PLF	0 PLF	
	End	3-6-0			13 PLF	34 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-0-0 to 3-6-0		Near Face	3 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
6	Point	3-3-12		Top	379 lb	179 lb	0 lb	0 lb	F1 Header Column Header Column
	Bearing Length	0-3-8							
7	Part. Uniform	3-4-3 to 3-6-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Tapered Start	3-4-3		Top	5 PLF	13 PLF	0 PLF	0 PLF	
	End	3-6-0			5 PLF	13 PLF	0 PLF	0 PLF	
9	Part. Uniform	3-4-3 to 3-6-0		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
10	Part. Uniform	3-4-3 to 3-6-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
11	Tapered Start	3-4-3		Near Face	5 PLF	13 PLF	0 PLF	0 PLF	
	End	3-6-0			5 PLF	13 PLF	0 PLF	0 PLF	
12	Part. Uniform	3-4-3 to 3-6-0		Near Face	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
	Self Weight				9 PLF				



JULY 04, 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

## Handling &amp; 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

Date: 7/3/2023

Page 1 of 2

Project: ZADORRA ESTATES

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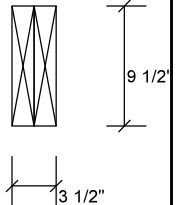
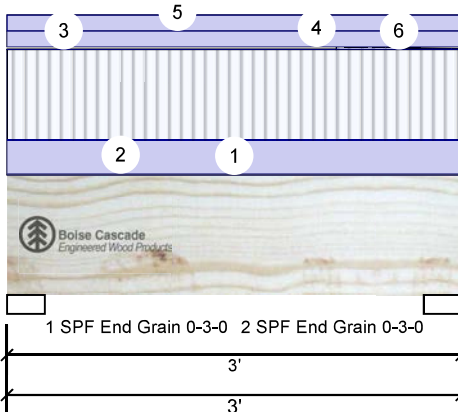
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 BC  
Project #:

MHP 23026

FH5-A Versa-Lam LVL 2.1E 3100 SP

1.750" X 9.500" 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(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	351	272	0	0
2	Vertical	353	273	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	8%	340 / 527	867	L	1.25D+1.5L
2 - SPF End Grain	3.000"	Vert	8%	342 / 529	871	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	498 ft-lb	1'6"	23220 ft-lb	0.021 (2%)	1.25D+1.5L	L
Unbraced	498 ft-lb	1'6"	23220 ft-lb	0.021 (2%)	1.25D+1.5L	L
Shear	686 lb	1' 1/2"	10574 lb	0.065 (6%)	1.25D+1.5L	L
Perm Defl in. (L/74772)	0.000	1'6"	0.088 (L/360)	0.005 (0%)	D	Uniform
LL Defl inch (L/57953)	0.001	1'6"	0.088 (L/360)	0.006 (1%)	L	L
TL Defl inch (L/32648)	0.001	1'6"	0.131 (L/240)	0.007 (1%)	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 laterally braced at a maximum of 3' o.c.
- 6 Bottom must be laterally braced at a maximum of 3' o.c.
- 7 Lateral slenderness ratio based on full section width.



JULY 04, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-0-0		Near Face	3 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	87 PLF	233 PLF	0 PLF	0 PLF	J2
3	Tapered Start	0-0-0		Near Face	0 PLF	1 PLF	0 PLF	0 PLF	
	End	2-2-1			0 PLF	1 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

## Handling &amp; 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



Client: GREENPARK

Date: 7/3/2023

Page 2 of 2

Project: ZADORRA ESTATES

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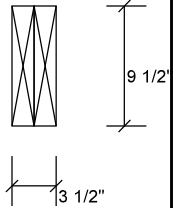
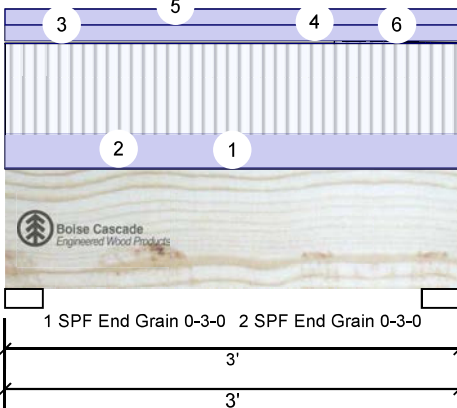
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 BC  
Project #:

MHP 23026

FH5-A Versa-Lam LVL 2.1E 3100 SP

1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-0-0 to 3-0-0		Top	41 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Part. Uniform	0-0-0 to 3-0-0		Near Face	41 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Tapered Start	2-2-1		Near Face	2 PLF	5 PLF	0 PLF	0 PLF	
	End	3-0-0			1 PLF	2 PLF	0 PLF	0 PLF	
	Self Weight				9 PLF				



JULY 04, 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

This design is valid until 4/17/2026

**Manufacturer Info**

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3228 Moodie Dr, Ottawa, Ontario  
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Client: GREENPARK

Date: 7/3/2023

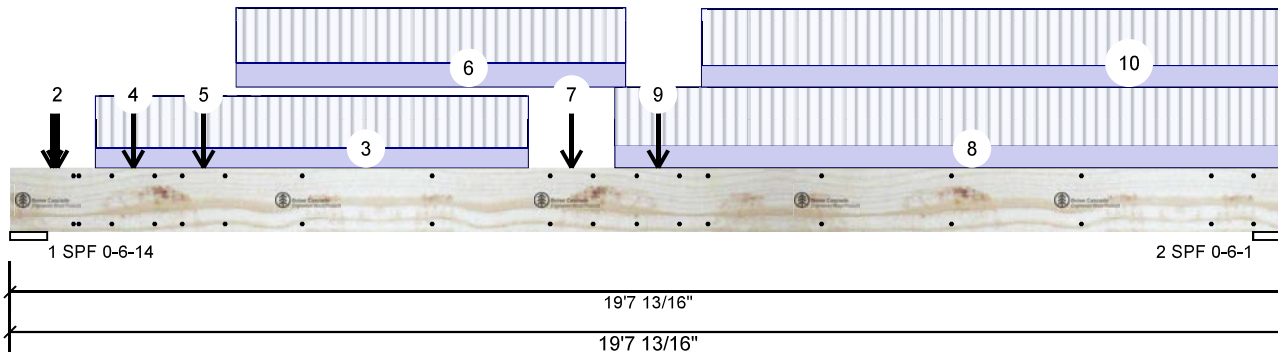
Project: ZADORRA ESTATES

Input by: W C

Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

MHP 23026

F10 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 4-Ply - PASSED Level: Second Floor

PER:   
CHIEF BUILDING OFFICIAL

## Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	4	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	Yes
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	4344	1989	0	0
2	Vertical	4533	1974	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.875"	Vert	30%	2486 / 6516	9002	L	1.25D+1.5L
2 - SPF	6.084"	Vert	35%	2468 / 6799	9266	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	40924 ft-lb	9'11 13/16"	73615 ft-lb	0.556 (56%)	1.25D+1.5L	L
Unbraced	40924 ft-lb	9'11 13/16"	73615 ft-lb	0.556 (56%)	1.25D+1.5L	L
Shear	9800 lb	1'6 3/4"	26434 lb	0.371 (37%)	1.25D+1.5L	L
Perm Defl in.	0.273 (L/823)	9'10 1/4"	0.623 (L/360)	0.437 (44%)	D	Uniform
LL Defl inch	0.611 (L/367)	9'10 11/16"	0.623 (L/360)	0.981 (98%)	L	L
TL Defl inch	0.884 (L/254)	9'10 1/2"	0.935 (L/240)	0.945 (95%)	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 Fasten all plies using 2 rows of SDW22634 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Simpson fasteners applied from a single side of the member use tip values where published.
- 6 Girders are designed to be supported on the bottom edge only.
- 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 04, 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.

## 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 &amp; 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

Date: 7/3/2023

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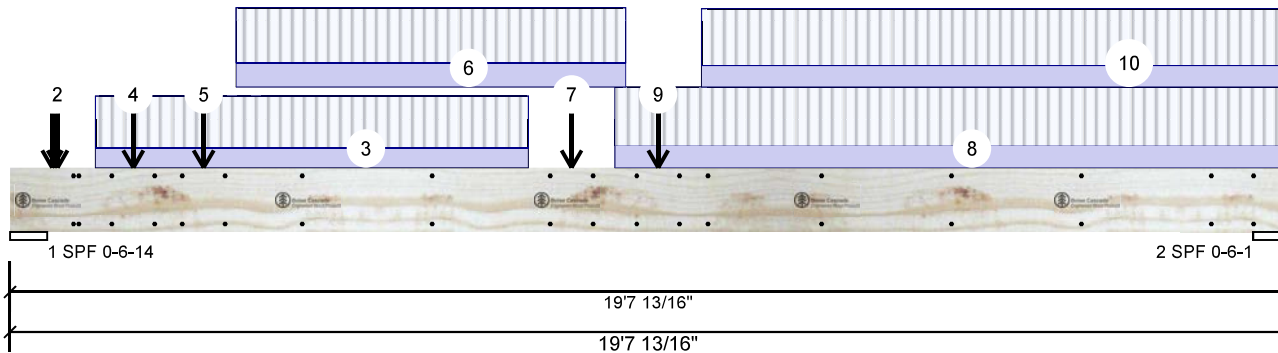
Project: ZADORRA ESTATES

Input by: W C

Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

MHP 23026

F10 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 4-Ply - PASSED Level: Second Floor

PER:   
CHIEF BUILDING OFFICIAL

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-7-13		Near Face	114 lb	304 lb	0 lb	0 lb	J2
2	Point	0-8-13		Far Face	103 lb	224 lb	0 lb	0 lb	J2
3	Part. Uniform	1-3-13 to 7-11-13		Near Face	80 PLF	212 PLF	0 PLF	0 PLF	
4	Point	1-10-13		Far Face	117 lb	252 lb	0 lb	0 lb	J2
5	Point	2-11-13		Far Face	106 lb	233 lb	0 lb	0 lb	J2
6	Part. Uniform	3-5-13 to 9-5-13		Far Face	99 PLF	224 PLF	0 PLF	0 PLF	
7	Point	8-7-13		Near Face	108 lb	287 lb	0 lb	0 lb	J2
8	Part. Uniform	9-3-13 to 19-7-13		Near Face	90 PLF	239 PLF	0 PLF	0 PLF	
9	Point	9-11-13		Far Face	109 lb	261 lb	0 lb	0 lb	J2
10	Part. Uniform	10-7-13 to 19-7-13		Far Face	87 PLF	232 PLF	0 PLF	0 PLF	
	Self Weight				24 PLF				



JULY 04, 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**

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



Client: GREENPARK

Date: 7/3/2023

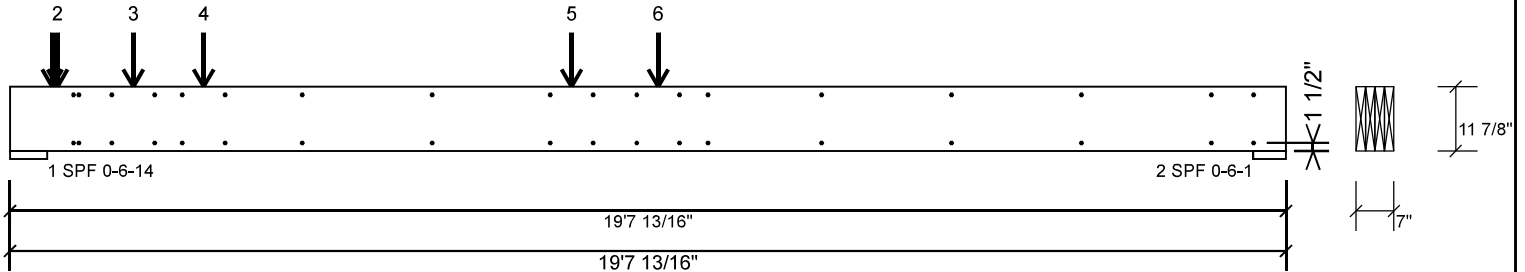
Project: ZADORRA ESTATES

Input by: W C

Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STP  
Project #:

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F10 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 4-Ply - PASSED Level: Second Floor

PER:   
CHIEF BUILDING OFFICIAL

### Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22634 at 24" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 12".

Capacity	85.1 %
Load	353.3 PLF
Yield Limit per Foot	415.0 PLF
Yield Limit per Fastener	415.0 lb.
Yield Mode	Lookup
Edge Distance	1 1/2"
Min. End Distance	6"
Load Combination	1.25D+1.5L
Duration Factor	1.00

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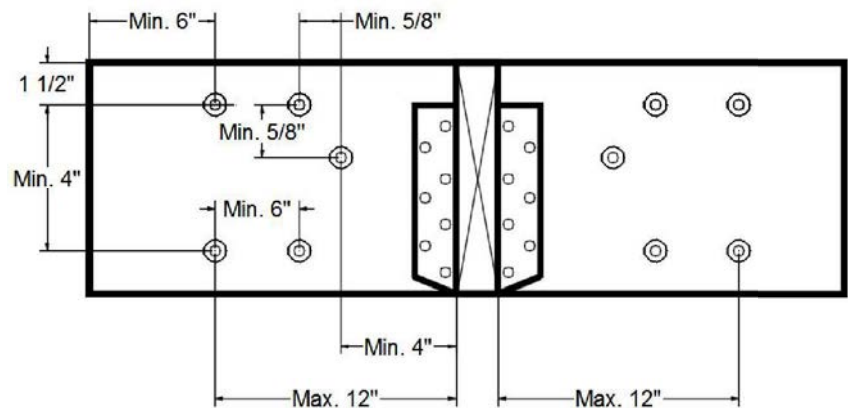
JULY 04, 2023

### Concentrated Load

Fasten at concentrated side load at 0-7-13 with a minimum of (2) – SDW22634 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load.

Capacity	45.3 %
Load	448.9lb.
Total Yield Limit	990.0 lb.
Yield Limit per Fastener	495.0 lb.
Yield Mode	Lookup
Load Combination	1.25D+1.5L
Duration Factor	1.00

### Min/Max fastener distances for Concentrated Side Loads



### Concentrated Load

Fasten at concentrated side load at 0-8-13 with a minimum of (2) – SDW22634 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load.

Capacity	35.2 %
Load	348.6lb.
Total Yield Limit	990.0 lb.
Yield Limit per Fastener	495.0 lb.
Yield Mode	Lookup
Load Combination	1.25D+1.5L
Duration Factor	1.00

### 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

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



Client: GREENPARK

Date: 7/3/2023

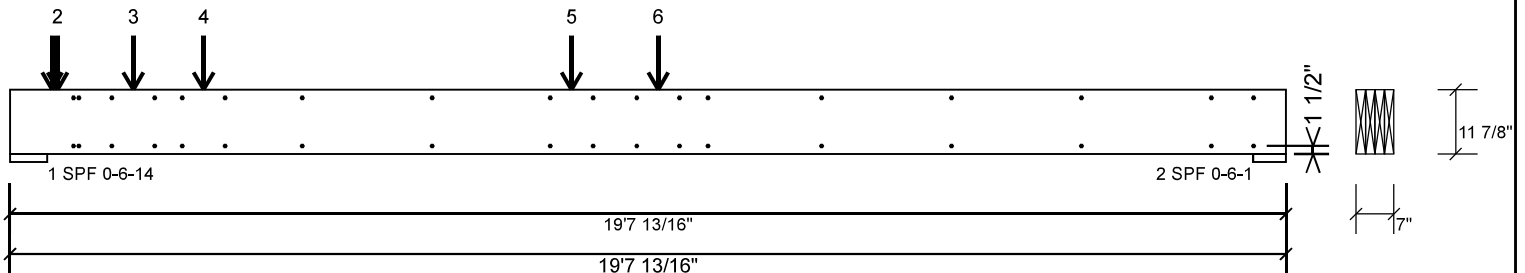
Project: ZADORRA ESTATES

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Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STP  
Project #:

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F10 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 4-Ply - PASSED Level: Second Floor

PER:   
CHIEF BUILDING OFFICIAL

## Multi-Ply Analysis

### Concentrated Load

Fasten at concentrated side load at 1-10-13 with a minimum of (4) – SDW22634 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load.

Capacity	19.9 %
Load	393.2lb.
Total Yield Limit	1980.0 lb.
Yield Limit per Fastener	495.0 lb.
Yield Mode	Lookup
Load Combination	1.25D+1.5L
Duration Factor	1.00

### Concentrated Load

Fasten at concentrated side load at 2-11-13 with a minimum of (4) – SDW22634 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load.

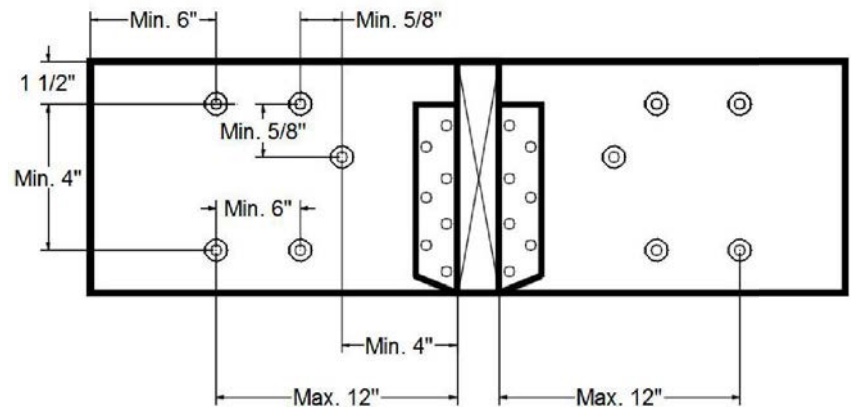
Capacity	18.3 %
Load	361.5lb.
Total Yield Limit	1980.0 lb.
Yield Limit per Fastener	495.0 lb.
Yield Mode	Lookup
Load Combination	1.25D+1.5L
Duration Factor	1.00

### Concentrated Load

Fasten at concentrated side load at 8-7-13 with a minimum of (4) – SDW22634 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load.

Capacity	21.4 %
Load	424.1lb.
Total Yield Limit	1980.0 lb.
Yield Limit per Fastener	495.0 lb.
Yield Mode	Lookup
Load Combination	1.25D+1.5L
Duration Factor	1.00

### Min/Max fastener distances for Concentrated Side Loads



JULY 04, 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

## 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



Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

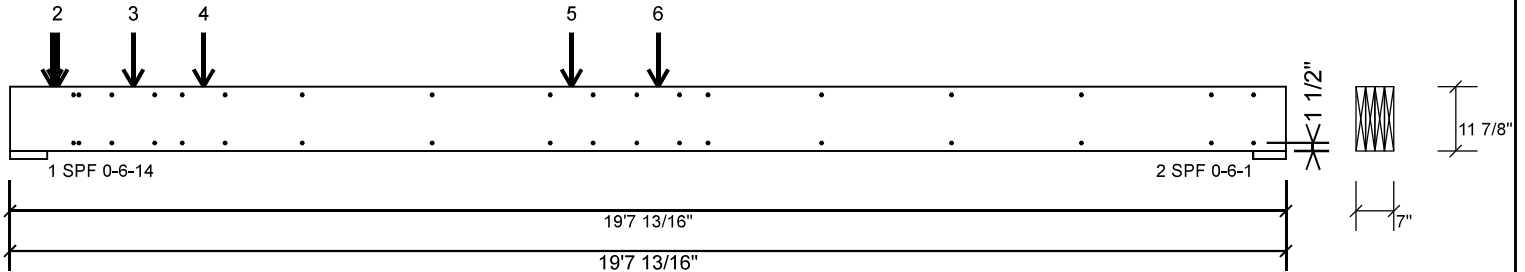
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OSHAWA, ONJob Name: RIVER 9-3 STP  
Project #:

Page 25 of 28

F10 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 4-Ply - PASSED Level: Second Floor

PER: *C. Maitre*  
CHIEF BUILDING OFFICIAL



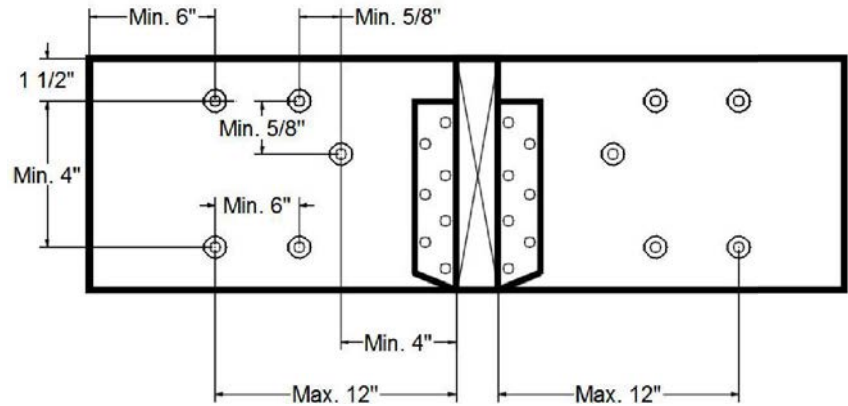
## Multi-Ply Analysis

### Concentrated Load

Fasten at concentrated side load at 9-11-13 with a minimum of (4) – SDW22634 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load.

Capacity	20.0 %
Load	395.8lb.
Total Yield Limit	1980.0 lb.
Yield Limit per Fastener	495.0 lb.
Yield Mode	Lookup
Load Combination	1.25D+1.5L
Duration Factor	1.00

### Min/Max fastener distances for Concentrated Side Loads



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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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CCMC: 12472

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



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Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

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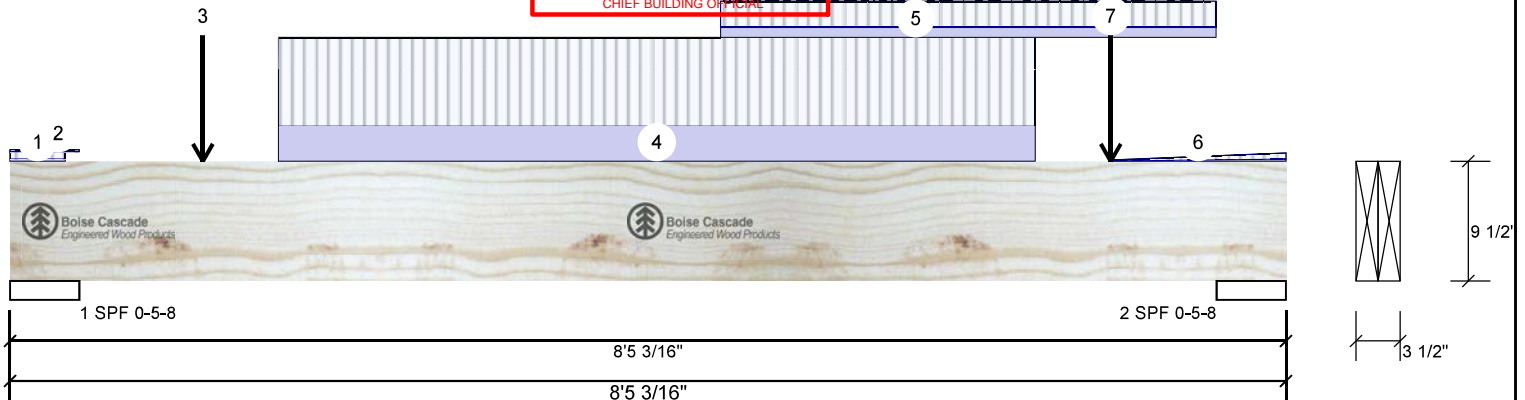
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

MHP 23026

F7 Versa-Lam LVL 2.1E 3100 SP

1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor

PER:   
CHIEF BUILDING OFFICIAL

## 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	1040	462	0	0
2	Vertical	1234	537	0	0

## Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	18%	578 / 1560	2138	L	1.25D+1.5L
2 - SPF	5.500"	Vert	21%	671 / 1851	2523	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4672 ft-lb	4'5 1/4"	23220 ft-lb	0.201 (20%)	1.25D+1.5L	L
Unbraced	4672 ft-lb	4'5 1/4"	23220 ft-lb	0.201 (20%)	1.25D+1.5L	L
Shear	2361 lb	7'2 3/16"	10574 lb	0.223 (22%)	1.25D+1.5L	L
Perm Defl in.	0.020 (L/4527)	4'3 1/16"	0.255 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.047 (L/1970)	4'3 1/8"	0.255 (L/360)	0.183 (18%)	L	
TL Defl inch	0.067 (L/1372)	4'3 1/8"	0.382 (L/240)	0.175 (17%)	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 04, 2023

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USED IN THE DESIGN OF THIS COMPONENT.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-6	0-6-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-8	0-1-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-3-5		Near Face	113 lb	277 lb	0 lb	0 lb	J4
4	Part. Uniform	1-9-5 to 6-9-5		Near Face	115 PLF	282 PLF	0 PLF	0 PLF	
5	Part. Uniform	4-8-6 to 7-11-10		Top	32 PLF	84 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

## Handling &amp; 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

Date: 7/3/2023

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Project: ZADORRA ESTATES

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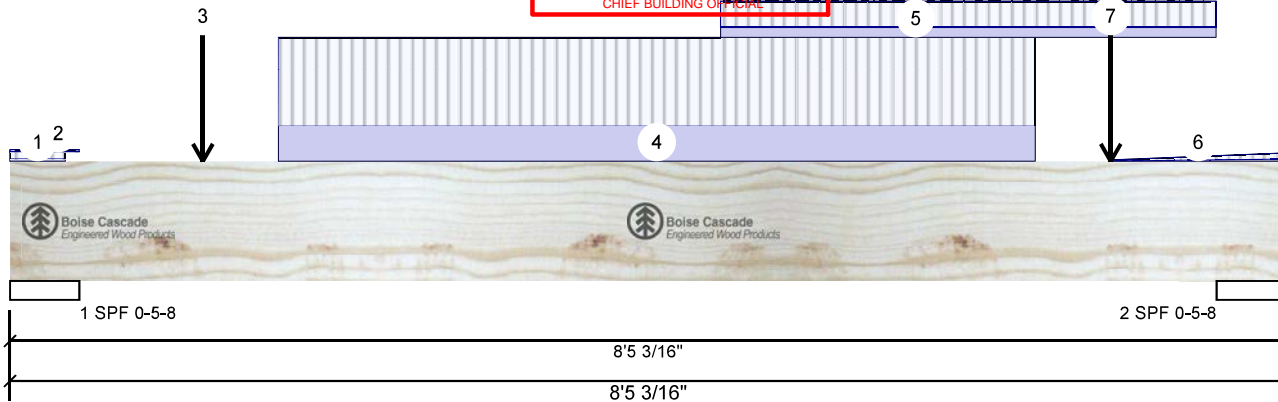
Address: ZADORRA ESTATES THE CITY OF OSHAWA  
OSHAWA, ONJob Name: RIVER 9-3 STP  
Project #:

MHP 23026

F7 Versa-Lam LVL 2.1E 3100 SP

1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor

PER:   
CHIEF BUILDING OFFICIAL

...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Tie-In	7-3-5 to 8-5-3	0-0-14 to 0-5-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Point	7-3-5		Near Face	118 lb	289 lb	0 lb	0 lb	J4
	Self Weight				9 PLF				



JULY 04, 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.

**Notes**

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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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Client: GREENPARK

Date: 7/3/2023

Project: ZADORRA ESTATES

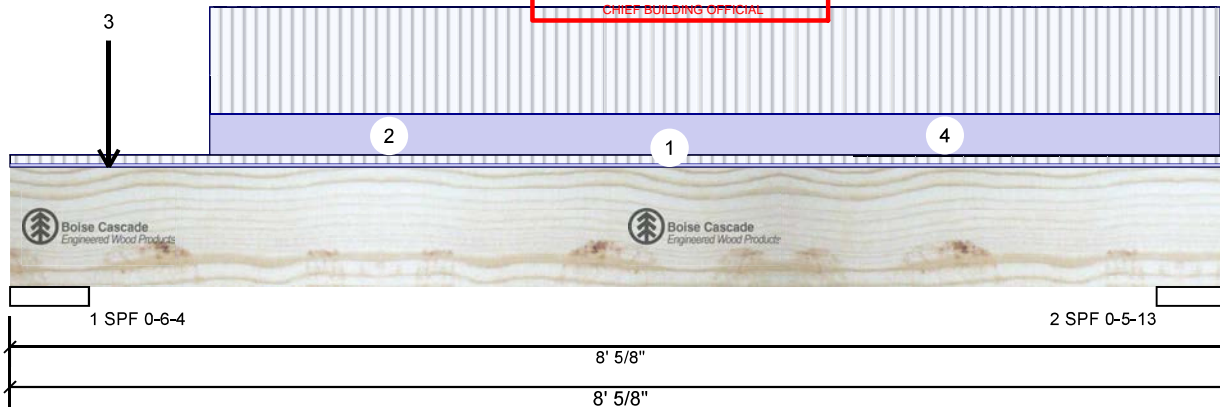
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OSHAWA, ONJob Name: RIVER 9-3 STD  
Project #:

Page 28 of 28

**F9 Versa-Lam LVL 2.1E 3100 SP 1.750" X 9.500" 3-Ply - PASSED**

Level: Second Floor

 PER:   
 CHIEF BUILDING OFFICIAL


9 1/2"

5 1/4"

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	Yes
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	954	420	0	0
2	Vertical	902	399	0	0

**Bearings and Factored Reactions**

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.250"	Vert	10%	525 / 1431	1956	L	1.25D+1.5L
2 - SPF	5.840"	Vert	10%	498 / 1352	1851	L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3003 ft-lb	4' 5/8"	36222 ft-lb	0.083 (8%)	1.25D+1.5L	L
Unbraced	3003 ft-lb	4' 5/8"	36222 ft-lb	0.083 (8%)	1.25D+1.5L	L
Shear	2232 lb	1'3 3/4"	15860 lb	0.141 (14%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/11108)	4' 9/16"	0.239 (L/360)	0.032 (3%)	D	Uniform
LL Defl inch	0.017 (L/4923)	4' 9/16"	0.239 (L/360)	0.073 (7%)	L	L
TL Defl inch	0.025 (L/3411)	4' 9/16"	0.358 (L/240)	0.070 (7%)	D+L	L

**Design Notes**

- 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.
- 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 must be continuously laterally braced.
- Bottom must have sheathing attached or be continuously braced.
- Lateral slenderness ratio based on full section width.



JULY 04, 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	Tie-In	0-0-0 to 8-0-10	0-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 5-6-12		Top	1 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-7-13		Far Face	114 lb	304 lb	0 lb	0 lb	J2
4	Part. Uniform	1-3-13 to 7-11-13		Far Face	80 PLF	212 PLF	0 PLF	0 PLF	
	Self Weight				14 PLF				

**Notes**

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

**Lumber**

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

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**

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

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This design is valid until 4/17/2026