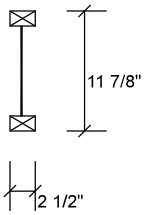
iStructDesign

Client: GREENPARK
Project:
Address: ZADORRA ESTATES OSHAWA ON

Date: 5/19/2023
Input by: W C
Job Name: CAROL 12-2 STD
Project #:

F1 AJS 140 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal - II
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Application:	Floor (Residential)
Design Method:	LSD
Building Code:	NBCC 2015 OBC 2012(2020 Update)
Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	44	17	0	0
2	Vertical	46	17	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	5%	21 / 66	87	L	1.25D+1.5L
2 - SPF	2.375"	Vert	5%	22 / 69	91	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	22 ft-lb	8 1/2"	5305 ft-lb	0.004 (0%)	1.25D+1.5L	L
Unbraced	22 ft-lb	8 1/2"	5305 ft-lb	0.004 (0%)	1.25D+1.5L	L
Shear	74 lb	1 1/4"	2350 lb	0.032 (3%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/220659)	8 1/2"	0.040 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/82747)	8 1/2"	0.040 (L/360)	0.004 (0%)	L	L
TL Defl inch	0.000 (L/60180)	8 1/2"	0.060 (L/240)	0.004 (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: SPF, Thickness: 2 1/2"
4 Girders are designed to be supported on the bottom edge only.
5 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
6 If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

JULY 24, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-6	1-6-12	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. IJoist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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

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: 12787

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

CSD DRAW DESIGN BUILD

iStructDesign

Client: GREENPARK
Project:
Address: ZADORRA ESTATES OSHAWA ON

Date: 5/19/2023
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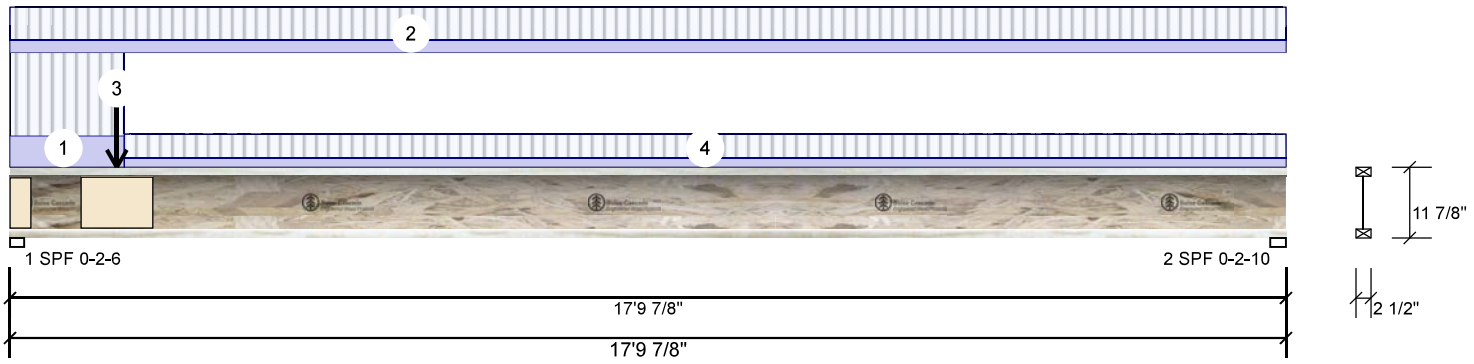
Job Name: CAROL 12-2 STD
Project #:

F13 AJS 140 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal - II
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Application:	Floor (Residential)
Design Method:	LSD
Building Code:	NBCC 2015 OBC 2012(2020 Update)
Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	885	332	0	0
2	Vertical	447	168	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	76%	416 / 1326	1742	L	1.25D+1.5L
2 - SPF	2.625"	Vert	51%	210 / 671	881	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4144 ft-lb	8'1 1/4"	5305 ft-lb	0.781 (78%)	1.25D+1.5L	L
Unbraced	4144 ft-lb	8'1 1/4"	5305 ft-lb	0.781 (78%)	1.25D+1.5L	L
Shear	1717 lb	1 5/8"	2350 lb	0.731 (73%)	1.25D+1.5L	L
Perm Defl in.	0.155 (L/1356)	8'7 13/16"	0.584 (L/360)	0.266 (27%)	D	Uniform
LL Defl inch	0.413 (L/509)	8'7 13/16"	0.584 (L/360)	0.707 (71%)	L	L
TL Defl inch	0.569 (L/370)	8'7 13/16"	0.877 (L/240)	0.649 (65%)	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 16'4" o.c.
5 Web stiffeners required at Bearing 1.

JULY 24, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-7-3	1-8-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 17-9-14	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-5-15		Far Face	164 lb	435 lb	0 lb	0 lb	F2
4	Tie-In	1-7-3 to 17-9-14	0-5-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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

This design is valid until 4/17/2026

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CSD DRAW DESIGN BUILD

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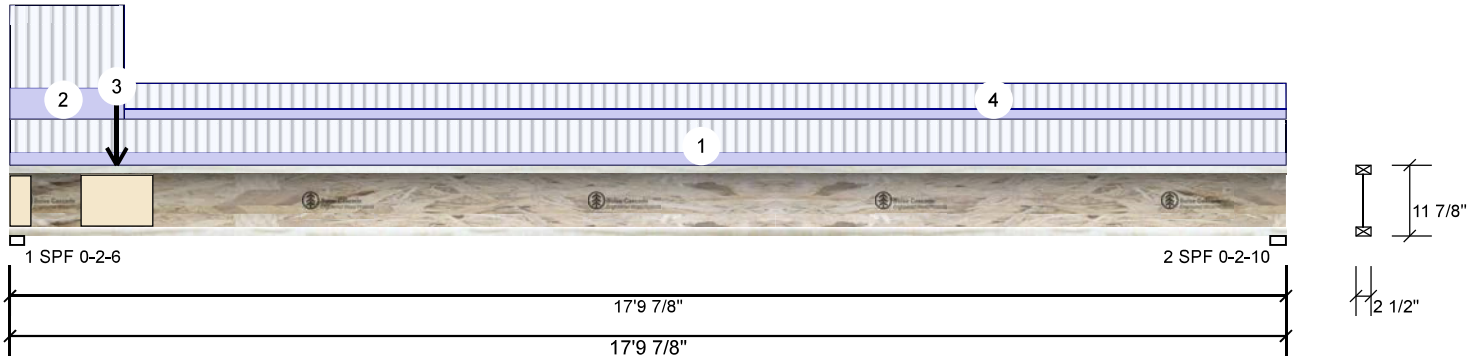
Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	888	334	0	0
2	Vertical	467	175	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	77%	417 / 1333	1750	L	1.25D+1.5L
2 - SPF	2.625"	Vert	53%	219 / 700	919	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4291 ft-lb	8'2 1/16"	5305 ft-lb	0.809 (81%)	1.25D+1.5L	L
Unbraced	4291 ft-lb	8'2 1/16"	5305 ft-lb	0.809 (81%)	1.25D+1.5L	L
Shear	1725 lb	1 5/8"	2350 lb	0.734 (73%)	1.25D+1.5L	L
Perm Defl in.	0.161 (L/1311)	8'8 1/16"	0.584 (L/360)	0.275 (27%)	D	Uniform
LL Defl inch	0.428 (L/492)	8'8 1/16"	0.584 (L/360)	0.732 (73%)	L	L
TL Defl inch	0.588 (L/358)	8'8 1/16"	0.877 (L/240)	0.671 (67%)	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 16'4" o.c.
5 Web stiffeners required at Bearing 1.

JULY 24, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 17-9-14	0-8-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-7-3	1-8-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-5-15		Near Face	158 lb	420 lb	0 lb	0 lb	F2
4	Tie-In	1-7-3 to 17-9-14	0-6-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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

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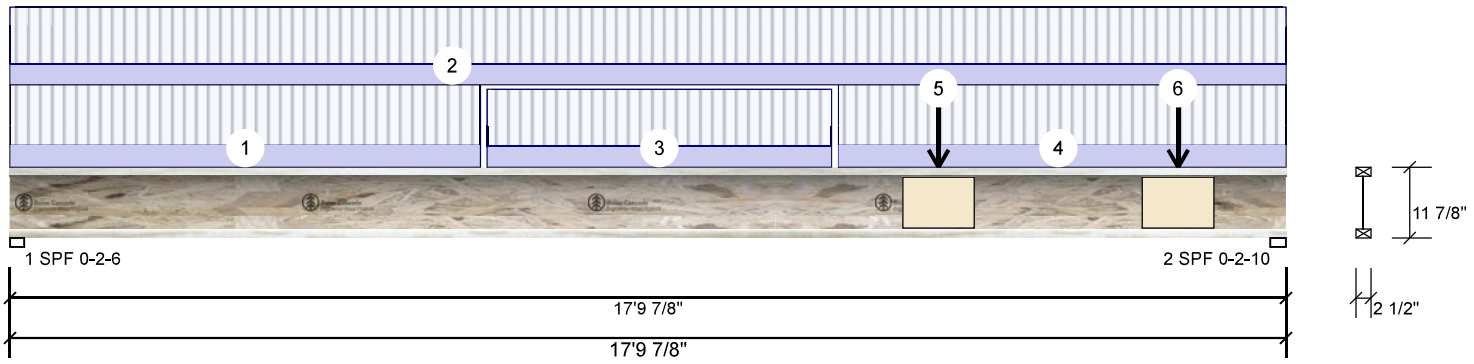
Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	497	186	0	0
2	Vertical	552	206	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	58%	233 / 746	979	L	1.25D+1.5L
2 - SPF	2.625"	Vert	63%	258 / 828	1086	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4316 ft-lb	9'1 15/16"	5305 ft-lb	0.814 (81%)	1.25D+1.5L	L
Unbraced	4316 ft-lb	9'1 15/16"	5305 ft-lb	0.814 (81%)	1.25D+1.5L	L
Shear	1069 lb	17'8"	2350 lb	0.455 (45%)	1.25D+1.5L	L
Perm Defl in.	0.159 (L/1323)	8'11 11/16"	0.584 (L/360)	0.272 (27%)	D	Uniform
LL Defl inch	0.425 (L/495)	8'11 3/4"	0.584 (L/360)	0.727 (73%)	L	L
TL Defl inch	0.584 (L/360)	8'11 3/4"	0.877 (L/240)	0.666 (67%)	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 12'11 5/8" o.c.

JULY 24, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 6-6-14	0-8-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 17-9-14	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	6-8-0 to 11-5-12	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	11-6-14 to 17-9-14	0-8-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	12-11-10		Far Face	15 lb	41 lb	0 lb	0 lb	F1
6	Point	16-3-13		Far Face	15 lb	41 lb	0 lb	0 lb	F1

Notes

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Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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

This design is valid until 4/17/2026

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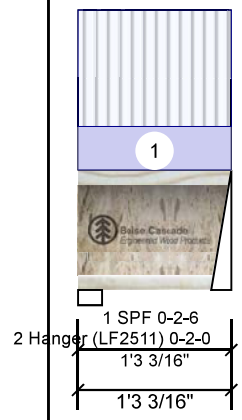

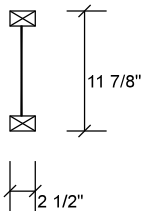

Member Information

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	43	16	0	0
2	Vertical	41	15	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	5%	20 / 65	85	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	5%	19 / 62	81	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17 ft-lb	7 3/4"	5305 ft-lb	0.003 (0%)	1.25D+1.5L	L
Unbraced	17 ft-lb	7 3/4"	5305 ft-lb	0.003 (0%)	1.25D+1.5L	L
Shear	67 lb	1 5/8"	2350 lb	0.029 (3%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/246418)	7 13/16"	0.034 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch	0.000 (L/92407)	7 13/16"	0.034 (L/360)	0.004 (0%)	L	L
TL Defl inch	0.000 (L/67205)	7 13/16"	0.051 (L/240)	0.004 (0%)	D+L	L

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Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fill all hanger nailing holes.
3. Right Header: SPF, Thickness: 2 1/2"
4. Girders are designed to be supported on the bottom edge only.
5. If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
6. If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

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

Notes

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Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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

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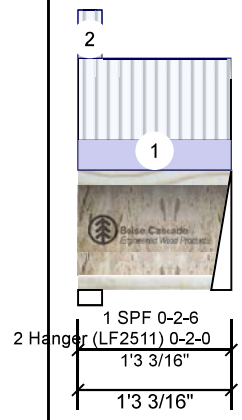

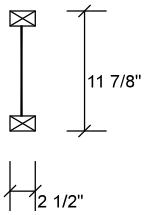

Member Information

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	49	18	0	0
2	Vertical	41	15	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	6%	23 / 73	96	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	5%	19 / 62	81	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17 ft-lb	7 3/4"	5305 ft-lb	0.003 (0%)	1.25D+1.5L	L
Unbraced	17 ft-lb	7 3/4"	5305 ft-lb	0.003 (0%)	1.25D+1.5L	L
Shear	71 lb	1 5/8"	2350 lb	0.030 (3%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/245617)	7 3/4"	0.034 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch	0.000 (L/92106)	7 3/4"	0.034 (L/360)	0.004 (0%)	L	L
TL Defl inch	0.000 (L/66986)	7 3/4"	0.051 (L/240)	0.004 (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 Right Header: SPF, Thickness: 2 1/2"
4 Girders are designed to be supported on the bottom edge only.
5 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
6 If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

JULY 24, 2023

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

Notes

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Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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

This design is valid until 4/17/2026

Manufacturer Info

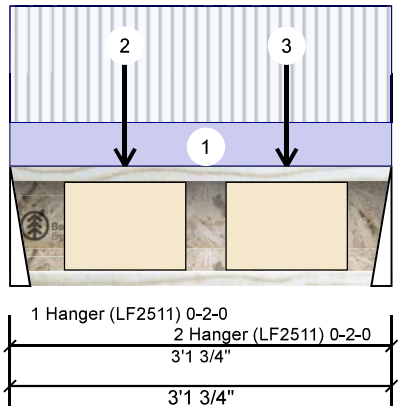
Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

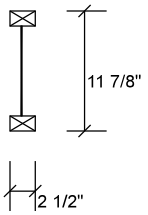
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400

Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F2 AJS 140 11.875" - PASSED

Level: Ground Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	420	158	0	0
2	Vertical	435	164	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	51%	197 / 630	827	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	53%	204 / 653	857	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	672 ft-lb	1'1 3/16"	5305 ft-lb	0.127 (13%)	1.25D+1.5L	L
Unbraced	672 ft-lb	1'1 3/16"	5305 ft-lb	0.127 (13%)	1.25D+1.5L	L
Shear	851 lb	3' 1/2"	2350 lb	0.362 (36%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/13938)	1'5 3/4"	0.098 (L/360)	0.026 (3%)	D	Uniform
LL Defl inch	0.007 (L/5239)	1'5 3/4"	0.098 (L/360)	0.069 (7%)	L	L
TL Defl inch	0.009 (L/3808)	1'5 3/4"	0.147 (L/240)	0.063 (6%)	D+L	L

JULY 24, 2023

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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: SPF, Thickness: 2 1/2"
4. Right Header: SPF, Thickness: 2 1/2"
5. Girders are designed to be supported on the bottom edge only.
6. If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
7. If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-1-12	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-11-6		Far Face	145 lb	386 lb	0 lb	0 lb	J4
3	Point	2-3-6		Far Face	140 lb	372 lb	0 lb	0 lb	J4

Notes

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Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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

This design is valid until 4/17/2026

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CCMC: 12787

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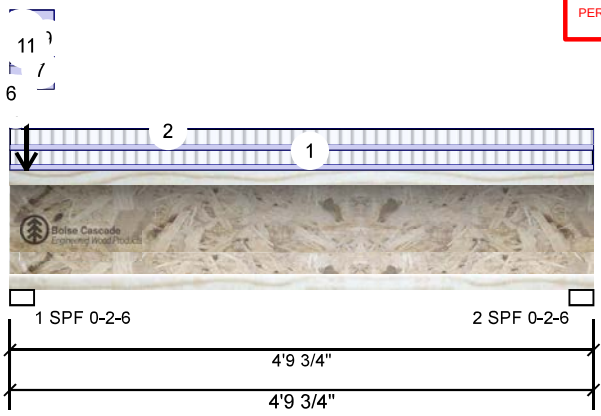
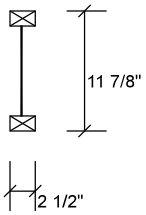
Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F3 AJS 140 11.875" - PASSED

Level: Ground Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	171	361	25	0
2	Vertical	124	47	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	48%	451 / 208	659	L	1.25D+1.5S +L
2 - SPF	2.375"	Vert	16%	59 / 186	245	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	264 ft-lb	2'4 3/4"	4934 ft-lb	0.054 (5%)	1.25D+1.5L	L
Unbraced	264 ft-lb	2'4 3/4"	4934 ft-lb	0.054 (5%)	1.25D+1.5L	L
Shear	269 lb	1 5/8"	2186 lb	0.123 (12%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/39826)	2'4 9/16"	0.151 (L/360)	0.009 (1%)	D	Uniform
LL Defl inch	0.004 (L/15460)	2'4 7/8"	0.151 (L/360)	0.023 (2%)	L+0.5S	L
TL Defl inch	0.005 (L/11137)	2'4 13/16"	0.227 (L/240)	0.022 (2%)	D+L+0.5S	L

JULY 24, 2023

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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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-9-12	0-7-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-9-12	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 0-1-2		Top	20 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Tapered Start	0-0-0		Top	2 PLF	5 PLF	0 PLF	0 PLF	
	End	0-1-2			2 PLF	5 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists must not be used
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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
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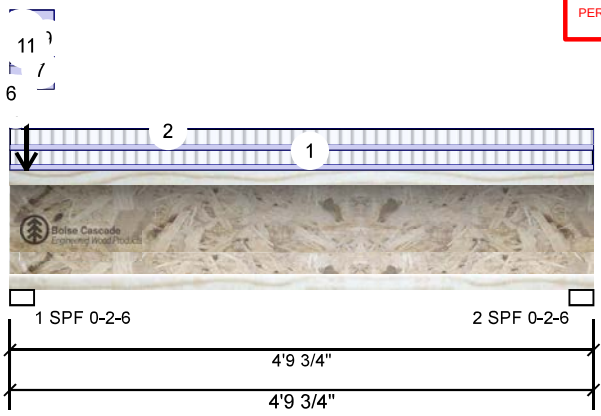
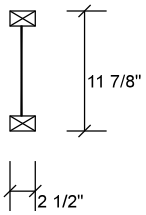
		Project #:	

F3 AJS 140 11.875" - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Part. Uniform	0-0-0 to 0-1-2		Top	1 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
6	Part. Uniform	0-0-0 to 0-1-2		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	0-0-0 to 0-4-6		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Tapered Start	0-0-0		Top	4 PLF	10 PLF	0 PLF	0 PLF	
	End	0-4-6			4 PLF	10 PLF	0 PLF	0 PLF	
9	Part. Uniform	0-0-0 to 0-4-6		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
10	Part. Uniform	0-0-0 to 0-4-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
11	Point	0-1-10		Top	263 lb	43 lb	25 lb	0 lb	B4
	Bearing Length	0-1-8							

JULY 24, 2023

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5. Provide lateral support at bearing points to avoid lateral displacement and rotation
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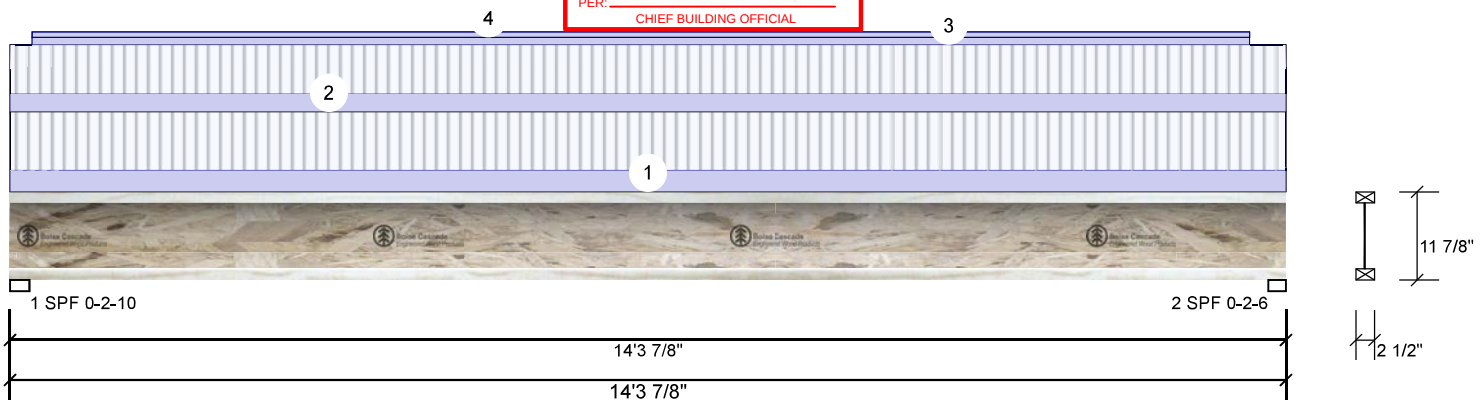
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F5 AJS 140 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal - II
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Application:	Floor (Residential)
Design Method:	LSD
Building Code:	NBCC 2015 OBC 2012(2020 Update)
Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	418	205	0	0
2	Vertical	417	204	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	51%	257 / 627	884	L	1.25D+1.5L
2 - SPF	2.375"	Vert	52%	255 / 625	880	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3042 ft-lb	7'2 1/16"	5305 ft-lb	0.573 (57%)	1.25D+1.5L	L
Unbraced	3042 ft-lb	7'2 1/16"	5305 ft-lb	0.573 (57%)	1.25D+1.5L	L
Shear	866 lb	1 7/8"	2350 lb	0.369 (37%)	1.25D+1.5L	L
Perm Defl in.	0.091 (L/1845)	7'2 1/16"	0.468 (L/360)	0.195 (20%)	D	Uniform
LL Defl inch	0.184 (L/913)	7'2 1/16"	0.468 (L/360)	0.394 (39%)	L	L
TL Defl inch	0.276 (L/611)	7'2 1/16"	0.702 (L/240)	0.393 (39%)	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 bearings.

JULY 24, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-3-14	0-9-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-3-14	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-3-0 to 13-10-15		Top	4 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-3-0 to 13-10-15		Top	3 PLF	0 PLF	0 PLF	0 PLF	

Notes

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Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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

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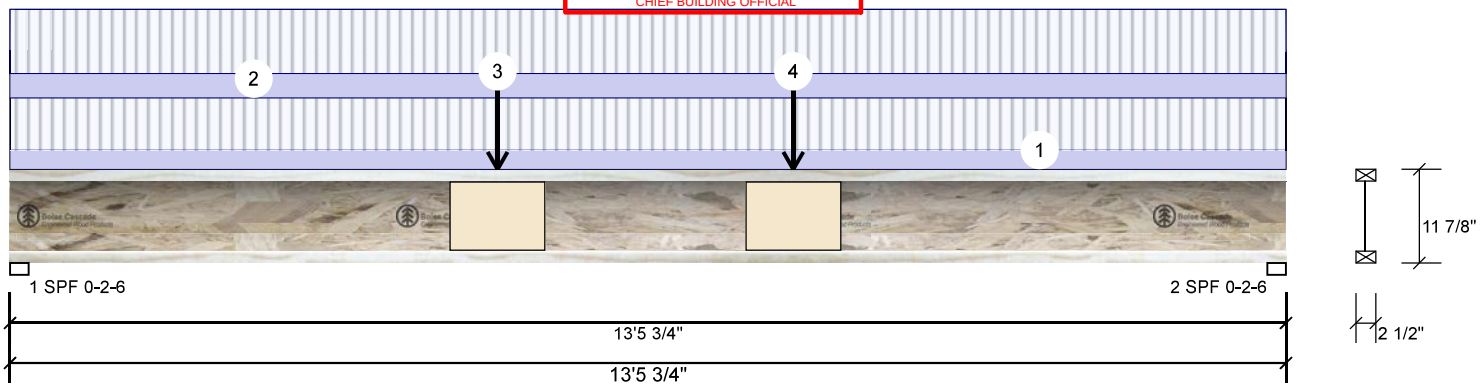
F6 AJS 140 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	433	163	0	0
2	Vertical	433	163	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	51%	204 / 650	854	L	1.25D+1.5L
2 - SPF	2.375"	Vert	51%	204 / 649	853	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2918 ft-lb	6'8 7/8"	5305 ft-lb	0.550 (55%)	1.25D+1.5L	L
Unbraced	2918 ft-lb	6'8 7/8"	5305 ft-lb	0.550 (55%)	1.25D+1.5L	L
Shear	838 lb	1 5/8"	2350 lb	0.357 (36%)	1.25D+1.5L	L
Perm Defl in.	0.064 (L/2471)	6'8 7/8"	0.440 (L/360)	0.146 (15%)	D	Uniform
LL Defl inch	0.170 (L/931)	6'8 7/8"	0.440 (L/360)	0.387 (39%)	L	L
TL Defl inch	0.234 (L/676)	6'8 7/8"	0.660 (L/240)	0.355 (35%)	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 5'2 7/16" o.c.

JULY 24, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-5-12	0-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-5-12	0-9-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	5-1-13		Near Face	17 lb	44 lb	0 lb	0 lb	F1
4	Point	8-3-5		Near Face	17 lb	44 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. IJoist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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

This design is valid until 4/17/2026

Manufacturer Info

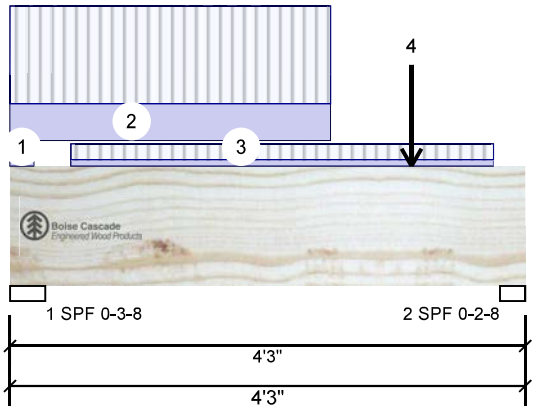
Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

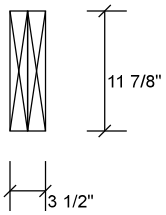
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400

Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F7-B Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	751	308	0	0
2	Vertical	635	263	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	20%	384 / 1126	1511	L	1.25D+1.5L
2 - SPF	2.500"	Vert	24%	328 / 952	1280	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1323 ft-lb	2'1 15/16"	35392 ft-lb	0.037 (4%)	1.25D+1.5L	L
Unbraced	1323 ft-lb	2'1 15/16"	35392 ft-lb	0.037 (4%)	1.25D+1.5L	L
Shear	1777 lb	3' 5/8"	13217 lb	0.134 (13%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/59116)	2'2 1/8"	0.129 (L/360)	0.006 (1%)	D	Uniform
LL Defl inch	0.002 (L/24166)	2'2 1/8"	0.129 (L/360)	0.015 (1%)	L	L
TL Defl inch	0.003 (L/17154)	2'2 1/8"	0.194 (L/240)	0.014 (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 continuously laterally braced.
6 Bottom must have sheathing attached or be continuously braced.
7 Lateral slenderness ratio based on full section width.

JULY 24, 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 0-2-6	1-5-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-7-12		Near Face	114 PLF	304 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-6-0 to 3-11-14		Top	19 PLF	50 PLF	0 PLF	0 PLF	
4	Point	3-3-12		Near Face	148 lb	396 lb	0 lb	0 lb	J3
	Self Weight				12 PLF				

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 4/17/2026

Manufacturer Info

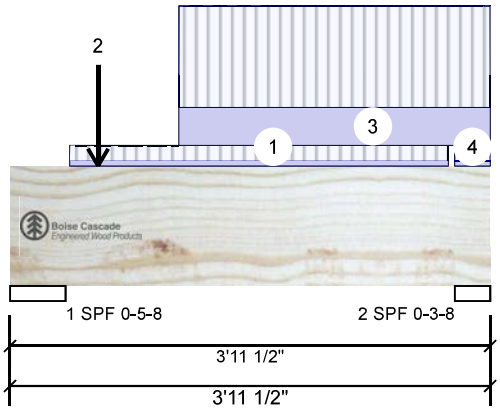
Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

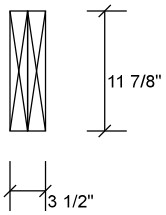
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400

Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F8-B Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	703	288	0	0
2	Vertical	724	295	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	12%	360 / 1054	1414	L	1.25D+1.5L
2 - SPF	3.500"	Vert	19%	368 / 1087	1455	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1049 ft-lb	2'1 1/8"	35392 ft-lb	0.030 (3%)	1.25D+1.5L	L
Unbraced	1049 ft-lb	2'1 1/8"	35392 ft-lb	0.030 (3%)	1.25D+1.5L	L
Shear	1941 lb	1'5 3/8"	13217 lb	0.147 (15%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/84878)	2' 7/8"	0.111 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch	0.001 (L/34561)	2' 7/8"	0.111 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.002 (L/24560)	2' 7/8"	0.167 (L/240)	0.010 (1%)	D+L	L

JULY 24, 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.

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-5-15 to 3-7-6		Top	19 PLF	50 PLF	0 PLF	0 PLF	
2	Point	0-8-11		Near Face	143 lb	383 lb	0 lb	0 lb	J4
3	Part. Uniform	1-4-11 to 3-11-8		Near Face	128 PLF	341 PLF	0 PLF	0 PLF	
4	Tie-In	3-8-0 to 3-11-8	1-1-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				12 PLF				

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 4/17/2026

Manufacturer Info

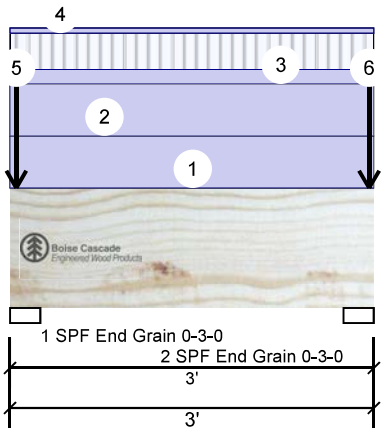
Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

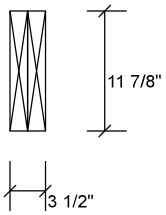
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400

Client:	GREENPARK	Date:	7/21/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 DC
		Project #:	

FH6 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal - II
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Application:	Floor (Residential)
Design Method:	LSD
Building Code:	NBCC 2015 OBC 2012(2020 Update)
Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	121	494	341	0
2	Vertical	72	448	257	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	12%	618 / 633	1250	L	1.25D+1.5S +L
2 - SPF End Grain	3.000"	Vert	10%	560 / 458	1018	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	151 ft-lb	1'6"	23359 ft-lb	0.006 (1%)	1.25D+1.5L	L
Unbraced	151 ft-lb	1'6"	23359 ft-lb	0.006 (1%)	1.25D+1.5L	L
Shear	170 lb	1'2 7/8"	8723 lb	0.019 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/232359)	1'6"	0.088 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/886563)	1'6"	0.088 (L/360)	0.000 (0%)	L+0.5S	L
TL Defl inch	0.000 (L/184106)	1'6"	0.131 (L/240)	0.001 (0%)	D+L+0.5S	L

Design Notes

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

JULY 24, 2023

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-0-0		Near Face	11 PLF	28 PLF	0 PLF	0 PLF	
	End	3-0-0			11 PLF	28 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 4/17/2026

Manufacturer Info

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

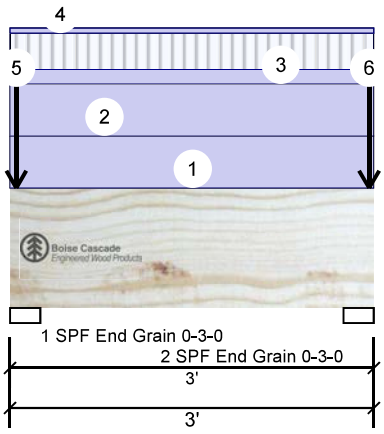
iStruct Design

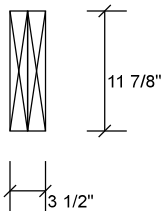
Client: GREENPARK
Project:
Address: ZADORRA ESTATES OSHAWA ON

Date: 7/21/2023
Input by: W C
Job Name: CAROL 12-2 DC
Project #:

FH6 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-0-0 to 3-0-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
5	Point	0-0-10		Top	334 lb	79 lb	341 lb	0 lb	Header Column Header Column F1
	Bearing Length	0-3-8							
6	Point	2-11-9		Top	288 lb	30 lb	257 lb	0 lb	Header Column Header Column
	Bearing Length	0-3-8							
	Self Weight				12 PLF				

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
JULY 24, 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

Handling & Installation

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

This design is valid until 4/17/2026

Manufacturer Info

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

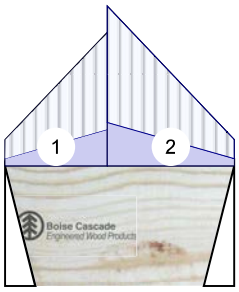
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400

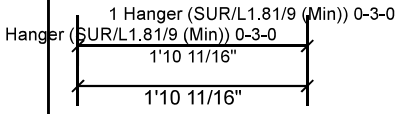
KOTT
CSD DRAW DESIGN BUILD

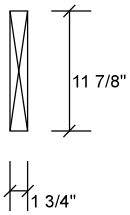
Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F10 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" - PASSED

Level: Second 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	13	10	0	0
2	Vertical	13	10	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	1%	13 / 19	32	L	1.25D+1.5L
2 - Hanger	3.000"	Vert	1%	13 / 19	32	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12 ft-lb	11 5/16"	17696 ft-lb	0.001 (0%)	1.25D+1.5L	L
Unbraced	12 ft-lb	11 5/16"	17696 ft-lb	0.001 (0%)	1.25D+1.5L	L
Shear	7 lb	7 13/16"	6608 lb	0.001 (0%)	0.9D+1.5L	L
Perm Defl in.	0.000 (L/3750237)	11 5/16"	0.051 (L/360)	0.000 (0%)	D	Uniform
LL Defl inch	0.000 (L/2640195)	11 5/16"	0.051 (L/360)	0.000 (0%)	L	L
TL Defl inch	0.000 (L/1549403)	11 5/16"	0.076 (L/240)	0.000 (0%)	D+L	L

Design Notes

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

JULY 24, 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 0-10-2	0-1-4 to 0-6-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-10-2 to 1-10-11	0-7-9 to 0-1-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				6 PLF				

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 4/17/2026

Manufacturer Info

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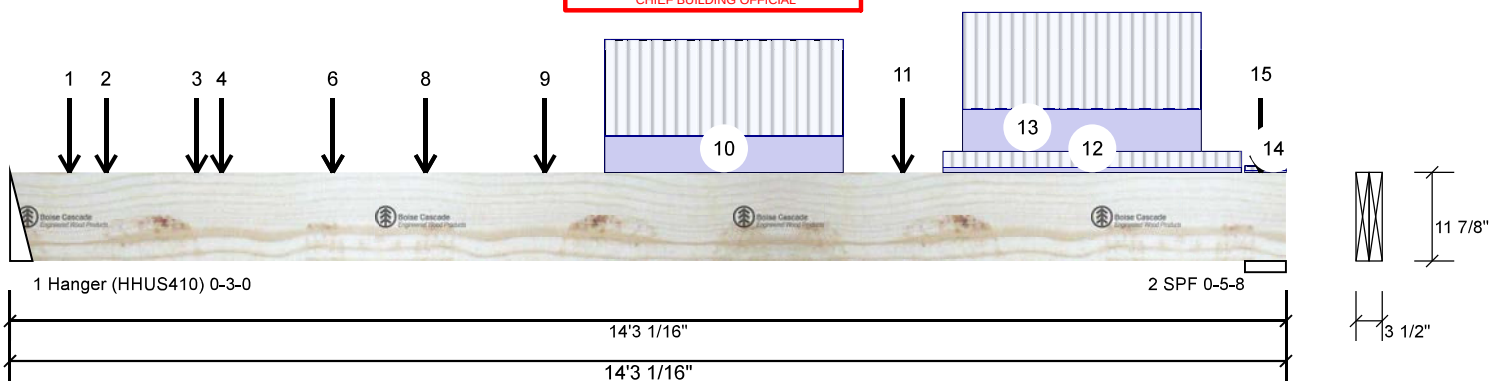
www.bc.com
CCMC: 12472

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

Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F11 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	2085	861	0 (-10)	0
2	Vertical	2143	922	0 (-3)	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	37%	1076 / 3127	4203	L	1.25D+1.5L
2 - SPF	5.500"	Vert	37%	1153 / 3215	4368	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	14547 ft-lb	7' 1/2"	35392 ft-lb	0.411 (41%)	1.25D+1.5L	L
Unbraced	14547 ft-lb	7' 1/2"	35392 ft-lb	0.411 (41%)	1.25D+1.5L	L
Shear	4466 lb	1'2 7/8"	13217 lb	0.338 (34%)	1.25D+1.5L	L
Perm Defl in.	0.099 (L/1655)	7' 5/8"	0.456 (L/360)	0.218 (22%)	D	Uniform
LL Defl inch	0.240 (L/684)	7' 1/4"	0.456 (L/360)	0.527 (53%)	L	L
TL Defl inch	0.339 (L/484)	7' 3/8"	0.684 (L/240)	0.496 (50%)	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.

JULY 24, 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	Point	0-8-0		Far Face	31 lb	31 lb	0 lb	0 lb	F8
2	Point	1-0-14		Near Face	141 lb	403 lb	0 lb	0 lb	J4
3	Point	2-1-1		Far Face	10 lb	13 lb	0 lb	0 lb	F10
4	Point	2-4-6		Near Face	139 lb	395 lb	0 lb	0 lb	J4

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

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

This design is valid until 4/17/2026

Manufacturer Info

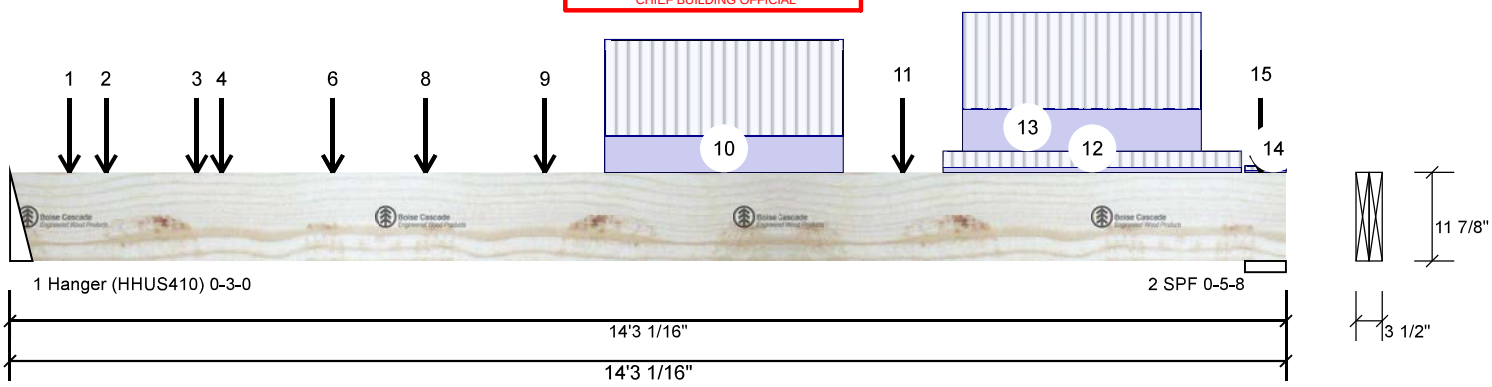
Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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

Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F11 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	3-7-5		Near Face	118 lb	356 lb	0 lb	0 lb	J9
6	Point	3-7-5		Near Face	0 lb	0 lb	-11 lb	0 lb	J9
7	Point	4-7-12		Near Face	129 lb	365 lb	0 lb	0 lb	J4
8	Point	4-7-12		Near Face	0 lb	0 lb	-2 lb	0 lb	J4
9	Point	5-11-12		Near Face	155 lb	413 lb	0 lb	0 lb	J3
10	Part. Uniform	6-7-12 to 9-3-12		Near Face	111 PLF	297 PLF	0 PLF	0 PLF	
11	Point	9-11-12		Near Face	156 lb	395 lb	0 lb	0 lb	J3
12	Part. Uniform	10-5-2 to 13-9-2		Top	15 PLF	50 PLF	0 PLF	0 PLF	
13	Part. Uniform	10-7-12 to 13-3-12		Near Face	129 PLF	297 PLF	0 PLF	0 PLF	
14	Tie-In	13-9-9 to 14-3-1	0-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
15	Point	13-11-12		Near Face	43 lb	100 lb	0 lb	0 lb	J3
	Self Weight				12 PLF				

JULY 24, 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

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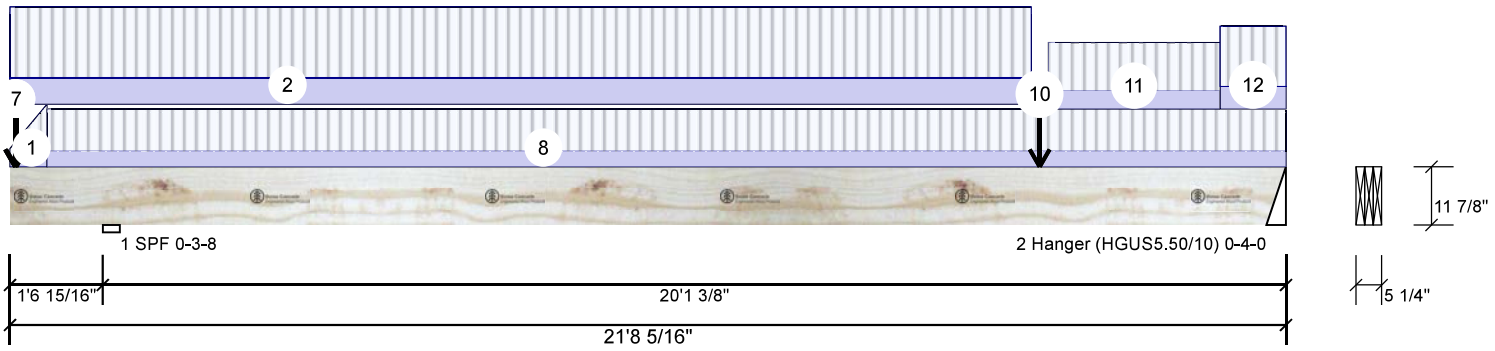
Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F12 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	887	687	112 (-2)	0
2	Vertical	2054	1003	0 (-16)	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	20%	859 / 1442	2300	LL	1.25D+1.5L +S
2 - Hanger	4.000"	Vert	19%	1254 / 3084	4338	_L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-554 ft-lb	1'6 15/16"	35887 ft-lb	0.015 (2%)	1.25D+1.5S +L	L_
Unbraced	-554 ft-lb	1'6 15/16"	34581 ft-lb	0.016 (2%)	1.25D+1.5S +L	L_
Pos Moment	16195 ft-lb	17'6 1/16"	55212 ft-lb	0.293 (29%)	1.25D+1.5L	_L
Unbraced	16195 ft-lb	17'6 1/16"	55212 ft-lb	0.293 (29%)	1.25D+1.5L	_L
Shear	4235 lb	20'4 7/16"	19825 lb	0.214 (21%)	1.25D+1.5L	_L
Perm Defl in.	0.155 (L/1525)	12'4 3/16"	0.657 (L/360)	0.236 (24%)	D	Uniform
LL Defl inch	0.303 (L/780)	12'5 3/4"	0.657 (L/360)	0.462 (46%)	L	_L
TL Defl inch	0.458 (L/516)	12'5 1/4"	0.985 (L/240)	0.465 (47%)	D+L	_L
LL Cant	-0.068 (2L/553)	Lt Cant	0.200 (2L/360)	0.342 (34%)	L	_L
TL Cant	-0.103 (2L/368)	Lt Cant	0.300 (2L/240)	0.343 (34%)	D+L	_L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fill all hanger nailing holes.
3 Right Header: DF, Thickness: 3 1/2"
4 Girders are designed to be supported on the bottom edge only.
5 Multiple plies must be fastened together as per manufacturer's details.
6 Top loads must be supported equally by all plies.
7 Top must be continuously laterally braced.
8 Bottom must be laterally braced at a maximum of 17'6 1/16" o.c.
9 Lateral slenderness ratio based on full section width.

JULY 24, 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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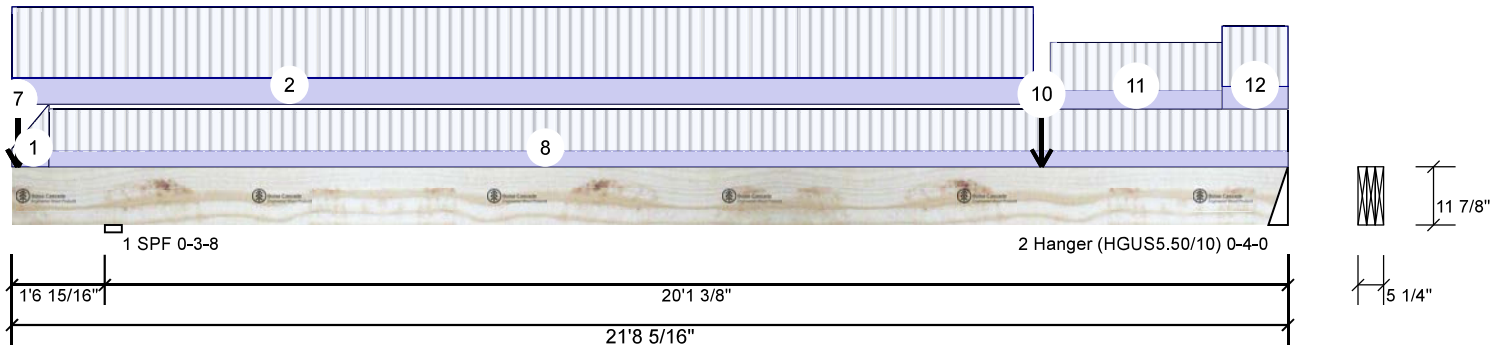
Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F12 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-7-9	0-1-7 to 0-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 17-4-5	0-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-1-1		Top	14 lb	0 lb	22 lb	0 lb	Header Column
	Bearing Length	0-5-8							
4	Point	0-1-1		Top	17 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
5	Point	0-1-1		Top	8 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
6	Point	0-1-4		Top	31 lb	0 lb	82 lb	0 lb	Header Column
	Bearing Length	0-5-8							
7	Point	0-1-4		Top	53 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
8	Tie-In	0-7-9 to 21-8-5	0-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
9	Point	17-6-1		Near Face	861 lb	2085 lb	0 lb	0 lb	F11
10	Point	17-6-1		Near Face	0 lb	0 lb	-10 lb	0 lb	F11
11	Tie-In	17-7-13 to 20-6-14	0-5-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
12	Tie-In	20-6-14 to 21-8-5	0-6-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				18 PLF				

JULY 24, 2023

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Lumber

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

Handling & Installation

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

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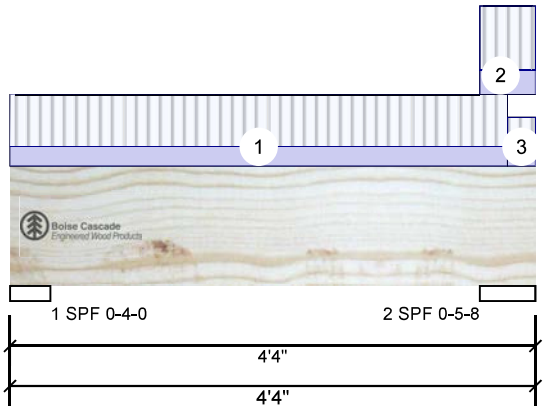
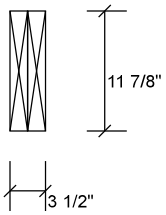
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F7 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	22	33	0	0
2	Vertical	28	37	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	Vert	1%	41 / 33	74	L	1.25D+1.5L
2 - SPF	5.500"	Vert	1%	46 / 43	89	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	59 ft-lb	2'1 1/4"	32915 ft-lb	0.002 (0%)	1.25D+1.5L	L
Unbraced	59 ft-lb	2'1 1/4"	32915 ft-lb	0.002 (0%)	1.25D+1.5L	L
Shear	34 lb	1'3 7/8"	8591 lb	0.004 (0%)	1.4D	Uniform
Perm Defl in.	0.000 (L/634058)	2'1 1/4"	0.122 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch	0.000 (L/956795)	2'1 1/4"	0.122 (L/360)	0.000 (0%)	L	L
TL Defl inch	0.000 (L/381345)	2'1 1/4"	0.183 (L/240)	0.001 (0%)	D+L	L

JULY 24, 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 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 bearings.
7 Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-1-4	0-3-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	3-10-8 to 4-4-0	0-3-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	4-1-4 to 4-4-0	0-2-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				12 PLF				

Notes

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Lumber

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

Handling & Installation

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

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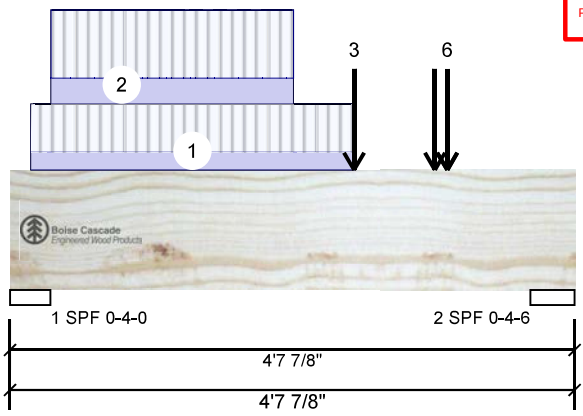
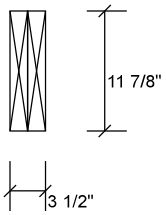
Level: Second Floor





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	1687	704	0 (-3)	0
2	Vertical	2619	1200	0 (-13)	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	Vert	40%	880 / 2530	3410	L	1.25D+1.5L
2 - SPF	4.375"	Vert	58%	1500 / 3929	5429	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4402 ft-lb	2'10 1/16"	35392 ft-lb	0.124 (12%)	1.25D+1.5L	L
Unbraced	4402 ft-lb	2'10 1/16"	35392 ft-lb	0.124 (12%)	1.25D+1.5L	L
Shear	6687 lb	3'3 5/8"	13217 lb	0.506 (51%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/16522)	2'5 3/8"	0.136 (L/360)	0.022 (2%)	D	Uniform
LL Defl inch	0.007 (L/7167)	2'5 3/16"	0.136 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.010 (L/4999)	2'5 1/4"	0.204 (L/240)	0.048 (5%)	D+L	L

JULY 24, 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 Multiple plies must be fastened together as per manufacturer's details.
4 Top must be continuously laterally braced.
5 Bottom must have sheathing attached or be continuously braced.
6 Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-2-1 to 2-10-1		Far Face	105 PLF	279 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-4-1 to 2-4-1		Near Face	149 PLF	396 PLF	0 PLF	0 PLF	
3	Point	2-10-1		Near Face	131 lb	350 lb	0 lb	0 lb	J8
4	Point	3-6-1		Far Face	137 lb	366 lb	0 lb	0 lb	J3
5	Point	3-7-4		Near Face	1003 lb	2054 lb	0 lb	0 lb	F12

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

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

This design is valid until 4/17/2026

Manufacturer Info

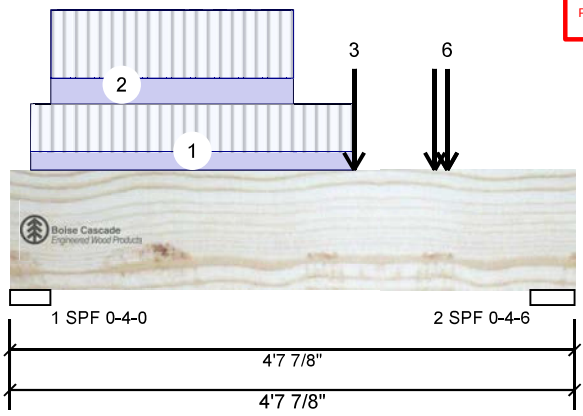
Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

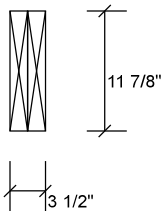
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400

Client:	GREENPARK	Date:	5/19/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA ON	Job Name:	CAROL 12-2 STD
		Project #:	

F7-A Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-7-4		Near Face	0 lb	0 lb	-16 lb	0 lb	F12
	Self Weight				12 PLF				

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
JULY 24, 2023

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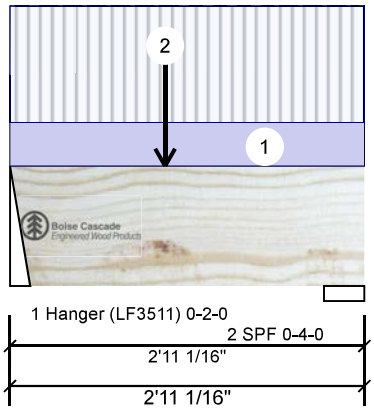

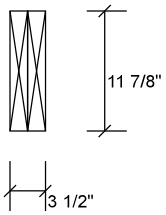

Member Information

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	31	31	0	0
2	Vertical	33	33	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	1%	39 / 47	86	L	1.25D+1.5L
2 - SPF	4.000"	Vert	1%	41 / 50	91	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	60 ft-lb	1'3 3/8"	35392 ft-lb	0.002 (0%)	1.25D+1.5L	L
Unbraced	60 ft-lb	1'3 3/8"	35392 ft-lb	0.002 (0%)	1.25D+1.5L	L
Shear	30 lb	1'1 7/8"	8591 lb	0.003 (0%)	1.4D	Uniform
Perm Defl in.	0.000 (L/1078840)	1'4 1/16"	0.085 (L/360)	0.000 (0%)	D	Uniform
LL Defl inch	0.000 (L/1031343)	1'4"	0.085 (L/360)	0.000 (0%)	L	L
TL Defl inch	0.000 (L/527287)	1'4 1/16"	0.127 (L/240)	0.000 (0%)	D+L	L

Design Notes

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

JULY 24, 2023

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Lumber

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

Handling & Installation

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2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

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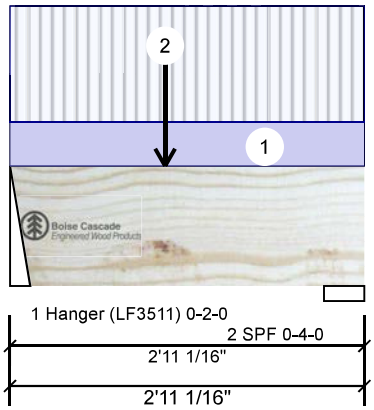
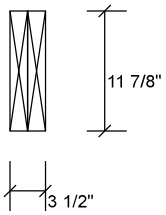
		Project #:	

F8 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-11-1	0-5-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-3-6		Near Face	10 lb	13 lb	0 lb	0 lb	F10
	Self Weight				12 PLF				

LICENSED PROFESSIONAL ENGINEER
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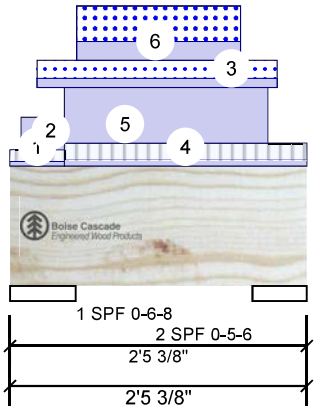
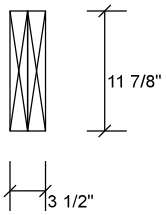
Level: Second Floor





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	27	141	64	0
2	Vertical	28	122	57	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.500"	Vert	2%	176 / 104	280	L	1.25D+1.5L +S
2 - SPF	5.375"	Vert	3%	153 / 99	251	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	98 ft-lb	1'3 3/16"	31145 ft-lb	0.003 (0%)	1.25D+1.5S +L	L
Unbraced	98 ft-lb	1'3 3/16"	31145 ft-lb	0.003 (0%)	1.25D+1.5S +L	L
Shear	68 lb	1'6 3/8"	11631 lb	0.006 (1%)	1.25D+1.5S +L	L
Perm Defl in.	0.000 (L/615494)	1'3 3/16"	0.053 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch	0.000 (L/985102)	1'3 3/16"	0.053 (L/360)	0.000 (0%)	S+0.5L	L
TL Defl inch	0.000 (L/378811)	1'3 3/16"	0.079 (L/240)	0.001 (0%)	D+S+0.5L	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 bearings.
7 Lateral slenderness ratio based on full section width.

JULY 24, 2023

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Lumber

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Handling & Installation

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This design is valid until 4/17/2026

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Project:		Input by:	W C
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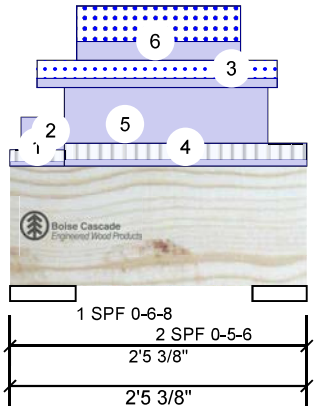
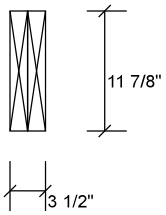
F8-A Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-6	0-5-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-1-2 to 0-5-6		Top	47 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-2-11 to 2-2-7		Top	13 PLF	0 PLF	26 PLF	0 PLF	
4	Tie-In	0-5-6 to 2-5-6	0-7-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Part. Uniform	0-5-6 to 2-1-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Part. Uniform	0-6-10 to 1-10-13		Top	27 PLF	0 PLF	51 PLF	0 PLF	
	Self Weight				12 PLF				

JULY 24, 2023

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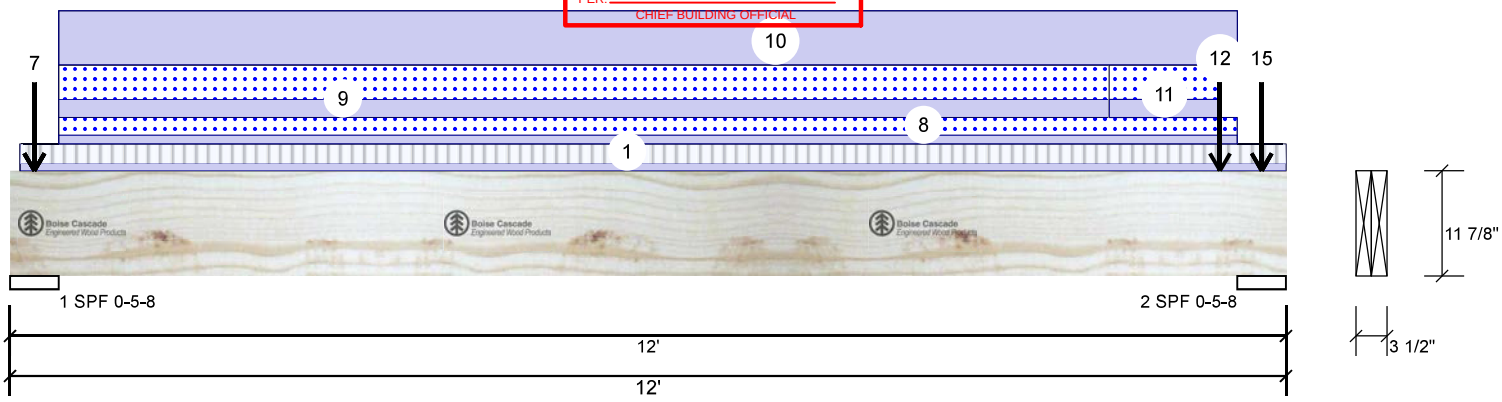
F9 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(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	170	943	583	0
2	Vertical	173	1403	1450	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.501"	Vert	19%	1178 / 838	2017	L	1.25D+1.5L +S
2 - SPF	5.500"	Vert	35%	1754 / 2349	4103	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4891 ft-lb	6'1 7/16"	31145 ft-lb	0.157 (16%)	1.25D+1.5L +S	L
Unbraced	4891 ft-lb	6'1 7/16"	31145 ft-lb	0.157 (16%)	1.25D+1.5L +S	L
Shear	1633 lb	10'6 5/8"	11631 lb	0.140 (14%)	1.25D+1.5L +S	L
Perm Defl in.	0.052 (L/2599)	6' 5/16"	0.374 (L/360)	0.138 (14%)	D	Uniform
LL Defl inch	0.035 (L/3825)	6' 7/8"	0.374 (L/360)	0.094 (9%)	S+0.5L	L
TL Defl inch	0.087 (L/1548)	6' 9/16"	0.560 (L/240)	0.155 (16%)	D+S+0.5L	L

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
2 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
3 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
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5 Multiple plies must be fastened together as per manufacturer's details.
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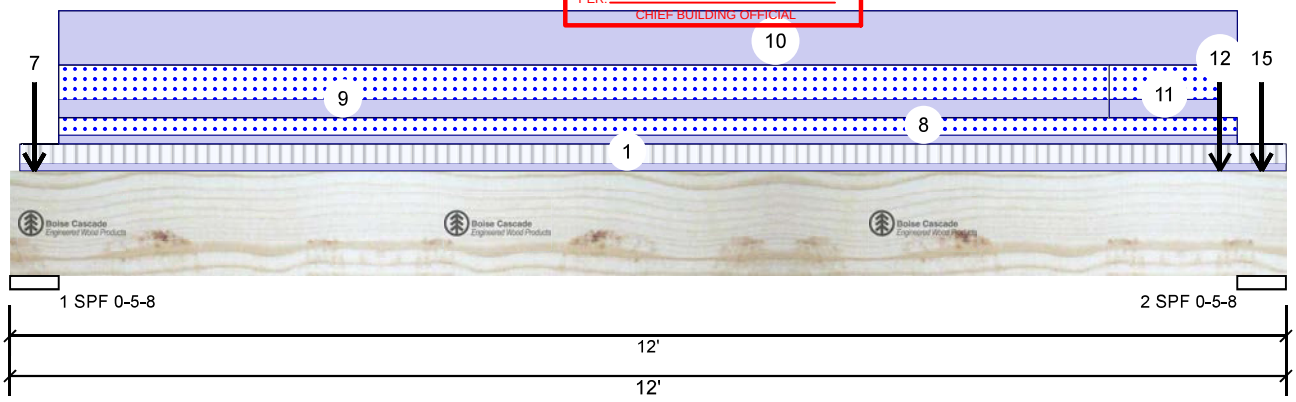

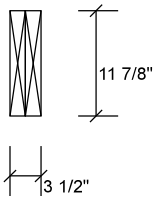

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-1-2 to 12-0-0	0-8-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-2-12		Top	24 lb	0 lb	46 lb	0 lb	
	Bearing Length	0-5-8							
3	Point	0-2-12		Top	21 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
4	Point	0-2-12		Top	24 lb	0 lb	46 lb	0 lb	
	Bearing Length	0-5-8							
5	Point	0-2-12		Top	20 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
6	Point	0-2-12		Top	23 lb	0 lb	43 lb	0 lb	
	Bearing Length	0-5-8							
7	Point	0-2-12		Top	19 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
8	Part. Uniform	0-5-8 to 11-6-8		Top	13 PLF	0 PLF	26 PLF	0 PLF	
9	Part. Uniform	0-5-8 to 10-4-1		Top	27 PLF	0 PLF	51 PLF	0 PLF	
10	Part. Uniform	0-5-8 to 11-6-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
11	Part. Uniform	10-4-1 to 11-4-9		Top	27 PLF	0 PLF	51 PLF	0 PLF	
12	Point	11-4-9		Top	599 lb	0 lb	1053 lb	0 lb	F16
	Bearing Length	0-5-8							
13	Point	11-9-4		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
14	Point	11-9-4		Top	13 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
15	Point	11-9-4		Top	1 lb	0 lb	0 lb	0 lb	Wall Self Weig
	Bearing Length	0-5-8							
	Self Weight				12 PLF				

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.

JULY 24, 2023

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 4/17/2026

Manufacturer Info

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CCMC: 12472

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