iStructDesign

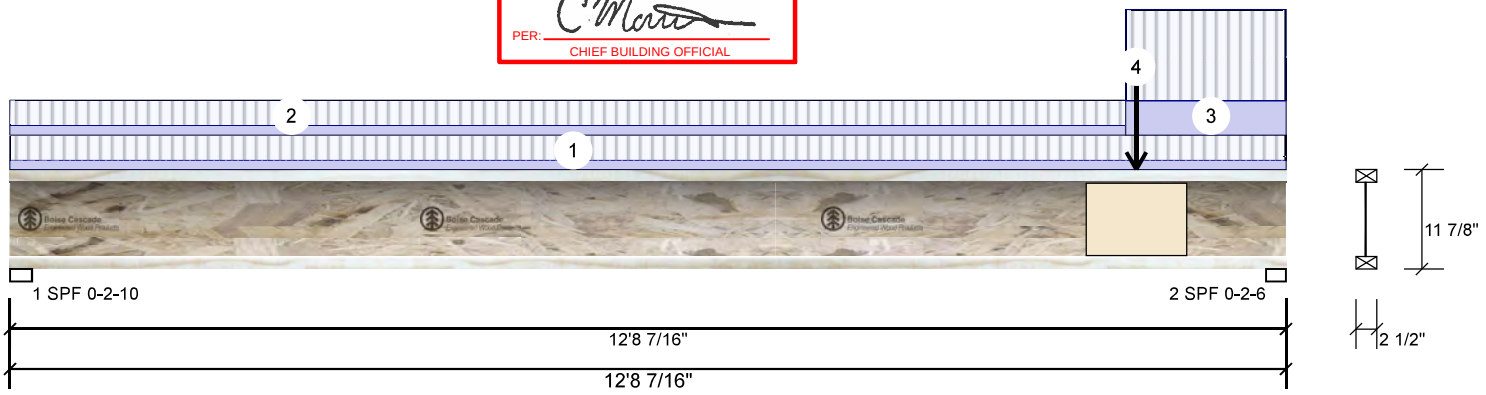
Client: GREENPARK
Project:
Address: ZADORRA ESTATES OSHAWA,ON

Date: 7/18/2023
Input by: W C
Job Name: VILLA 2-2 STD
Project #: MHP23034

F5-A AJS 140 11.875" - PASSED

CONSERVATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
Nov 14 2023
PER: _____
CHIEF BUILDING OFFICIAL

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	259	97	0	0
2	Vertical	556	209	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	29%	121 / 389	510	L	1.25D+1.5L
2 - SPF	2.375"	Vert	65%	261 / 834	1095	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1809 ft-lb	7'4 13/16"	5305 ft-lb	0.341 (34%)	1.25D+1.5L	L
Unbraced	1809 ft-lb	7'4 13/16"	5305 ft-lb	0.341 (34%)	1.25D+1.5L	L
Shear	1074 lb	12'6 13/16"	2350 lb	0.457 (46%)	1.25D+1.5L	L
Perm Defl in.	0.036 (L/4082)	6'8 3/16"	0.414 (L/360)	0.088 (9%)	D	Uniform
LL Defl inch	0.097 (L/1532)	6'8 3/16"	0.414 (L/360)	0.235 (24%)	L	L
TL Defl inch	0.134 (L/1114)	6'8 3/16"	0.620 (L/240)	0.215 (22%)	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 11'2 9/16" o.c.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
JULY 19, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-8-7	0-5-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 11-1-5	0-5-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	11-1-5 to 12-8-7	1-6-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	11-2-9		Near Face	112 lb	298 lb	0 lb	0 lb	F2

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

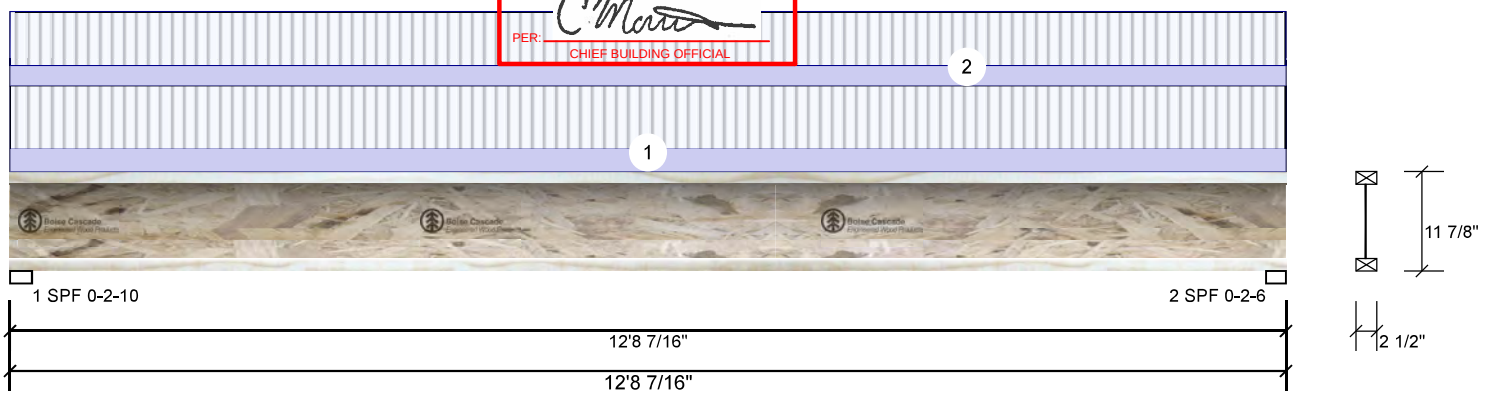
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400

CSD DRAW DESIGN BUILD

Client:	GREENPARK	Date:	7/18/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 STD
		Project #:	MHP-23034

F5-B 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	365	137	0	0
2	Vertical	364	136	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	41%	171 / 548	719	L	1.25D+1.5L
2 - SPF	2.375"	Vert	43%	171 / 545	716	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2175 ft-lb	6'4 5/16"	5305 ft-lb	0.410 (41%)	1.25D+1.5L	L
Unbraced	2175 ft-lb	6'4 5/16"	5305 ft-lb	0.410 (41%)	1.25D+1.5L	L
Shear	701 lb	12'6 13/16"	2350 lb	0.298 (30%)	1.25D+1.5L	L
Perm Defl in.	0.043 (L/3467)	6'4 3/8"	0.414 (L/360)	0.104 (10%)	D	Uniform
LL Defl inch	0.115 (L/1300)	6'4 3/8"	0.414 (L/360)	0.277 (28%)	L	L
TL Defl inch	0.158 (L/945)	6'4 3/8"	0.620 (L/240)	0.254 (25%)	D+L	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Girders are designed to be supported on the bottom edge only.
3 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 19, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-8-7	0-9-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-8-7	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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Lumber

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Handling & Installation

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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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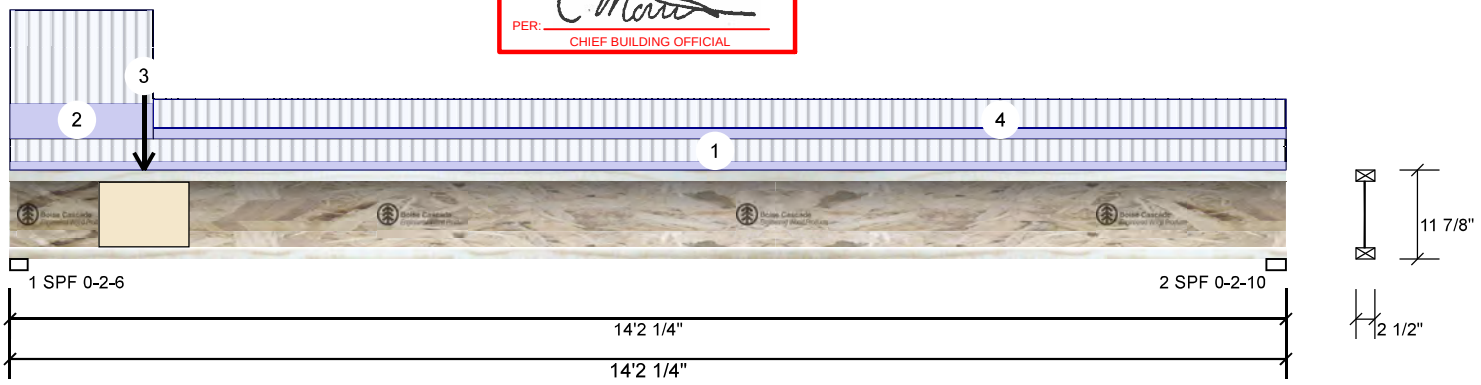
F6 AJS 140 11.875" - PASSED

Level: Ground Floor



Member Information

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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	605	227	0	0
2	Vertical	283	106	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	71%	284 / 907	1191	L	1.25D+1.5L
2 - SPF	2.625"	Vert	32%	133 / 425	558	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2172 ft-lb	6'1 1/8"	5305 ft-lb	0.409 (41%)	1.25D+1.5L	L
Unbraced	2172 ft-lb	6'1 1/8"	5305 ft-lb	0.409 (41%)	1.25D+1.5L	L
Shear	1170 lb	1 5/8"	2350 lb	0.498 (50%)	1.25D+1.5L	L
Perm Defl in.	0.053 (L/3118)	6'9 5/16"	0.463 (L/360)	0.115 (12%)	D	Uniform
LL Defl inch	0.142 (L/1171)	6'9 3/8"	0.463 (L/360)	0.308 (31%)	L	L
TL Defl inch	0.196 (L/851)	6'9 3/8"	0.695 (L/240)	0.282 (28%)	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.
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4 Bottom flange must be laterally braced at a maximum of 12'8 3/8" o.c.

JULY 19, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-2-4	0-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-7-2	1-7-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-5-14		Near Face	121 lb	321 lb	0 lb	0 lb	F2
4	Tie-In	1-7-2 to 14-2-4	0-5-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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Lumber

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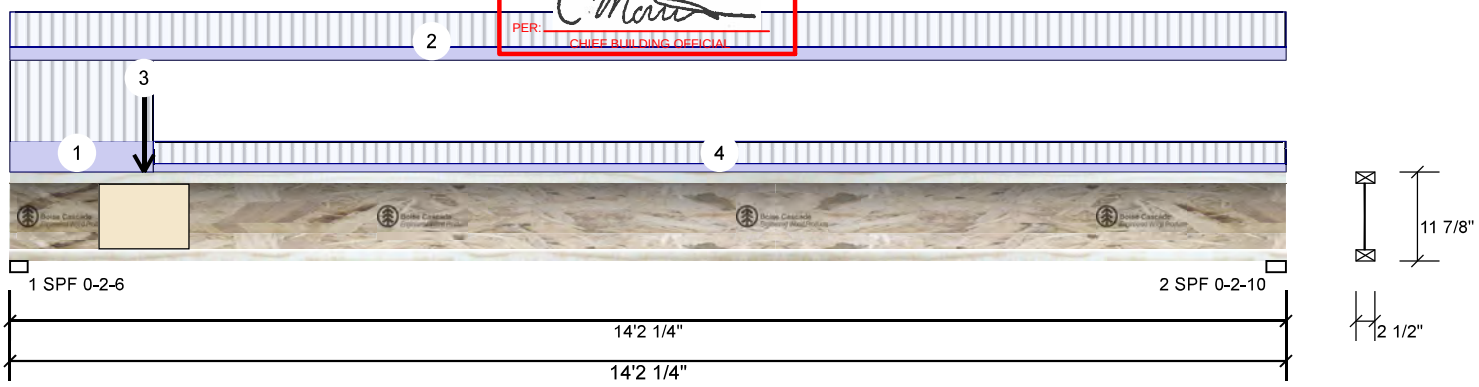

Member Information

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	693	260	0	0
2	Vertical	356	134	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	81%	326 / 1039	1365	L	1.25D+1.5L
2 - SPF	2.625"	Vert	40%	167 / 534	701	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2666 ft-lb	6'3 5/16"	5305 ft-lb	0.503 (50%)	1.25D+1.5L	L
Unbraced	2666 ft-lb	6'3 5/16"	5305 ft-lb	0.503 (50%)	1.25D+1.5L	L
Shear	1341 lb	1 5/8"	2350 lb	0.571 (57%)	1.25D+1.5L	L
Perm Defl in.	0.066 (L/2543)	6'9 15/16"	0.463 (L/360)	0.142 (14%)	D	Uniform
LL Defl inch	0.175 (L/955)	6'9 15/16"	0.463 (L/360)	0.377 (38%)	L	L
TL Defl inch	0.240 (L/694)	6'9 15/16"	0.695 (L/240)	0.346 (35%)	D+L	L

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JULY 19, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-7-2	1-7-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-2-4	0-8-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-5-14		Far Face	127 lb	337 lb	0 lb	0 lb	F2
4	Tie-In	1-7-2 to 14-2-4	0-5-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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Lumber

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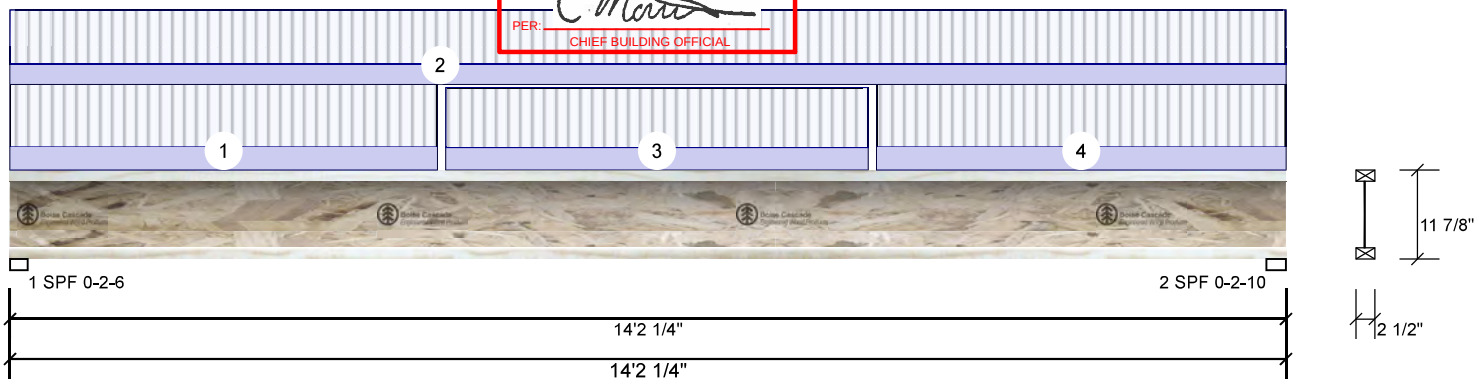

Member Information

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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	401	150	0	0
2	Vertical	402	151	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	47%	188 / 602	790	L	1.25D+1.5L
2 - SPF	2.625"	Vert	46%	188 / 604	792	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2671 ft-lb	7'1"	5305 ft-lb	0.503 (50%)	1.25D+1.5L	L
Unbraced	2671 ft-lb	7'1"	5305 ft-lb	0.503 (50%)	1.25D+1.5L	L
Shear	774 lb	1 5/8"	2350 lb	0.329 (33%)	1.25D+1.5L	L
Perm Defl in.	0.064 (L/2593)	7'1 1/16"	0.463 (L/360)	0.139 (14%)	D	Uniform
LL Defl inch	0.171 (L/972)	7'1 1/16"	0.463 (L/360)	0.370 (37%)	L	L
TL Defl inch	0.236 (L/707)	7'1 1/16"	0.695 (L/240)	0.339 (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.
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4 Bottom flange must be laterally braced at bearings.

I.LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
JULY 19, 2023

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1	Tie-In	0-0-0 to 4-9-1	0-9-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-2-4	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	4-10-3 to 9-6-8	0-8-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	9-7-10 to 14-2-4	0-9-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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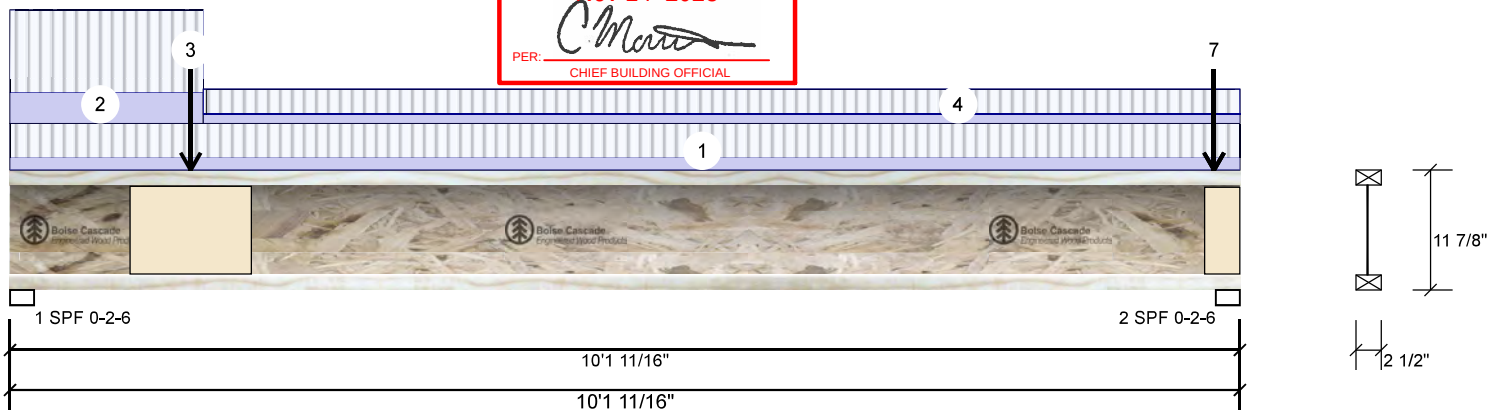

Member Information

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	504	208	0	0
2	Vertical	860	416	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	60%	261 / 755	1016	L	1.25D+1.5L
2 - SPF	2.375"	Vert	79%	520 / 1290	1810	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1537 ft-lb	4'3 3/4"	5305 ft-lb	0.290 (29%)	1.25D+1.5L	L
Unbraced	1537 ft-lb	4'3 3/4"	5305 ft-lb	0.290 (29%)	1.25D+1.5L	L
Shear	1798 lb	10' 1/16"	2350 lb	0.765 (77%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/5280)	4'9 11/16"	0.329 (L/360)	0.068 (7%)	D	Uniform
LL Defl inch	0.056 (L/2122)	4'10"	0.329 (L/360)	0.170 (17%)	L	L
TL Defl inch	0.078 (L/1513)	4'9 15/16"	0.494 (L/240)	0.159 (16%)	D+L	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 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 8'7 13/16" o.c.
5 Web stiffeners required at Bearing 2.

JULY 19, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-1-11	0-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-7-2	1-6-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-5-14		Near Face	111 lb	238 lb	0 lb	0 lb	F2
4	Tie-In	1-7-2 to 10-1-11	0-5-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	9-11-2		Top	143 lb	379 lb	0 lb	0 lb	J7
	Bearing Length	0-1-8							

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
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

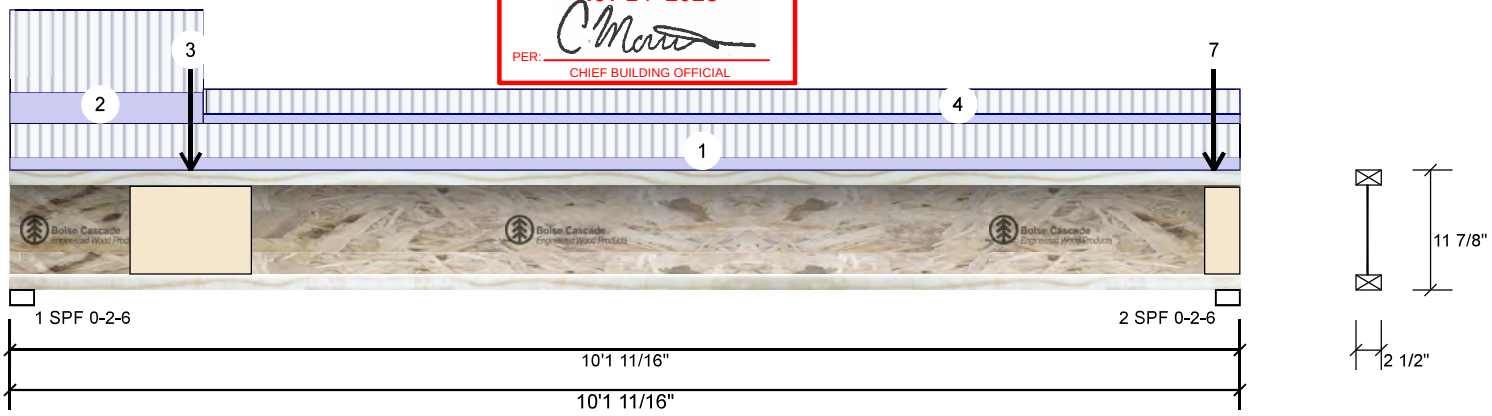
Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

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

Client:	GREENPARK	Date:	7/18/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 STD
		Project #:	MHP-23034

F9 AJS 140 11.875" - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	9-11-2		Top	83 lb	220 lb	0 lb	0 lb	J8
	Bearing Length	0-1-8							
7	Point	9-11-2		Top	90 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-1-8							

JULY 19, 2023

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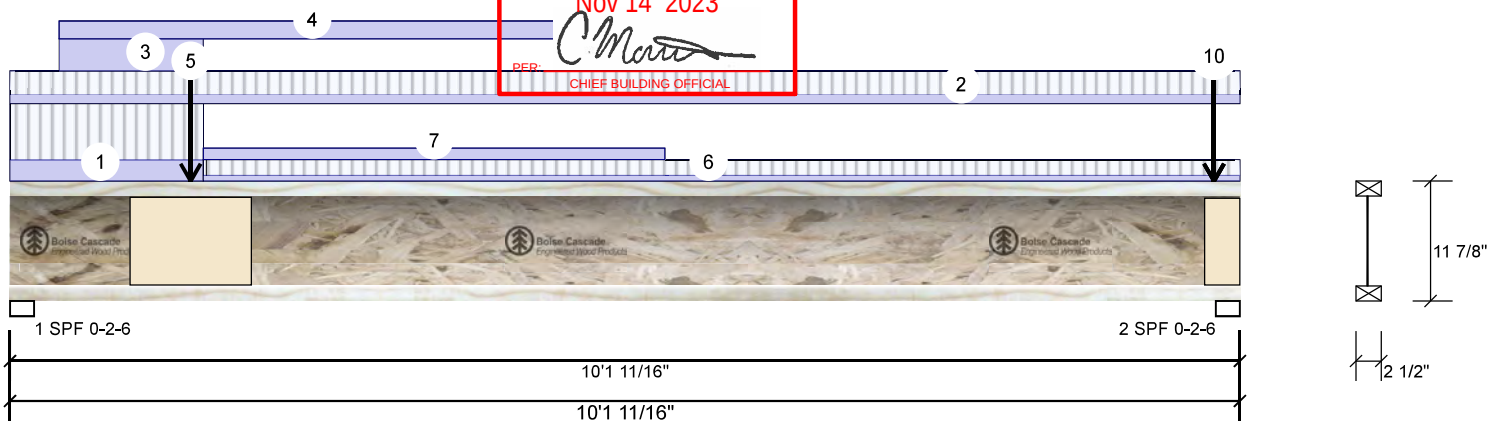

Member Information

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	509	399	0	0
2	Vertical	845	465	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	75%	499 / 764	1263	L	1.25D+1.5L
2 - SPF	2.375"	Vert	81%	581 / 1267	1848	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1906 ft-lb	4'1"	5305 ft-lb	0.359 (36%)	1.25D+1.5L	L
Unbraced	1906 ft-lb	4'1"	5305 ft-lb	0.359 (36%)	1.25D+1.5L	L
Shear	1836 lb	10' 1/16"	2350 lb	0.781 (78%)	1.25D+1.5L	L
Perm Defl in.	0.042 (L/2800)	4'7 5/16"	0.329 (L/360)	0.129 (13%)	D	Uniform
LL Defl inch	0.056 (L/2132)	4'9 7/8"	0.329 (L/360)	0.169 (17%)	L	L
TL Defl inch	0.098 (L/1211)	4'8 11/16"	0.494 (L/240)	0.198 (20%)	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 8'7 13/16" o.c.
5 Web stiffeners required at Bearing 2.

JULY 19, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-7-2	1-6-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 10-1-11	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-4-14 to 1-7-2		Top	36 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-14 to 5-4-13		Top	20 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-5-14		Far Face	167 lb	247 lb	0 lb	0 lb	F2
6	Tie-In	1-7-2 to 10-1-11	0-5-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. 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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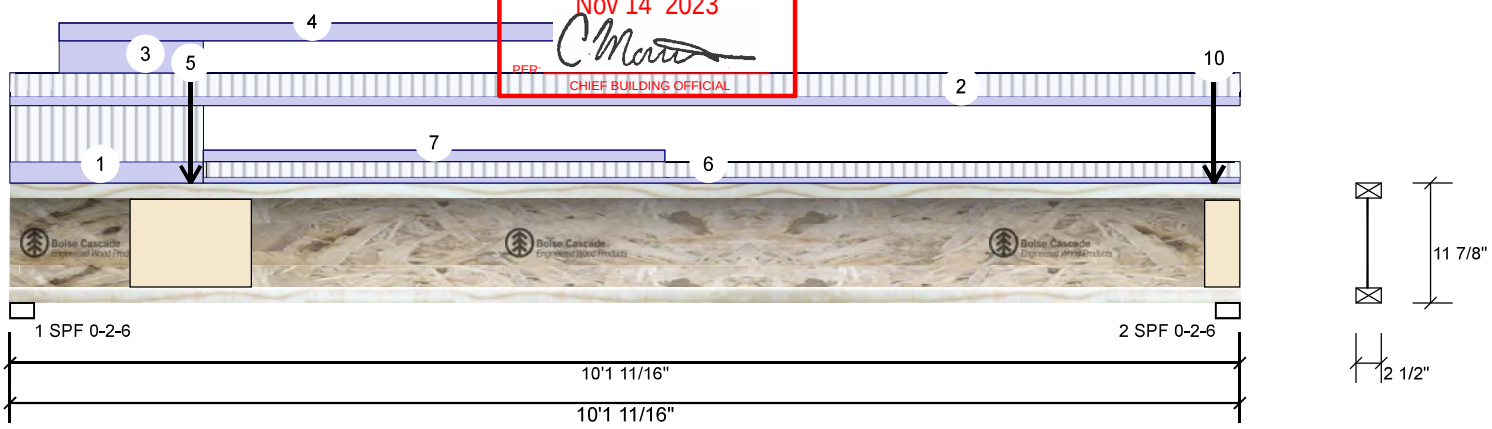
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 STD
		Project #:	MHP 23034

F9-A AJS 140 11.875" - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Part. Uniform	1-7-2 to 5-4-13		Top	13 PLF	0 PLF	0 PLF	0 PLF	
8	Point	9-11-2		Top	140 lb	371 lb	0 lb	0 lb	J7
	Bearing Length	0-1-8							
9	Point	9-11-2		Top	82 lb	216 lb	0 lb	0 lb	J8
	Bearing Length	0-1-8							
10	Point	9-11-2		Top	88 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-1-8							

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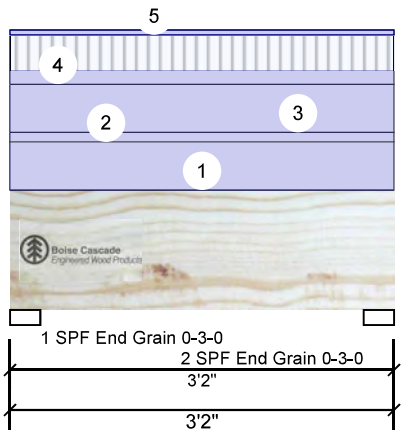
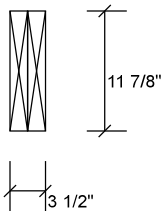
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 STD & WOC
		Project #:	MHP23034

FH1 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	48	182	0	0
2	Vertical	48	182	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%	227 / 71	299	L	1.25D+1.5L
2 - SPF End Grain	3.000"	Vert	4%	227 / 71	299	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	184 ft-lb	1'7"	25128 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	184 ft-lb	1'7"	25128 ft-lb	0.007 (1%)	1.25D+1.5L	L
Shear	202 lb	1'11 1/8"	9384 lb	0.022 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/183529)	1'7"	0.093 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/702510)	1'7"	0.093 (L/360)	0.001 (0%)	L	L
TL Defl inch	0.000 (L/145514)	1'7"	0.140 (L/240)	0.002 (0%)	D+L	L

JULY 19, 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 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	0-0-0 to 3-2-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-2-0		Near Face	8 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 3-2-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Tapered Start	0-0-0		Near Face	11 PLF	30 PLF	0 PLF	0 PLF	

Continued on page 2...

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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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www.bc.com
CCMC: 12472

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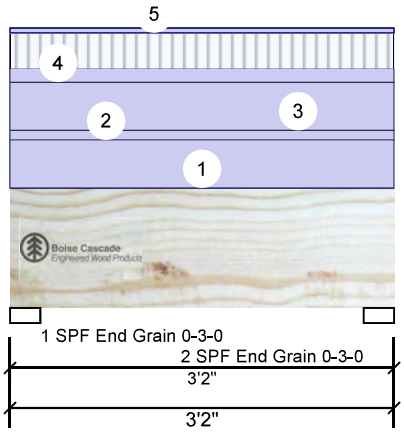
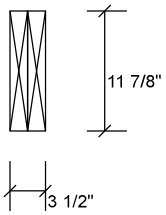
FH1 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	End	3-2-0			11 PLF	30 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-0-0 to 3-2-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
	Self Weight				12 PLF				

JULY 19, 2023

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MHP 23034

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
Nov 14 2023
PER: _____
CHIEF BUILDING OFFICIAL

Ground Floor

Installation Guide

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

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

1. All blocking to be cut from 12' joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.
12. Multi ply beams with side loading to have all fasteners installed with the head on the side of the applied load
13. Confirmation of adequate support & anchorage of components is the responsibility of the building designer; suggested uplift connectors are as shown
14. Where beam hangs on side of 3-ply member, it is recommended that the equivalent quantity and size of nails required for the hanger attachment also be installed on opposite side of the 3-ply member

Ground Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F16	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	1	2	2	14-0-0
F14	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	2	2	4	8-0-0
F11	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	3	2	6	6-0-0
FH1	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	3	2	6	4-0-0

Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F6	AJS 140	2.5	11.875			1	16-0-0
F5	AJS 140	2.5	11.875			1	14-0-0
F9	AJS 140	2.5	11.875			2	12-0-0
F10	AJS 140	2.5	11.875	1	2	2	12-0-0
F3	AJS 140	2.5	11.875			1	6-0-0
F2	AJS 140	2.5	11.875			1	4-0-0
J6	AJS 140	2.5	11.875			15	16-0-0
J5	AJS 140	2.5	11.875			27	14-0-0
J4	AJS 140	2.5	11.875			11	12-0-0
J8	AJS 140	2.5	11.875			2	10-0-0
J2	AJS 140	2.5	11.875			3	6-0-0

Rim Board

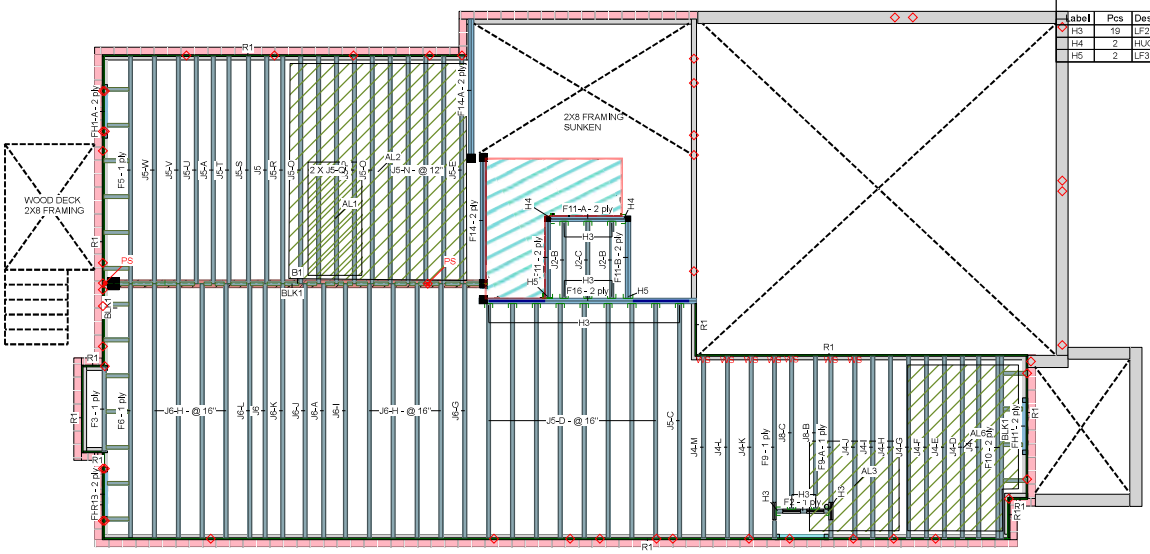
Label	Description	Width	Depth	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875	12	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinFt	Varies	37-0-0

Hanger

Label	Pcs	Description	Beam/Girder fasteners	Supported Member fasteners
H3	19	LF2511	12 10dx1 1/2	1 #8x1 1/4WS
H4	2	HUC410 (Min)	14 16d	6 10d
H5	2	LF3511	12 10d	2 #8x1 1/4WS



JOB INFORMATION

Builder
GREENPARK

Project

Shipping
ZADORRA ESTATES
OSHAWA,ON

Sales Rep
RALPH MIRIGELLO

Designer
W C

Plotted
July 18, 2023

Layout Name
VILLA 2-2 DC

Job Path
S:\CUSTOMERS\GREENPARK\ZADORRA ESTATES\MODELS\VILLA 2\VILLA 2-2\F-VILLA 2-2\DC\VILLA 2-2 DC.ild

DESIGN CRITERIA

Ground Floor

Design Method	LSD (Canada)
Building Code	NBCC 2015 OBC 2012(2020 Update)

Floor

Loads

Live	40
Dead	15

Deflection Joist

LL Span L/	360
TL Span L/	240

Deflection Flush Girder

LL Span L/	360
TL Span L/	240

Deflection Dropped Girder

LL Span L/	360
TL Span L/	240

Deflection Header

LL Span L/	360
TL Span L/	240

Decking

Decking	OSB
Thickness	3/4"
Fastener	Nailed & Glued

CCMC References

Boise - 12472-R , 12787-R
LP - 12412-R, Roseburg - 13310-R
Forex - 14056-R

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

KOTT

Legend

WS	Web Stiffener
-ws	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
◇	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 11.875
	AJS 140 11.875
	Versa-Lam LVL 2.1E 3100 SP 1.75 X 11.875
	1.75 X 9.5 (Dropped)
	5.25 X 8 (Dropped)

iStruct Design

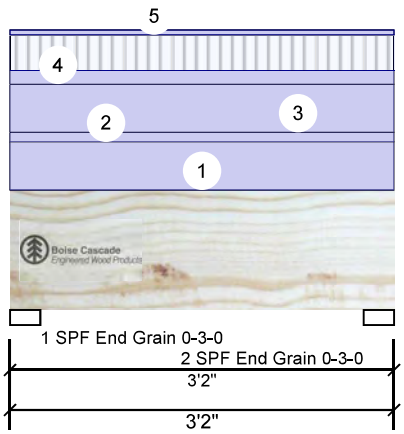
Client: GREENPARK
Project:
Address: ZADORRA ESTATES OSHAWA,ON

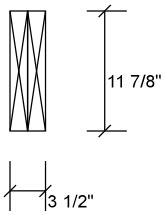
Date: 7/18/2023
Input by: W C
Job Name: VILLA 2-2 DC
Project #:

MHP 23034

FH1 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	48	182	0	0
2	Vertical	48	182	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%	227 / 71	299	L	1.25D+1.5L
2 - SPF End Grain	3.000"	Vert	4%	227 / 71	299	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	184 ft-lb	1'7"	25128 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	184 ft-lb	1'7"	25128 ft-lb	0.007 (1%)	1.25D+1.5L	L
Shear	202 lb	1'11 1/8"	9384 lb	0.022 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/183529)	1'7"	0.093 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/702510)	1'7"	0.093 (L/360)	0.001 (0%)	L	L
TL Defl inch	0.000 (L/145514)	1'7"	0.140 (L/240)	0.002 (0%)	D+L	L

Design Notes

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

JULY 19, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-2-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-2-0		Near Face	8 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 3-2-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Tapered Start	0-0-0		Near Face	11 PLF	30 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 & 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

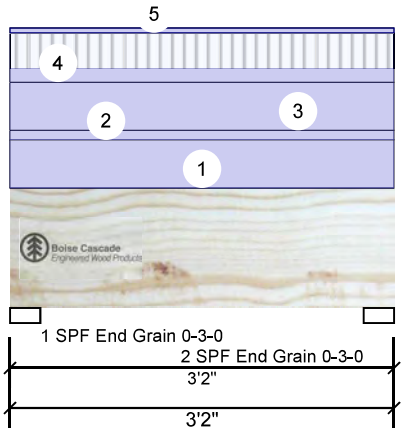
KOTT

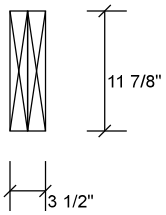
CSD DRAW DESIGN BUILD

Client:	GREENPARK	Date:	7/18/2023	Page 2 of 7	
Project:		Input by:	W C		
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 DC		
		Project #:	MHP23034		

FH1 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
	End	3-2-0			11 PLF	30 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-0-0 to 3-2-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
	Self Weight				12 PLF				

JULY 19, 2023

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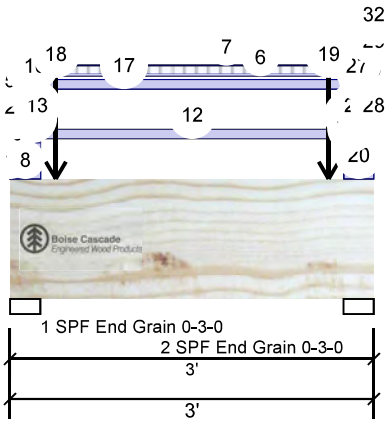

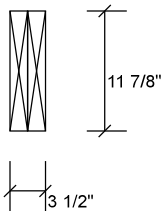

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Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	76	410	239	0
2	Vertical	75	410	239	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	9%	512 / 434	946	L	1.25D+1.5S+L
2 - SPF End Grain	3.000"	Vert	9%	512 / 434	946	L	1.25D+1.5S+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	213 ft-lb	1'5 15/16"	23005 ft-lb	0.009 (1%)	1.25D+1.5L	L
Unbraced	213 ft-lb	1'5 15/16"	23005 ft-lb	0.009 (1%)	1.25D+1.5L	L
Shear	222 lb	1'9 1/8"	8591 lb	0.026 (3%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/154042)	1'6"	0.088 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/359167)	1'6"	0.088 (L/360)	0.001 (0%)	S+0.5L	L
TL Defl inch	0.000 (L/107806)	1'6"	0.131 (L/240)	0.002 (0%)	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 3.
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Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 DC
		Project #:	MHP23034
		Level:	Ground Floor

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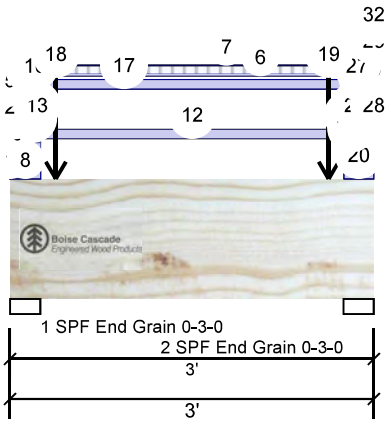

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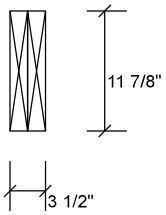

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-0-0		Near Face	61 PLF	0 PLF	159 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 0-0-0		Near Face	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-0-0		Near Face	7 PLF	19 PLF	0 PLF	0 PLF	
	End	0-0-0			7 PLF	19 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 0-0-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
5	Part. Uniform	0-0-0 to 0-0-0		Near Face	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Tapered Start	0-0-0		Near Face	12 PLF	31 PLF	0 PLF	0 PLF	
	End	3-0-0			12 PLF	31 PLF	0 PLF	0 PLF	
7	Part. Uniform	0-0-0 to 3-0-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
8	Part. Uniform	0-0-0 to 0-3-1		Top	30 PLF	0 PLF	80 PLF	0 PLF	
9	Part. Uniform	0-0-0 to 0-3-1		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Tapered Start	0-0-0		Top	4 PLF	10 PLF	0 PLF	0 PLF	
	End	0-3-1			4 PLF	10 PLF	0 PLF	0 PLF	
11	Part. Uniform	0-0-0 to 0-3-1		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
12	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
13	Part. Uniform	0-0-0 to 0-3-1		Near Face	30 PLF	0 PLF	80 PLF	0 PLF	
14	Part. Uniform	0-0-0 to 0-3-1		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
15	Tapered Start	0-0-0		Near Face	4 PLF	10 PLF	0 PLF	0 PLF	
	End	0-3-1			4 PLF	10 PLF	0 PLF	0 PLF	
16	Part. Uniform	0-0-0 to 0-3-1		Near Face	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
17	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
18	Point	0-4-9		Top	210 lb	24 lb	199 lb	0 lb	Header Column Header Column
	Bearing Length	0-3-8							
19	Point	2-7-9		Top	210 lb	24 lb	199 lb	0 lb	Header Column Header Column
	Bearing Length	0-3-8							
20	Part. Uniform	2-9-1 to 3-0-0		Top	30 PLF	0 PLF	80 PLF	0 PLF	
21	Part. Uniform	2-9-1 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
22	Tapered Start	2-9-1		Top	4 PLF	10 PLF	0 PLF	0 PLF	

Continued on page 3...

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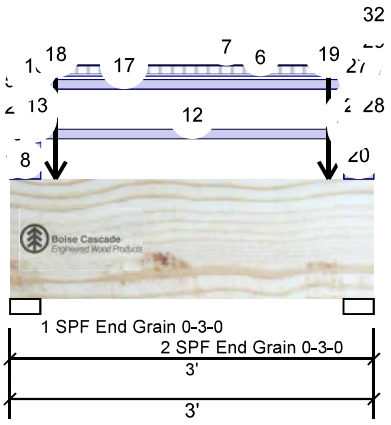

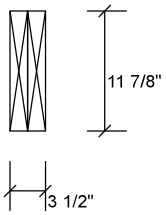

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	End	3-0-0			4 PLF	10 PLF	0 PLF	0 PLF	
23	Part. Uniform	2-9-1 to 3-0-0		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
24	Part. Uniform	2-9-1 to 3-0-0		Near Face	30 PLF	0 PLF	80 PLF	0 PLF	
25	Part. Uniform	2-9-1 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
26	Tapered Start	2-9-1		Near Face	4 PLF	10 PLF	0 PLF	0 PLF	
	End	3-0-0			4 PLF	10 PLF	0 PLF	0 PLF	
27	Part. Uniform	2-9-1 to 3-0-0		Near Face	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
28	Part. Uniform	3-0-0 to 3-0-0		Near Face	61 PLF	0 PLF	159 PLF	0 PLF	
29	Part. Uniform	3-0-0 to 3-0-0		Near Face	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
30	Tapered Start	3-0-0		Near Face	7 PLF	19 PLF	0 PLF	0 PLF	
	End	3-0-0			7 PLF	19 PLF	0 PLF	0 PLF	
31	Part. Uniform	3-0-0 to 3-0-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
32	Part. Uniform	3-0-0 to 3-0-0		Near Face	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
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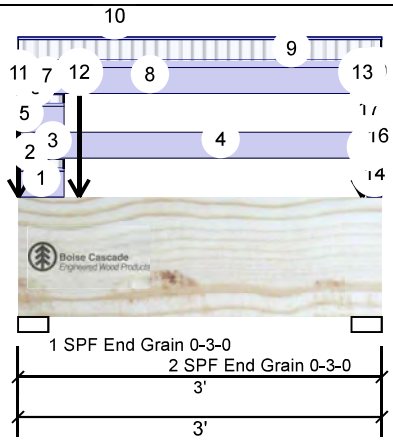

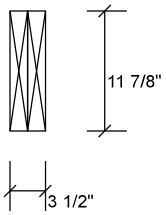

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Plies:	2
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Deflection TL:	240
Importance:	Normal - II
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Dead:	15 PSF

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Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	84	439	252	0
2	Vertical	86	449	252	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	10%	549 / 462	1011	L	1.25D+1.5S +L
2 - SPF End Grain	3.000"	Vert	10%	562 / 464	1025	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	194 ft-lb	1'4 3/16"	23005 ft-lb	0.008 (1%)	1.25D+1.5L	L
Unbraced	194 ft-lb	1'4 3/16"	23005 ft-lb	0.008 (1%)	1.25D+1.5L	L
Shear	220 lb	1'9 1/8"	8591 lb	0.026 (3%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/179787)	1'5 5/16"	0.088 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/651480)	1'5 7/16"	0.088 (L/360)	0.001 (0%)	L+0.5S	L
TL Defl inch	0.000 (L/140904)	1'5 3/8"	0.131 (L/240)	0.002 (0%)	D+L+0.5S	L

Design Notes

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

JULY 19, 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

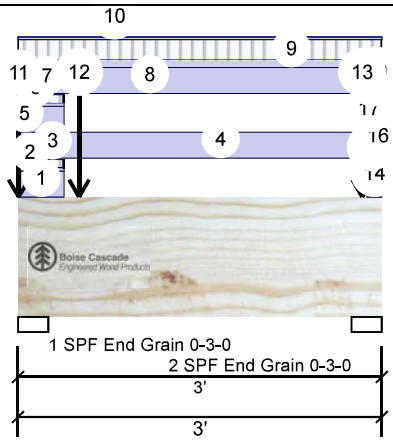
Manufacturer Info

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:	7/18/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 DC
		Project #:	MHP 23034
		Level:	Ground Floor

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



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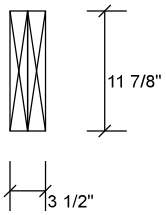

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-4-9		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Tapered Start	0-0-0		Top	5 PLF	13 PLF	0 PLF	0 PLF	
	End	0-4-9			5 PLF	13 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 0-4-9		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
4	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Part. Uniform	0-0-0 to 0-4-9		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Tapered Start	0-0-0		Near Face	5 PLF	13 PLF	0 PLF	0 PLF	
	End	0-4-9			5 PLF	13 PLF	0 PLF	0 PLF	
7	Part. Uniform	0-0-0 to 0-4-9		Near Face	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
8	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Tapered Start	0-0-0		Near Face	12 PLF	31 PLF	0 PLF	0 PLF	
	End	3-0-0			12 PLF	31 PLF	0 PLF	0 PLF	
10	Part. Uniform	0-0-0 to 3-0-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
11	Point	0-0-1		Top	122 lb	0 lb	252 lb	0 lb	Header Column Header Column
	Bearing Length	0-3-8							
12	Point	0-6-1		Top	137 lb	32 lb	0 lb	0 lb	Header Column Header Column
	Bearing Length	0-3-8							
13	Point	2-10-1		Top	259 lb	32 lb	252 lb	0 lb	Header Column Header Column Header Column Header Column
	Bearing Length	0-3-8							
14	Part. Uniform	2-10-9 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
15	Tapered Start	2-10-9		Top	5 PLF	13 PLF	0 PLF	0 PLF	
	End	3-0-0			5 PLF	13 PLF	0 PLF	0 PLF	
16	Part. Uniform	2-10-9 to 3-0-0		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
17	Part. Uniform	2-10-9 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
18	Tapered Start	2-10-9		Near Face	5 PLF	13 PLF	0 PLF	0 PLF	
	End	3-0-0			5 PLF	13 PLF	0 PLF	0 PLF	
19	Part. Uniform	2-10-9 to 3-0-0		Near Face	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
	Self Weight				12 PLF				

Notes

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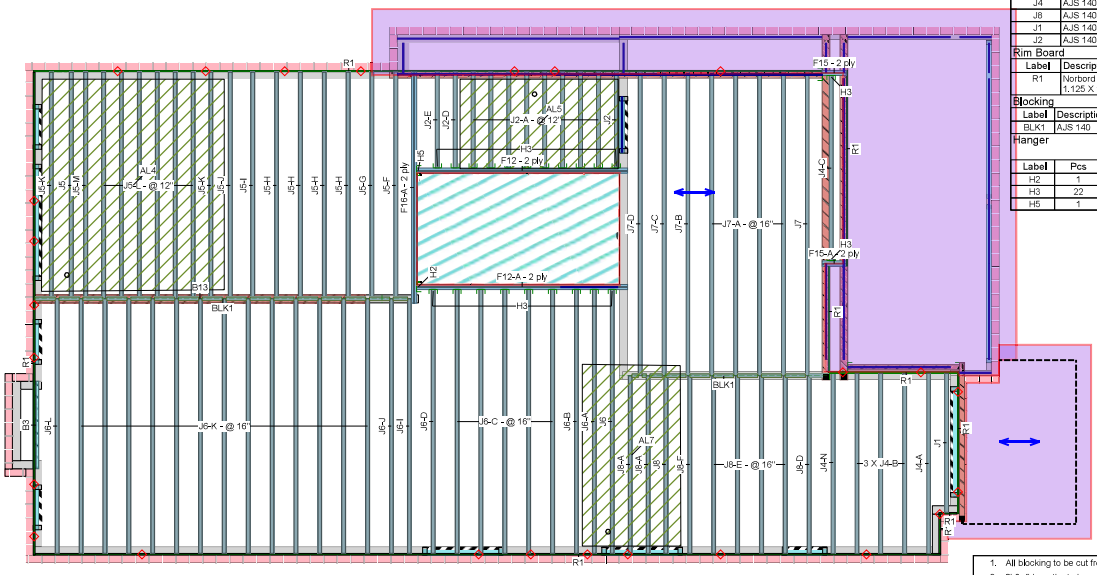
www.bc.com
CCMC: 12472

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

MHP 23034

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
Nov 14 2023
PER: _____
CHIEF BUILDING OFFICIAL

Second Floor



Second Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F16	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	1	2	2	14-0-0
F12	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	2	2	4	12-0-0
F15	Versa-Lam LVL 2.1E 3100 SP	1.75	11.875	2	2	4	2-0-0

I Joist (Flush)

Label	Description	Width	Depth	Pcs	Length
J7	AJS 140	2.5	11.875	8	18-0-0
J6	AJS 140	2.5	11.875	25	16-0-0
J5	AJS 140	2.5	11.875	18	14-0-0
J4	AJS 140	2.5	11.875	6	12-0-0
J8	AJS 140	2.5	11.875	9	10-0-0
J1	AJS 140	2.5	11.875	1	8-0-0
J2	AJS 140	2.5	11.875	11	6-0-0

Rim Board

Label	Description	Width	Depth	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875	14	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinFt	Varies	27-0-0

Hanger

Label	Pcs	Description	Beam/Girder fasteners	Supported Member fasteners
H2	1	HHUS410	30 16d	10 16d
H3	22	LF2511	12 10d	1 #8x1 1/4WS
H5	1	LF3511	12 10d	2 #8x1 1/4WS

JOB INFORMATION

Builder
GREENPARK

Project

Shipping
ZADORRA ESTATES
OSHAWA,ON

Sales Rep
RALPH MIRIGELLO

Designer
WC

Plotted
July 17, 2023

Layout Name
VILLA 2-2 ALL OPT

Job Path
S:\CUSTOMERS\GREENPARK\ZADORRA ESTATES\MODELS\VILLA 2\VILLA 2-2\F-VILLA 2-2\VILLA 2-2 STD.isl

DESIGN CRITERIA

Second Floor

Design Method	LSD (Canada)
Building Code	NBCC 2015 OBC 2012(2020 Update)

Floor Loads

Live	40
Dead	15

Deflection Joist

LL Span	L/ 360
TL Span	L/ 240

Deflection Flush Girder

LL Span	L/ 360
TL Span	L/ 240

Deflection Dropped Girder

LL Span	L/ 360
TL Span	L/ 240

Deflection Header

LL Span	L/ 360
TL Span	L/ 240

Decking

Decking	OSB
Thickness	5/8"
Fastener	Nailed & Glued

CCMC References
Boise - 12472-R , 12787-R
LP - 12412-R, Roseburg - 13310-R
Forex - 14056-R

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

1. All blocking to be cut from 12' joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.
12. Multi ply beams with side loading to have all fasteners installed with the head on the side of the applied load
13. Confirmation of adequate support & anchorage of components is the responsibility of the building designer; suggested uplift connectors are as shown
14. Where beam hangs on side of 3-ply member, it is recommended that the equivalent quantity and size of nails required for the hanger attachment also be installed on opposite side of the 3-ply member

Legend

WS	Web Stiffener
-ws	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
◇	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 11.875
	AJS 140 11.875
	Versa-Lam LVL 2.1E 3100 SP 1.75 X

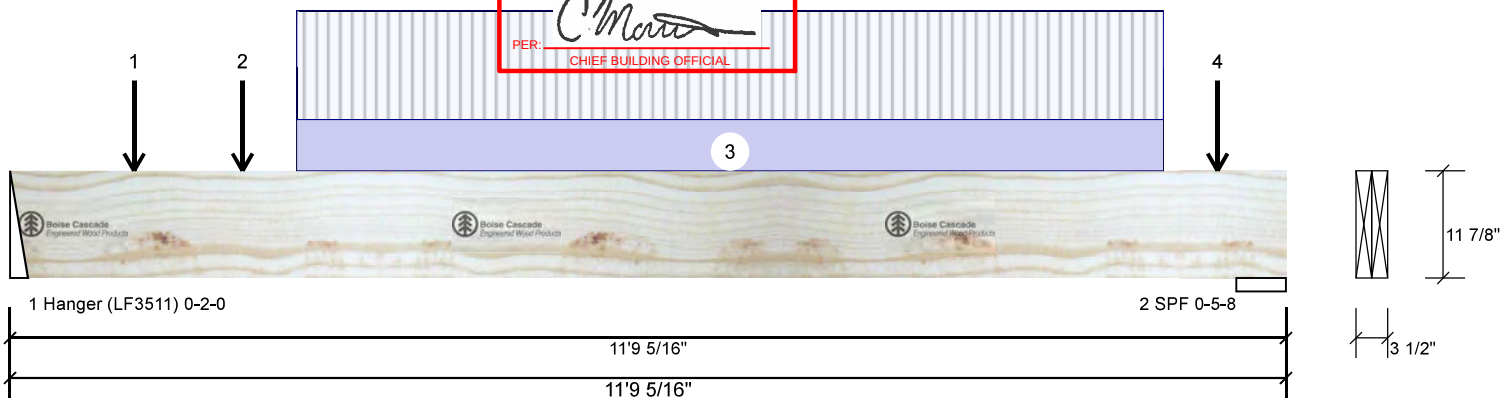
Installation Guide
(Open your phone's camera and hover over this QR code to access it)

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

Client:	GREENPARK	Date:	7/18/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 STD
		Project #:	MHP23034

F12 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED

Level: Second 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	545	308	0	0
2	Vertical	631	360	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	16%	385 / 818	1203	L	1.25D+1.5L
2 - SPF	5.500"	Vert	12%	450 / 946	1397	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3671 ft-lb	5'9 1/16"	35392 ft-lb	0.104 (10%)	1.25D+1.5L	L
Unbraced	3671 ft-lb	5'9 1/16"	35392 ft-lb	0.104 (10%)	1.25D+1.5L	L
Shear	1321 lb	10'3 15/16"	13217 lb	0.100 (10%)	1.25D+1.5L	L
Perm Defl in.	0.021 (L/6304)	5'9 1/16"	0.376 (L/360)	0.057 (6%)	D	Uniform
LL Defl inch	0.037 (L/3622)	5'8 7/8"	0.376 (L/360)	0.099 (10%)	L	L
TL Defl inch	0.059 (L/2301)	5'9"	0.564 (L/240)	0.104 (10%)	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 must be continuously laterally braced.
7. Bottom must have sheathing attached or be continuously braced.
8. Lateral slenderness ratio based on full section width.

JULY 19, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	1-1-12		Far Face	45 lb	119 lb	0 lb	0 lb	J2
2	Point	2-1-12		Far Face	41 lb	104 lb	0 lb	0 lb	J2
3	Part. Uniform	2-7-12 to 10-7-12		Far Face	49 PLF	104 PLF	0 PLF	0 PLF	
4	Point	11-1-12		Far Face	51 lb	121 lb	0 lb	0 lb	J2
	Self Weight				12 PLF				

Notes

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3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
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Manufacturer Info

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CCMC: 12472

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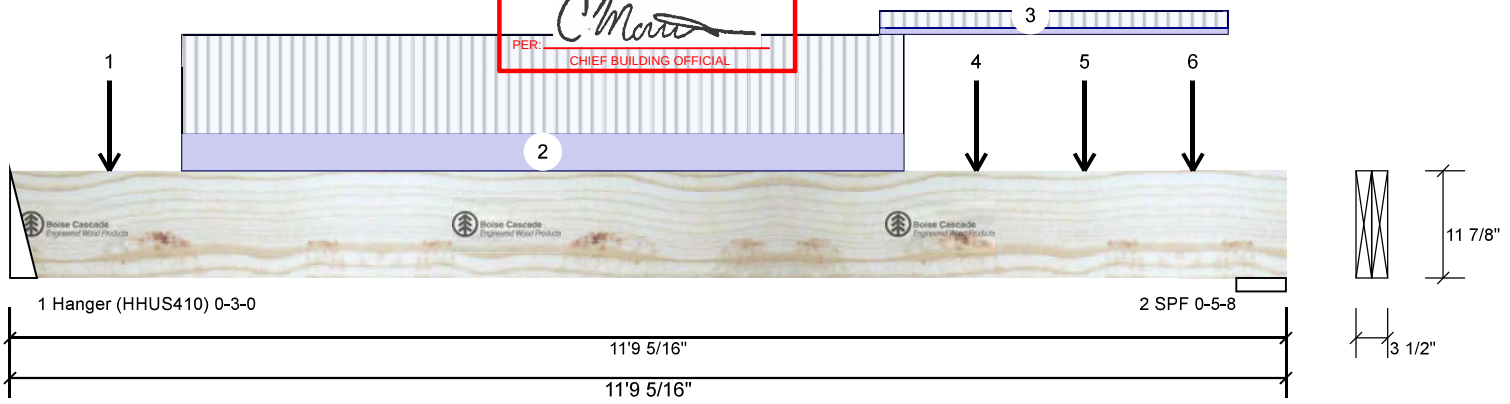
Client:	GREENPARK	Date:	7/18/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 STD
		Project #:	MHP23034

F12-A 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	1631	683	0	0
2	Vertical	1820	784	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	29%	854 / 2446	3300	L	1.25D+1.5L
2 - SPF	5.500"	Vert	31%	980 / 2730	3710	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	9495 ft-lb	5'10 1/2"	35392 ft-lb	0.268 (27%)	1.25D+1.5L	L
Unbraced	9495 ft-lb	5'10 1/2"	35392 ft-lb	0.268 (27%)	1.25D+1.5L	L
Shear	3613 lb	10'3 15/16"	13217 lb	0.273 (27%)	1.25D+1.5L	L
Perm Defl in.	0.044 (L/3056)	5'9 13/16"	0.373 (L/360)	0.118 (12%)	D	Uniform
LL Defl inch	0.105 (L/1280)	5'9 3/4"	0.373 (L/360)	0.281 (28%)	L	L
TL Defl inch	0.149 (L/902)	5'9 3/4"	0.560 (L/240)	0.266 (27%)	D+L	L

Design Notes

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-11-0		Near Face	144 lb	384 lb	0 lb	0 lb	J6
2	Part. Uniform	1-7-0 to 8-3-0		Near Face	109 PLF	291 PLF	0 PLF	0 PLF	
3	Part. Uniform	8-0-5 to 11-2-15		Top	19 PLF	50 PLF	0 PLF	0 PLF	
4	Point	8-11-0		Near Face	131 lb	339 lb	0 lb	0 lb	J6

Continued on page 2...

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Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 STD
		Project #:	MHP23034

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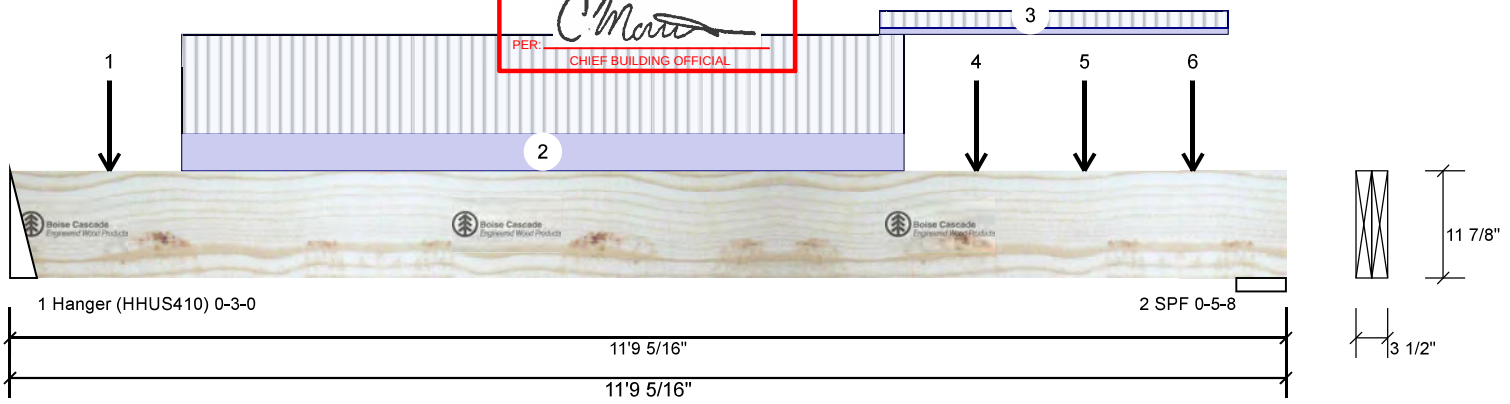
Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	9-11-0		Near Face	124 lb	291 lb	0 lb	0 lb	J6
6	Point	10-11-0		Near Face	141 lb	336 lb	0 lb	0 lb	J6
	Self Weight				12 PLF				

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
JULY 19, 2023

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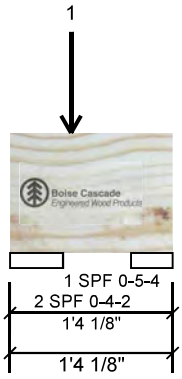
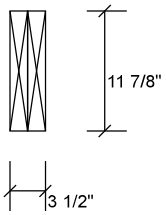
613-838-2775 / 905-642-4400

Client:	GREENPARK	Date:	7/18/2023
Project:		Input by:	W C
Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 STD
		Project #:	MHP 23034

F15-A 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	176	74	0	0
2	Vertical	41	23	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	3%	93 / 264	357	L	1.25D+1.5L
2 - SPF	4.125"	Vert	1%	28 / 61	89	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	45 ft-lb	6 1/16"	35392 ft-lb	0.001 (0%)	1.25D+1.5L	L
Unbraced	45 ft-lb	6 1/16"	35392 ft-lb	0.001 (0%)	1.25D+1.5L	L
Shear	351 lb	1'5 1/8"	13217 lb	0.027 (3%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/3030066)	6 1/16"	0.023 (L/360)	0.000 (0%)	D	Uniform
LL Defl inch	0.000 (L/1195211)	6 1/16"	0.023 (L/360)	0.000 (0%)	L	L
TL Defl inch	0.000 (L/857120)	6 1/16"	0.034 (L/240)	0.000 (0%)	D+L	L

JULY 19, 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 must be continuously laterally braced.
5 Bottom must have sheathing attached or be continuously braced.
6 Lateral slenderness ratio based on full section width.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-6-1		Far Face	81 lb	217 lb	0 lb	0 lb	J4
	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

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Address:	ZADORRA ESTATES OSHAWA,ON	Job Name:	VILLA 2-2 STD
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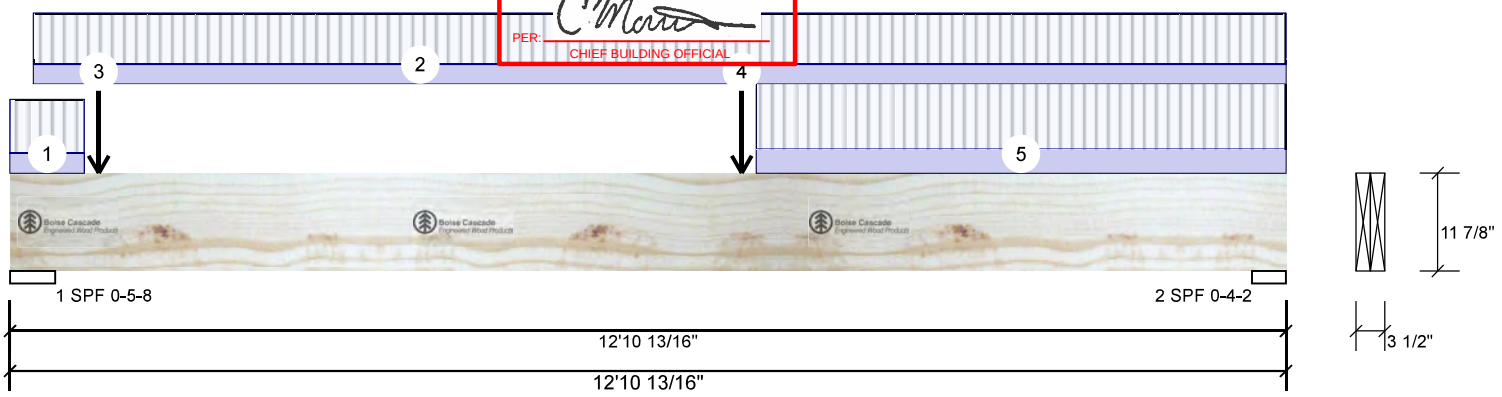

Member Information

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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	1968	928	0	0
2	Vertical	621	371	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	35%	1160 / 2952	4111	L	1.25D+1.5L
2 - SPF	4.125"	Vert	16%	463 / 931	1395	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5685 ft-lb	7'4 13/16"	35392 ft-lb	0.161 (16%)	1.25D+1.5L	L
Unbraced	5685 ft-lb	7'4 13/16"	35392 ft-lb	0.161 (16%)	1.25D+1.5L	L
Shear	4024 lb	1'5 3/8"	13217 lb	0.304 (30%)	1.25D+1.5L	L
Perm Defl in.	0.036 (L/4052)	6'7 1/16"	0.408 (L/360)	0.089 (9%)	D	Uniform
LL Defl inch	0.062 (L/2365)	6'6 11/16"	0.408 (L/360)	0.152 (15%)	L	L
TL Defl inch	0.098 (L/1493)	6'6 13/16"	0.611 (L/240)	0.161 (16%)	D+L	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 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 6'6" o.c.
7 Lateral slenderness ratio based on full section width.

JULY 19, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-9-0	0-6-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-2-13 to 12-10-13	0-6-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-10-12		Near Face	683 lb	1631 lb	0 lb	0 lb	F12
4	Point	7-4-13		Near Face	308 lb	545 lb	0 lb	0 lb	F12
5	Tie-In	7-6-9 to 12-10-13	0-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				12 PLF				

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