

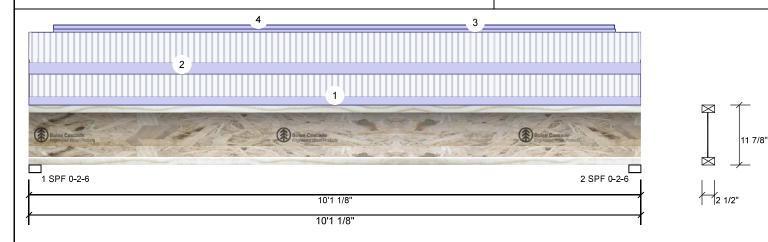
OF PERMIPPE PLANGREEN PARK Nov 03 e 2023 OF RA ESTATES HAV<mark>VA,ON</mark>

WCInput by: Job Name: VILLA 5-2 STD

Project #

F3 **AJS 140**

Level: Ground Floor



Member Info	mation			Unf	actored Re	actions (JNP	ATTERNED II	b (Uplift)		
Туре:	Girder	Application:	Floor (Residential)	Brg	Direction	Li	ve	Dead	Sno	w	Wind
Plies:	1	Design Method:	LSD	1	Vertical	2	64	132		0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2015	2	Vertical	2	64	131		0	0
Deflection LL:	360		OBC 2012(2020 Update)								
Deflection TL:	240	Load Sharing:	No								
Importance:	Normal - II	Deck:	Not Checked								
General Load		Vibration:	Not Checked								
Floor Live:	40 PSF			Bea	rings and F	actored	Rea	ctions			
Dead:	15 PSF			Bea	aring Length	Dir.	Сар.	React D/L Ib	Total Ld.	Case	Ld. Comb.
				1 -	SPF 2.375"	Vert	33%	164 / 397	561 L		1.25D+1.5L
				2 -	SPF 2.375"	Vert	33%	164 / 397	561 L		1.25D+1.5L

Analysis Results

Ana l ysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1348 ft-lb	5' 9/16"	5305 ft-lb	0.254 (25%)	1.25D+1.5L	L
Unbraced	1348 ft-lb	5' 9/16"	5305 ft-lb	0.254 (25%)	1.25D+1.5L	L
Shear	547 l b	1 5/8"	2350 lb	0.233 (23%)	1.25D+1.5L	L
Perm Defl in	0.023 (L/5220)	5' 9/16"	0.327 (L/360)	0.069 (7%)	D	Uniform
LL Defl inch	0.044 (L/2653)	5' 9/16"	0.327 (L/360)	0.136 (14%)	L	L
TL Defl inch	0.067 (L/1759)	5' 9/16"	0.491 (L/240)	0.136 (14%)	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.



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.

I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-1-2	0-6-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 10-1-2	0-9-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-4-14 to 9-8-2		Тор	3 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-14 to 9-7-14		Тор	4 PLF	0 PLF	0 PLF	0 PLF	

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.

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

Handling & Installation

- Handling & Installation

 1. Noist flanges must not be out or drilled

 2. Refer to latest copy of the Jioist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-rjly fastening details and handling/erection details

 3. Damaged Jioists must not be used

 4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

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

This design is valid until 4/17/2026

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St.

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

Kott Inc.

Boise, ID 83702





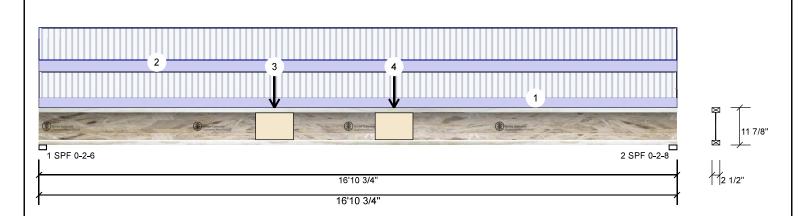
HAV<mark>VA,ON</mark>

WCInput by: Job Name: VILLA 5-2 STD

Project #

F4 **AJS 140**

Level: Ground Floor



Member Inforn	nation			Unfa	actored Rea	actions	UNP	ATTERNED II	o (Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Direction	L	ive	Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	Vertical		516	193	0	0
Moisture Condition:	Dry	Building Code:	NBCC 2015	2	Vertical		510	191	0	0
Deflection LL:	360		OBC 2012(2020 Update)							
Deflection TL:	240	Load Sharing:	No							
Importance:	Normal - II	Deck:	Not Checked							
General Load		Vibration:	Not Checked							
Floor Live:	40 PSF			Bear	rings and F	actored	l Rea	ctions		
Dead:	15 PSF			Bea	aring Length	Dir.	Cap.	React D/L Ib	Total Ld. Case	Ld. Comb.
				1 -	SPF 2.375"	Vert	60%	242 / 773	1015 L	1.25D+1.5L
				2 -	SPF 2.518"	Vert	59%	239 / 765	1004 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4345 ft-lb	8'6"	5305 ft-lb	0.819 (82%)	1.25D+1.5L	L
Unbraced	4345 ft-lb	8'6"	5305 ft-lb	0.819 (82%)	1.25D+1.5L	L
Shear	1000 l b	1 5/8"	2350 lb	0.426 (43%)	1.25D+1.5L	L
Perm Defl in	0.143 (L/1395)	8'5 3/16"	0.554 (L/360)	0.258 (26%)	D	Uniform
LL Defl inch	0.381 (L/523)	8'5 3/16"	0.554 (L/360)	0.689 (69%)	L	L
TL Defl inch	0.524 (L/380)	8'5 3/16"	0.831 (L/240)	0.631 (63%)	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 7'5 15/16" o.c.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-10-12	0-7-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-10-12	0-9-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	6-2-13		Near Face	16 lb	43 lb	0 l b	0 l b	F1
4	Point	9-4-13		Near Face	16 lb	43 lb	0 l b	0 lb	F1

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

Handling & Installation

- Handling & Installation

 1. Noist flanges must not be cut or drilled

 2. Refer to latest copy of the Juoist product information details for framing details, stifferer tables, web hole chart, bridging details, multi-ray fastening details and handling/erection details

 3. Damaged Juoists must not be used

 4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

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

This design is valid until 4/17/2026

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

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

Kott Inc.

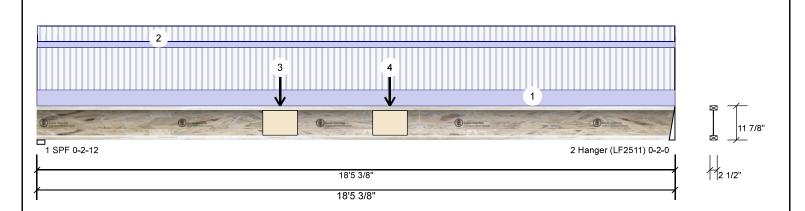


Input by: WC Job Name: VILLA 5-2 STD

Project #

F5 **AJS 140**

Level: Ground Floor



Member Inforn	nation		_	Unfactored Reactions UNPATTERNED lb (Uplift)							
Туре:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind		
Plies:	1	Design Method:	LSD	1	Vertical	437	164	0	0		
Moisture Condition:	Dry	Building Code:	NBCC 2015	2	Vertical	429	161	0	0		
Deflection LL:	360		OBC 2012(2020 Update)								
Deflection TL:	240	Load Sharing:	No								
Importance:	Normal - II	Deck:	Not Checked								
General Load		Vibration:	Not Checked								
Floor Live:	40 PSF			Beari	ings and Fa	actored Re	actions				
Dead:	15 PSF			Bea	ring Length	Dir. Ca	. React D/L lb	Total Ld. Case	Ld. Comb.		
				1 - 5	SPF 2.750"	Vert 49	% 205 / 656	861 L	1.25D+1.5L		
				2 -	2.000"	Vert 53	% 201 / 643	844 L	1.25D+1.5L		
Analysis Result	S			Han	ger						

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4073 ft-lb	9'3 15/16"	5305 ft-lb	0.768 (77%)	1.25D+1.5L	L
Unbraced	4073 ft-lb	9'3 15/16"	5305 ft-lb	0.768 (77%)	1.25D+1.5L	L
Shear	847 l b	2"	2350 lb	0.360 (36%)	1.25D+1.5L	L
Perm Defl in.	0.158 (L/1383)	9'2 7/8"	0.606 (L/360)	0.260 (26%)	D	Uniform
LL Defl inch	0.421 (L/518)	9'2 7/8"	0.606 (L/360)	0.695 (69%)	L	L
TL Defl inch	0.579 (L/377)	9'2 7/8"	0.909 (L/240)	0.637 (64%)	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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 6 Bottom flange must be laterally braced at a maximum of 8'2 15/16" o.c.



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ı	I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	1	Tie-In	0-0-0 to 18-5-6	0-9-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	2	Tie-In	0-0-2 to 18-5-6	0-3-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	3	Point	7-0-6		Near Face	16 l b	43 lb	0 lb	0 lb	F1
	4	Point	10-2-8		Near Face	16 l b	43 lb	0 lb	0 lb	F1

Notes

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

Handling & Installation

- Handling & Installation

 1. Noist flanges must not be out or drilled

 2. Refer to latest copy of the Jioist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-rjly fastening details and handling/erection details

 3. Damaged Jioists must not be used

 4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3,5 inches
 For flat roofs provide proper drainage to prevent ponding

This design is valid until 4/17/2026

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St.

Boise, ID 83702 (800) 232-0788 www.bc.com CCMC: 12787

Kott Inc.





OF RA ESTATES HAV<mark>VA,ON</mark>

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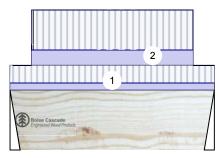
Job Name: VILLA 5-2 STD

Project #:

Versa-Lam LVL 2.1F-3-100-SP-FICIAL 750" X 11.875"

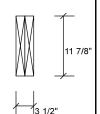
2-Ply - PASSED

Level: Ground Floor



1 Hanger (LF3511) 0-2-0 2 Hanger (LF3511) 0-2-0 3'4 7/16'

3'4 7/16'



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Member	Information
	0: 1

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

Unfactored Reactions UNPATTERNED lb (Uplift) Bra Direction Livo Doad

פוטן	Direction	LIVE	Deau	SHOW	vviilu
1	Vertical	186	89	0	0
2	Vertical	186	89	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	330 ft-lb	1'8 1/4"	35392 ft-lb	0.009 (1%)	1.25D+1.5L	L
Unbraced	330 ft-lb	1'8 1/4"	35392 ft-lb	0.009 (1%)	1.25D+1.5L	L
Shear	287 l b	1'1 7/8"	13217 l b	0.022 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/255365)	1'8 1/4"	0.105 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch	0.000 (L/118926)	1'8 1/4"	0.105 (L/360)	0.003 (0%)	L	L
TL Defl inch	0.000 (L/81139)	1'8 1/4"	0.158 (L/240)	0.003 (0%)	D+L	L

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. F	React D/L I b	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	5%	111 / 279	390	L	1.25D+1.5L
2 -	2.000"	Vert	5%	112 / 279	391	1	1.25D+1.5L
2 - Hanger	2.000	vert	370	1127273	331	_	1.23D 1 1.3L

Design Notes

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



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

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise. ID 83702 (800) 232-0788

www.bc.com CCMC: 12472

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





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OF PERMIPPE PLANGREENPARK Nov 03e2023

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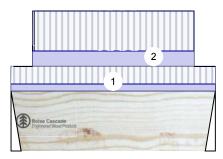
Job Name: VILLA 5-2 STD

Project #:

Versa-Lam LVL 2.1F-3-1000SP-FICIAL 750" X 11.875"

2-Ply - PASSED

Level: Ground Floor



1 Hanger (LF3511) 0-2-0 2 Hanger (LF3511) 0-2-0 3'4 7/16" 3'4 7/16'

	11 7/8"
3 1	/2"

I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-4-7		Тор	15 PLF	40 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-4-4 to 3-0-4		Far Face	33 PLF	89 PLF	0 PLF	0 PLF	
	Self Weight				12 PLF				



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

Handling & Installation

Handling & Installation

1. IVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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

Kott Inc. 3228 Moodie Dr, Ottawa, Ontario

613-838-2775 / 905-642-4400





OF RA ESTATES NO,AVVAF

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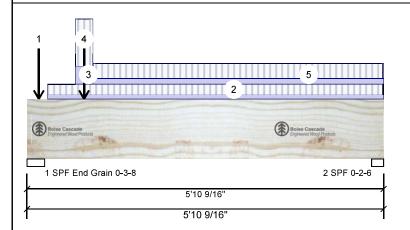
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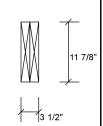
Project #:

Versa-Lam LVI 2 1F 2 100 SP FICIAL 750" X 11.875"

2-Ply - PASSED

Level: Ground Floor





Member Information Application: Floor (Residential) Type: Plies: 2 Design Method: LSD Moisture Condition: Dry **Building Code: NBCC 2015** OBC 2012(2020 Update) Deflection LL: 360 Load Sharing: Deflection TL: 240 Not Checked Deck: Importance: Normal - II Vibration: Not Checked General Load Floor Live: 40 PSF 15 PSF Dead:

Unfactored Reactions	UNPATTERNED	lb	(Uplift)
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Bearings and Factored Reactions

Brg	Direction	Live	Dead	Snow	VVind
1	Vertical	862	439	0	0
2	Vertical	141	90	0	0

Bearing Length Dir.

Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 3.500" Vert 14% 548 / 1292 1841 L 1.25D+1.5L End

Grain

2 - SPF 2.375" Vert 112 / 211 323 L 1.25D+1.5L

Analysis	Actua l	Location	Allowed	Capacity	Comb.	Case
Moment	516 ft-lb	2'5 1/16"	35392 ft-lb	0.015 (1%)	1.25D+1.5L	L
Unbraced	516 ft-lb	2'5 1/16"	35392 ft-lb	0.015 (1%)	1.25D+1.5L	L
Shear	512 lb	1'3 3/8"	13217 l b	0.039 (4%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/83928)	2'10 1/2"	0.184 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch	0.001 (L/50491)	2'10 1/8"	0.184 (L/360)	0.007 (1%)	L	L
TL Defl inch	0.002 (L/31527)	2'10 1/4"	0.276 (L/240)	0.008 (1%)	D+L	L



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Design Notes

Analysis Results

- 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 4'11 1/4" o.c.
- 7 Lateral slenderness ratio based on full section width.

I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-2-5		Near Face	285 l b	591 l b	0 lb	0 lb	F17
2	Tie-In	0-4-1 to 5-10-9	0-5-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-9-9 to 1-1-1	1-10-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	0-11-5		Far Face	89 lb	186 l b	0 lb	0 lb	F6

Continued on page 2...

Notes

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

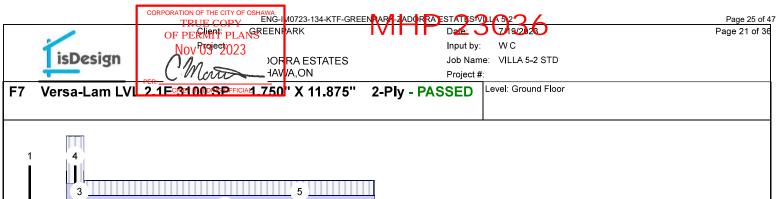
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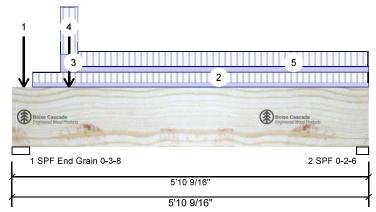
Manufacturer Info

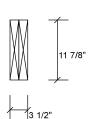
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Load Type ID Location Trib Width Side Comments Dead Live Wind Snow 1-1-1 to 5-10-9 0-7-0 15 PSF 40 PSF 0 PSF 0 PSF 5 Tie-In Тор Self Weight 12 PLF



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Notes

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

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-pty fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702 (800) 232-0788

www.bc.com CCMC: 12472

Kott Inc.

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





Nov 03e2023 isDesign

OF RA ESTATES HAV<mark>VA,ON</mark>

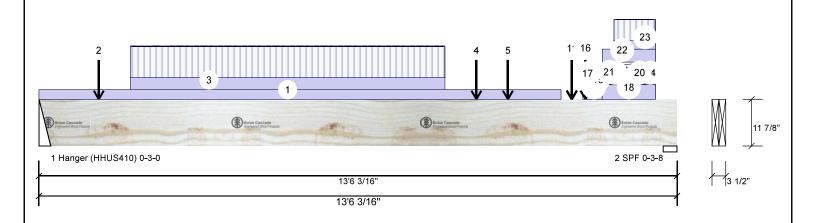
WC Input by: Job Name: VILLA 5-2 STD

Project #:

Versa-Lam LVL 2.1F 3100 SP FICIAL 750" X 11.875"

2-Ply - PASSED

Level: Ground Floor



Member Inforn	nation			Unfa	ctored Rea	ction	s UNP	ATTERNED I	b (Upl	ift)
Туре:	Girder	Application:	Floor (Residential)	Brg	Direction		Live	Dead		Sno
Plies:	2	Design Method:	LSD	1	Vertical		1179	964		(
Moisture Condition:	•	Building Code:	NBCC 2015 OBC 2012(2020 Update)	2	Vertical		994	1157		45
Deflection LL:	360	Land Charine	, , ,							
Deflection TL:	240	Load Sharing:	No							
Importance:	Normal - II	Deck:	Not Checked							
General Load		Vibration:	Not Checked							
Floor Live:	40 PSF			Beari	ings and Fa	actore	d Read	ctions		
Dead:	15 PSF			Bear	ring Length	Dir.	Сар.	React D/L Ib	Total	Ld.
				1 -	3.000"	Vert	26%	1205 / 1829	3034	L
				_ Han	ger					
Analysis Result	s			1 2 - 8	PF 3.500"	Vert	45%	1446 / 1944	3391	L

Brg	Direction	Live	Dead	Snow
۱ ،	Vertical	1170	064	61

L	Bearings and Factored Reactions												
Γ	Bearing	Length	Dir.	Cap.	React D/L I b	Total	Ld. Case	Ld. Comb.					
	1 - Hanger	3.000"	Vert	26%	1205 / 1829	3034	L	1.25D+1.5L +S					
	2 - SPF	3.500"	Vert	45%	1446 / 1944	3391	L	1.25D+1.5L +S					

454

Analysis	Actua l	Location	Allowed	Capacity	Comb.	Case
Moment	10480 ft-lb	6'9 15/16"	35392 ft-lb	0.296 (30%)	1.25D+1.5L +S	L
Unbraced	10480 ft-lb	6'9 15/16"	35392 ft-lb	0.296 (30%)	1.25D+1.5L +S	L
Shear	2937 lb	1'2 7/8"	13217 l b	0.222 (22%)	1.25D+1.5L +S	L
Perm Defl in	. 0.100 (L/1565)	6'9 7/16"	0.437 (L/360)	0.230 (23%)	D	Uniform
LL Defl inch	0.127 (L/1235)	6'8 7/8"	0.437 (L/360)	0.292 (29%)	L+0.5S	L
TL Defl inch	0.228 (L/690)	6'9 1/8"	0.655 (L/240)	0.348 (35%)	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 Fill all hanger nailing holes.
- 3 Left Header: DF, Thickness: 3 1/2"
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Multiple plies must be fastened together as per manufacturer's details.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be continuously laterally braced.
- 8 Bottom must be laterally braced at a maximum of 3'7" o.c.
- 9 Lateral slenderness ratio based on full section width.



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

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-pty fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702 (800) 232-0788

www.bc.com CCMC: 12472

Kott Inc.

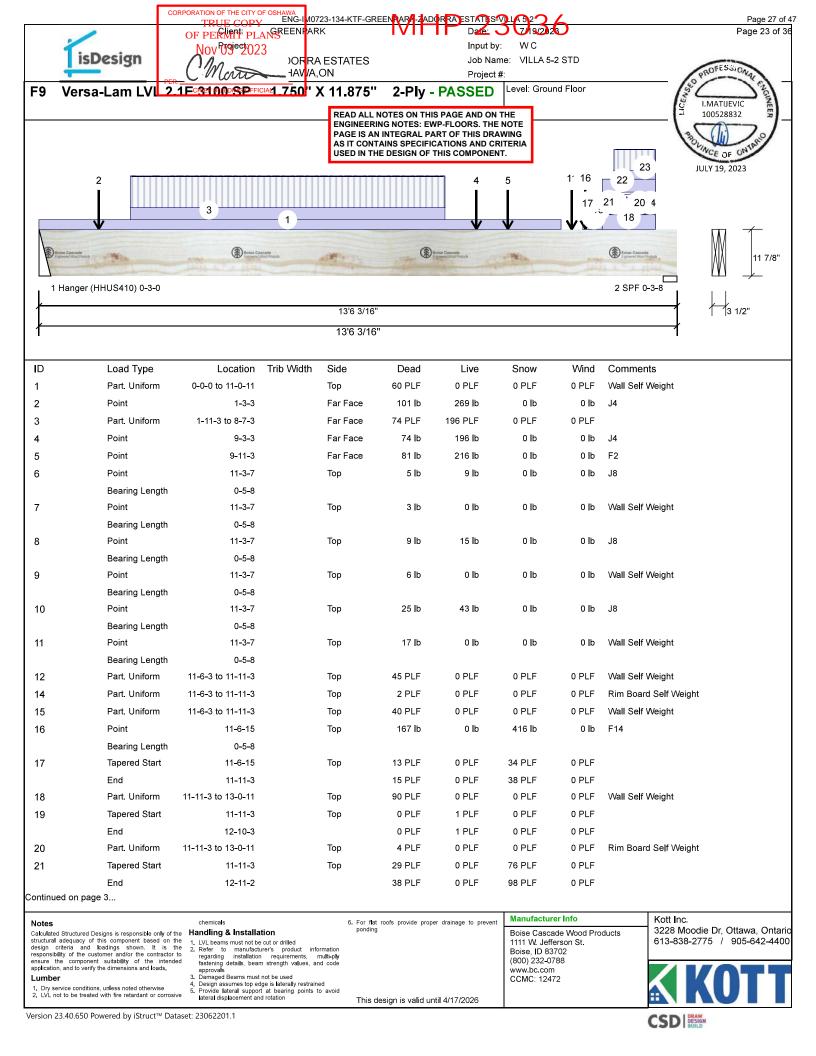
3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400

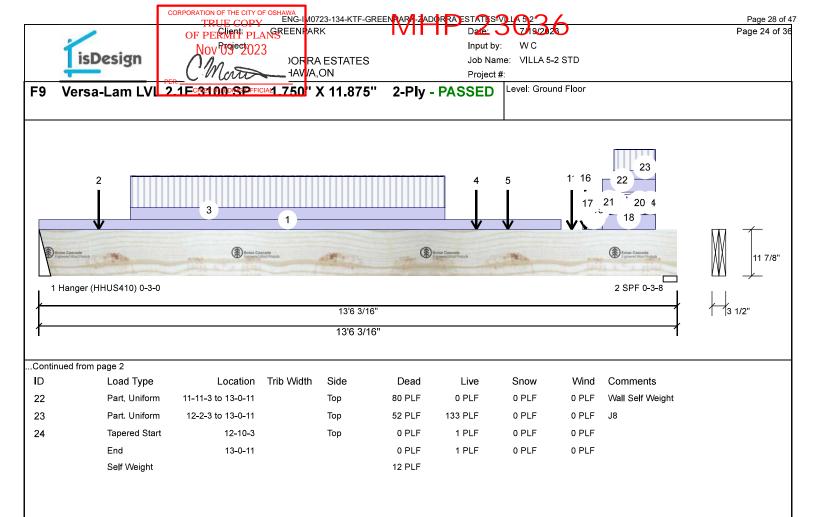
Wind 0

0











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www.bc.com CCMC: 12472

Kott Inc.

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





OF PERMIPPE PLANGREEN PARK Nov 703 e 2023

OF RA ESTATES

HAV<mark>VA,ON</mark>

Input by:

Job Name: VILLA 5-2 STD & WOC

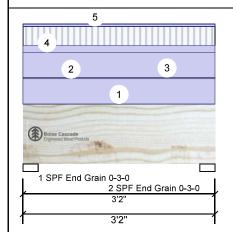
Project #:

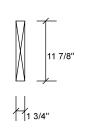
Versa-Lam LVL 244 E 3400 SP

isDesign

1.750" X 11.875" - PASSED

Level: Ground Floor





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

Unfactored	Reactions	UNPATTERNED I	(Uplift)
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Brg	Direction	Live	Dead	Snow	VVind
1	Vertical	48	163	0	0
2	Vertical	48	163	0	0

Analysis Results

Ana l ysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	169 ft-lb	1'7"	12918 ft-lb	0.013 (1%)	1.25D+1.5L	L
Unbraced	169 ft-lb	1'7"	12918 ft-lb	0.013 (1%)	1.25D+1.5L	L
Shear	182 l b	1'11 1/8"	4824 lb	0.038 (4%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/102390)	1'7"	0.093 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch	0.000 (L/351255)	1'7"	0.093 (L/360)	0.001 (0%)	L	L
TL Defl inch	0.000 (L/79280)	1'7"	0.140 (L/240)	0.003 (0%)	D+L	L

Bearings and Factored Reactions

Bear	ing Length	Dir.	Cap.	React D/L Ib	Total	Ld. Case	Ld. Comb.
1 - S End Grair	PF 3.000" 1	Vert	7%	204 / 71	275	L	1.25D+1.5L
2 - S End Grain	PF 3.000"	Vert	7%	204 / 71	275	L	1.25D+1.5L



- 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 Top must be continuously laterally braced.

4 Bottom must have sheathing attached or be continuously braced.



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4 Bottom must i	Siy braceu.								
I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-2-0		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-2-0		Near Face	2 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	
	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				6 PLF				

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

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product 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

This design is valid until 4/17/2026

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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





ORRA ESTATES

HAV<mark>VA,ON</mark>

Input by:

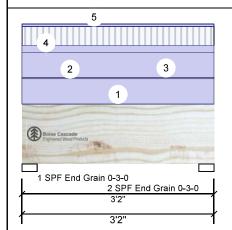
WC Job Name: VILLA 5-2 DC

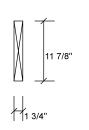
Project #:

Versa-Lam LVL 244 E 3400 SP

1.750" X 11.875" - PASSED

Level: Ground Floor





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

Unfactored	Reactions	UNPAT	TERNED	lb	(Uplift)
------------	-----------	-------	--------	----	----------

Brg	Direction	Live	Dead	Snow	vvina
1	Vertical	48	163	0	0
2	Vertical	48	163	0	0

Analysis Results

Analysis	Actua l	Location	Allowed	Capacity	Comb.	Case
Moment	169 ft-lb	1'7"	12918 ft-lb	0.013 (1%)	1.25D+1.5L	L
Unbraced	169 ft-lb	1'7"	12918 ft-lb	0.013 (1%)	1.25D+1.5L	L
Shear	182 lb	1'2 7/8"	4824 lb	0.038 (4%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/102390)	1'7"	0.093 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch	0.000 (L/351255)	1'7"	0.093 (L/360)	0.001 (0%)	L	L
TL Defl inch	0.000 (L/79280)	1'7"	0.140 (L/240)	0.003 (0%)	D+L	L

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L I b	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	7%	204 / 71	275	L	1.25D+1.5L
2 - SPF End Grain	3.000"	Vert	7%	204 / 71	275	L	1.25D+1.5L



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 Top must be continuously laterally braced.
- 4 Bottom must have sheathing attached or be continuously braced.

I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-2-0		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-2-0		Near Face	2 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	
	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				6 PLF				

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

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Boise Cascade Wood Products

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

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

CORPORATION OF THE CITY OF OSHAWA ENG-140723-134-KTF-GREEN ARY-LADORRA ESTATISS V OF PERWIT PLANSREEN ARK Nov 03e2023 ORRA ESTATES

NO,AVVAF

Input by:

Job Name: VILLA 5-2 DC

Project #:

1.750" X 11.875" Versa-Lam L<mark>VL 2_1₽=3•1000⊆SP</mark>CIAL

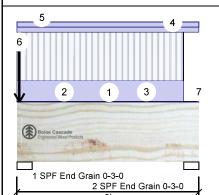
2-Ply - PASSED Level: Ground Floor

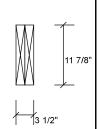
Brg

1

Direction

Vertical





Wind

0

0

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

2	Vertical	482	348

Unfactored Reactions UNPATTERNED lb (Uplift)

Live

1191

Bearings and Factored Reactions Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1133 / 2072 1 - SPF 3.000" Vert 3204 L 1.25D+1.5L +S End Grain 2 - SPF 3.000" Vert 11% 435 / 723 1157 L 1.25D+1.5L End Grain

Dead

906

Snow

285

n

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	775 ft-lb	1'6"	35392 ft-lb	0.022 (2%)	1.25D+1.5L	L
Unbraced	775 ft-lb	1'6"	35392 ft-lb	0.022 (2%)	1.25D+1.5L	L
Shear	1077 l b	1'9 1/8"	13217 l b	0.082 (8%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/95986)	1'6"	0.088 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch	0.000 (L/64562)	1'6"	0.088 (L/360)	0.006 (1%)	L+0.5S	L
TL Defl inch	0.001 (1/38599)	1'6"	0.131 (L/240)	0.006 (1%)	D+L+0.5S	L

Design Notes

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

7 Lateral slenderness ratio based on full section width.



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I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-0-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
2	Tapered Start	0-0-0		Near Face	0 PLF	1 PLF	0 PLF	0 PLF	
	End	3-0-0			0 PLF	1 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 2-9-0		Near Face	163 PLF	384 PLF	0 PLF	0 PLF	J2
Continued on page 2									

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

Handling & Installation

1. UVL 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

Design assumes top edge is laterally restrained
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

3228 Moodie Dr, Ottawa, Ontario

613-838-2775 / 905-642-4400

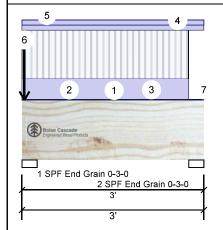
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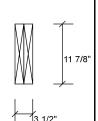
Nov 03e2023 OF RA ESTATES HAV<mark>VA,ON</mark>

Input by: WCJob Name: VILLA 5-2 DC

Project #:

1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor Versa-Lam LVL 2_14=3+1000-SPCIAL FH₆





Continued	from	nage	1	

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Part. Uniform	0-0-0 to 3-0-0		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	0-0-8		Тор	518 lb	614 lb	285 lb	0 l b	Header Column Header Column
	Bearing Length	0-3-8							
7	Part. Uniform	3-0-0 to 3-0-0		Near Face	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				12 PLF				



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

Handling & Installation

Handling & Installation

1. IVI 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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Kott Inc.

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





NO,AVVAF

Input by:

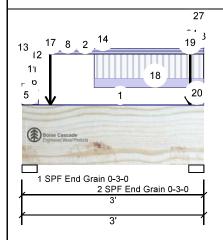
W C Job Name: VILLA 5-2 DC

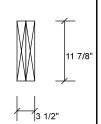
Project #:

Versa-Lam VI 2.4F-3100 SPIAL 1.750" X 11.875"

2-Ply - PASSED

Level: Ground Floor





Member Information Application: Floor (Residential) Type: Plies: 2 Design Method: LSD Moisture Condition: Dry **Building Code: NBCC 2015** OBC 2012(2020 Update) Deflection LL: 360 Load Sharing: Deflection TL: 240 Not Checked Deck: Importance: Normal - II Vibration: Not Checked General Load Floor Live: 40 PSF Dead: 15 PSF

Unfactored React	ions UNPATTERN	ED Ib	(Uplift)
-------------------------	----------------	-------	----------

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1056	827	236	0
2	Vertical	1066	871	244	0

Analysis Results Comb. Analysis Actual Location Allowed Capacity Case

Moment	865 ft-lb	1'4 1/4"	35392 ft-lb	0.024 (2%)	1.25D+1.5L +S	L
Unbraced	865 ft-lb	1'4 1/4"	35392 ft-lb	0.024 (2%)	1.25D+1.5L +S	L
Shear	1375 lb	1'2 7/8"	13217 lb	0.104 (10%)	1.25D+1.5L +S	L
Perm Defl in.	0.000 (L/82054)	1'5 3/16"	0.088 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch	0.001 (L/57179)	1'5 5/16"	0.088 (L/360)	0.006 (1%)	L+0.5S	L
TL Defl inch	0.001	1'5 5/16"	0.131 (L/240)	0.007 (1%)	D+L+0.5S	L

Bearings and Factored Reactions

L	9											
ſ	Bearing	Length	Dir.	Cap.	React D/L Ib	Total	Ld. Case	Ld. Comb.				
ı	1 - SPF End Grain	3.000"	Vert	30%	1034 / 1820	2854	L	1.25D+1.5L +S				
ı	2 - SPF End Grain	3.000"	Vert	27%	1089 / 1843	2932	L	1.25D+1.5L +S				

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.

(L/33698)

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



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

Handling & Installation

1. UVL 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

Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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

Kott Inc.

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





OF RA ESTATES

HAV<mark>VA,ON</mark>

Input by:

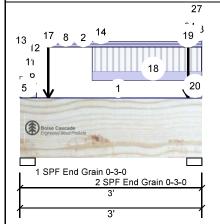
WCJob Name: VILLA 5-2 DC

Project #:

Versa-Lam VI 2.4F-3100 SPIAL 1.750" X 11.875"

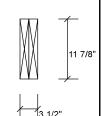
2-Ply - PASSED

Level: Ground Floor





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I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tapered Start	0-0-0		Near Face	2 PLF	4 PLF	0 PLF	0 PLF	
	End	3-0-0			0 PLF	1 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
4	Part. Uniform	0-0-0 to 0-3-4		Тор	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
5	Part. Uniform	0-0-0 to 0-3-4		Тор	64 PLF	130 PLF	0 PLF	0 PLF	J1
6	Part. Uniform	0-0-0 to 0-3-4		Тор	30 PLF	0 PLF	80 PLF	0 PLF	
7	Part. Uniform	0-0-0 to 0-3-4		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	0-0-0 to 3-0-0		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Part. Uniform	0-0-0 to 0-3-4		Near Face	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
11	Part. Uniform	0-0-0 to 0-3-4		Near Face	64 PLF	130 PLF	0 PLF	0 PLF	J1
12	Part. Uniform	0-0-0 to 0-3-4		Near Face	30 PLF	0 PLF	80 PLF	0 PLF	
13	Part. Uniform	0-0-0 to 0-3-4		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
14	Part, Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
17	Point	0-5-10		Тор	607 l b	902 lb	216 lb	0 lb	Header Column Header Column F4
	Bearing Length	0-3-8							
18	Part. Uniform	1-2-4 to 3-0-0		Near Face	131 PLF	349 PLF	0 PLF	0 PLF	J1
19	Point	2-9-4		Тор	434 lb	432 lb	221 lb	0 lb	Header Column Header Column Header Column Header Column
	Bearing Length	0-3-8							
20	Part. Uniform	2-9-4 to 3-0-0		Тор	80 PLF	170 PLF	0 PLF	0 PLF	J1
22	Part. Uniform	2-9-4 to 3-0-0		Тор	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
23	Part. Uniform	2-9-4 to 3-0-0		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
24	Part. Uniform	2-9-4 to 3-0-0		Near Face	80 PLF	170 PLF	0 PLF	0 PLF	J1
26	Part. Uniform	2-9-4 to 3-0-0		Near Face	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
27	Part. Uniform	2-9-4 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				12 PLF				

Notice 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.

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

Handling & Installation

Handling & Installation

1. IVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding Manufacturer Info Boise Cascade Wood Products

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

Kott Inc.

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







CORPORATION OF THE CITY OF OSHAWA
ENG-I M0723-134-KTF-GREEN ARY - ZADORRA ESTATES V OF PERWIT PLANSREEN ARK Nov 03 e 2023

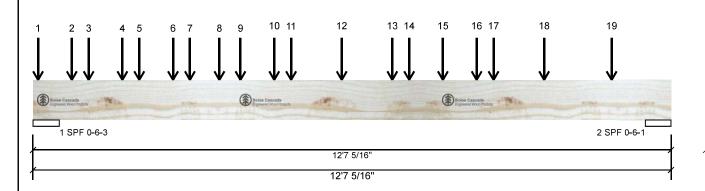
OF RA ESTATES NO,AVVAF

W C Input by: Job Name: VILLA 5-2 STD

Project #

Versa-Lam LVL 2 1FE3-1000SPCIAL 1.750" X 9.500" 3-Ply - PASSED

Level: Second Floor



Floor (Residential)

OBC 2012(2020 Update)

NBCC 2015

LSD

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	4329	1950	0	0
2	Vertical	4088	1711	0	0

Deflection TL: Not Checked Deck: Normal - II Vibration: Not Checked General Load 40 PSF 15 PSF

Application:

Design Method:

Building Code:

Load Sharing:

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L I b	Total	Ld. Case	Ld. Comb.
1 - SPF	6.217"	Vert	44%	2438 / 6494	8932	L	1.25D+1.5L
2 - SPF	6.080"	Vert	42%	2138 / 6132	8270	L	1.25D+1.5L

Analysis Results

Member Information

Moisture Condition: Dry

360

240

Deflection LL:

Importance:

Floor Live:

Dead:

Type: Plies:

Analysis	Actua l	Location	Allowed	Capacity	Comb.	Case
Moment	24869 ft-lb	6'1 3/16"	36222 ft-lb	0.687 (69%)	1.25D+1.5L	L
Unbraced	24869 ft-lb	6'1 3/16"	36222 ft-lb	0.687 (69%)	1.25D+1.5L	L
Shear	7968 l b	11'3 11/16"	15860 lb	0.502 (50%)	1.25D+1.5L	L
Perm Defl in.	0.165 (L/853)	6'3 3/8"	0.390 (L/360)	0.422 (42%)	D	Uniform
LL Defl inch	0.384 (L/366)	6'3 11/16"	0.390 (L/360)	0.983 (98%)	L	L
TL Defl inch	0.548 (L/256)	6'3 9/16"	0.585 (L/240)	0.937 (94%)	D+L	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Multiple plies must be fastened together as per manufacturer's details.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be continuously laterally braced.
- 7 Bottom must be laterally braced at bearings.
- 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	0-1-3		Тор	81 lb	166 l b	0 lb	0 l b	J1
	Bearing Length	0-3-8							
2	Point	0-9-3		Тор	160 l b	370 l b	0 lb	0 l b	J2
	Bearing Length	0-3-8							

Continued on page 2...

Notes

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- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVI beams must not be cut or drilled
 Refer to manufacturer's product information
 regarding installation requirements, multi-ply
 fastening details, beam strength values, and code
 approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

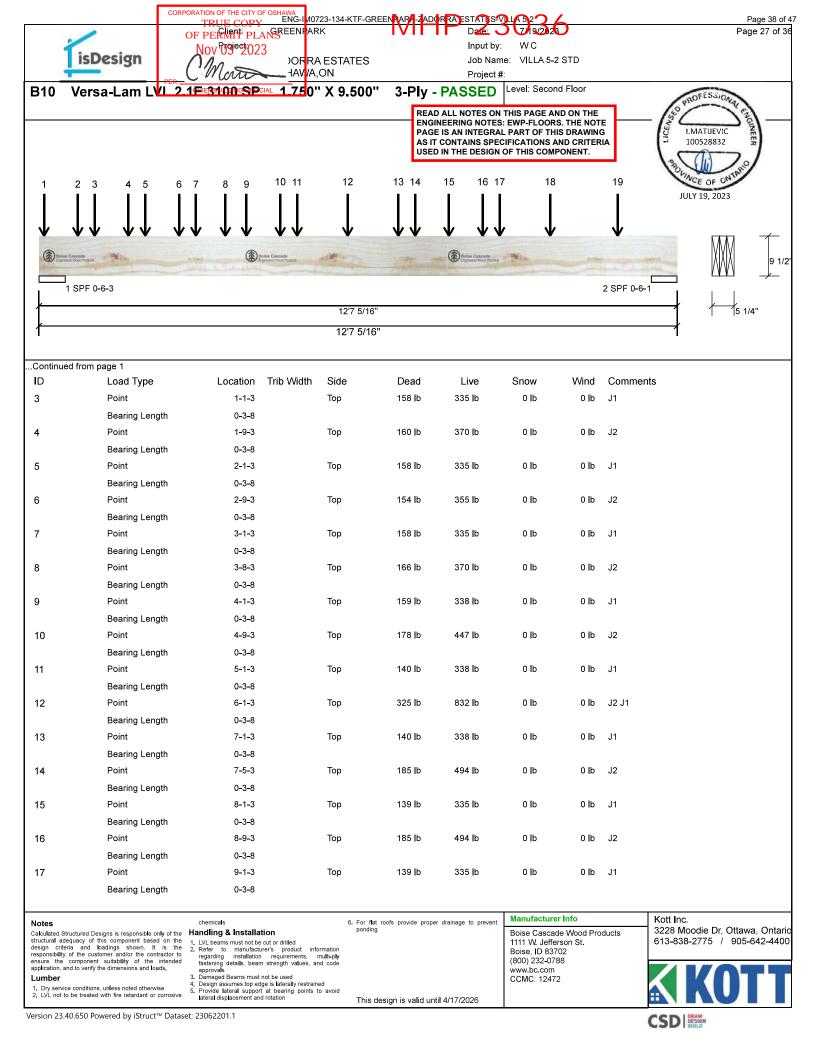
Manufacturer Info

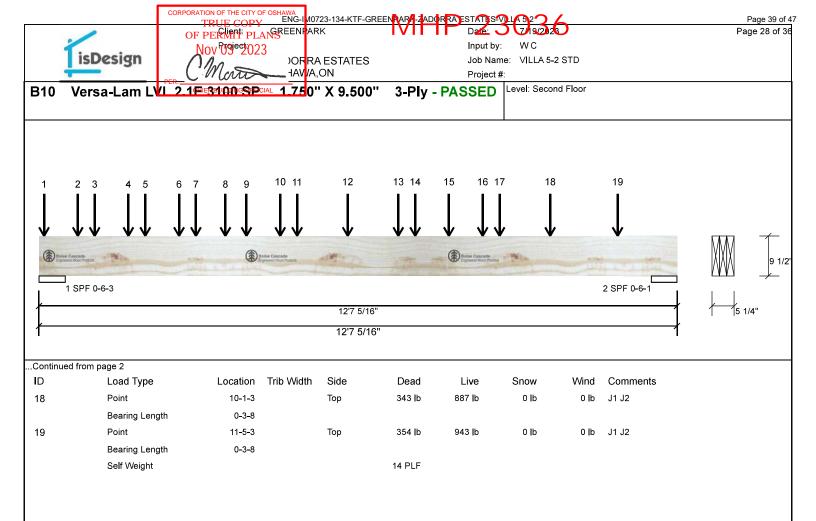
Boise Cascade Wood Products 1111 W. Jefferson St. Boise. ID 83702 (800) 232-0788 www.bc.com CCMC: 12472

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











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

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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Kott Inc.

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





CORPORATION OF THE CITY OF OSHAWA ENG-I M0723-134-KTF-GREEN ARM-ZADO RRA OF PERWIT PLANSREEN ARK Nov 03e2023 OF RA ESTATES

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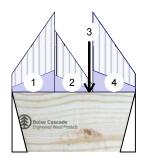
Job Name: VILLA 5-2 STD Project #:

NO,AVVAF

F12 Versa-Lam LVL

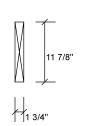
1.750" X 11.875" - PASSED

Level: Second Floor



1 Hanger (SUR/L1.81/9 (Min)) 0-3-0 2 Hange (SUR/L1.81/9 (Min)) 0-3-0

2' 7/16' 2' 7/16'



Snow

0

0

Wind

0

0

Member Information Unfactored Reactions UNPATTERNED lb (Uplift) Application: Floor (Residential) Type: Brg Direction Live Plies: Design Method: LSD Vertical 1 14 Moisture Condition: Dry **Building Code: NBCC 2015** 2 Vertical 17 OBC 2012(2020 Update) Deflection LL: 360 Load Sharing: Deflection TL: 240 Not Checked Deck: Importance: Normal - II Vibration: Not Checked General Load Floor Live: 40 PSF 15 PSF Dead: Analysis Results

Bearings	Bearings and Factored Reactions											
Bearing	Length	Dir.	Cap.	React D/L I b	Total	Ld. Case	Ld. Comb.					
1 - Hanger	3.000"	Vert	1%	14 / 21	35	L	1.25D+1.5L					
2 - Hanger	3.000"	Vert	1%	15 / 25	40	L	1.25D+1.5L					

OFESSIO

I.MATIJEVIC 100528832

E OF JULY 19, 2023 Dead

11

12

Location Allowed Analysis Actual Capacity Comb. Case Moment 16 ft-lb 1'3 5/16" 17696 ft-lb 0.001 (0%) 1.25D+1.5L L Unbraced 16 ft-lb 1'3 5/16" 17696 ft-lb 0.001 (0%) 1.25D+1.5L L 0.002 (0%) 1.25D+1.5L L 16 lb 9 9/16" 6608 lb Shear Perm Defl in 0.000 1' 3/4" 0.055 (L/360) 0.000 (0%) D Uniform (L/2911345) 0.000 1'1 3/16" 0.055 (L/360) 0.000 (0%) L LL Defl inch (L/2019394) TL Defl inch 0.000 1'1" 0.083 (L/240) 0.000 (0%) D+L (L/1192891)

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

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	4
USED IN THE DESIGN OF THIS COMPONENT.	

7 Bottom maot n	avo onoaumig auaonoa	or be continued	ny bracca.						
I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-8-7	0-1-4 to 0-5-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-8-7 to 1-4-0	0-4-4 to 0-0-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-3-5		Far Face	4 l b	10 l b	0 lb	0 l b	J7
4	Tie-In	1-4-0 to 2-0-7	0-5-7 to 0-1-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				6 PLF				

Notes

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

Handling & Installation

LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals Damaged Beams must not be used

Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

This design is valid until 4/17/2026

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Boise Cascade Wood Products 1111 W. Jefferson St. Boise. ID 83702

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

Kott Inc.





NO,AVVAF

OF RA ESTATES

WC Input by:

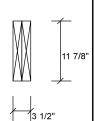
Job Name: VILLA 5-2 STD

Project #:

Versa-Lam L<mark>VL 2.1F 3400 SPCAL 1.75</mark>0" X 11.875"

2-Ply - PASSED Level: Second Floor





Member Infoi	rmation			Unfa	actored Rea	actions UN	IPATTERNED	lb (Upl	lift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead		Snow	Wind
Plies:	2	Design Method:	LSD	1	Vertical	31	76		0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2015	2	Vertical	70	56		0	0
Deflection LL:	360		OBC 2012(2020 Update)							
Deflection TL:	240	Load Sharing:	No							
Importance:	Normal - II	Deck:	Not Checked							
General Load		Vibration:	Not Checked							
Floor Live:	40 PSF			Bear	rings and Fa	actored Re	eactions			
Dead:	15 PSF			Bea	aring Length	Dir. Ca	ıp. React D/L İ b	Total	Ld. Case	Ld. Comb.
				1 - 3	SPF 5.188"	Vert '	107 / 0	107	Uniform	1.4D
				2 - :	SPF 4.125"	Vert 2	2% 71 / 105	176	L	1.25D+1.5L

Analysis Results

ı	Ana l ysis	Actua l	Location	Allowed	Capacity	Comb.	Case
l	Moment	34 ft-lb	10 1/8"	33268 ft-lb	0.001 (0%)	1.25D+1.5L	L
l	Unbraced	34 ft-lb	10 1/8"	33268 ft-lb	0.001 (0%)	1.25D+1.5L	L
l	Shear	109 lb	-(1/16")	12424 lb	0.009 (1%)	1.25D+1.5L	L
	Perm Defl in.	0.000 (L/2472310)	9 1/2"	0.023 (L/360)	0.000 (0%)	D	Uniform
	LL Defl inch	0.000 (L/1766968)	10 1/8"	0.023 (L/360)	0.000 (0%)	L	L
	TL Defl inch	0.000 (L/1038896)	10 1/8"	0.034 (L/240)	0.000 (0%)	D+L	L

PROFESSION LMATHEVIC 100528832 JULY 19, 2023

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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	0-0-0 to 0-4-1		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-4-1 to 0-11-14		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Point	0-10-2		Near Face	38 lb	101 l b	0 lb	0 l b	J8
	Self Weight				12 PLF				

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and badings 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.

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

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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Kott Inc.

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



NO,AVVAF

WC Input by:

Job Name: VILLA 5-2 STD

Project #

Versa-Lam LVI 2.15 3400 SPCIAL 1.750" X 11.875"

Level: Second Floor 2-Ply - PASSED

1 Hanger (LF3511) 0-2-0 2 Hanger (LF3511) 0-2-0

2

11'11 3/4' 11'11 3/4" 11 7/8'

Member Information

Application: Type: Plies: 2 Design Method: Moisture Condition: Dry **Building Code:** Deflection LL: 360 Deflection TL: 240 Deck: Importance: Normal - II General Load

Floor Live: 40 PSF 15 PSF Dead:

Floor (Residential)

NBCC 2015 OBC 2012(2020 Update)

Load Sharing: Not Checked

Bolse Cascade Engineeral Wood Products

Vibration: Not Checked

LSD

Unfactored	Reactions	UNPATTERNED Ib	(Uplift)
O I I I I I C C C C C C	I TCG C CI O I I S	OTHER PERSONS	(O P ()

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	328	193	0	0
2	Vertical	351	206	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L Ib	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	10%	241 / 492	733	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	10%	258 / 527	784	L	1.25D+1.5L

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JULY 19, 2023

READ ALL NOTES ON THIS PAGE AND ON THE

ENGINEERING NOTES: EWP-FLOORS. THE NOTE

Analysis Results

Analysis	Actua l	Location	Allowed	Capacity	Comb.	Case
Moment	2200 ft-lb	6' 1/4"	35392 ft-lb	0.062 (6%)	1.25D+1.5L	L
Unbraced	2200 ft-lb	6' 1/4"	35392 ft-lb	0.062 (6%)	1.25D+1.5L	L
Shear	782 lb	10'9 7/8"	13217 l b	0.059 (6%)	1.25D+1.5L	L
Perm Defl in.	0.014 (L/10012)	6' 1/16"	0.392 (L/360)	0.036 (4%)	D	Uniform
LL Defl inch	0.024 (L/5809)	6'	0.392 (L/360)	0.062 (6%)	L	L
TI Deflinch	0.038 (L/3676)	6'	0.588 (L/240)	0.065 (7%)	D+L	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-8-4		Far Face	23 lb	62 lb	0 l b	0 b	J6
2	Part. Uniform	1-4-4 to 10-8-4		Far Face	21 PLF	57 PLF	0 PLF	0 PLF	
3	Point	10-7-3		Near Face	11 l b	14 lb	0 lb	0 lb	F12

Continued on page 2...

Notes

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

Handling & Installation

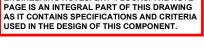
1. UVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used

Dariga Beams must not be used
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Boise Cascade Wood Products 1111 W. Jefferson St. Boise. ID 83702

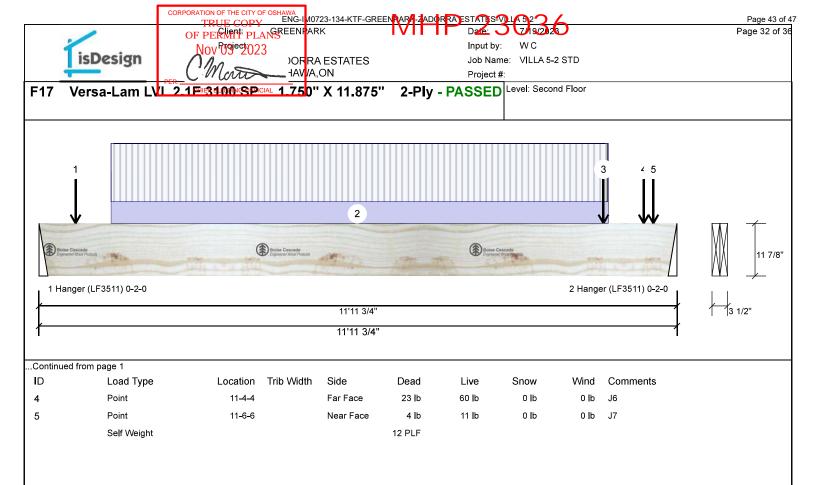
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Handling & Installation

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

Manufacturer Info

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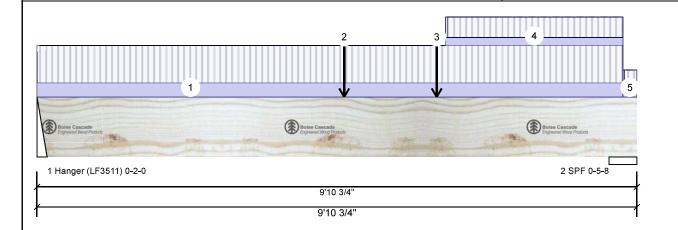
W C Input by: Job Name: VILLA 5-2 STD

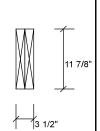
Project #:

Versa-Lam LVI 2 1F 2 100 SP FICIAL 750" X 11.875"

2-Ply - PASSED

Level: Second Floor





Me	em	ber	Inf	orm	ation
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Туре:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal - II
General Load	

40 PSF 15 PSF Application: Floor (Residential) Design Method: LSD

Building Code: NBCC 2015 OBC 2012(2020 Update) Load Sharing:

Deck: Not Checked Vibration: Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	257	179	0	0
2	Vertical	429	276	0	0

Bearings and Factored Reactions

Bearing Leng	gth Dir.	Cap.	React D/L I b	Total	Ld. Case	Ld. Comb.
1 - 2.000	0" Vert	8%	224 / 385	609	L	1.25D+1.5L
Hanger						
2 - SPF 5.500	0" Vert	8%	345 / 644	989	L	1.25D+1.5L

Analysis Results

Floor Live:

Dead:

Ana i ysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2373 ft-lb	6'7 1/8"	35392 ft-lb	0.067 (7%)	1.25D+1.5L	L
Unbraced	2373 ft-lb	6'7 1/8"	35392 ft-lb	0.067 (7%)	1.25D+1.5L	L
Shear	871 l b	8'5 3/8"	13217 l b	0.066 (7%)	1.25D+1.5L	L
Perm Defl in.	0.009 (L/11998)	5' 7/8"	0.313 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.014 (L/7852)	5'1 3/8"	0.313 (L/360)	0.046 (5%)	L	L
TL Defl inch	0.024 (L/4746)	5'1 3/16"	0.470 (L/240)	0.051 (5%)	D+L	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 9-8-0	0-8-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	5-0-13		Far Face	12 b	17 l b	0 lb	0 l b	F12
3	Point	6-7-2		Far Face	206 lb	351 lb	0 lb	0 lb	F17

Continued on page 2...

Notes

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Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

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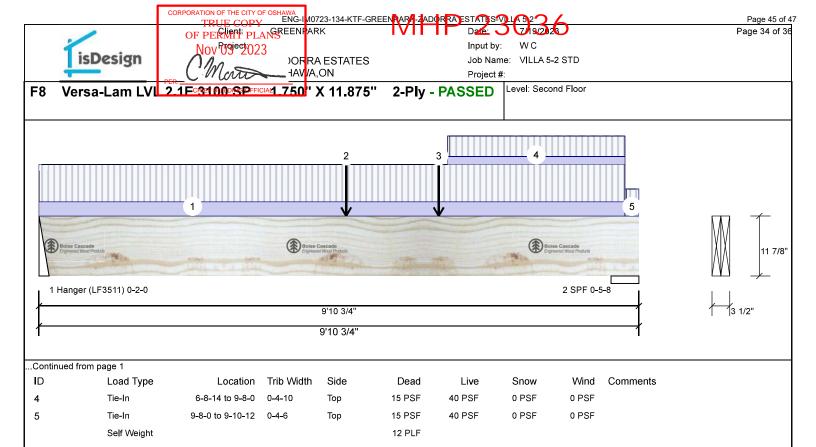
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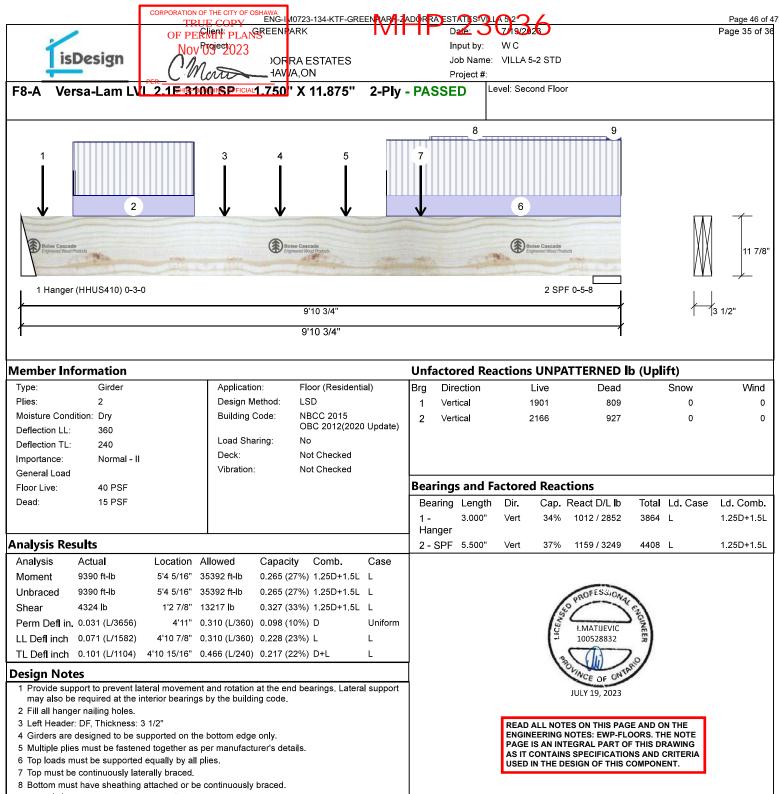
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9 Lateral slenderness ratio based on full section width.

I D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-4-5		Far Face	120 l b	310 l b	0 lb	0 lb	J2
2	Part. Uniform	0-10-5 to 2-10-5		Far Face	142 PLF	368 PLF	0 PLF	0 PLF	
3	Point	3-4-5		Far Face	137 l b	353 lb	0 lb	0 lb	J2
4	Point	4-3-5		Far Face	143 lb	368 lb	0 lb	0 lb	J2

Continued on page 2...

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Handling & Installation

LVI beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, multi-ply
fastening details, beam strength values, and code
approvals

Damaged Beams must not be used

Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

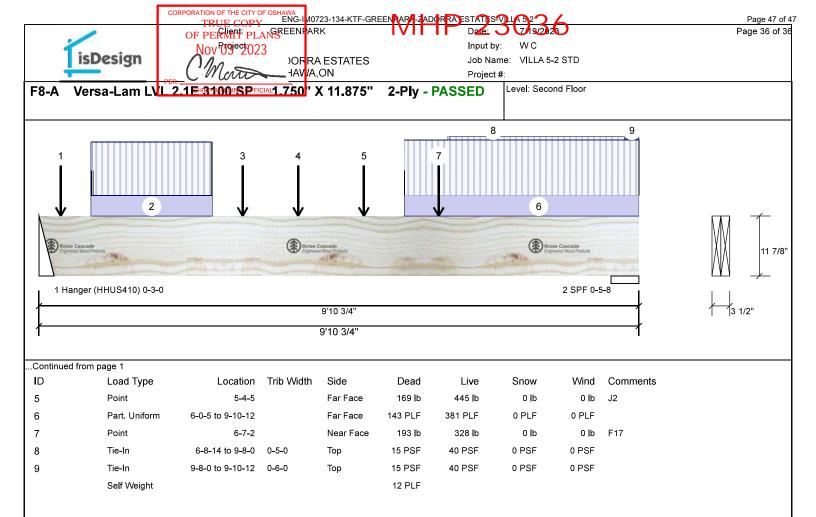
This design is valid until 4/17/2026

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