

Client: Project: Address: Weaver Homes

1/24/2025 Input by: Curtis Quick

Job Name: The Lauren H Beams

Page 1 of 14

Const

Ld. Comb.

D+S

0

0

Total Ld. Case

8383 L

7538 L

Project #:

Kerto-S LVL GDH (Side Load)

1.750" X 18.000"

3-Ply - PASSED

Reactions UNPATTERNED Ib (Uplift)

Dir.

Vert

Vert

Cap. React D/L lb

54%

4291 / 4093

3868 / 3670

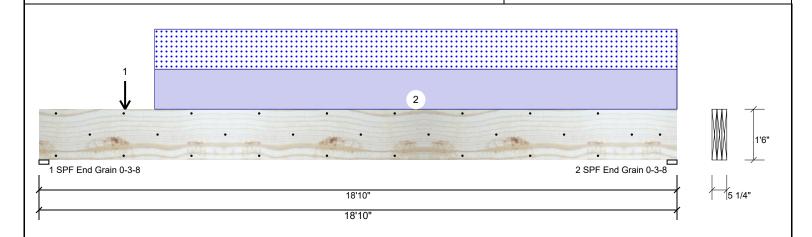
Bearing Length

1-SPF 3.500"

2 - SPF 3.500"

End Grain

End Grain



							(- p	,	
Туре:	Girder	Application:	Floor	Brg	Direction	Live	Dead	Snow	Wind
Plies:	3	Design Method:	ASD	1	Vertical	0	4291	4093	0
Moisture Condition	n: Dry	Building Code:	IBC 2012	2	Vertical	0	3868	3670	0
Deflection LL:	360	Load Sharing:	Yes						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal - II								
Temperature:	Temp <= 100°F								
·	•			Bea	rings				

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	35313 ft-lb	9' 3/8"	77108 ft-lb	0.458 (46%)	D+S	L
Unbraced	35313 ft-lb	9' 3/8"	35414 ft-lb	0.997 (100%)	D+S	L
Shear	8377 lb	1'9 1/2"	23184 lb	0.361 (36%)	D+S	L
LL Defl inch	0.229 (L/964)	9'3 3/8"	0.613 (L/360)	0.373 (37%)	S	L
TL Defl inch	0.470 (L/470)	9'3 3/8"	0.920 (L/240)	0.511 (51%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 3 rows of SDW22500 at 24" o.c. Maximum end distance not to exceed
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at a maximum of 5'7 1/4" o.c.
- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Point	2-6-8		Тор	1997 lb	0 lb	1997 lb	0 lb	0 lb	B4	
	Bearing Length	0-3-8									
2	Part. Uniform	3-5-0 to 18-10-0		Тор	374 PLF	0 PLF	374 PLF	0 PLF	0 PLF	B3	
	Self Weight				21 PI F						

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

- 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
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor

Client: Weaver Homes 1/24/2025 Page 2 of 14 Project: Input by: Curtis Quick isDesign Address: Job Name: The Lauren H Beams Project #: 1.750" X 18.000" 3-Ply - PASSED Level: Level Kerto-S LVL **GDH (Side Load)** 1 SPF End Grain 0-3-8 2 SPF End Grain 0-3-8 18'10" 18'10" Multi-Ply Analysis Fasten all plies using 3 rows of SDW22500 at 24" o.c.. Maximum end distance not to exceed 12". Capacity 0.0 % 0.0 PLF Yield Limit per Foot 382.5 PLF Yield Limit per Fastener 255.0 lb. См Yield Mode Lookup Edge Distance 1 1/2" Min. End Distance 6" Load Combination **Duration Factor** 1.00

Notes

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.

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

Handling & Installation

L. UVL 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

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

For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

Manufacturer Info

(800) 622-5850 www.metsawood.com/us

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851



Project: Address: Date: 1/24/2025 Input by:

Curtis Quick Job Name: The Lauren H Beams Page 3 of 14

Wind

Total Ld. Case

2346 L

2346 L

1196 / 1150

1150

1150

0

0

Const

Ld. Comb.

D+S

D+S

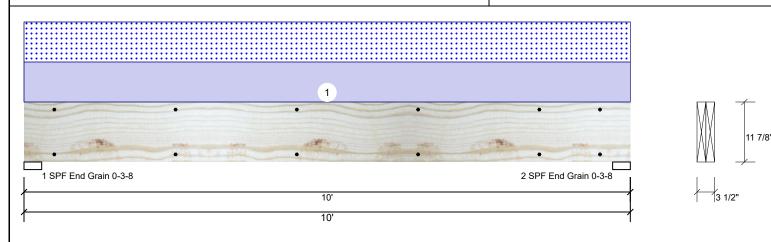
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0

Project #:

1.750" X 11.875" 2-Ply - PASSED **Kerto-S LVL** GDH-1

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Live Type: Floor Brg Direction Dead Snow Plies: 2 Design Method: ASD 0 1196 Vertical 1 Moisture Condition: Dry **Building Code:** IBC 2012 2 Vertical 0 1196 Deflection LL: 360 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal - II Temp <= 100°F Temperature: **Bearings** Bearing Length Dir. Cap. React D/L lb 1196 / 1150 1 - SPF 3.500" Vert End

Analysis Re	esults
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Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5340 ft-lb	5'	22897 ft-lb	0.233 (23%)	D+S	L
Unbraced	5340 ft-lb	5'	9721 ft-lb	0.549 (55%)	D+S	L
Shear	1754 lb	8'8 5/8"	10197 lb	0.172 (17%)	D+S	L
LL Defl inch	0.051 (L/2238)	5'	0.318 (L/360)	0.161 (16%)	S	L
TL Defl inch	0.104 (L/1097)	5'	0.477 (L/240)	0.219 (22%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings

i iop illaot	bo laterally braced at one	i boarnigo.									
8 Bottom m	ust be laterally braced at	end bearings.									
9 Lateral sle	enderness ratio based on										
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform			Тор	230 PLF	0 PLF	230 PLF	0 PLF	0 PLF	G1	
	Self Weight				9 PLF						

Grain

End Grain

2 - SPF 3.500"

Vert

23%

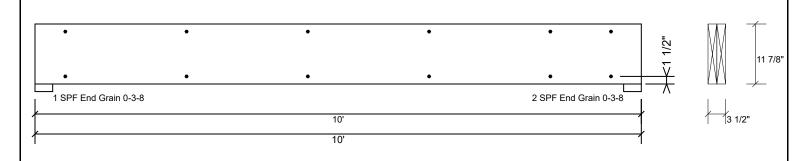
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions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

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- 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
- 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 Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850

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Client: Weaver Homes Date: 1/24/2025 Page 4 of 14 Project: Input by: Curtis Quick isDesign Address: Job Name: The Lauren H Beams Project #: 1.750" X 11.875" Level: Level **Kerto-S LVL** 2-Ply - PASSED GDH-1



Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12".

Capacity 0.0 % 0.0 PLF 255.0 PLF Yield Limit per Foot Yield Limit per Fastener 255.0 lb. См Yield Mode Lookup Edge Distance 1 1/2" Min. End Distance 6" Load Combination **Duration Factor** 1.00

Notes

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.

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 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- L. UVL beams must not be cut or drilled
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 Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

Manufacturer Info

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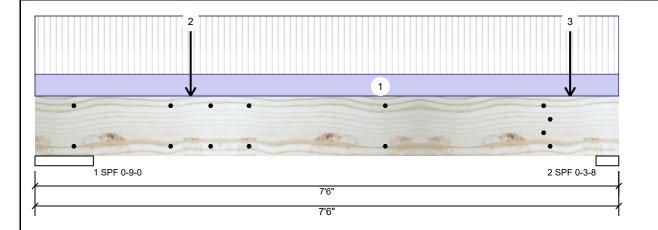
Project: Address: Date: 1/24/2025 Input by:

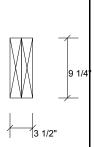
Curtis Quick Job Name: The Lauren H Beams

Project #:

1.750" X 9.250" 2-Ply - PASSED Kerto-S LVL BM1

Level: Level





Page 5 of 14

Member Information

Type: Plies: Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal - II Temperature: Temp <= 100°F

Application: Floor Design Method: ASD **Building Code:** IBC 2012

Load Sharing: No

Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	159	1025	937	0	0
2	Vertical	141	1318	1239	0	0

Bearings

Bearing	Length	Dir.	Cap. F	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	9.000"	Vert	15%	1025 / 937	1961	L	D+S
2 - SPF	3.500"	Vert	49%	1318 / 1239	2557	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2535 ft-lb	2'	14423 ft-lb	0.176 (18%)	D+S	L
Unbraced	2535 ft-lb	2'	10012 ft-lb	0.253 (25%)	D+S	L
Shear	2539 lb	6'5 1/4"	7943 lb	0.320 (32%)	D+S	L
LL Defl inch	0.022 (L/3655)	3'7 1/4"	0.219 (L/360)	0.098 (10%)	S	L
TL Defl inch	0.046 (L/1730)	3'7 9/16"	0.329 (L/240)	0.139 (14%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Simpson fasteners applied from a single side of the member use tip values where published.
- 6 Girders are designed to be supported on the bottom edge only.
- 7 Top loads must be supported equally by all plies.
- 8 Top must be laterally braced at end bearings.
- 9 Bottom must be laterally braced at end bearings.
- 10 Lateral slenderness ratio based on single ply width.

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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
- 6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Metsä Wood

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This design is valid until 6/28/2026





Project: Address:

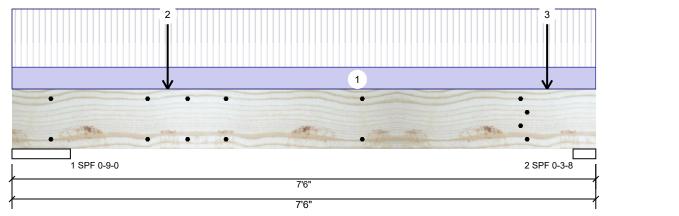
Date: 1/24/2025

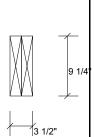
Input by: Curtis Quick Job Name: The Lauren H Beams

Project #:

Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED BM₁

Level: Level





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ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	15 PLF	40 PLF	0 PLF	0 PLF	0 PLF	Floor
2	Point	2-0-0		Far Face	1088 lb	0 lb	1088 lb	0 lb	0 lb	A6
3	Point	6-10-8		Far Face	1088 lb	0 lb	1088 lb	0 lb	0 lb	A6
	Self Weight				7 PLF					

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. 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

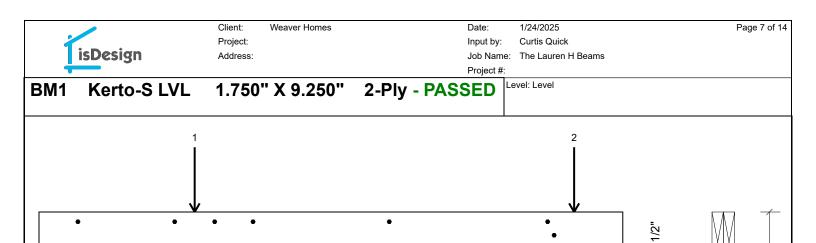
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

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Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851



Multi-Ply Analysis

. 1 SPF 0-9-0

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 12".

7'6" 7'6"

on a distance not to exceed	·- ·
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	255.0 PLF
Yield Limit per Fastener	255.0 lb.
См	1
Yield Mode	Lookup
Edge Distance	1 1/2"
Min. End Distance	6"
Load Combination	
Duration Factor	1.00

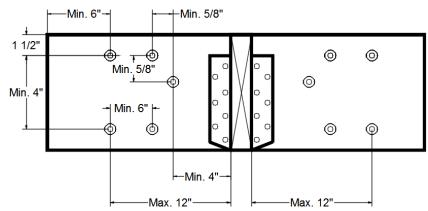
Concentrated Load

Fasten at concentrated side load at 2-0-0 with a minimum of (4) – SDW22338 in the pattern shown. All fasteners shall be installed with the head on the

side of the applied load.

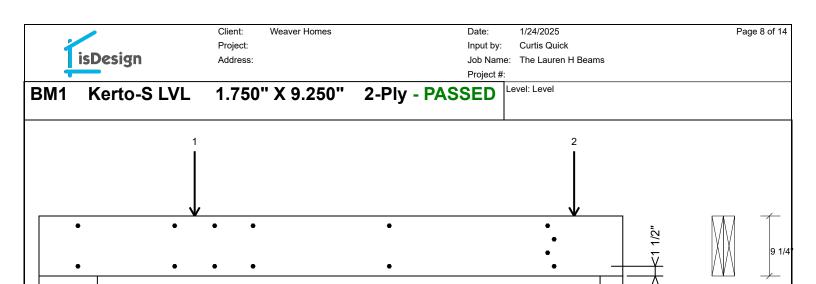
side of the applied load.	
Capacity	92.8 %
Load	1088.0lb.
Total Yield Limit	1173.0 lb.
Cg	1.0000
См	1
Yield Limit per Fastener	293.3 lb.
Yield Mode	Lookup
Load Combination	D+S
Duration Factor	1.15

Min/Max fastener distances for Concentrated Side Loads



2 SPF 0-3-8

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 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 1. Dry service conditions unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive. 2. LVL not to be treated with fire retardant or corrosive. 3. Chemicals 4. For flat roofs provide proper drainage to provent ponding 4. Dry service conditions, unless noted otherwise 5. Provide lateral support at bearing points to avoid lateral displacement and rotation 5. For flat roofs provide proper drainage to prevent ponding 4. Despit assumes top calculation 6. For flat roofs provide proper drainage to prevent ponding Metså Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us This design is valid until 6/28/2026



7'6' 7'6"

Multi-Ply Analysis

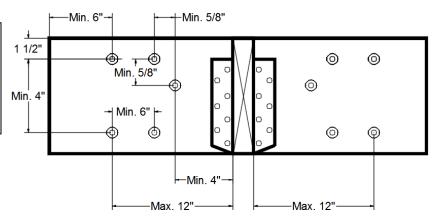
. 1 SPF 0-9-0

Concentrated Load

Fasten at concentrated side load at 6-10-8 with a minimum of (4) – SDW22338 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load

side of the applied load.	
Capacity	92.8 %
Load	1088.0lb.
Total Yield Limit	1173.0 lb.
Cg	1.0000
См	1
Yield Limit per Fastener	293.3 lb.
Yield Mode	Lookup
Load Combination	D+S
Duration Factor	1.15

Min/Max fastener distances for Concentrated Side Loads



2 SPF 0-3-8

Notes

NOtes

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

Handling & Installation

- I. 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
- 6. For flat roofs provide proper drainage to prevent ponding

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Metsä Wood

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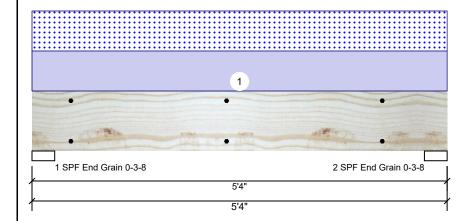
Project: Address: Date: 1/24/2025

Input by: Curtis Quick Job Name: The Lauren H Beams

Project #:

1.750" X 9.250" 2-Ply - PASSED **Kerto-S LVL** BM₂

Level: Level



Application:

Design Method:

Building Code:

Load Sharing:

Deck:

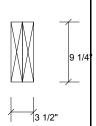
Floor

ASD

No

IBC 2012

Not Checked



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Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance:

Normal - II Temperature: Temp <= 100°F

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1678	1659	0	0
2	Vertical	0	1678	1659	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3717 ft-lb	2'8"	14423 ft-lb	0.258 (26%)	D+S	L
Unbraced	3717 ft-lb	2'8"	11811 ft-lb	0.315 (31%)	D+S	L
Shear	2013 lb	4'3 1/4"	7943 lb	0.253 (25%)	D+S	L
LL Defl inch	0.024 (L/2469)	2'8"	0.162 (L/360)	0.146 (15%)	S	L
TL Defl inch	0.048 (L/1227)	2'8"	0.244 (L/240)	0.196 (20%)	D+S	L

Bearings

Bearing L	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 3 End Grain	3.500"	Vert	32%	1678 / 1659	3337	L	D+S
2 - SPF 3 End Grain	3.500"	Vert	32%	1678 / 1659	3337	L	D+S

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.

Self Weight

- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	622 PLF	0 PLF	622 PLF	0 PLF	0 PLF	A3

Notes

NOtes

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Lumber

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
- Damaged Beams must not be used is miss that be used s top edge is laterally restrained support at bearing points to avoid nent and rotation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

7 PLF

Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

4. Donor-older conditions contain a set of all conditions	4.	Design assumes
 Dry service conditions, unless noted otherwise 	5	Provide lateral s
LVL not to be treated with fire retardant or corrosive	٥.	
E. EVE not to be treated with me retained to correcte		lateral displaceme

Version 23.40.705 Powered by iStruct™ Dataset: 24051401.1529

isDesign

Client: Weaver Homes

Project: Address:

Date: 1/24/2025

Input by: Curtis Quick Job Name: The Lauren H Beams

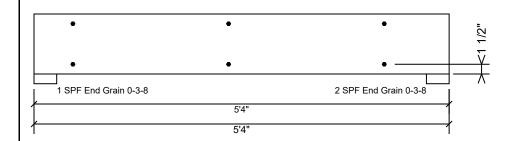
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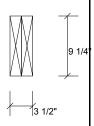
Kerto-S LVL BM2

1.750" X 9.250"

2-Ply - PASSED

Level: Level





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Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12".

rasteri ali piles asirig 2 rows	01 3D VV 22330 at 24 0.c IVIC
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	255.0 PLF
Yield Limit per Fastener	255.0 lb.
См	1
Yield Mode	Lookup
Edge Distance	1 1/2"
Min. End Distance	6"
Load Combination	
Duration Factor	1.00

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-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 6/28/2026

(800) 622-5850

Manufacturer Info

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 www.metsawood.com/us



Project: Address: Date: 1/24/2025

Input by: Curtis Quick Job Name: The Lauren H Beams

Project #:

1.750" X 9.250" 2-Ply - PASSED **Kerto-S LVL** BM₃

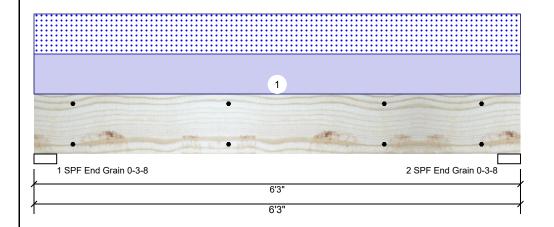
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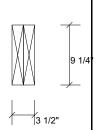
Reactions UNPATTERNED Ib (Uplift)

Live

0

0





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Member Information

Type:	Header
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal - II
T	T 4

Application: Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No **Header Supports** No Glass: Deck: Not Checked

Direction

Vertical

Vertical

Wind Dead Snow Const 2401 2378 0 0 2401 2378 0 0

Temperature:

Temp <= 100°F

Bearings

End Grain

Brg

1

2

Bearing	Length	Dir.	Cap. F	React D/L lb	Total	Ld. Case	Ld. Comb
1 - SPF End Grain	3.500"	Vert	46%	2401 / 2378	4779	L	D+S
2 - SPF	3 500"	Vert	46%	2401 / 2378	4779	1	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6412 ft-lb	3'1 1/2"	14423 ft-lb	0.445 (44%)	D+S	L
Unbraced	6412 ft-lb	3'1 1/2"	10779 ft-lb	0.595 (59%)	D+S	L
Shear	3160 lb	1' 3/4"	7943 lb	0.398 (40%)	D+S	L
LL Defl inch	0.053 (L/1309)	3'1 1/2"	0.193 (L/360)	0.275 (27%)	S	L
TL Defl inch	0.107 (L/652)	3'1 1/2"	0.290 (L/240)	0.368 (37%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.
- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	761 PLF	0 PLF	761 PLF	0 PLF	0 PLF	A2
	Self Weight				7 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
 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
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

isDesign

Client: Weaver Homes

Project: Address:

Date: 1/24/2025

Input by: Curtis Quick Job Name: The Lauren H Beams

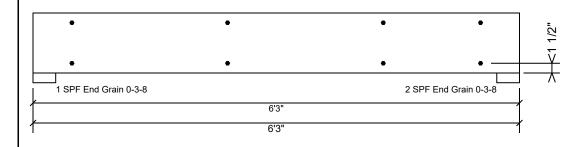
Project #:

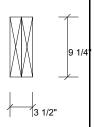
Kerto-S LVL BM₃

1.750" X 9.250"

2-Ply - PASSED

Level: Level





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Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12".

Capacity	0.0 %	
Load	0.0 PLF	
Yield Limit per Foot	255.0 PLF	
Yield Limit per Fastener	255.0 lb.	
CM	1	
Yield Mode	Lookup	
Edge Distance	1 1/2"	
Min. End Distance	6"	
Load Combination		
Duration Factor	1.00	

Notes

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.

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-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 6/28/2026

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info



Client: Project: Address: Weaver Homes

Weaver Home

Date: 1/24/2025

Input by: Curtis Quick

Job Name: The Lauren H Beams

Project #:

BM4 S-P-F #2 2.000" X 10.000" 2-Ply - PASSED

Level: Level

Reactions UNPATTERNED Ib (Uplift)

Vert

Vert

Live

0

0

35%

35%

Brg

1

2

Direction

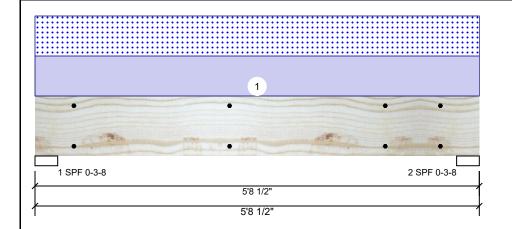
Vertical

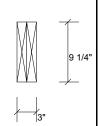
Vertical

1-SPF 3.500"

2 - SPF

3.500"





Const

0

0

Wind

0

0

D+S

D+S

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Member Information Type: Girder Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal - II Temperature: Temp <= 100°F</td>

Application: Floor
Design Method: ASD
Building Code: IBC 2012
Load Sharing: No
Deck: Not Checked

Bearing	S				
Bearing	Length	Dir.	Cap. React D/L lb	Total Ld. Case	Ld. Comb.

782 / 782

782 / 782

Dead

782

782

Snow

782

782

1564 L

1564 L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1888 ft-lb	2'10 1/4"	3946 ft-lb	0.478 (48%)	D+S	L
Unbraced	1888 ft-lb	2'10 1/4"	3629 ft-lb	0.520 (52%)	D+S	L
Shear	1404 lb	1' 3/4"	2872 lb	0.489 (49%)	D+S	L
LL Defl inch	0.017 (L/3726)	2'10 1/4"	0.175 (L/360)	0.097 (10%)	S	L
TL Defl inch	0.034 (L/1863)	2'10 1/4"	0.262 (L/240)	0.129 (13%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22300 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Far Face	274 PLF	0 PLF	274 PLF	0 PLF	0 PLF	A4

This design is valid until 6/28/2026

Manufacturer Info	

