

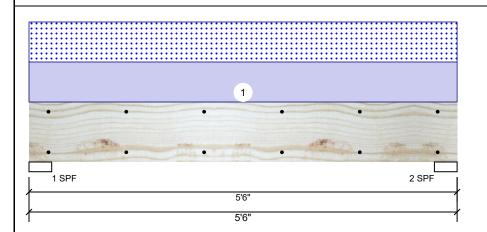
Client: Project: Address: Weaver Development

Date: 4/27/2020

Input by: David Landry Job Name: Lot 3 Stephenson Farm

Project #: J0420-1807 Level: Level

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



Application: Design Method:

Building Code:

Load Sharing:

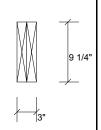
Deck:

ASD

No

IBC/IRC 2015

Not Checked



Page 1 of 8

Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal
Tanan anatura.	Taman -

Temperature: Temp <= 100°F

Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	919	919	0	0
2	0	919	919	0	0

Bearings

Bearing Length	Cap. Rea	ct D/L lb Total	Ld. Case	Ld. Comb.
1 - SPF 3.500"	41%	919 / 919 1837	L	D+S
2 SDE 3500"	11%	010 / 010 1837	1	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2122 ft-lb	2'9"	3946 ft-lb	0.538 (54%)	D+S	L
Unbraced	2122 ft-lb	2'9"	3654 ft-lb	0.581 (58%)	D+S	L
Shear	1169 lb	1'	2872 lb	0.407 (41%)	D+S	L
LL Defl inch	0.018 (L/3452)	2'9"	0.126 (L/480)	0.140 (14%)	S	L
TL Defl inch	0.035 (L/1726)	2'9"	0.168 (L/360)	0.210 (21%)	D+S	L

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 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	334 PLF	0 PLF	334 PLF	0 PLF	0 PLF	A4

This design is valid until 2/26/2023

соттесн

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS Manufacturer Info

Client: Project: Address: Weaver Development

4/27/2020

Date:

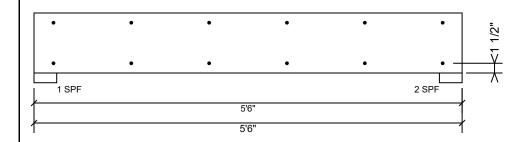
Input by:

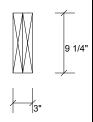
David Landry Job Name: Lot 3 Stephenson Farm

Project #: J0420-1807

2.000" X 10.000" 2-Ply - PASSED S-P-F #2 **BM1**

Level: Level





Page 2 of 8

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

1 3	,
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	157.4 PLF
Yield Limit per Fastener	78.7 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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Client: Weaver Development

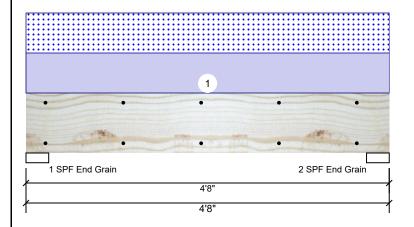
Project: Address: Date: 4/27/2020

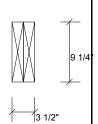
Input by: David Landry Job Name: Lot 3 Stephenson Farm

Project #: J0420-1807

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

Level: Level





Page 3 of 8

Member Information	Memb	er	Inf	orn	nat	tio	n
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Type:	Giraer
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal
Temperature:	Temp <= 100°F

Application: Floor Design Method: ASD **Building Code: IBC/IRC 2015** Load Sharing: No Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)							
Brg	Live	Dead	Snow	Wind	Const		
1	0	1526	1510	0	0		
2	0	1526	1510	0	0		

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2881 ft-lb	2'4"	14423 ft-lb	0.200 (20%)	D+S	L
Unbraced	2881 ft-lb	2'4"	12555 ft-lb	0.229 (23%)	D+S	L
Shear	1735 lb	1'	7943 lb	0.218 (22%)	D+S	L
LL Defl inch	0.015 (L/3370)	2'4 1/16"	0.105 (L/480)	0.140 (14%)	S	L
TL Defl inch	0.030 (L/1676)	2'4 1/16"	0.140 (L/360)	0.210 (21%)	D+S	L

Bearings			
Bearing Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF 3.500"	28% 1526 / 1510	3036 L	D+S
End			

Grain 28% 1526 / 1510 3036 L D+S 2 - SPF 3.500" End Grain

0 PLF

0 PLF

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

Uniform

Load Type ID Trib Width Side Dead 0.9 Comments Location Live 1 Snow 1.15 Wind 1.6 Const. 1.25

647 PLF

Top

Self Weight 7 PLF

1

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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

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

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This design is valid until 2/26/2023

0 PLF

647 PLF

Client: Weaver Development

Project: Address: Date: 4/27/2020

Input by: David Landry Job Name: Lot 3 Stephenson Farm

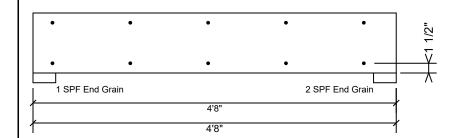
Project #: J0420-1807

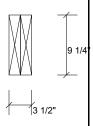
Kerto-S LVL BM₂

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 4 of 8

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

rasterrain pries asing 2 rov	vs or roa box rians (. 120x5) at
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
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

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

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This design is valid until 2/26/2023



Client:

Project: Address: Weaver Development

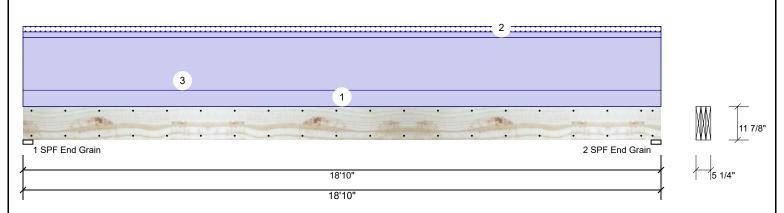
Date: 4/27/2020

Input by: David Landry Job Name: Lot 3 Stephenson Farm Page 5 of 8

Project #: J0420-1807

1.750" X 11.875" 3-Ply - PASSED **Kerto-S LVL GDH**

Level: Level



Member Infor	mation						Reaction	ns UNPAT	TERNE	D lb (Uplift))		
Type:	Girder		Application	on: F	loor		Brg	Live	Dead	d Snow	1	Vind	Const
Plies:	3		Design M	/lethod: A	SD		1	0	272	0 188		0	0
Moisture Conditio	n: Dry		Building	Code: IE	3C/IRC 2015		2	0	272	0 188		0	0
Deflection LL:	480		Load Sha	aring: Y	es								
Deflection TL:	360		Deck:	N	lot Checked								
Importance:	Normal												
Temperature:	Temp <= 100)°F											
							Bearing	s					
							Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
							1 - SPF End	3.500"	18%	2720 / 188	2908	L	D+S
Analysis Resul	ts						Grain						
Analysis A	tual	Location	Allowed	Capacity	Comb.	Case	2 - SPF End	3.500"	18%	2720 / 188	2908	L	D+S
Moment 12	191 ft-lb	9'5"	27954 ft-lb	0.436 (44%) D	Uniform	Grain						
Unbraced 13	035 ft-lb	9'5"	13056 ft-lb	0.998	D+S	1	——						

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12191 ft-lb	9'5"	27954 ft-lb	0.436 (44%)	D	Uniform
Unbraced	13035 ft-lb	9'5"	13056 ft-lb	0.998 (100%)	D+S	L
Shear	2368 lb	1'2 5/8"	11970 lb	0.198 (20%)	D	Uniform
LL Defl inch	0.037 (L/6029)	9'5 1/16"	0.459 (L/480)	0.080 (8%)	S	L
TL Defl inch	0.565 (L/390)	9'5 1/16"	0.612 (L/360)	0.920 (92%)	D+S	L

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 10'11 5/8" o.c.
- 6 Bottom braced at bearings.
- 7 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	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall	
2	Tie-In	0-0-0 to 18-10-0	1-0-0	Тор	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof	
3	Uniform			Тор	195 PLF	0 PLF	0 PLF	0 PLF	0 PLF	B1GE	
	Self Weight				14 PLF						

NOtes

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

 I. VIL 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

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

- For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS



This design is valid until 2/26/2023 CSD DESIGN

Client:

Project: Address: Weaver Development

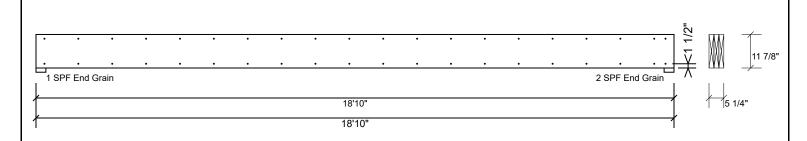
4/27/2020 Input by:

David Landry Job Name: Lot 3 Stephenson Farm Page 6 of 8

Project #: J0420-1807

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

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed

Capacity	0.0 %	
Load	0.0 PLF	
Yield Limit per Foot	163.7 PLF	
Yield Limit per Fastener	81.9 lb.	
Yield Mode	IV	
Edge Distance	1 1/2"	
Min. End Distance	3"	
Load Combination		
Duration Factor	1 00	

Notes

NOtes

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

Handling & Installation

- Informing & Installation

 I. VIL 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

 Design assumes top edge is laterally restrained is provide lateral support at bearing points to avoid lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

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This design is valid until 2/26/2023



Client: Weaver Development

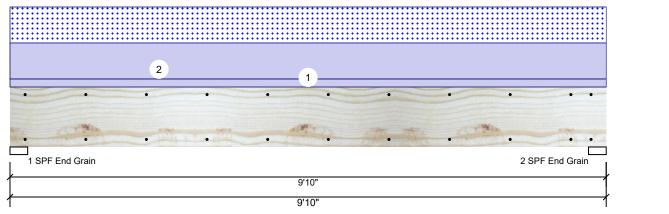
Project: Address: Date: 4/27/2020

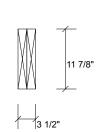
Input by: David Landry Job Name: Lot 3 Stephenson Farm

Project #: J0420-1807

1.750" X 11.875" 2-Ply - PASSED **Kerto-S LVL** GDH2

Level: Level





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Member Information

Type: Girder	
Plies: 2	
Moisture Condition: Dry	
Deflection LL: 480	
Deflection TL: 360	
Importance: Normal	
Temperature: Temp <= 100°	F

Application: Floor Design Method: ASD **Building Code: IBC/IRC 2015**

Load Sharing: No

Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1653	1313	0	0
2	0	1653	1313	0	0

Bearings

Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	28%	1653 / 1313	2966	L	D+S
2 - SPF End Grain	3.500"	28%	1653 / 1313	2966	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6627 ft-lb	4'11"	22897 ft-lb	0.289 (29%)	D+S	L
Unbraced	6627 ft-lb	4'11"	9857 ft-lb	0.672 (67%)	D+S	L
Shear	2231 lb	8'7 3/8"	10197 lb	0.219 (22%)	D+S	L
LL Defl inch	0.056 (L/2022)	4'11"	0.234 (L/480)	0.240 (24%)	S	L
TL Defl inch	0.126 (L/895)	4'11"	0.312 (L/360)	0.400 (40%)	D+S	L

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 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	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
2	Uniform			Тор	267 PLF	0 PLF	267 PLF	0 PLF	0 PLF	G1
	Self Weight				9 PLF					

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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
 2 Damaged Beams must not be used

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

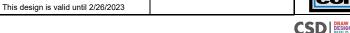
For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS





Client:

Project: Address: Weaver Development

Date: 4/27/2020

Input by: David Landry Job Name: Lot 3 Stephenson Farm Page 8 of 8

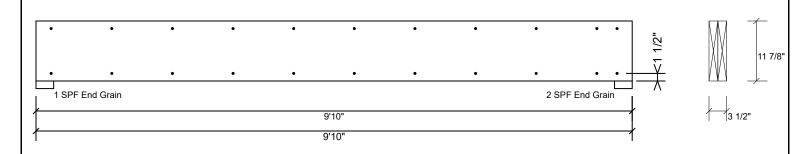
Project #: J0420-1807

Kerto-S LVL GDH₂

1.750" X 11.875"

2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
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

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Manufacturer Info

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This design is valid until 2/26/2023

