

Client: Ben Stou

Project: Address: Ben Stout Real Estate

Date: 1/7/2021

Input by: David Landry

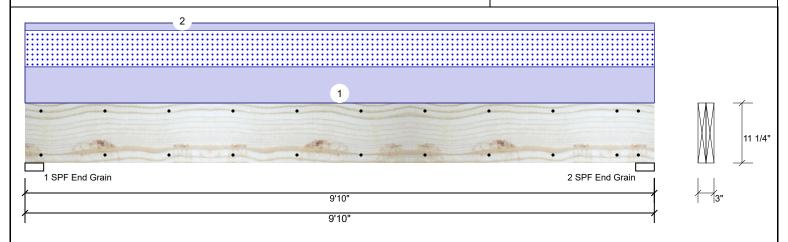
Job Name: Lot 12 Forest Ridge

Project #: J1220-5667

Page 1 of 6

GDH2 S-P-F #2 2.000" X 12.000" 2-Ply - PASSED

Level: Level



Member Info	ormation						Reaction	ns UNPAT	TERNE	D lb (Uplift)		
Type:	Girder		Applicati	ion: F	loor		Brg	Live	Dea	d Snow	,	Wind	Const
Plies:	2		Design I	Method: A	ASD		1	0	125	1033		0	0
Moisture Condi	tion: Dry		Building	Code: I	BC/IRC 2015		2	0	125	i4 1033		0	0
Deflection LL:	480		Load Sh	aring: N	No								
Deflection TL:	360		Deck:	1	Not Checked								
Importance:	Normal												
Temperature:	Temp <= 10	00°F											
							Bearing:	s					
							Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
							1 - SPF End	3.500"	51%	1254 / 1033	2286	L	D+S
Analysis Res	ults						Grain						
	Actual	Location	Allowed	Capacity	Comb.	Case	2 - SPF End	3.500"	51%	1254 / 1033	2286	L	D+S
Moment	5109 ft-lb	4'11"	5306 ft-lb	0.963 (96%	6) D+S	L	Grain						
Unbraced	5109 ft-lb	4'11"	5110 ft-lb	1.000	D+S	L							

L

L

LL Defl inch 0.073 (L/1536) TL Defl inch 0.162 (L/694)

Shear

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".

1'2" 3493 lb

(100%)

4'11" 0.234 (L/480) 0.310 (31%) S

4'11" 0.312 (L/360) 0.520 (52%) D+S

0.499 (50%) D+S

- 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 3'1 1/8" o.c.
- 6 Bottom braced at bearings.

1744 lb

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	210 PLF	0 PLF	210 PLF	0 PLF	0 PLF	G1
2	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above

This design is valid until 2/26/2023

Manufacturer Info

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

CSD DESIGN

Client: Ben Stout Real Estate Date: 1/7/2021 Page 2 of 6 Project: Input by: David Landry isDesign Address: Job Name: Lot 12 Forest Ridge Project #: J1220-5667 Level: Level 2.000" X 12.000" 2-Ply - PASSED S-P-F #2 GDH₂ 1 SPF End Grain 2 SPF End Grain 9'10" 9'10' 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 PLF Load 157.4 PLF Yield Limit per Foot

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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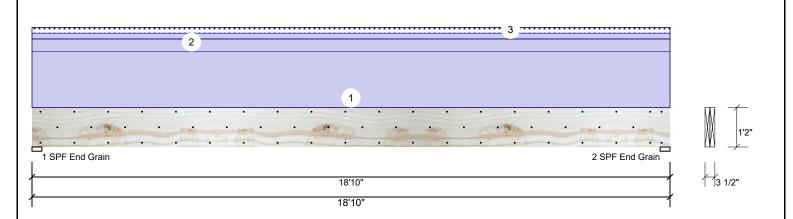
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Page 3 of 6

1.750" X 14.000" **Kerto-S LVL** 2-Ply - PASSED **GDH**

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Brg Live Wind Type: Floor Dead Snow Const Plies: 2 Design Method: ASD 0 2551 0 188 0 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 0 2551 188 0 0 Deflection LL: 480 Load Sharing: No Deflection TL: 360 Deck: Not Checked Importance: Normal Temp <= 100°F Temperature: **Bearings** Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 3.500" 2551 / 188 2739 L End Grain Analysis Results 2 - SPF 3.500" 26% 2551 / 188 2739 L D+S End

Grain

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11433 ft-lb	9'5"	24299 ft-lb	0.471 (47%)	D	Uniform
Unbraced	12277 ft-lb	9'5"	12280 ft-lb	1.000 (100%)	D+S	L
Shear	2173 lb	1'4 3/4"	9408 lb	0.231 (23%)	D	Uniform
LL Defl inch	0.034 (L/6479)	9'5 1/16"	0.459 (L/480)	0.070 (7%)	S	L
TL Defl inch	0.495 (L/445)	9'5 1/16"	0.612 (L/360)	0.810 (81%)	D+S	L

Design Notes

- 1 Fasten all plies using 3 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 8'6" o.c.
- 6 Bottom braced at bearings.

/ Lateral Sterius	erriess ratio based of									
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	195 PLF	0 PLF	0 PLF	0 PLF	0 PLF	B1GE
2	Uniform			Тор	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
3	Tie-In	0-0-0 to 18-10-0	1-0-0	Тор	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	
	Self Weight				11 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
- 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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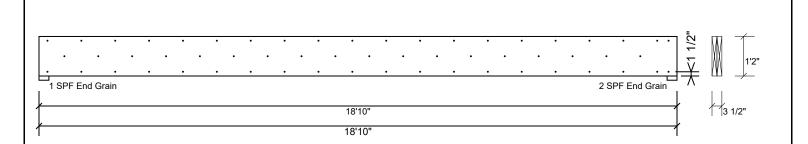
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Page 4 of 6

Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED **GDH**

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 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	245.6 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

- 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

For flat roofs provide proper drainage to prevent ponding

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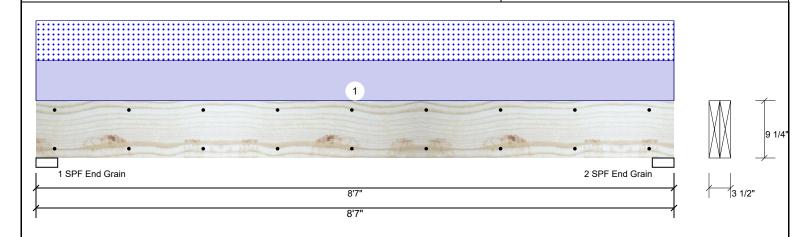
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Page 5 of 6

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

Level: Level



Member Inforn	nation			Reactio	ons UNPAT	TTERNED IL	(Uplift)
Type:	Girder	Application:	Floor	Brg	Live	Dead	Snow
Plies:	2	Design Method:	ASD	1	0	1636	1605
Moisture Condition:	: Dry	Building Code:	IBC/IRC 2015	2	0	1636	1605
Deflection LL:	480	Load Sharing:	No				
Deflection TL:	360	Deck:	Not Checked				
Importance:	Normal						
Temperature:	Temp <= 100°F						
				Bearing	gs		
				Bearing	g Length	Cap. Rea	ct D/L lb
				1 000	3 500"	20% 16	36 / 1605

Analysis	Results
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Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6232 ft-lb	4'3 1/2"	14423 ft-lb	0.432 (43%)	D+S	L
Unbraced	6232 ft-lb	4'3 1/2"	8689 ft-lb	0.717 (72%)	D+S	L
Shear	2486 lb	7'7"	7943 lb	0.313 (31%)	D+S	L
LL Defl inch	0.090 (L/1078)	4'3 9/16"	0.203 (L/480)	0.450 (45%)	S	L
TL Defl inch	0.183 (L/534)	4'3 9/16"	0.271 (L/360)	0.670 (67%)	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.

	Bearing	s					
	Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
	1 - SPF End Grain	3.500"	30%	1636 / 1605	3241	L	D+S
_	2 - SPF End Grain	3.500"	30%	1636 / 1605	3241	L	D+S

Wind

0

0

Const

0

0

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	374 PLF	0 PLF	374 PLF	0 PLF	0 PLF	B2

Self Weight 7 PLF

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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

This design is valid until 2/26/2023

6. For flat roofs provide proper drainage to prevent ponding

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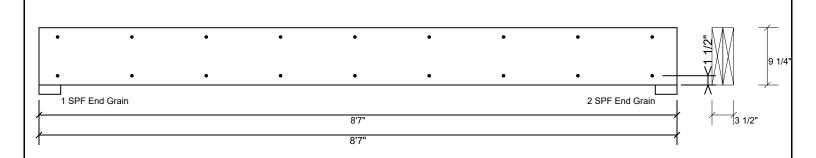
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Page 6 of 6

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

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

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 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

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