

Client:

Project: Address: Weaver Development, Inc.

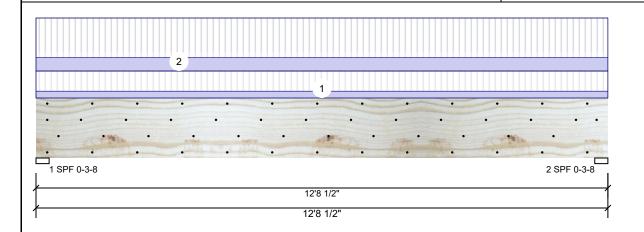
Date: 1/18/2024

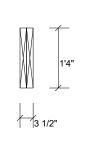
Input by: David Landry Job Name: Lot 29 West Preserve

Project #: J0124-0159

1.750" X 16.000" **Kerto-S LVL** 2-Ply - PASSED BM₁

Level: Level





Page 1 of 4

Member Information

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

Application: Floor Design Method: ASD **Building Code: IBC/IRC 2015** Load Sharing: No Not Checked Deck: Ceiling: Gypsum 1/2"

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	3635	1299	0	0	0
2	Vertical	3635	1299	0	0	0

Bearings

Bearing L	ength	Dir.	Cap. R	teact D/L lb	Total	Ld. Case	Ld. Comb.
1-SPF 3	3.500"	Vert	95%	1299 / 3635	4934	L	D+L
2-SPF 3	3.500"	Vert	95%	1299 / 3635	4934	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	14614 ft-lb	6'4 1/4"	34565 ft-lb	0.423 (42%)	D+L	L
Unbraced	14614 ft-lb	6'4 1/4"	14620 ft-lb	1.000 (100%)	D+L	L
Shear	4707 lb	1'7 1/2"	11947 lb	0.394 (39%)	D+L	L
LL Defl inch	0.144 (L/1021)	6'4 1/4"	0.307 (L/480)	0.470 (47%)	L	L
TL Defl inch	0.196 (L/752)	6'4 1/4"	0.409 (L/360)	0.479 (48%)	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 Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top must be laterally braced at a maximum of 8' 15/16" o.c.
- 6 Lateral slenderness ratio based on single ply width

	Lateral die nach 1000 ratio bacca en eingle	o pry wiatri.									
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform			Near Face	65 PLF	193 PLF	0 PLF	0 PLF	0 PLF	F6	
2	Uniform			Far Face	127 PLF	379 PLF	0 PLF	0 PLF	0 PLF	F5	
	Self Weight				12 PLF						

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

- 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

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

Manufacturer Info

Comtech, Inc. 1001 S Reilly Rd., NC 28314 (910) 864-8787





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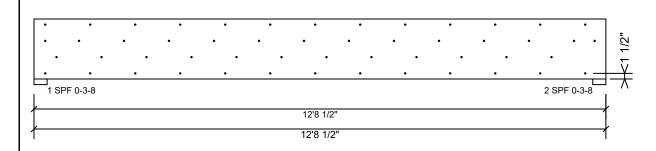
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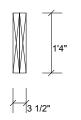
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Multi-Ply Analysis

Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

rasterran phes asing rrows	7 01 100 BOX 110115 (.120X5) 01
Capacity	77.3 %
Load	253.0 PLF
Yield Limit per Foot	327.4 PLF
Yield Limit per Fastener	81.9 lb.
См	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+L
Duration Factor	1.00

Notes

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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

For flat roofs provide proper drainage to prevent ponding

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Wind

1986 / 188

2174 L

0

0

Const

Ld. Comb.

D+S

D+S

0

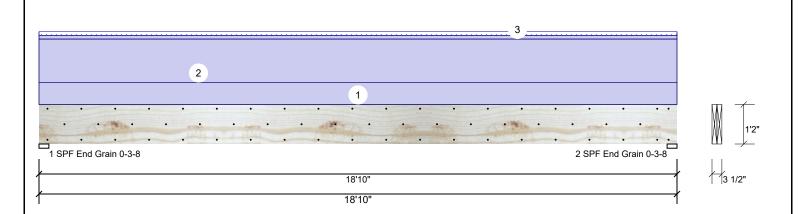
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Project #: J0124-0159

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

Address:

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Type: Floor Brg Direction Live Dead Snow Plies: 2 Design Method: ASD 0 1986 Vertical 188 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 Vertical 0 1986 188 Deflection LL: 480 Load Sharing: No Deflection TL: 360 Not Checked Deck: Importance: Normal - II Ceiling: Gypsum 1/2" Temp <= 100°F Temperature: **Bearings** Bearing Length Dir. Cap. React D/L lb Total Ld. Case 1 - SPF 3.500" Vert 21% 1986 / 188 2174 I End

Analysis R	esults
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Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8901 ft-lb	9'5"	24299 ft-lb	0.366 (37%)	D	Uniform
Unbraced	9745 ft-lb	9'5"	9767 ft-lb	0.998 (100%)	D+S	L
Shear	1691 lb	1'5 1/2"	9408 lb	0.180 (18%)	D	Uniform
LL Defl inch	0.034 (L/6479)	9'5 1/16"	0.459 (L/480)	0.074 (7%)	S	L
TL Defl inch	0.393 (L/561)	9'5 1/16"	0.612 (L/360)	0.641 (64%)	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 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 11'4 1/2" o.c.

7 Lateral slenderness ratio based on single bly width

/ Latera	i sieriuerriess ralio baseu	on single ply widin.								
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	Uniform			Тор	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	B1GE
3	Tie-In Far	0-0-0 to 18-10-0	1-0-0	Тор	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof
3	Tie-In Near	0-0-0 to 18-10-0	0-0-0	Тор	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof
	Self Weight				11 PLF					

Grain 2 - SPF 3.500"

End Grain Vert

21%

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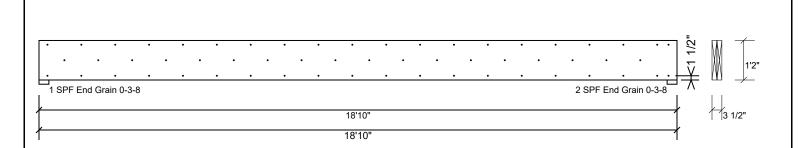
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Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED **GDH**

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.	
См	1	
Yield Mode	IV	
Edge Distance	1 1/2"	
Min. End Distance	3"	
Load Combination		
Duration Factor	1.00	

Notes

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