

Watermark Homes

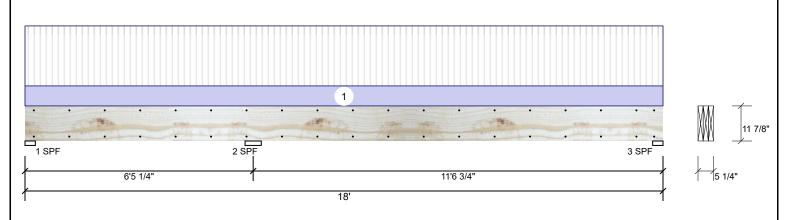
Project:

Address: Lot 35 Oak Haven 3/1/2022

Input by: Anthony Williams Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

Kerto-S LVL 1.750" X 11.875" 3-Ply - PASSED BM1





Member Infor	rmation			Rea	ctions UNP	ATTERN	IED II	b (Uplift)			
Type:	Girder	Application:	Roof	Brg	Direction	Live		Dead	Snow	Wind	Const
Plies:	3	Slope:	0/12	1	Vertical	1162		409	0	0	0
Moisture Conditio	n: Dry	Design Method:	ASD	2	Vertical	8927		3140	0	0	0
Deflection LL:	480	Building Code:	IBC 2012	3	Vertical	3771		1326	0	0	0
Deflection TL:	360	Load Sharing:	Yes								
Importance:	Normal - II	Deck:	Not Checked								
Temperature:	Temp <= 100°F										
				Bea	rings						
				Bea	aring Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 -	SPF 3.500"	Vert	35%	376 / 2355	2731 (-734)	L_	D+L(D+L)
Analysis Resul	lts			2 -	SPF 5.500"	Vert	100%	3191 / 9072	12263	LL	D+L

3 - SPF 3.500"

Analysis	Results
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Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-12572 ft-lb	6'5 1/4"	31060 ft-lb	0.405 (40%)	D+L	LL
Unbraced	-12572 ft-lb	6'5 1/4"	12575 ft-lb	1.000 (100%)	D+L	LL
Pos Moment	11556 ft-lb	13' 11/16"	31060 ft-lb	0.372 (37%)	D+L	_L
Unbraced	11556 ft-lb	13' 11/16"	11563 ft-lb	0.999 (100%)	D+L	_L
Shear	5753 lb	7'7 7/8"	13300 lb	0.433 (43%)	D+L	LL
LL Defl inch	0.148 (L/920)	12'5 1/2"	0.283 (L/480)	0.522 (52%)	L	_L
TI Deflinch	0.196 (L/695)	12'5 13/16"	0.378 (L/360)	0.518 (52%)	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 2 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 Tie-down connection required at bearing 1 for uplift 734 lb (Combination D+L, Load Case _L).
- 7 Top must be laterally braced at a maximum of 12'7 5/16" o.c.
- 8 Bottom must be laterally braced at a maximum of 11'4 11/16" o.c.
- 9 Lateral slenderness ratio based on single ply width.

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
- 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

Handling & Installation

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

66%

Vert

1308 / 3835

5143 L

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Page 1 of 14

D+I





Client: Watermark Homes

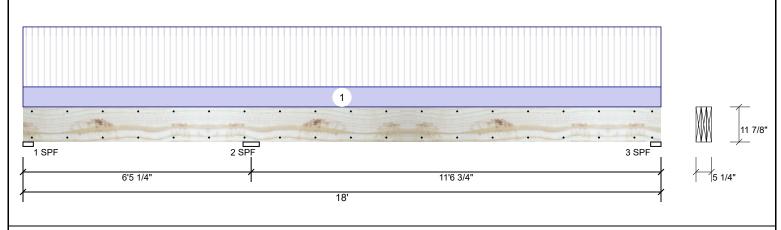
Project:

Address: Lot 35 Oak Haven Date: 3/1/2022

Input by: Anthony Williams Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

1.750" X 11.875" 3-Ply - PASSED **Kerto-S LVL** BM1

_evel: Level



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	257 PLF	770 PLF	0 PLF	0 PLF	0 PLF	F04	
	Self Weight				14 PLF						

Notes

NOtes
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 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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Page 2 of 14





Project:

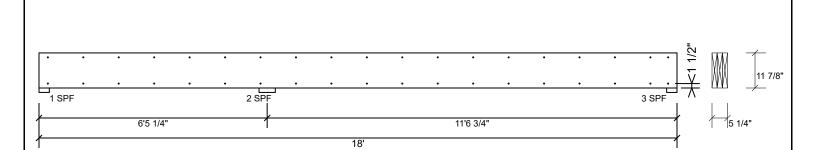
Watermark Homes

Address: Lot 35 Oak Haven 3/1/2022

Input by: Anthony Williams Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

evel: Level

1.750" X 11.875" **Kerto-S LVL** 3-Ply - PASSED BM₁



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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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

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- For flat roofs provide proper drainage to prevent ponding

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Page 3 of 14





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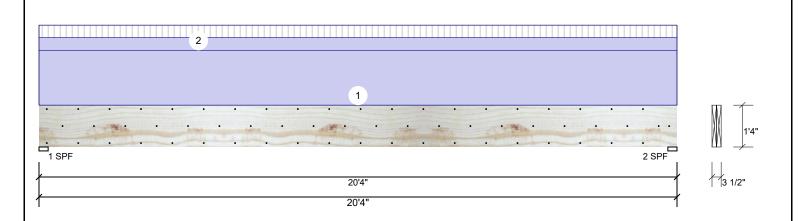
Project:

Address: Lot 35 Oak Haven 3/1/2022

Input by: Anthony Williams Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

1.750" X 16.000" **Kerto-S LVL** 2-Ply - PASSED BM₃

Level: Level



Member Info	rmation	Rea	Reactions UNPATTERNED lb (Uplift)							
Туре:	Girder	Application:	Roof	Brg	Direction	Live	Dead	Snov	w Win	d Const
Plies:	2	Slope:	0/12	1	Vertical	407	2312		0	0 0
Moisture Condition	on: Dry	Design Method:	ASD	2	Vertical	407	2312		0	0 0
Deflection LL:	480	Building Code:	IBC 2012							
Deflection TL:	360	Load Sharing:	No							
Importance:	Normal - II	Deck:	Not Checked							
Temperature:	Temp <= 100°F									
				Bea	rings					
				Bea	aring Length	Dir.	Cap. React	D/L lb To	otal Ld. Cas	e Ld. Comb.
				1 -	SPF 3.500"	Vert	52% 2312	2/407 2	719 L	D+L
				2 -	SPF 3.500"	Vert	52% 2312	2 / 407 2	719 L	D+L

Analysis Results

	•						
ſ	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
l	Moment	13233 ft-lb	10'2"	34565 ft-lb	0.383 (38%)	D+L	L
	Unbraced	13233 ft-lb	10'2"	13276 ft-lb	0.997 (100%)	D+L	L
l	Shear	2301 lb	1'7 1/2"	11947 lb	0.193 (19%)	D+L	L
l	LL Defl inch	0.063 (L/3784)	10'2 1/16"	0.497 (L/480)	0.127 (13%)	L	L
I	TL Defl inch	0.422 (L/566)	10'2 1/16"	0.663 (L/360)	0.636 (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 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 8'11 1/4" o.c.
- 7 Bottom must be laterally braced at end bearings.

o Lateral sieriderness 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	175 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Тор	40 PLF	40 PLF	0 PLF	0 PLF	0 PLF	ROOF
	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
- 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
- 6. For flat roofs provide proper drainage to prevent ponding

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Page 4 of 14

BM₃

Kerto-S LVL

Client:

Project: Address:

Watermark Homes

Lot 35 Oak Haven

Date: 3/1/2022

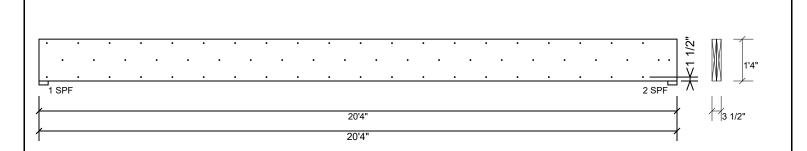
Input by: Anthony Williams Job Name: Lot 35 Oak Haven

J0322-1085/1086

Page 5 of 14

Project #: 1.750" X 16.000" 2-Ply - PASSED

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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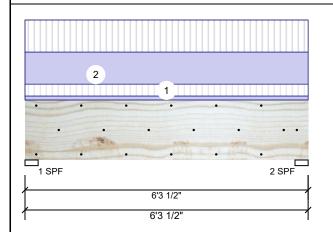
Project:

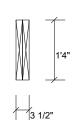
Address: Lot 35 Oak Haven Date: 3/1/2022

Input by: Anthony Williams Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

1.750" X 16.000" 2-Ply - PASSED **Kerto-S LVL** BM4

Level: Level





Page 6 of 14

Member Information

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

Application: Slope: 0/12 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	1746	1471	0	0	0
2	Vertical	1746	1471	0	0	0

Bearings

Bearing Length	Dir.	Cap. F	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF 3.500"	Vert	62%	1471 / 1746	3216	L	D+L	
2 - SPF 3.500"	Vert	62%	1471 / 1746	3216	L	D+L	

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4380 ft-lb	3'1 3/4"	34565 ft-lb	0.127 (13%)	D+L	L
Unbraced	4380 ft-lb	3'1 3/4"	19678 ft-lb	0.223 (22%)	D+L	L
Shear	1572 lb	1'7 1/2"	11947 lb	0.132 (13%)	D+L	L
LL Defl inch	0.011 (L/6369)	3'1 3/4"	0.146 (L/480)	0.075 (8%)	L	L
TL Defl inch	0.020 (L/3457)	3'1 3/4"	0.195 (L/360)	0.104 (10%)	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 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 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			Тор	50 PLF	150 PLF	0 PLF	0 PLF	0 PLF	FLOOR
2	Uniform			Тор	405 PLF	405 PLF	0 PLF	0 PLF	0 PLF	J1
	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
- 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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Project:

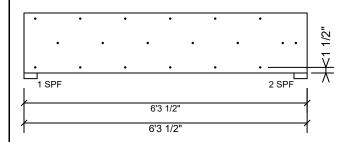
Address: Lot 35 Oak Haven Date: 3/1/2022

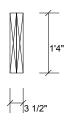
Input by: Anthony Williams Job Name: Lot 35 Oak Haven

Project #: J0322-1085/1086

1.750" X 16.000" 2-Ply - PASSED **Kerto-S LVL** BM4

Level: Level





Page 7 of 14

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".

rasteri ali piles usirig 3 re	JWS OF TOO BOX Halls (.120x3) at
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

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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

This design is valid until 3/30/2024

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Manufacturer Info

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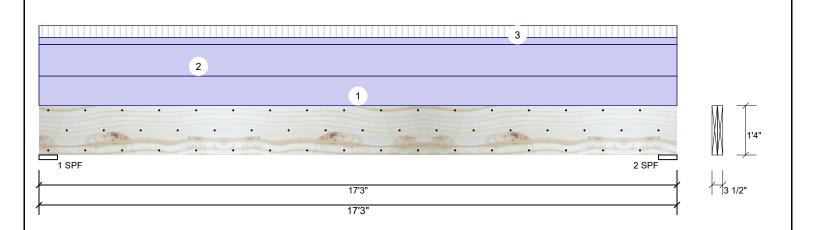
Project:

Address: Lot 35 Oak Haven 3/1/2022

Input by: Anthony Williams Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

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

Level: Level



Member Info	Member Information					ATTERN	NED Ib	(Uplift)			
Type:	Girder	Application:	Roof	Brg	Direction	Live	e 1	Dead	Snow	Wind	Const
Plies:	2	Slope:	0/12	1	Vertical	518	3	3083	0	0	0
Moisture Condition	on: Dry	Design Method:	ASD	2	Vertical	518	3	3083	0	0	0
Deflection LL:	480	Building Code:	IBC 2012								
Deflection TL:	600	Load Sharing:	No								
Importance:	Normal - II	Deck:	Not Checked								
Temperature:	Temp <= 100°F										
				Bear	rings						
				Bea	aring Length	Dir.	Cap. F	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 -	SPF 6.000"	Vert	40%	3083 / 518	3600	L	D+L
				2 -	SPF 6.000"	Vert	40%	3083 / 518	3600	L	D+L

Analysis Results

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Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	14027 ft-lb	8'7 1/2"	34565 ft-lb	0.406 (41%)	D+L	L
Unbraced	14027 ft-lb	8'7 1/2"	14050 ft-lb	0.998 (100%)	D+L	L
Shear	2852 lb	1'10"	11947 lb	0.239 (24%)	D+L	L
LL Defl inch	0.045 (L/4374)	8'7 9/16"	0.410 (L/480)	0.110 (11%)	L	L
TL Defl inch	0.313 (L/629)	8'7 9/16"	0.328 (L/600)	0.954 (95%)	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 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 8'5 1/16" o.c.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width

6 Edicial sicilaciness 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	150 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Тор	160 PLF	0 PLF	0 PLF	0 PLF	0 PLF	BRICK
3	Uniform			Тор	35 PLF	60 PLF	0 PLF	0 PLF	0 PLF	Roof/Floor
	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
- 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
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- 6. For flat roofs provide proper drainage to prevent ponding

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Page 8 of 14



Client:

Watermark Homes

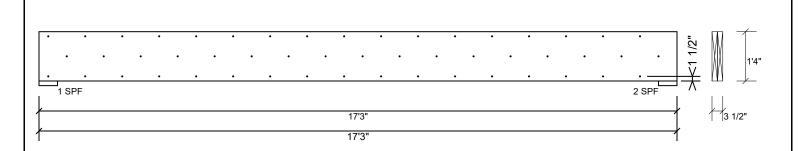
Project:

Address: Lot 35 Oak Haven 3/1/2022

Input by: Anthony Williams Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

Kerto-S LVL 1.750" X 16.000" 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".

1 3		•	,
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
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

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Page 9 of 14





Client: Watermark Homes

Project: Address:

Lot 35 Oak Haven

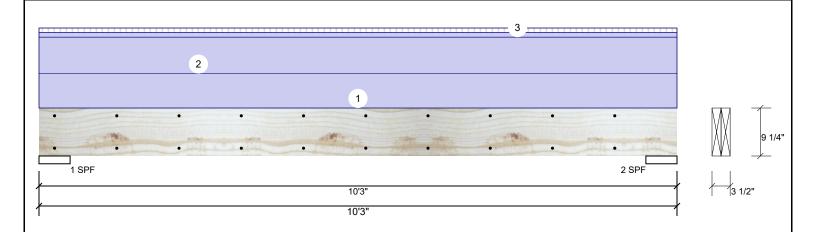
3/1/2022

Input by: Anthony Williams Page 10 of 14

Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

1.750" X 9.250" 2-Ply - PASSED GDH-9 Kerto-S LVL

Level: Level



Member Info	Member Information						Reactions UNPATTERNED Ib (Uplift)							
Type:	Girder	Application:	Roof	Brg	Direction	Live	Dead	Snow	Wind	Const				
Plies:	2	Slope:	0/12	1	Vertical	103	1728	0	0	0				
Moisture Condition	on: Dry	Design Method:	ASD	2	Vertical	103	1728	0	0	0				
Deflection LL:	480	Building Code:	IBC 2012											
Deflection TL:	600	Load Sharing:	No											
Importance:	Normal - II	Deck:	Not Checked											
Temperature:	Temp <= 100°F			ļ										
				Bea	rings									
				Bea	aring Length	Dir.	Cap. React D	/L lb Tot	al Ld. Case	Ld. Comb.				
				1 -	SPF 6.000"	Vert	21% 1728	103 18	31 L	D+L				
					CDE 6,000"	Vort	210/ 1729	102 10	21	D±I				

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3705 ft-lb	5'1 1/2"	11288 ft-lb	0.328 (33%)	D	Uniform
Unbraced	3924 ft-lb	5'1 1/2"	7663 ft-lb	0.512 (51%)	D+L	L
Shear	1305 lb	8'11 3/4"	6216 lb	0.210 (21%)	D	Uniform
LL Defl inch	0.008 (L/13536)	5'1 1/2"	0.234 (L/480)	0.035 (4%)	L	L
TL Defl inch	0.148 (L/758)	5'1 1/2"	0.188 (L/600)	0.792 (79%)	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 2 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 end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

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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	150 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
2	Uniform			Тор	160 PLF	0 PLF	0 PLF	0 PLF	0 PLF	BRICK
3	Uniform			Тор	20 PLF	20 PLF	0 PLF	0 PLF	0 PLF	Roof
	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

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
 Damagee 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

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





Client:

Project: Address:

Watermark Homes

Lot 35 Oak Haven

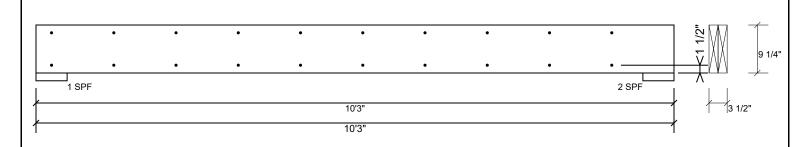
Date: 3/1/2022

Input by: Anthony Williams Page 11 of 14

Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

Kerto-S LVL 2-Ply - PASSED GDH-9 1.750" X 9.250"

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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- 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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Manufacturer Info

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Sliding Door Header

Client:

Watermark Homes

Project: Address:

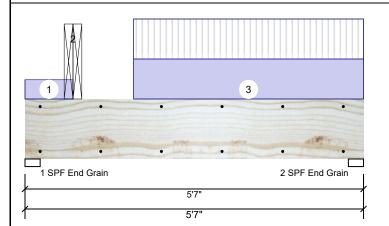
Lot 35 Oak Haven

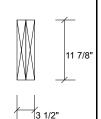
Date: 3/1/2022

Input by: Anthony Williams Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

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

Level: Level





Page 12 of 14

Mem			

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

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	684	2489	0	0	0
2	Vertical	709	960	0	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2327 ft-lb	2'5 3/16"	19911 ft-lb	0.117 (12%)	D+L	L
Unbraced	2327 ft-lb	2'5 3/16"	15061 ft-lb	0.155 (15%)	D+L	L
Shear	1840 lb	1'2 7/8"	8867 lb	0.208 (21%)	D+L	L
LL Defl inch	0.007 (L/9597)	2'9 7/8"	0.174 (L/360)	0.038 (4%)	L	L
TL Defl inch	0.018 (L/3391)	2'7 1/2"	0.260 (L/240)	0.071 (7%)	D+L	L

Bearings

Bearing Le	ngth Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 3.0 End Grain	00" Vert	35%	2489 / 684	3173	L	D+L
2 - SPF 3.0 End Grain	00" Vert	18%	960 / 709	1669	L	D+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 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.
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- 8 Lateral slenderness ratio based on single ply width.

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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	Part. Uniform	0-0-0 to 0-9-8		Тор	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Load	
2	Point	0-9-8		Тор	2312 lb	407 lb	0 lb	0 lb	0 lb	BM3 Brg 1	
	Bearing Length	0-3-8									
3	Part. Uniform	1-9-8 to 5-7-0		Тор	260 PLF	260 PLF	0 PLF	0 PLF	0 PLF	C2	
	Self Weight				9 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 3/30/2024

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Manufacturer Info

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Client: Address:

Watermark Homes

Project:

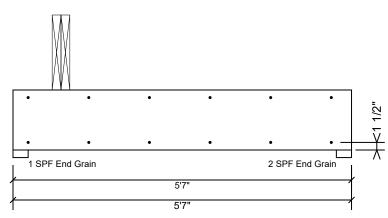
Lot 35 Oak Haven

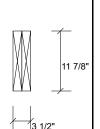
Date: 3/1/2022

Input by: Anthony Williams Job Name: Lot 35 Oak Haven Project #: J0322-1085/1086

2-Ply - PASSED Level: Level







Page 13 of 14

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".

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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

- For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

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Client: Address:

Watermark Homes

Project:

Lot 35 Oak Haven

3/1/2022

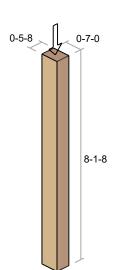
Project #:

Input by: Anthony Williams Job Name: Lot 35 Oak Haven

J0322-1085/1086

5.500" X 7.000" - PASSED **Anthony Power Column C1**

Level: Level



Design Method: ASD Building Code: IBC 2012 Importance: Normal - II

Application: Column Free Standing

Service Condition: Dry Load Sharing:

Design OK. Design Notes

1. Axial load eccentricity of 1/6 side dimension in both cross-section axes, each axis analyzed separately.

Page 14 of 14

- 2. Designed in accordance with NDS 2012, ASCE7 and
- 3. Top and bottom ends of the member must be supported to prevent lateral movement and rotation.
- 4. Holes and notches are not allowed in member.

Analysis Design Properties

Allulysis	ysis					Design i roperties				
	Actual	Allowed	Capacity	Load Combination	E:	1900000	Fc:	2300		
Slenderness	17.7	50.0	35%		Ey:	1900000	Fv:	0		
Axial (lb.)	12263	71395	17%	D+L	Fb:	2100	Fvy:	0		
Axial + Bending	0.20	1	20%	D+L	Fby:	2300				
Bearing SPF (lb.)	12348	16363	75%	D+L						
LL Deflection	0.056 (in.) L/1731	0.271 (in.) L/360	21%	L						

Applied Loads

טו	Load Type	Location	Dead 0.9	Live i	S110W 1.15	vvina 1.6	Const. 1.25	Comments
Axial								
1	Point	8-1-8	3191 lb	9072 lb	0 lb	0 lb	0 lb	BM1

Manufacturer Info

Anthony Forest Products Co 309 North Washington El Dorado, AR 71730 (800) 221-2326 www.anthonyforest.com

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

