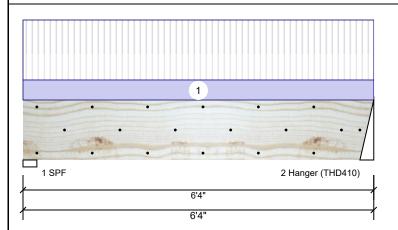


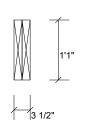
1/31/2020 Designer: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 13.000" 2-Ply - PASSED **Kerto-S LVL**

Level: Level





Page 1 of 16

Member Inform	ation
Туре:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal

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 Dead Snow Wind Const Live 513 0 0 1441 0 1 2 1441 513 0 0 0

Bearings

Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 3.000" 513 / 1441 D+L 1954 L 3.000" 2 -21% 513 / 1441 1954 L D+L Hanger

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2739 ft-lb	3'2"	23540 ft-lb	0.116 (12%)	D+L	L
Unbraced	2739 ft-lb	3'2"	15248 ft-lb	0.180 (18%)	D+L	L
Shear	1170 lb	1'3 1/4"	9707 lb	0.121 (12%)	D+L	L
LL Defl inch	0.015 (L/4710)	3'2"	0.149 (L/480)	0.100 (10%)	L	L
TL Defl inch	0.021 (L/3473)	3'2"	0.199 (L/360)	0.100 (10%)	D+L	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 Fill all hanger nailing holes.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at 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	152 PLF	455 PLF	0 PLF	0 PLF	0 PLF	F03 FL. TRUSSES	
	Self Weight				10 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 12/11/2021

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

Manufacturer Info







1/31/2020 Designer:

Neal Baggett Job Name: Beaumont

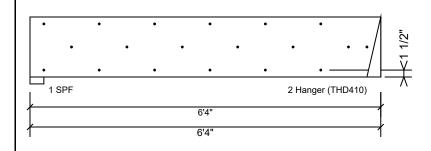
Level: Level

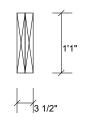
Project #:

Kerto-S LVL

1.750" X 13.000"

2-Ply - PASSED





Page 2 of 16

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"

li asteri ali piles usirig 5 rows	01 100 box 11alis (.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

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 12/11/2021

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Manufacturer Info





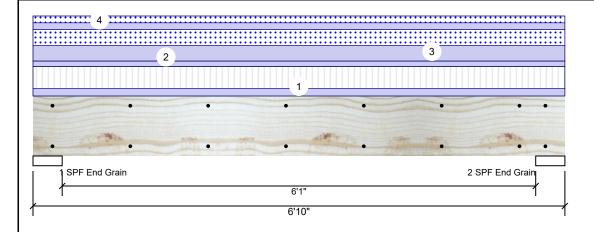


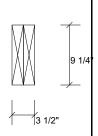
1/31/2020 Designer: Neal Baggett Job Name: Beaumont

Project #:

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

Level: Level





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Member Information

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

Reaction	s UNPAT	(Uplift)			
Brg	Live	Dead	Snow	Wind	Const
1	1548	2508	1579	0	0
2	1548	2508	1579	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6844 ft-lb	3'5"	14423 ft-lb	0.474 (47%)	D+0.75(L+S)	L
Unbraced	6844 ft-lb	3'5"	10370 ft-lb	0.660 (66%)	D+0.75(L+S)	L
Shear	3503 lb	1'1"	7943 lb	0.441 (44%)	D+0.75(L+S)	L
LL Defl inch	0.061 (L/1212)	3'5"	0.155 (L/480)	0.400 (40%)	0.75(L+S)	L
TL Defl inch	0.127 (L/586)	3'5"	0.207 (L/360)	0.610 (61%)	D+0.75(L+S)	L

Bearings

Bearing Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF 4.500" End Grain	35% 2508 / 2345	4853 L	D+0.75(L+S)
2 - SPF 4.500" End Grain	35% 2508 / 2345	4853 L	D+0.75(L+S)

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	151 PLF	453 PLF	0 PLF	0 PLF	0 PLF	F03 FL. TRUSSES	
2	Uniform			Тор	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE	
3	Uniform			Тор	322 PLF	0 PLF	322 PLF	0 PLF	0 PLF	A03 RF. TRUSSES	
4	Uniform			Far Face	140 PLF	0 PLF	140 PLF	0 PLF	0 PLF	M01 RF. TRUSSES	
	Self Weight				7 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

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

This design is valid until 12/11/2021

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Manufacturer Info





Client: Project: Address:

1/31/2020 Designer:

Neal Baggett Job Name: Beaumont

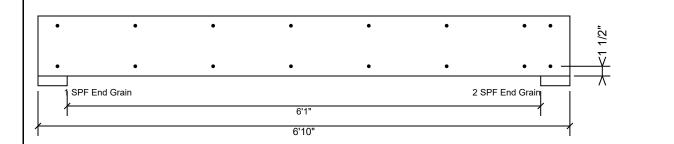
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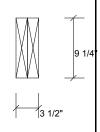
Kerto-S LVL

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 4 of 16

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"

rasterrail piles asing E	TOWS OF TOO BOX Halls (.TEOXS) at
Capacity	85.5 %
Load	140.0 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	D+S
Duration Factor	1.15

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





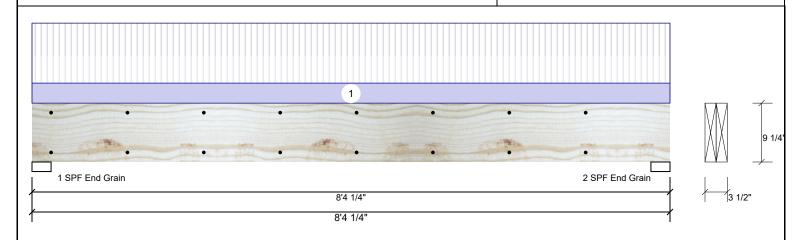


Date: 1/31/2020 Designer: Neal Baggett Job Name: Beaumont

Project #:

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

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Brg Dead Snow Wind Type: Floor Live Plies: 2 Design Method: ASD 3254 1116 0 0 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 3254 1116 0 0 Deflection LL: 480 Load Sharing: No Deflection TL: 360 Deck: Not Checked Importance: Normal Temperature: Temp <= 100°F

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Allalysis	Actual	Location	Allowed	Capacity	COITID.	Casc
Moment	8326 ft-lb	4'2 1/8"	12542 ft-lb	0.664 (66%)	D+L	L
Unbraced	8326 ft-lb	4'2 1/8"	8569 ft-lb	0.972 (97%)	D+L	L
Shear	3367 lb	7'4 3/4"	6907 lb	0.488 (49%)	D+L	L
LL Defl inch	0.176 (L/544)	4'2 3/16"	0.199 (L/480)	0.880 (88%)	L	L
TL Defl inch	0.236 (L/405)	4'2 3/16"	0.266 (L/360)	0.890 (89%)	D+L	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.

Bearings	5						
Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF End Grain	3.000"	48%	1116 / 3254	4370	L	D+L	
2 - SPF End	3.000"	48%	1116 / 3254	4370	L	D+L	

Load Type ID Trib Width Side Dead 0.9 Live 1 Wind 1.6 Const. 1.25 Location Snow 1.15 Comments 1 Uniform Top 260 PLF 779 PLF 0 PLF 0 PLF 0 PLF F01 FL. TRUSSES

> 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

- 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 12/11/2021

Grain

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Manufacturer Info

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



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Const

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Client: Project: Address:

1/31/2020 Designer: Neal Baggett Job Name: Beaumont

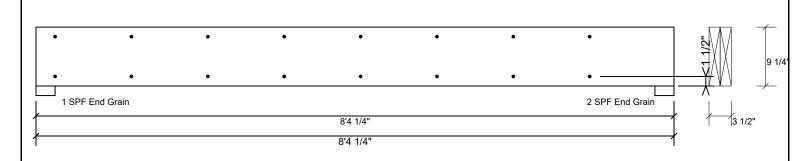
Project #:

Kerto-S LVL

1.750" X 9.250"

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 Load 0.0 PLF 163.7 PLF Yield Limit per Foot Yield Limit per Fastener 81.9 lb. IV Yield Mode 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

- L. UV. 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

This design is valid until 12/11/2021

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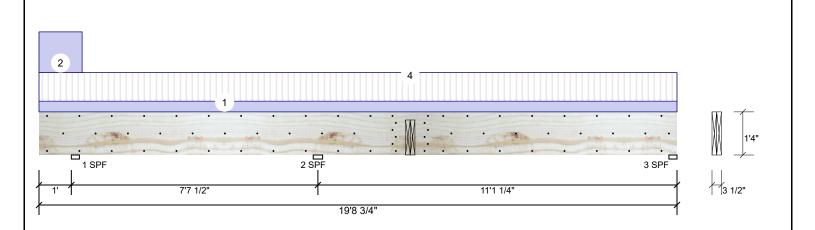
Client: Project: Address:

1/31/2020 Designer: Neal Baggett Job Name: Beaumont

Project #:

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

Level: Level



3

621

Application: Type: Floor Plies: 2 Design Method: ASD Moisture Condition: Dry **Building Code: IBC/IRC 2015** Deflection LL: 480 Load Sharing: No Deflection TL: 360 Deck: Not Checked Importance: Normal Temperature: Temp <= 100°F

Reaction	Reactions UNPATTERNED lb (Uplift)										
Brg	Live	Dead	Snow	Wind	Const						
1	94	243	0	0	0						
2	2305	973	0	0	0						

287

Bearings Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 3.000" 13% 230 / 366 596 (-63) LL D+L 2 - SPF 3.500" 65% 994 / 2364 3358 _LL D+I 3 - SPF 3.000" 20% 278 / 620 899 L_L D+L

0

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-3543 ft-lb	8'7 1/2"	34565 ft-lb	0.103 (10%)	D+L	_LL
Unbraced	-3543 ft-lb	8'7 1/2"	15635 ft-lb	0.227 (23%)	D+L	_LL
Pos Moment	3140 ft-lb	12'4 11/16"	34565 ft-lb	0.091 (9%)	D+L	L_L
Unbraced	3140 ft-lb	12'4 11/16"	12544 ft-lb	0.250 (25%)	D+L	L_L
Shear	2274 lb	9'11 1/2"	11947 lb	0.190 (19%)	D+L	_LL
LL Defl inch	0.027 (L/4886)	13'5 15/16"	0.273 (L/480)	0.100 (10%)	L	L_L
TL Defl inch	0.037 (L/3498)	13'6 1/2"	0.364 (L/360)	0.100 (10%)	D+L	L_L
LL Cant	0.001 (2L/16363)	Lt Cant	0.200 (2L/480)	0.007 (1%)	L	L_L
TL Cant	0.002 (2L/12927)	Lt Cant	0.300 (2L/360)	0.006 (1%)	D+L	L_L

Design Notes

- 1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is
- 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 63 lb (Combination D+L, Load Case L).
- 7 Top braced at bearings.
- 8 Bottom braced at bearings.
- 9 Lateral slenderness ratio based on single ply width.

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

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Client: Project: Address:

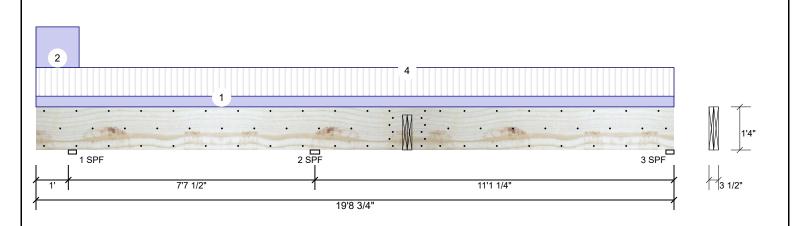
1/31/2020 Designer: Neal Baggett

Job Name: Beaumont

Project #:

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

Level: 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	30 PLF	80 PLF	0 PLF	0 PLF	0 PLF	FL. LOADING
2	Part. Uniform	0-0-0 to 1-4-0		Тор	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE
4	Point	11-5-12		Far Face	513 lb	1441 lb	0 lb	0 lb	0 lb	7'-FB. @ FOYER Brg 2
	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

- 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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1/31/2020 Designer: Neal Baggett Job Name: Beaumont

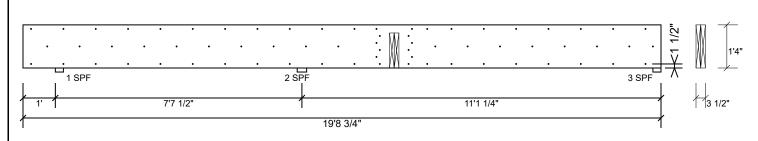
Level: Level

Project #:

Kerto-S LVL

1.750" X 16.000"

2-Ply - PASSED



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 6"

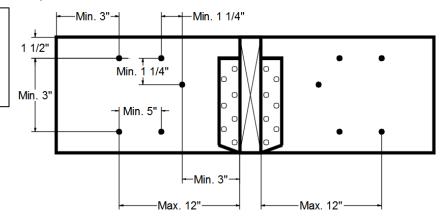
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Concentrated Load

Fasten at concentrated side load at 11-5-12 with a minimum of (12) - 10d Box nails (.128x3") in the pattern shown.

P 4		
Capacity	99.5 %	
Load	977.1lb.	
Total Yield Limit	982.0 lb.	
Cg	0.9998	
Yield Limit per Fastener	81.9 lb.	
Yield Mode	IV	
Load Combination	D+L	
Duration Factor	1 00	

Min/Max fastener distances for Concentrated Side Loads



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

- 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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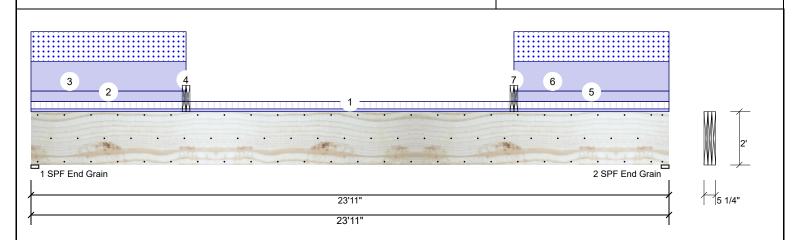


1/31/2020 Designer: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 24.000" 3-Ply - PASSED **Kerto-S LVL**

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Brg Wind Type: Floor Live Dead Snow Const Plies: 3 Design Method: ASD 957 5205 3791 0 0 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 957 5205 3791 0 0 Deflection LL: 480 Load Sharing: Yes 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" 5205 / 3791 8996 L D+S End Grain **Analysis Results** 2 - SPF 3.500" 5205 / 3791 8996 L D+S

End Grain

•						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	37841 ft-lb	11'11 1/2"	131295 ft-lb	0.288 (29%)	D+0.75(L+S)	L
Unbraced	37841 ft-lb	11'11 1/2"	37957 ft-lb	0.997 (100%)	D+0.75(L+S)	L
Shear	7185 lb	21'8 3/8"	30912 lb	0.232 (23%)	D+S	L
LL Defl inch	0.160 (L/1763)	11'11 9/16"	0.587 (L/480)	0.270 (27%)	S	L
TL Defl inch	0.378 (L/746)	11'11 9/16"	0.783 (L/360)	0.480 (48%)	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 7'1 1/8" o.c.
- 6 Bottom braced at bearings.

/ Lateral sien	derness ratio based									
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	30 PLF	80 PLF	0 PLF	0 PLF	0 PLF	FL. LOADING
2	Part. Uniform	0-0-0 to 5-9-12		Тор	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE
3	Part. Uniform	0-0-0 to 5-9-12		Тор	322 PLF	0 PLF	322 PLF	0 PLF	0 PLF	A01 RF. TRUSSES
4	Point	5-9-12		Тор	1977 lb	0 lb	1919 lb	0 lb	0 lb	13'-FB. @ PLAY ROOM Brg 1
5	Part. Uniform	18-1-4 to 23-11-0		Тор	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE

Continued on page 2...

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

- 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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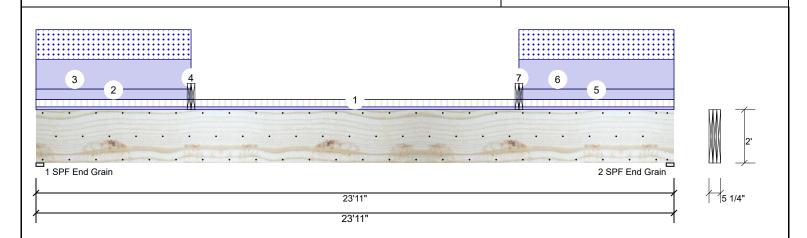
Client: Project: Address:

1/31/2020 Designer: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 24.000" 3-Ply - PASSED **Kerto-S LVL**

Level: Level



Continued	from	page	1
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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
6	Part. Uniform	18-1-4 to 23-11-0		Тор	322 PLF	0 PLF	322 PLF	0 PLF	0 PLF	A01 RF. TRUSSES
7	Point	18-1-4		Тор	1977 lb	0 lb	1919 lb	0 lb	0 lb	13'-FB. @ PLAY ROOM Brg 2

Self Weight 28 PLF

NOtes
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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
- - This design is valid until 12/11/2021

6. For flat roofs provide proper drainage to prevent ponding

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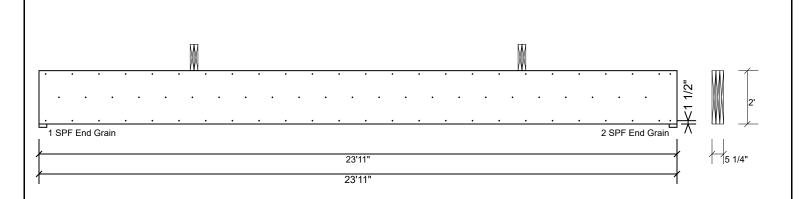
Client: Project: Address:

1/31/2020 Designer: Neal Baggett Job Name: Beaumont

Project #:

1.750" X 24.000" 3-Ply - PASSED **Kerto-S LVL**

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 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	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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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

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This design is valid until 12/11/2021

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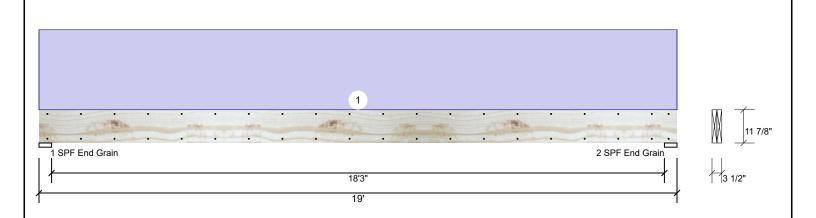
Client: Project: Address:

1/31/2020 Designer: Neal Baggett Job Name: Beaumont

Project #:

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

Level: Level



Reactions UNPATTERNED Ib (Uplift) Application: Brg Live Snow Wind Type: Floor Dead Const Plies: 2 Design Method: ASD 0 2016 0 0 0 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 0 2016 0 0 0 Deflection LL: 480 Load Sharing: No Deflection TL: 360 Deck: Not Checked Importance: Normal Temperature: Temp <= 100°F **Bearings** Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 4.500" 2016 / 0 2016 Uniform D End

Grain

End Grain

2 - SPF 4.500"

15%

2016 / 0

2016 Uniform

D

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8957 ft-lb	9'6"	17919 ft-lb	0.500 (50%)	D	Uniform
Unbraced	8957 ft-lb	9'6"	8966 ft-lb	0.999 (100%)	D	Uniform
Shear	1740 lb	17'8 3/8"	7980 lb	0.218 (22%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.582 (L/379)	9'6 1/16"	0.612 (L/360)	0.950 (95%)	D	Uniform

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 10'4 1/8" 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	203 PLF	0 PLF	0 PLF	0 PLF	0 PLF	END WALL / GABLE	
	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 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 12/11/2021

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Manufacturer Info

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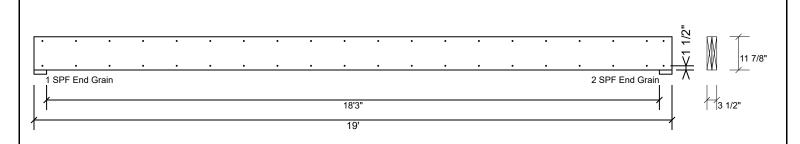
Client: Project: Address:

1/31/2020 Designer: Neal Baggett Job Name: Beaumont

Project #:

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

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"

1 3	•	•
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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- Informing & Installation

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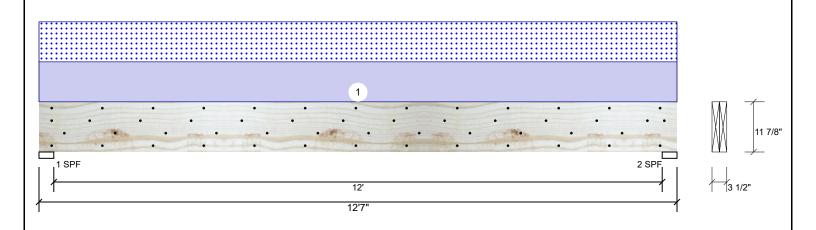
1/31/2020 Designer: Neal Baggett

Job Name: Beaumont

Project #:

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

_evel: Level



Member Information					Reactions UNPATTERNED lb (Uplift)					
Type:	Girder	Application:	Roof	Brg	Live	Dead	Snow	Wi	nd	Const
Plies:	2	Slope:	0/12	1	0	1977	1919		0	0
Moisture Condition	n: Dry	Design Method:	ASD	2	0	1977	1919		0	0
Deflection LL:	360	Building Code:	IBC/IRC 2015							
Deflection TL:	240	Load Sharing:	No							
Importance:	Normal	Deck:	Not Checked							
Temperature:	Temp <= 100°F									
				Bearing	s					
				Bearing	Length	Cap. Rea	act D/L lb	Total L	d. Case	Ld. Comb.
				1 - SPF	3.500"	75% 19	77 / 1919	3896 L		D+S
				2 - SPF	3.500"	75% 19	77 / 1919	3896 L		D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11380 ft-lb	6'3 1/2"	22897 ft-lb	0.497 (50%)	D+S	L
Unbraced	11380 ft-lb	6'3 1/2"	11401 ft-lb	0.998 (100%)	D+S	L
Shear	3745 lb	1'2 5/8"	10197 lb	0.367 (37%)	D+S	L
LL Defl inch	0.167 (L/869)	6'3 1/2"	0.404 (L/360)	0.410 (41%)	S	L
TL Defl inch	0.340 (L/428)	6'3 1/2"	0.606 (L/240)	0.560 (56%)	D+S	L

Design Notes

- 1 Fasten all plies using 4 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 must be laterally braced at a maximum of 7'9" o.c.
- 5 Bottom braced at bearings.
- 6 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	305 PLF	0 PLF	305 PLF	0 PLF	0 PLF	A02 RF. TRUSSES
	Self Weight				9 PLF					

NOtes
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Handling & Installation

- Informing & Installation

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Client: Project: Address:

1/31/2020 Designer: Neal Baggett

Job Name: Beaumont

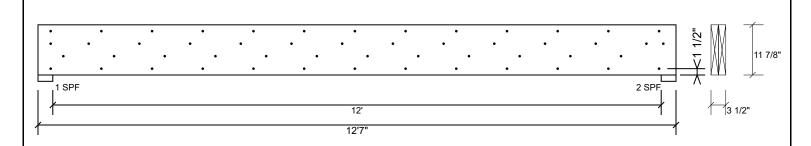
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Project #:

Kerto-S LVL

1.750" X 11.875" 2-Ply - PASSED

_evel: Level



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"

1 3		,	,
Capacity	93.2 %		
Load	305.0 PLF		
Yield Limit per Foot	327.4 PLF		
Yield Limit per Fastener	81.9 lb.		
Yield Mode	IV		
Edge Distance	1 1/2"		
Min. End Distance	3"		
Load Combination	D+S		
Duration Factor	1.15		

Notes

Notes

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