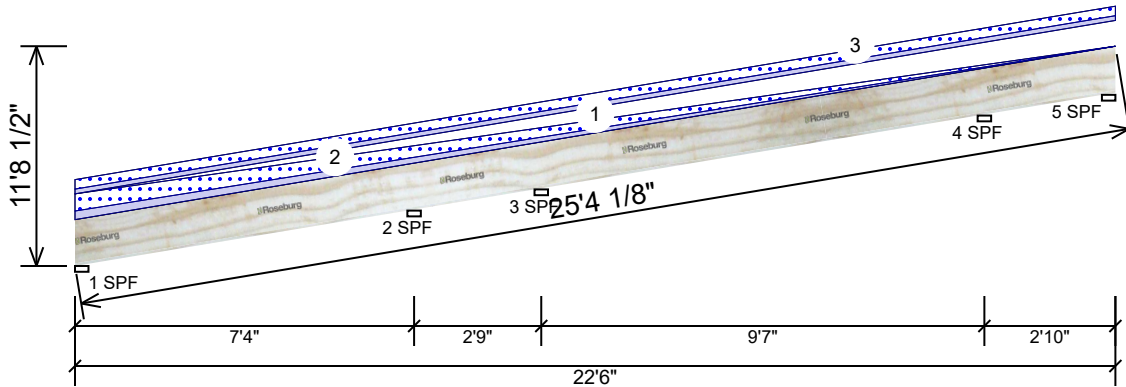


**B10 2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Roof
Plies:	2	Slope:	5.66/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	480	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1039	1821	0	0
2	Vertical	0	1562	2720	0	0
3	Vertical	0	1344	2285	0	0
4	Vertical	0	1502	2535	0	0
5	Vertical	0	(-210)	0 (-360)	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	55%	1039 / 1827	2866	L_L_	D+S
2 - SPF	3.500"	Vert	90%	1562 / 3126	4688	LL_L	D+S
3 - SPF	3.500"	Vert	78%	1344 / 2717	4062	_LL_	D+S
4 - SPF	3.500"	Vert	78%	1502 / 2546	4048	L_LL	D+S
5 - SPF	3.500"	Vert	0%	-210 / -507	-717	L_L_	D+S(D+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-3635 ft-lb	7'4"	24470 ft-lb	0.149 (15%)	D+S	LL_L
Unbraced	-3635 ft-lb	7'4"	4125 ft-lb	0.881 (88%)	D+S	LL_L
Pos Moment	3692 ft-lb	3'1 11/16"	24470 ft-lb	0.151 (15%)	D+S	L_L_
Unbraced	3692 ft-lb	3'1 11/16"	4125 ft-lb	0.895 (90%)	D+S	L_L_
Shear	2341 lb	6'11 3/8"	9241 lb	0.253 (25%)	D+S	LL_L
LL Defl inch	0.023 (L/4050)	3'5 3/4"	0.196 (L/480)	0.119 (12%)	S	L_L_
TL Defl inch	0.036 (L/2583)	3'5 3/4"	0.393 (L/240)	0.093 (9%)	D+S	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 Refer to manufacturer's literature for sloped bearing detail.
- 3 Attach with enough nails to prevent sliding between the joist and the sloped bearing wedge at each support.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Multiple plies must be fastened together as per manufacturer's details.
- 6 Top loads must be supported equally by all plies.
- 7 Tie-down connection required at bearing 5 for uplift 717 lb (Combination D+S, Load Case L\_L\_).
- 8 Top must be laterally braced at end bearings.
- 9 Bottom must be laterally braced at end bearings.
- 10 Lateral slenderness ratio based on single ply width.

**Notes**

Calculated Structural 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.

**Lumber**

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

chemicals

**Handling & Installation**

1. LVL 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 5/24/2024

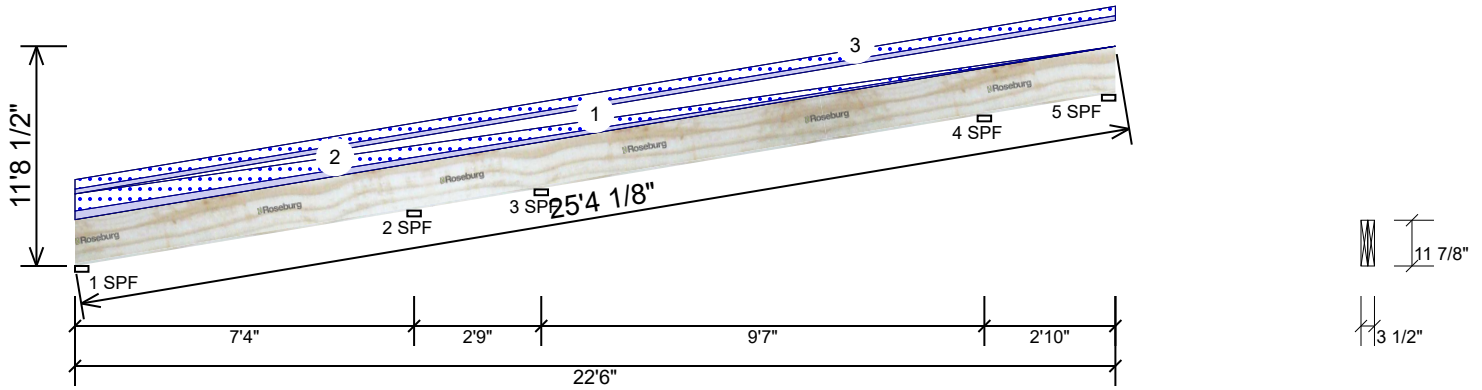
**Manufacturer Info**

Roseburg Forest Products  
4500 Riddle By-pass Rd  
Riddle, OR 97469  
(541) 784-4005  
www.roseburg.com  
APA: PR-L289, PR-L270, ICC-ES:  
ESR-1210

Kempville Building Material  
298 Harvey Faulk Road, N.C.  
U.S.A  
27332  
919.775.1450

**B10 2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
2	Tapered Start	0-0-0		Top	190 PLF	0 PLF	380 PLF	0 PLF	0 PLF	Rf Load
	End	22-6-0			0 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
3	Tapered Start	0-0-0		Top	105 PLF	0 PLF	210 PLF	0 PLF	0 PLF	
	End	22-6-0			105 PLF	0 PLF	210 PLF	0 PLF	0 PLF	
	Self Weight				11 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.

**Lumber**  
1. Dry service conditions, unless noted otherwise  
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**  
1. LVL 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 5/24/2024

**Manufacturer Info**  
Roseburg Forest Products  
4500 Riddle By-pass Rd  
Riddle, OR 97469  
(541) 784-4005  
www.roseburg.com  
APA: PR-L289, PR-L270, ICC-ES:  
ESR-1210

Kempsville Building Material  
298 Harvey Faulk Road, N.C.  
U.S.A  
27332  
919.775.1450