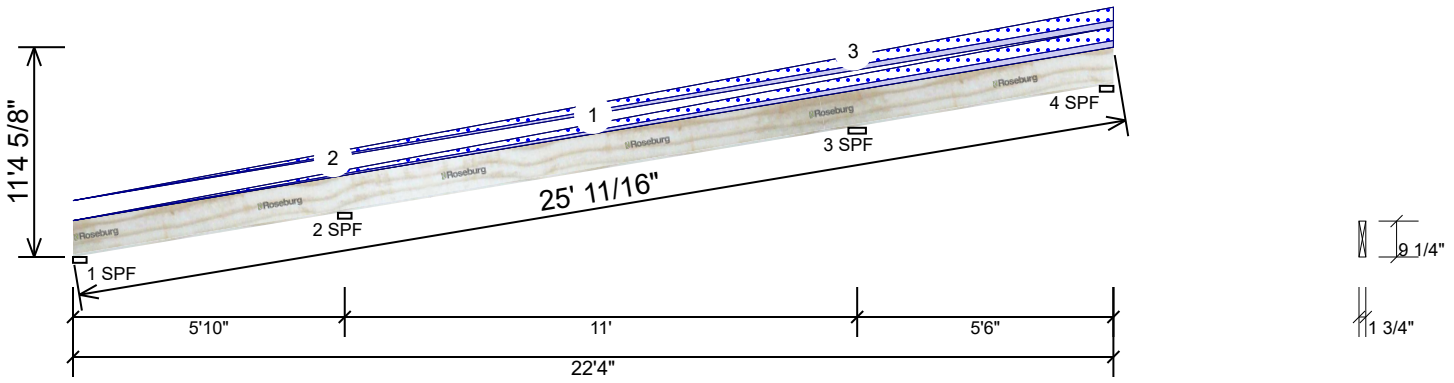
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:	Charlie D Smith Construction	Date:	9/14/2021
Project:	ROOF HIP - above back bath	Input by:	RKW
Address:	200 Gilchrist Road Cameron, N.C. 28326 Harnett County	Job Name:	Chambers Residence
		Project #:	21090009

B15 2.0E Rigidlam LVL 1.750" X 9.250" - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Roof
Plies:	1	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	(-33)	0 (-74)	0	0
2	Vertical	0	611	1024	0	0
3	Vertical	0	1172	2039	0	0
4	Vertical	0	326	584	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	0%	-33 / -119	-152 (-152)	_L_	D+S(D+S)
2 - SPF	3.500"	Vert	64%	611 / 1050	1661	LL_	D+S
3 - SPF	4.500"	Vert	96%	1172 / 2045	3217	_LL	D+S
4 - SPF	3.500"	Vert	39%	326 / 687	1013	L_L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2626 ft-lb	16'10"	7659 ft-lb	0.343 (34%)	D+S	_LL
Unbraced	-2626 ft-lb	16'10"	2627 ft-lb	1.000 (100%)	D+S	_LL
Pos Moment	1789 ft-lb	11'6 1/4"	7659 ft-lb	0.234 (23%)	D+S	_L_
Unbraced	1789 ft-lb	11'6 1/4"	1790 ft-lb	1.000 (100%)	D+S	_L_
Shear	1271 lb	17' 7/16"	3599 lb	0.353 (35%)	D+S	_LL
LL Defl inch	0.103 (L/1416)	11'4 7/8"	0.304 (L/480)	0.339 (34%)	S	_L_
TL Defl inch	0.157 (L/927)	11'4 1/2"	0.608 (L/240)	0.259 (26%)	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 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 Tie-down connection required at bearing 1 for uplift 152 lb (Combination D+S, Load Case _L_).
6 Top must be laterally braced at a maximum of 21'9 3/16" o.c. along the slope.
7 Bottom must be laterally braced at a maximum of 14'8 1/16" o.c.

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

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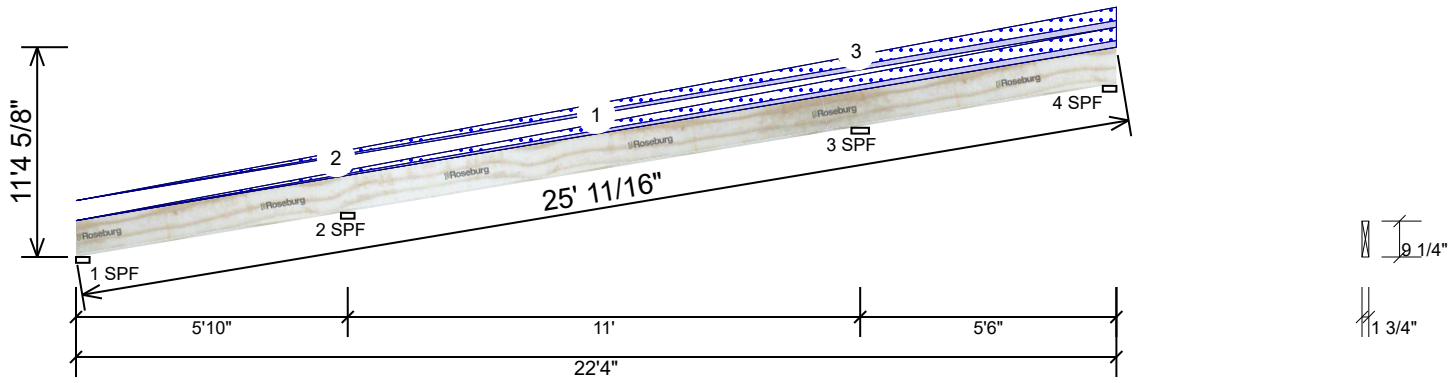

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
2	Tapered Start	0-0-0		Top	0 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Rf Load
	End	22-4-0			80 PLF	0 PLF	160 PLF	0 PLF	0 PLF	
3	Tapered Start	0-0-0		Top	0 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Rf Load
	End	22-4-0			80 PLF	0 PLF	160 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF					

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