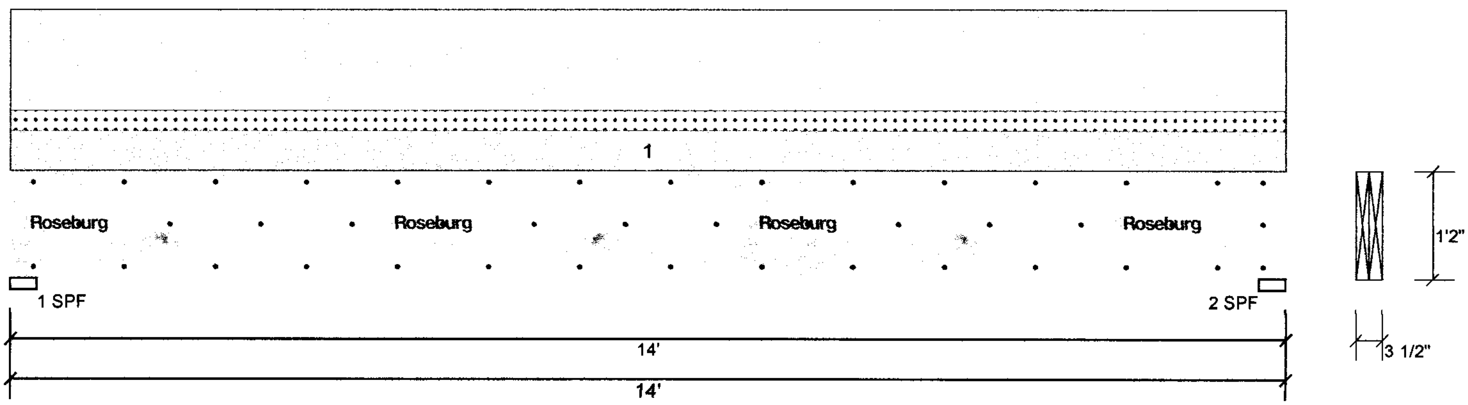
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:		Date:	4/28/2020
Project:	Spencer Gay	Input by:	
Address:		Job Name:	165 Cresthaven
		Project #:	

B3 1.3E Rigidlam LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Member Information

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

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	2596	1124	519	0	0
2	2596	1124	519	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	71%	1124 / 2596	3720	L	D+L
2 - SPF	3.500"	71%	1124 / 2596	3720	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12181 ft-lb	7'	21028 ft-lb	0.579 (58%)	D+L	L
Unbraced	12181 ft-lb	7'	17697 ft-lb	0.688 (69%)	D+L	L
Shear	2978 lb	1'4 3/4"	6533 lb	0.456 (46%)	D+L	L
LL Defl inch	0.270 (L/603)	7' 1/16"	0.339 (L/480)	0.800 (80%)	L	L
TL Defl inch	0.386 (L/420)	7' 1/16"	0.677 (L/240)	0.570 (57%)	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. 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 full section width.

NORTH CAROLINA PROFESSIONAL SEAL 034198 ENGINEER RANDOLPH MARSHALL

29 April 2020

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		7-5-0	Top	20 PSF	50 PSF	10 PSF	0 PSF	0 PSF	
	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.

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 11/15/2022

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

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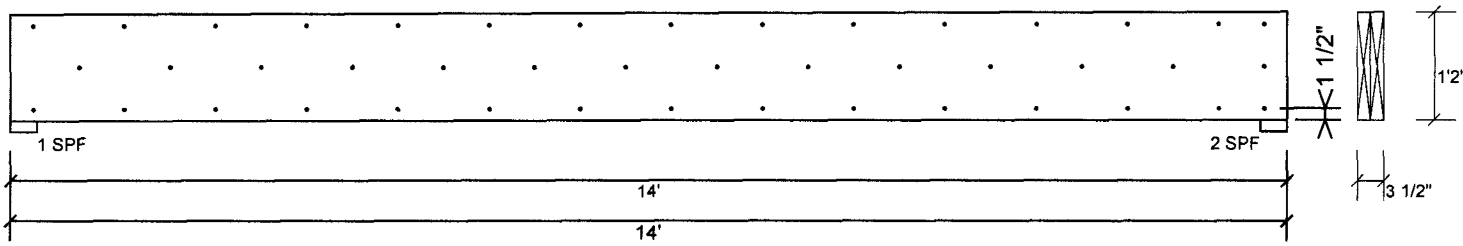

Multi-Ply Analysis

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	271.6 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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Lumber

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Handling & Installation

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