E. Randoph Marshall. PE

Marshall Engineering Services, PLLC

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Linden, NC 28356

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Brian Kaseta

Go To Guys LLC

Lane RV Park

Linden, NC

30 June 2022

Subject: 153 Canterbury Rd.

Sanford, NC 27332

I visited the house at the above address to analyze two LVL beams. The inspection was requested by a local building official.

There are two double-ply 11.25" beams installed in the area being remodeled. They support the upstairs living areas. Both span 13'. They have the proper bearing support either from studs or an exterior wall in the garage.

The ply's are fastened together with the correct number of nails which are properly spaced.

I have attached the design documents for both beans. Beam B1 is in front of the home and beam B2 is 13' away.

These beams will adequately support the imposed loads. The area is structurally sound.

Sincerely,

E. Randolph Marshall. PE

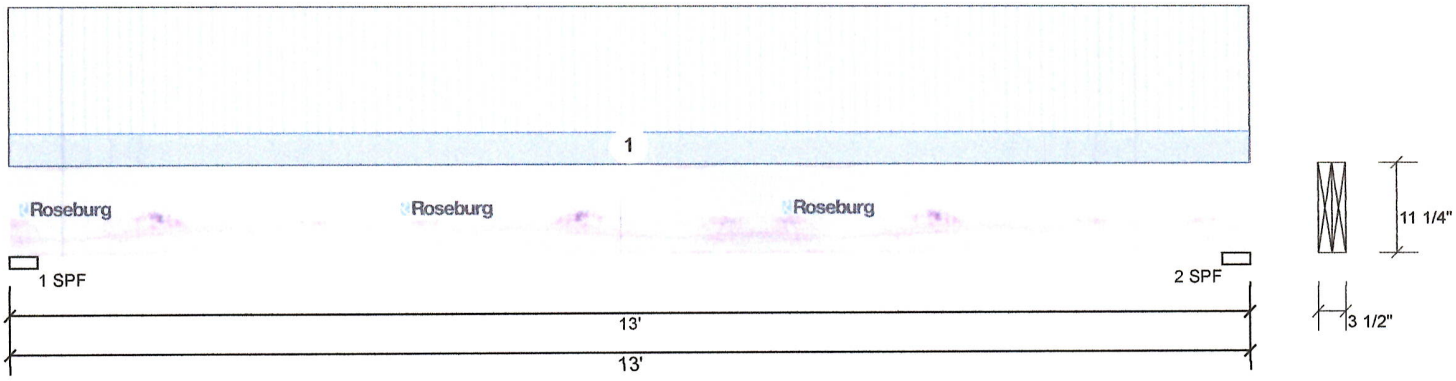
EWP Studio
Simpson Strong-Tie® Component Solutions™

Client:
Project:
Address:

Date: 6/30/2022
Input by:
Job Name:
Project #:

B2 2.0E Rigidlam LVL 1.750" X 11.250" 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:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	3380	913	0	0	0
2	Vertical	3380	913	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	82%	913 / 3380	4293	L	D+L
2 - SPF	3.500"	Vert	82%	913 / 3380	4293	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12984 ft-lb	6'6"	19227 ft-lb	0.675 (68%)	D+L	L
Unbraced	12984 ft-lb	6'6"	13015 ft-lb	0.998 (100%)	D+L	L
Shear	3491 lb	11'9 1/4"	7613 lb	0.459 (46%)	D+L	L
LL Defl inch	0.349 (L/432)	6'6"	0.418 (L/360)	0.834 (83%)	L	L
TL Defl inch	0.443 (L/340)	6'6"	0.627 (L/240)	0.706 (71%)	D+L	L

NORTH CAROLINA PROFESSIONAL SEAL 034198 ENGINEER RANDOLPH MARSHALL

30 Jun 2022

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 Girders are designed to be supported on the bottom edge only.
3 Multiple plies must be fastened together as per manufacturer's details.
4 Top loads must be supported equally by all plies.
5 Top must be laterally braced at a maximum of 5'11 3/4" o.c.
6 Bottom must be laterally braced at end 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		13-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
	Self Weight				10 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 3/1/2025

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

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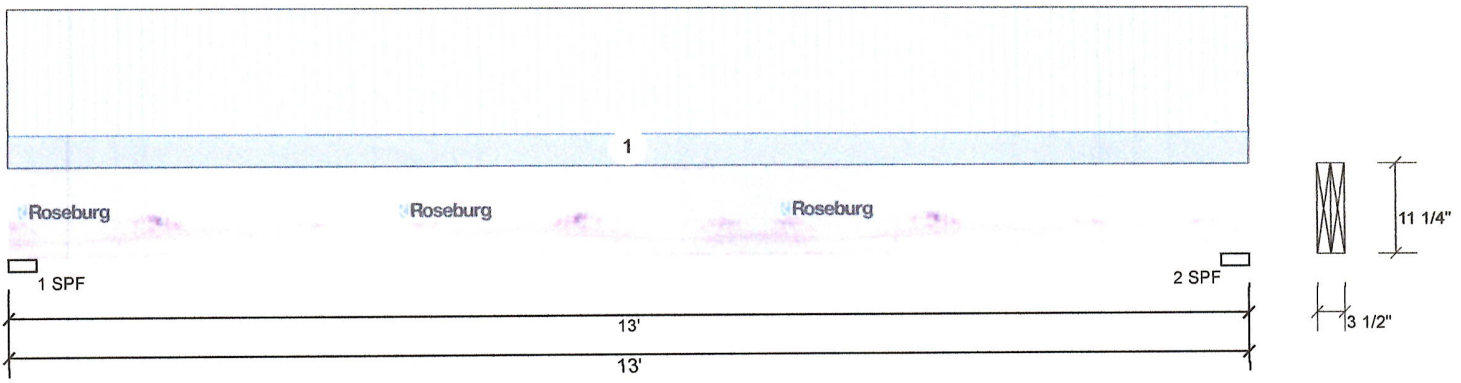

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