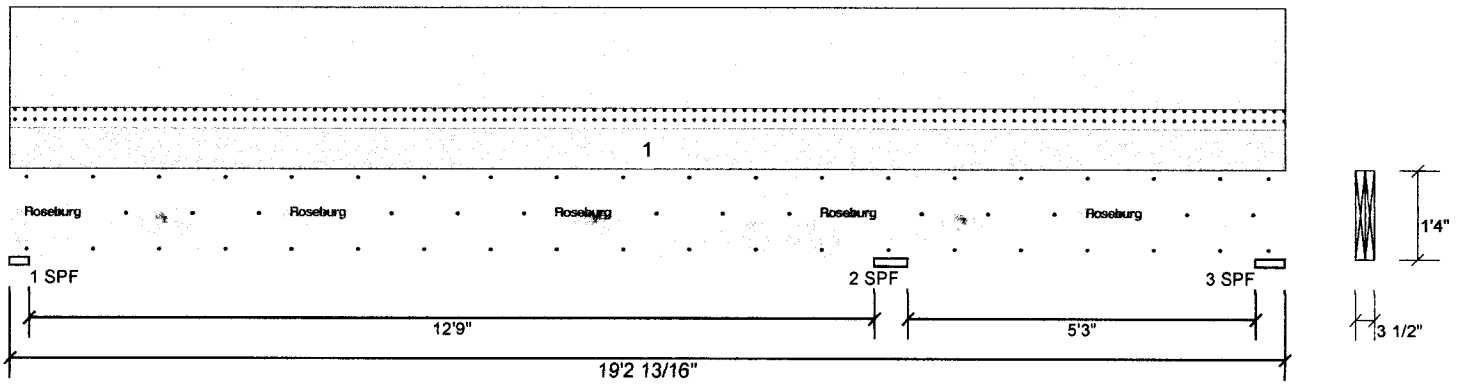
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project: Spencer Gay
Address:

Date: 4/28/2020
Input by:
Job Name: 165 Cresthaven
Project #:

B1 2.0E Rigidlam LVL 1.750" X 16.000" 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	2119	929	424	0	0
2	5153	2260	1031	0	0
3	101	44	20	0	0

Bearings

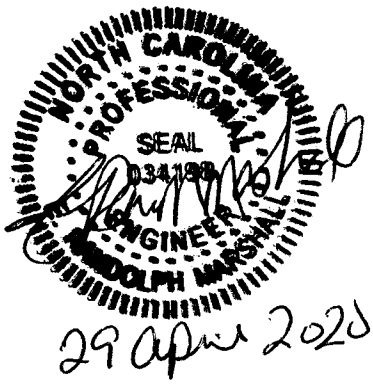
Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	59%	929 / 2153	3082	L_	D+L
2 - SPF	6.000"	83%	2260 / 5153	7413	LL	D+L
3 - SPF	5.313"	15%	44 / 1132	1177 (-841)	_L	D+L(D+L)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-8886 ft-lb	13'3 1/2"	37215 ft-lb	0.239 (24%)	D+L	LL
Unbraced	-8886 ft-lb	13'3 1/2"	31380 ft-lb	0.283 (28%)	D+L	LL
Pos Moment	7919 ft-lb	5'7 1/16"	37215 ft-lb	0.213 (21%)	D+L	L_
Unbraced	7919 ft-lb	5'7 1/16"	31380 ft-lb	0.252 (25%)	D+L	L_
Shear	3547 lb	11'11 1/2"	10827 lb	0.328 (33%)	D+L	LL
LL Defl inch	0.062 (L/2548)	6'2 1/4"	0.327 (L/480)	0.190 (19%)	L	L_
TL Defl inch	0.087 (L/1800)	6'2"	0.653 (L/240)	0.130 (13%)	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 Tie-down connection required at bearing 3 for uplift 841 lb (Combination D+L, Load Case L_).
6 Top braced at bearings.
7 Bottom braced at bearings.
8 Lateral slenderness ratio based on full section 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		7-8-0	Top	20 PSF	50 PSF	10 PSF	0 PSF	0 PSF	
	Self Weight				15 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, PR-L270, ICC-ES: ESR-1210

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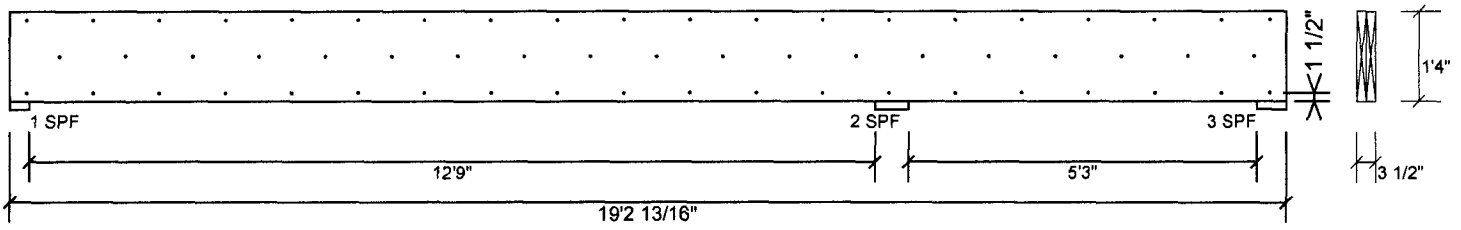

Multi-Ply Analysis

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

Notes

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Lumber

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Handling & Installation

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