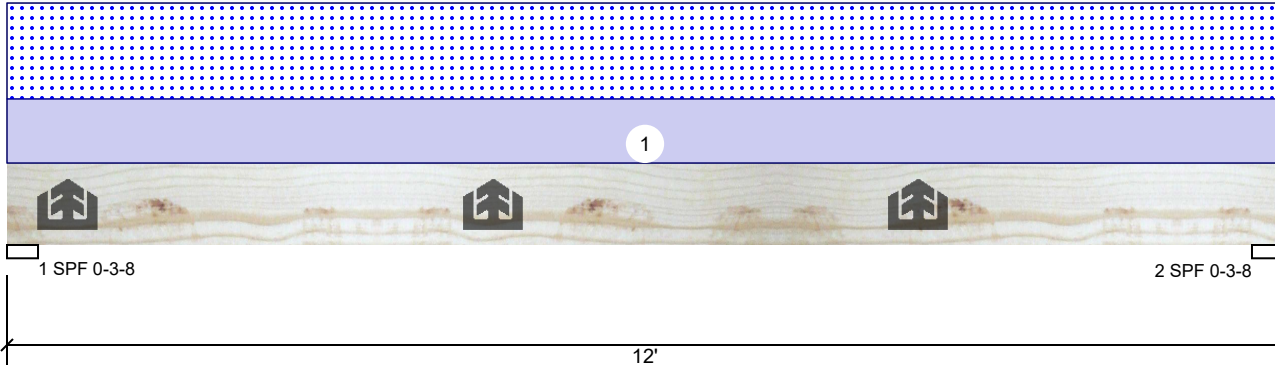


**B1 West Fraser 1.8 LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal - II
Temperature:	Temp <= 100°F
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Application:	Floor
Design Method:	ASD
Building Code:	IRC 2021
Load Sharing:	No
Deck:	Not Checked

**Reactions PATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	567	774	0	0
2	Vertical	0	567	774	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	26%	567 / 774	1341	L	D+S
2 - SPF	3.500"	Vert	26%	567 / 774	1341	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3722 ft-lb	6'	14867 ft-lb	25%	D+S	L
Unbraced	3722 ft-lb	6'	5697 ft-lb	65%	D+S	L
Shear	1104 lb	10'11 1/4"	7198 lb	15%	D+S	L
LL Defl inch	0.132 (L/1046)	6'	0.385 (L/360)	34%	S	L
TL Defl inch	0.229 (L/604)	6'	0.577 (L/240)	40%	D+S	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings.
- 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 end bearings.
- 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			Top	86 PLF	0 PLF	129 PLF	0 PLF	0 PLF	
	Self Weight				8 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 9/3/2027

**Manufacturer Info**  
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ICC-ES: ESR-1618

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