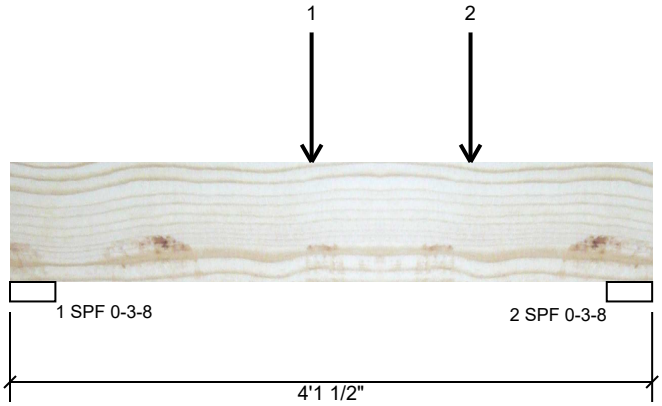
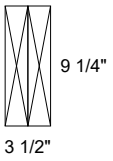
Client:	Onsite Homes	Date:	12/3/2024
Project:	J0924-5040	Input by:	DL
Address:	2885 Lemuel Black Road	Job Name:	Lot 4 Lemuel Black
		Project #:	J0924-5040

BM5 Kerto-S LVL 1.750" X 9.250" 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:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	723	708	0	0
2	Vertical	0	1738	1723	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	27%	723 / 708	1431	L	D+S
2 - SPF	3.500"	Vert	66%	1738 / 1723	3461	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3239 ft-lb	2'11 1/2"	14423 ft-lb	22%	D+S	L
Unbraced	3239 ft-lb	2'11 1/2"	13050 ft-lb	25%	D+S	L
Shear	3453 lb	3' 3/4"	7943 lb	43%	D+S	L
LL Defl inch	0.012 (L/3707)	2'6"	0.092 (L/480)	13%	S	L
TL Defl inch	0.024 (L/1846)	2'6"	0.122 (L/360)	20%	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 must be laterally braced at end bearings.
5 Bottom must be laterally braced at end bearings.
6 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	Point	1-11-4		Far Face	311 lb	0 lb	311 lb	0 lb	0 lb	C2
2	Point	2-11-8		Far Face	2120 lb	0 lb	2120 lb	0 lb	0 lb	C3-GR
	Self Weight				7 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 2/14/2027

Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us