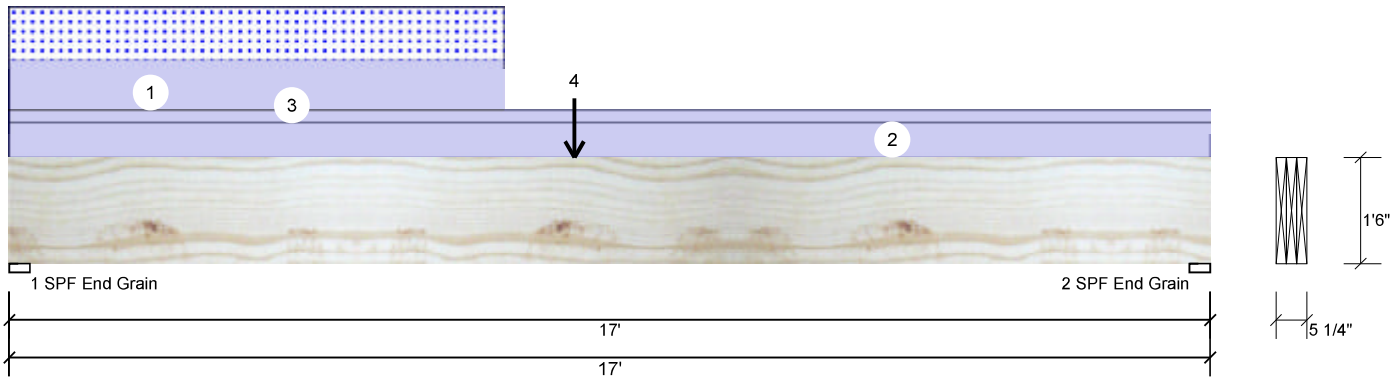
Client:	Weaver Development	Date:	3/24/2022
Project:	Lindsay 1553	Input by:	Christine Shivy
Address:	Lindsay 1553	Job Name:	GDH
		Project #:	

GDH16' SL Kerto-S LVL 1.750" X 18.000" 3-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	Yes
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	0	4084	2035	0	0
2	Vertical	0	2984	936	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	40%	4084 / 2035	6119	L	D+S
2 - SPF End Grain	3.500"	Vert	25%	2984 / 936	3920	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	24670 ft-lb	8'	77108 ft-lb	0.320 (32%)	D+S	L
Unbraced	24670 ft-lb	8'	24741 ft-lb	0.997 (100%)	D+S	L
Shear	4851 lb	1'9 1/2"	23184 lb	0.209 (21%)	D+S	L
LL Defl inch	0.080 (L/2495)	8'	0.414 (L/480)	0.192 (19%)	S	L
TL Defl inch	0.249 (L/798)	8'	0.828 (L/240)	0.301 (30%)	D+S	L

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 8'1 13/16" 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	Part. Uniform	0-0-0 to 7-0-0		Top	242 PLF	0 PLF	242 PLF	0 PLF	0 PLF	D1,C1GE,C1 TRUSS
2	Uniform			Top	160 PLF	0 PLF	0 PLF	0 PLF	0 PLF	GABLE END
3	Uniform			Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	FRAME DOWN WALL
4	Point	8-0-0		Top	1277 lb	0 lb	1277 lb	0 lb	0 lb	C2 TRUSS
	Bearing Length	0-3-8								
	Self Weight				21 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 11/3/2024

Manufacturer Info

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

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS