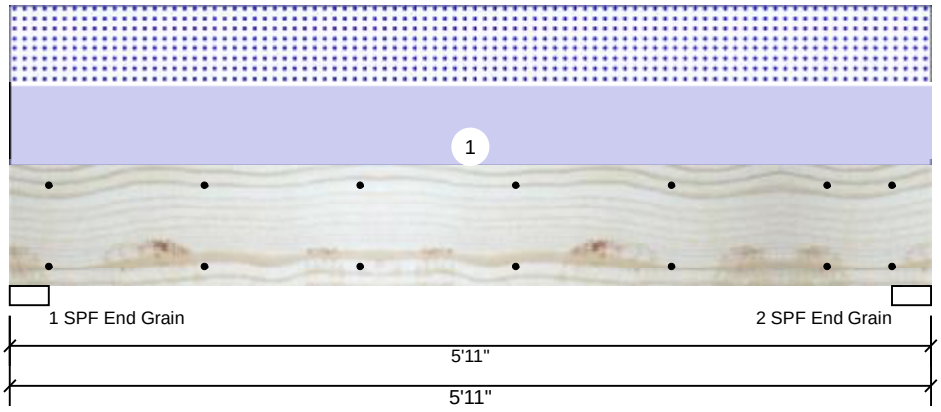
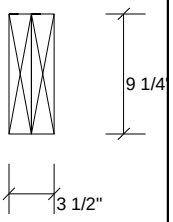
Client:	WEAVER	Date:	9/17/2020
Project:		Input by:	Lenny Norris
Address:		Job Name:	LEYLAND
		Project #:	

2852 TWIN 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		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1607	1586	0	0
2	0	1607	1586	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	35%	1607 / 1586	3193	L	D+S
2 - SPF End Grain	3.000"	35%	1607 / 1586	3193	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4143 ft-lb	2'11 1/2"	14423 ft-lb	0.287 (29%)	D+S	L
Unbraced	4143 ft-lb	2'11 1/2"	11027 ft-lb	0.376 (38%)	D+S	L
Shear	2158 lb	4'11 1/2"	7943 lb	0.272 (27%)	D+S	L
LL Defl inch	0.032 (L/2081)	2'11 1/2"	0.139 (L/480)	0.230 (23%)	S	L
TL Defl inch	0.064 (L/1034)	2'11 1/2"	0.185 (L/360)	0.350 (35%)	D+S	L

Design Notes

1 Fasten all plies using 2 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 Top braced at bearings.
6 Bottom braced at 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	536 PLF	0 PLF	536 PLF	0 PLF	0 PLF	A2 TRUSS / A4
	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 2/26/2023

Manufacturer Info

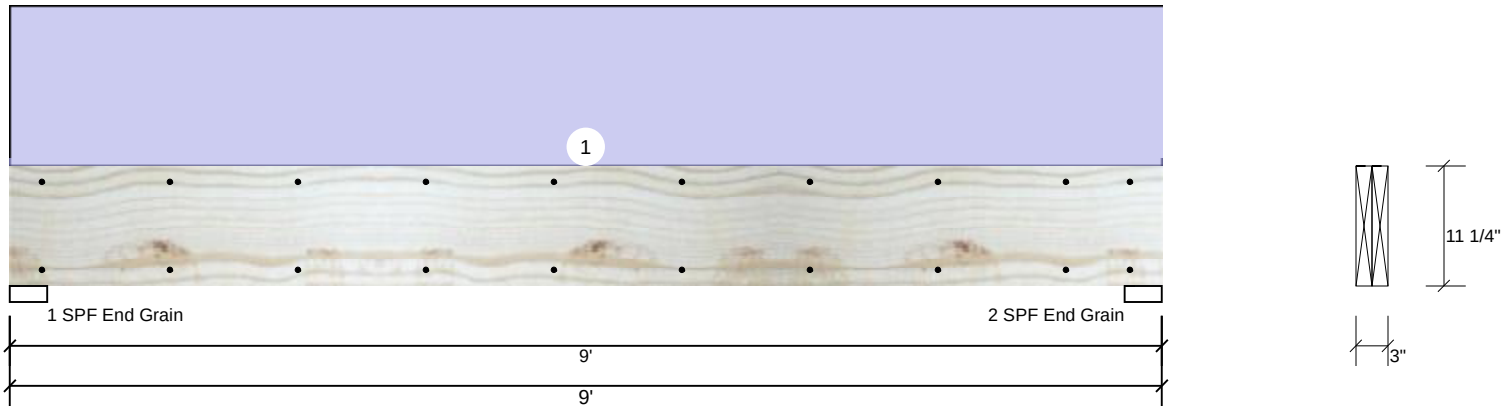
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

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

Client:	WEAVER	Date:	9/17/2020
Project:		Input by:	Lenny Norris
Address:		Job Name:	LEYLAND
		Project #:	

GDH SP #2 2.000" X 12.000" 2-Ply - PASSED

Level: Level



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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		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	900	0	0	0
2	0	900	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	15%	900 / 0	900	Uniform	D
2 - SPF End Grain	3.500"	15%	900 / 0	900	Uniform	D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1824 ft-lb	4'6"	3560 ft-lb	0.512 (51%)	D	Uniform
Unbraced	1824 ft-lb	4'6"	3175 ft-lb	0.575 (57%)	D	Uniform
Shear	667 lb	1'2"	3544 lb	0.188 (19%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.048 (L/2132)	4'6"	0.285 (L/360)	0.170 (17%)	D	Uniform

Design Notes

1. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
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3. Girders are designed to be supported on the bottom edge only.
4. Top loads must be supported equally by all plies.
5. Top braced at bearings.
6. Bottom braced at 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	200 PLF	0 PLF	0 PLF	0 PLF	0 PLF	

This design is valid until 2/26/2023

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