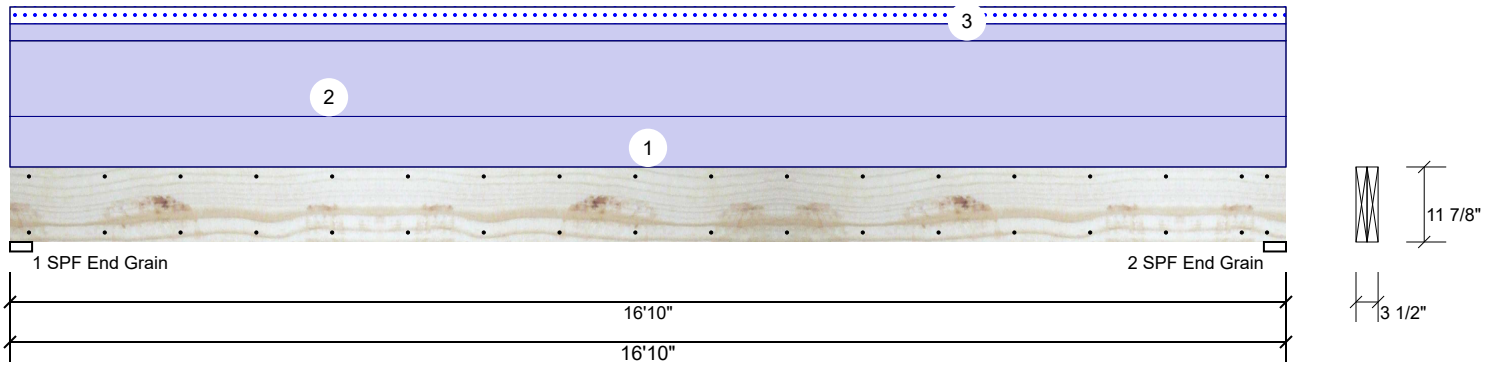
Client:	Watermark Homes	Date:	7/9/2020
Project:		Input by:	David Landry
Address:		Job Name:	Lot 1 Oak Haven
		Project #:	J0720-3074

GDH Kerto-S LVL 1.750" X 11.875" 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	1509	168	0	0
2	0	1509	168	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	16%	1509 / 168	1677	L	D+S
2 - SPF End Grain	3.500"	16%	1509 / 168	1677	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6008 ft-lb	8'5"	17919 ft-lb	0.335 (34%)	D	Uniform
Unbraced	6678 ft-lb	8'5"	6683 ft-lb	0.999 (100%)	D+S	L
Shear	1290 lb	1'2 5/8"	7980 lb	0.162 (16%)	D	Uniform
LL Defl inch	0.035 (L/5617)	8'5 1/16"	0.409 (L/480)	0.090 (9%)	S	L
TL Defl inch	0.348 (L/564)	8'5 1/16"	0.546 (L/360)	0.640 (64%)	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 must be laterally braced at a maximum of 14'10 1/2" o.c.
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	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
2	Uniform			Top	90 PLF	0 PLF	0 PLF	0 PLF	0 PLF	C1GE
3	Tie-In	0-0-0 to 16-10-0	1-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof Load
	Self Weight				9 PLF					

Notes

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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 1/8/2023

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:	Watermark Homes	Date:	7/9/2020
Project:		Input by:	David Landry
Address:		Job Name:	Lot 1 Oak Haven
		Project #:	J0720-3074

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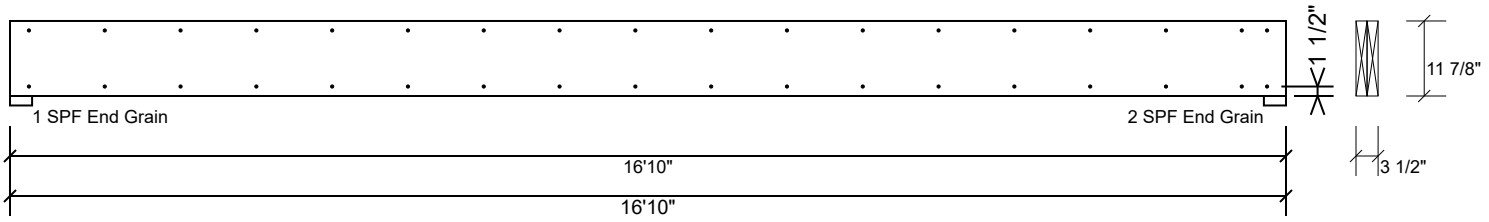
Level: Level



Multi-Ply Analysis

Fasten all plies using 2 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	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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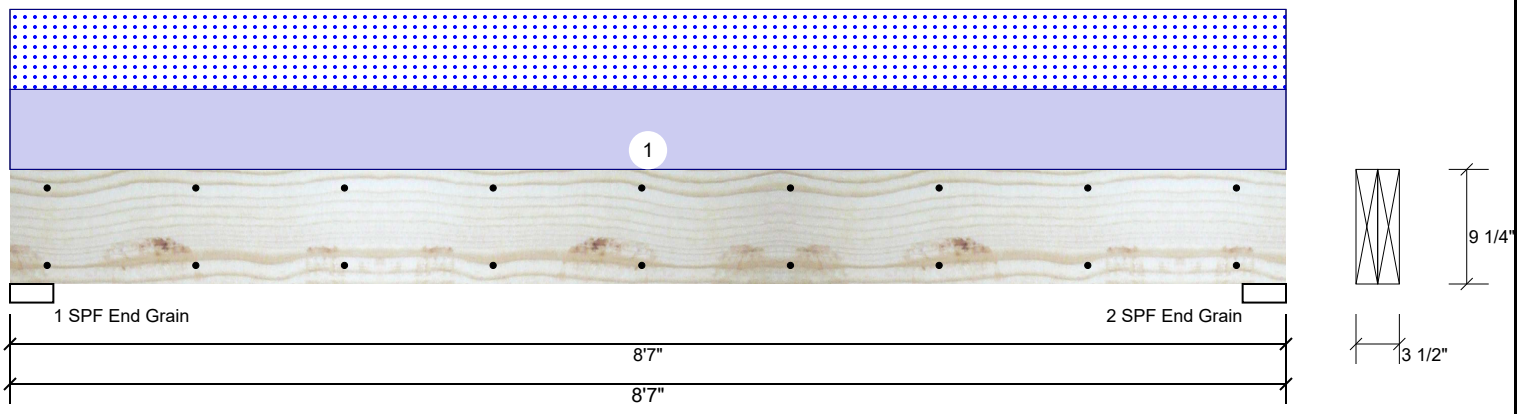
Project:		Input by:	David Landry
Address:		Job Name:	Lot 1 Oak Haven
		Project #:	J0720-3074

BM1 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Information

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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	1340	1309	0	0
2	0	1340	1309	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	25%	1340 / 1309	2649	L	D+S
2 - SPF End Grain	3.500"	25%	1340 / 1309	2649	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5093 ft-lb	4'3 1/2"	14423 ft-lb	0.353 (35%)	D+S	L
Unbraced	5093 ft-lb	4'3 1/2"	8689 ft-lb	0.586 (59%)	D+S	L
Shear	2032 lb	7'7"	7943 lb	0.256 (26%)	D+S	L
LL Defl inch	0.074 (L/1322)	4'3 9/16"	0.203 (L/480)	0.360 (36%)	S	L
TL Defl inch	0.149 (L/653)	4'3 9/16"	0.271 (L/360)	0.550 (55%)	D+S	L

Design Notes

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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	305 PLF	0 PLF	305 PLF	0 PLF	0 PLF	A08
	Self Weight				7 PLF					

Notes

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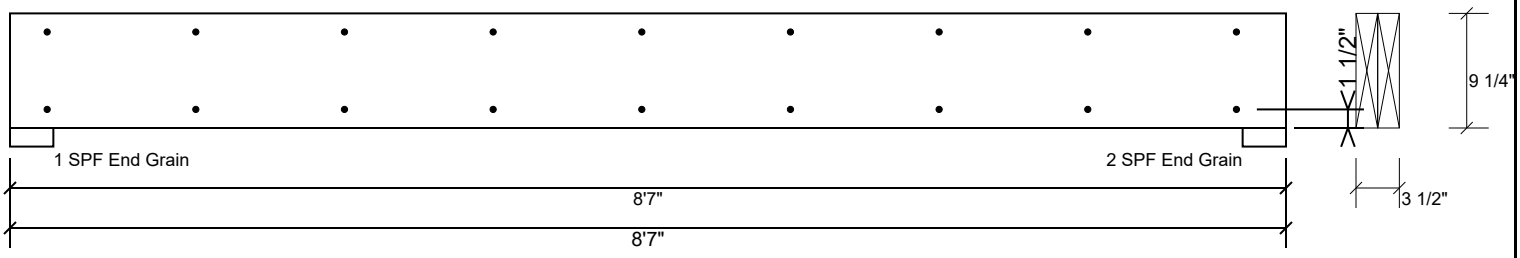

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Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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