

September 30, 2020

John Turner
U.S. Lumber
3312 North Berkeley Lake Road
Duluth, GA 30096

Client: 84 Lumber – Fayetteville, NC
Project: Caviness Land – CL2302 CP GL
Address: 114 Silk Oak Drive, Bunnlevel, NC

TO WHOM IT MAY CONCERN:

I have reviewed attached Design Reports created by U.S. Lumber for the client and project listed above. These member calculations for Louisiana-Pacific joists and/or beams were prepared using the isDesign™ software package based on design information and conditions provided by the client.

Each report reflects the LP product, depth, and size that can structurally support the loads shown. My professional engineer's seal on this letter verifies that the analyses presented conform to accepted engineering practices and use code-accepted product design values.

My review is limited to the building components shown in these reports. I have not verified the applicability of components with the project plans or jobsite conditions. All notes and design load information shown in these reports should be reviewed with the building designer and/or the local code official to ensure that the loads, spans, and other conditions are correct and acceptable for the specific application. Verification of end use conditions is the responsibility of the building designer and/or local code official.

Alternate materials shall not be substituted for the products shown on the attached isDesign™ reports. Product substitution renders my review null and void.

This PDF document containing a cover letter and attached design reports has been digitally signed, dated and certified as indicated by my seal and signature below and a certification banner when viewed electronically. A printed copy of this electronic document is suitable for archival purposes but it is not considered to be an original signed, dated, and sealed document.

Sincerely,



Glyn R. Boone, P.E.
Owner/Principal
Myer Hill Consulting
NC PE# 17046 - NC COA# P-1898

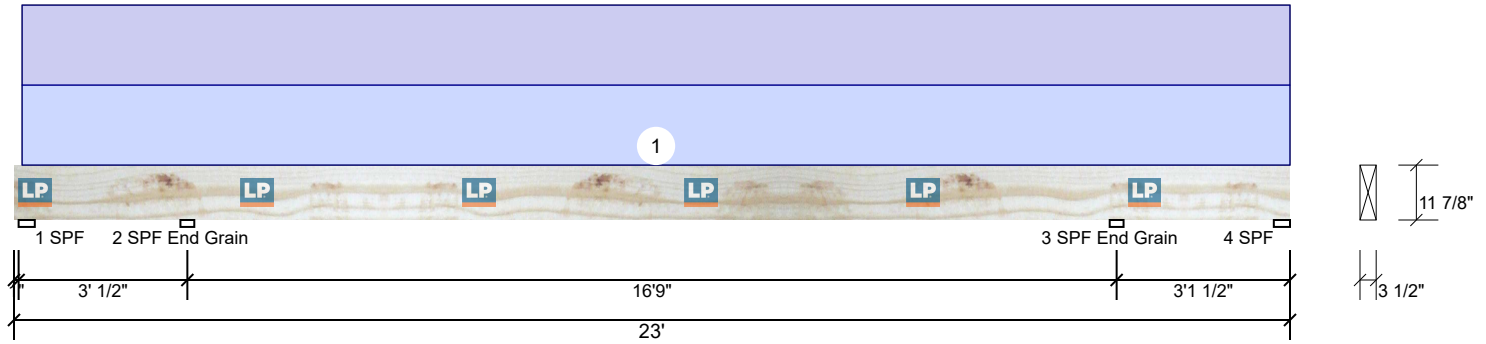
Attachments: Member Design Reports dated 09/30/2020 (5 pages total – including this cover letter).



Client: 84 Fayetteville NC
 Project: Caviness Land - CL2302
 Address: 114 Silk Oak Dr.
 Bunnlevel NC

Date: 9/30/2020
 Input by: Kyle Miltzer
 Job Name: CL2302 CP GL_2nd Flr_HD2-A
 Project #: CL2302 CP GL

CL2302 CP GL_2nd Flr_HD2-A LP-LSL 1.55E 3.500" X 11.875" - PASSED Level: 2nd Flr



Member Information

Type:	Girder	Application:	Floor
Plies:	1	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	10 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	(-283)	0	0	0 (-214)
2	0	890	0	0	668
3	0	890	0	0	668
4	0	(-277)	0	0	0 (-208)

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	0%	-304 / -286	-590 (-590)	__L__	D+C(D+C)
2 - SPF	3.000"	17%	911 / 686	1597	__LL__	D+C
3 - SPF	3.000"	17%	911 / 686	1597	__LL__	D+C
4 - SPF	3.500"	0%	-298 / -281	-579 (-579)	__L__	D+C(D+C)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1969 ft-lb	19'10 1/2"	20247 ft-lb	0.097 (10%)	D+C	__LL__
Pos Moment	1310 ft-lb	11'6"	20247 ft-lb	0.065 (6%)	D+C	__L__
Shear	723 lb	20'10 3/8"	14201 lb	0.051 (5%)	D+C	__LL__
LL Defl inch	0.035 (L/5719)	11'6 1/16"	0.558 (L/360)	0.060 (6%)	C	L_L_
TL Defl inch	0.082 (L/2466)	11'6 1/16"	0.838 (L/240)	0.100 (10%)	D+C	L_L_
LL Cant	0.000 (2L/1998)		0.000 (2L/360)	0.000 (0%)		
TL Cant	-0.000 (2L/52015)	Lt Cant	0.300 (2L/360)	0.000 (0%)	D+C	LLL_

Design Notes

- 1 Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
- 2 Dead Load Deflection: Instant = 0.046", Long Term = 0.070"
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Tie-down connection required at bearing 1 for uplift 590 lb (Combination D+C, Load Case __L__).
- 5 Tie-down connection required at bearing 4 for uplift 579 lb (Combination D+C, Load Case __L__).
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.

Beam OK installed high in wall (under double top plate) and framing below to garage door opening per detail on page 2

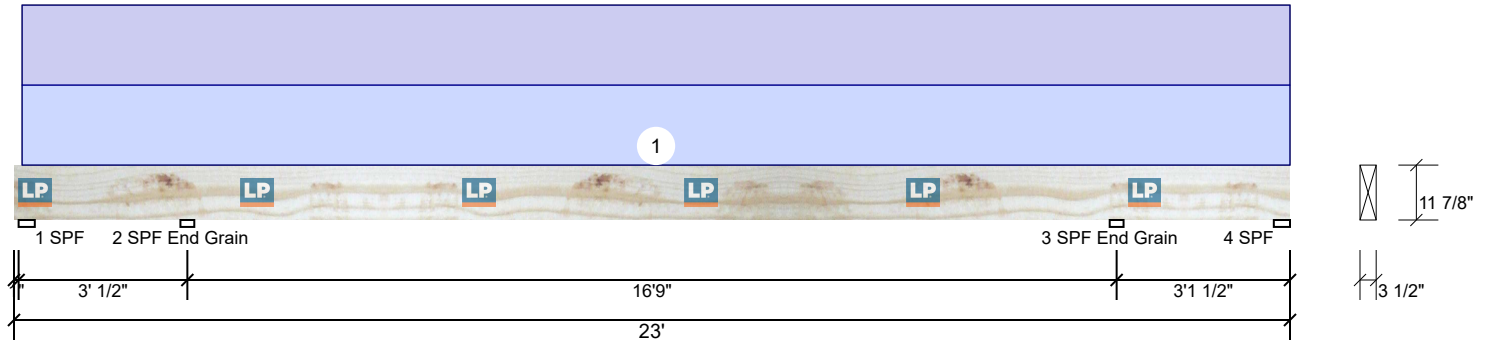
Notes
 This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.
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Manufacturer Info
 Louisiana-Pacific Corp
 414 Union Street, Suite 2000
 Nashville, TN 37219
 (888) 820-0325
 www.lpcorp.com
 APA: PR-L280, ICC-ES: ESR-2403,
 LADBS: RR-25783, Florida: FL15228

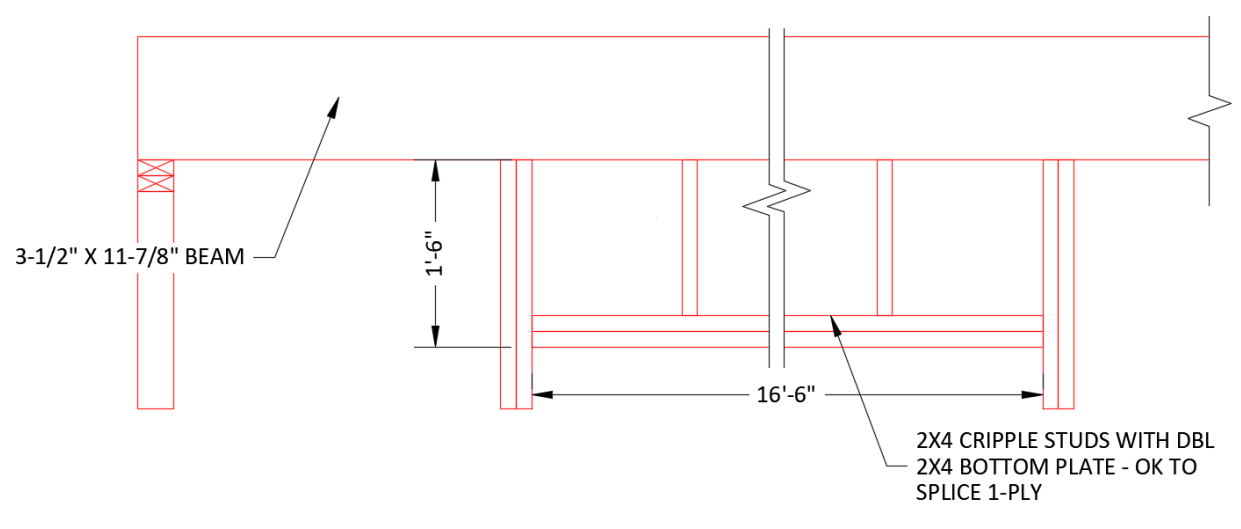
U.S. Lumber
 2160 Satellite Blvd., Suite 450, GA
 U.S.A
 30097
 888-613-5078

This design is valid until 10/31/2021

CL2302 CP GL_2nd Flr_HD2-A LP-LSL 1.55E 3.500" X 11.875" - PASSED Level: 2nd Flr



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 Self Weight	0-1-12 to 23-0-0		Top	40 PLF 13 PLF	0 PLF	0 PLF	0 PLF	40 PLF	Gable & Roof



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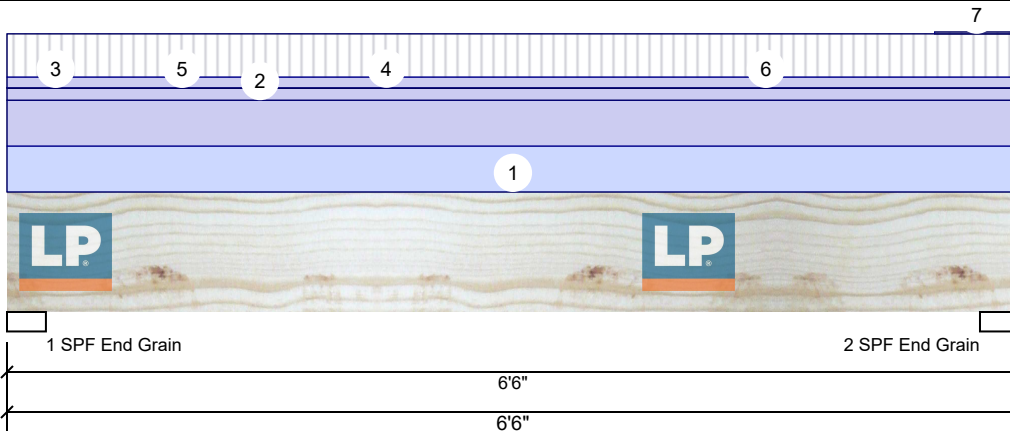
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 10/31/2021

CL2302 CP GL_2nd Flr_HD1-A LP-LSL 1.55E 3.500" X 9.250" - PASSED

Level: 2nd Flr



Member Information

Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
Temperature:	Temp <= 100°F
General Load	
Floor Live:	40 PSF
Dead:	10 PSF

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	923 (0)	1496	0	0	975
2	923 (-6)	1496	0	0	975

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	32%	1496 / 1424	2920	Uniform	D+0.75(L+C)
2 - SPF End Grain	3.000"	32%	1496 / 1424	2920	Uniform	D+0.75(L+C)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3491 ft-lb	3'3"	10127 ft-lb	0.345 (34%)	D+L	L
Shear	1706 lb	5'6 1/2"	8849 lb	0.193 (19%)	D+L	L
LL Defl inch	0.048 (L/1525)	3'3"	0.204 (L/360)	0.240 (24%)	0.75(L+C)	Uniform
TL Defl inch	0.099 (L/744)	3'3"	0.306 (L/240)	0.320 (32%)	D+0.75(L+C)	Uniform

Beam OK installed high in wall (under double top plate) and framing below to door opening per detail on page 2

Design Notes

- 1 Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
- 2 Dead Load Deflection: Instant = 0.051", Long Term = 0.076"
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.

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 6-6-0		Top	300 PLF	0 PLF	0 PLF	0 PLF	300 PLF	
2	Part. Uniform	0-0-0 to 6-6-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-0-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	0-7-8			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 6-6-0		Top	70 PLF	283 PLF	0 PLF	0 PLF	0 PLF	
5	Tapered Start	0-7-8		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	2-7-8			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
6	Tapered Start	2-7-8		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

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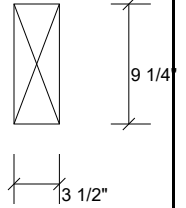
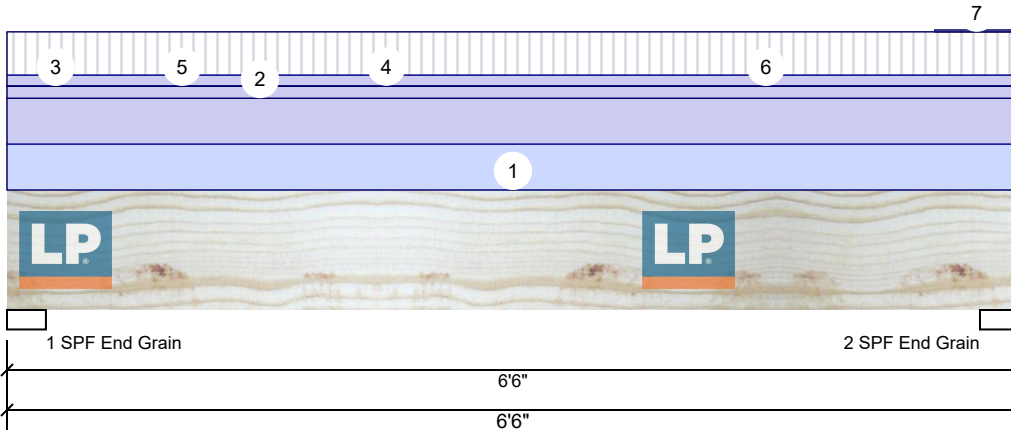
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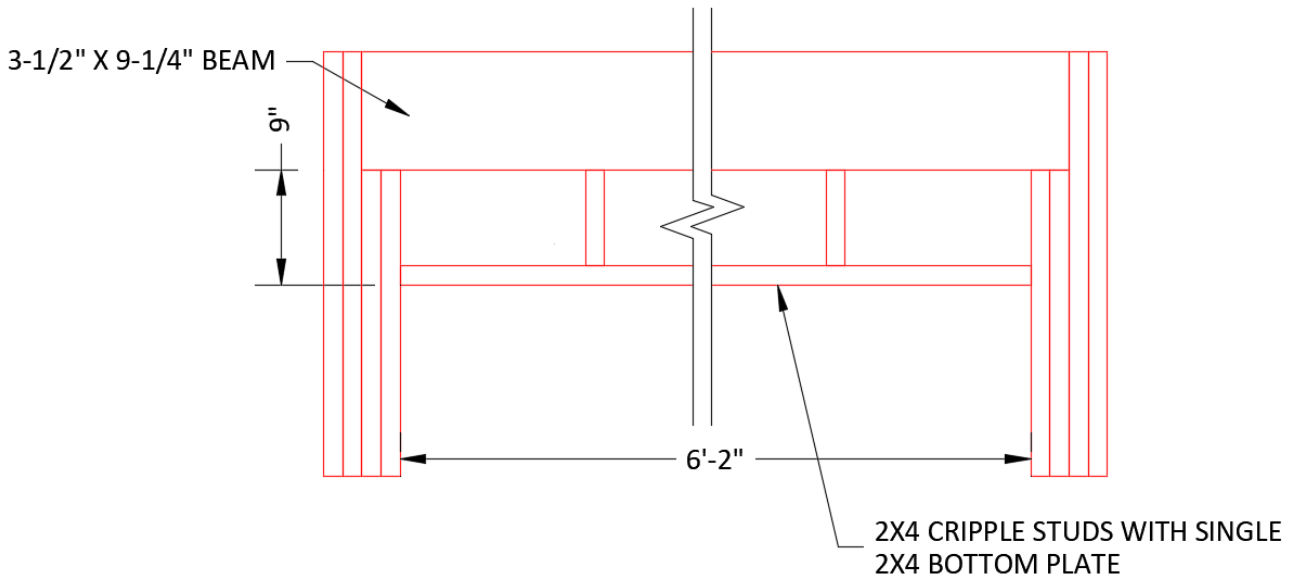
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Level: 2nd Flr



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
	End	6-6-0			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
7	Part. Uniform	5-11-8 to 6-6-0		Top	0 PLF	-12 PLF	0 PLF	0 PLF	0 PLF	J8
	Self Weight				10 PLF					



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