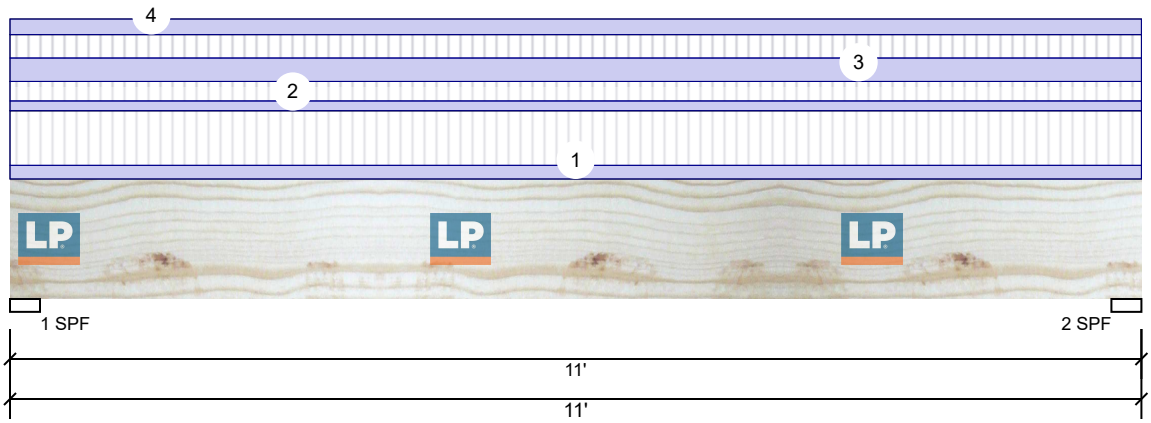
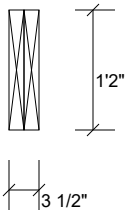
Client:	Brad Cummings	Date:	10/13/2020
Project:		Input by:	
Address:		Job Name:	Spring Hill Church Rd
		Project #:	

10' Garage Door Header LP-LVL 2900Fb-2.0E 1.750" X 14.000" 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:	600	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	2750	1837	0	0	0
2	2750	1837	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	88%	1837 / 2750	4587	L	D+L
2 - SPF	3.500"	88%	1837 / 2750	4587	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11585 ft-lb	5'6"	27029 ft-lb	0.429 (43%)	D+L	L
Shear	3423 lb	1'4 3/4"	9310 lb	0.368 (37%)	D+L	L
LL Defl inch	0.103 (L/1227)	5'6"	0.264 (L/480)	0.390 (39%)	L	L
TL Defl inch	0.172 (L/735)	5'6"	0.211 (L/600)	0.820 (82%)	D+L	L

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 = 0.069", Long Term = 0.103"
3 Girders are designed to be supported on the bottom edge only.
4 Multiple plies must be fastened together as per manufacturer's details.
5 Top loads must be supported equally by all plies.
6 Top must be continuously braced.
7 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	Uniform			Top	70 PLF	280 PLF	0 PLF	0 PLF	0 PLF	Floor Load
2	Uniform			Top	50 PLF	100 PLF	0 PLF	0 PLF	0 PLF	Attic Load
3	Uniform			Top	120 PLF	120 PLF	0 PLF	0 PLF	0 PLF	Roof Load
4	Uniform			Top	80 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Brick Load
	Self Weight				14 PLF					

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.

This design is valid until 10/31/2021

Manufacturer Info

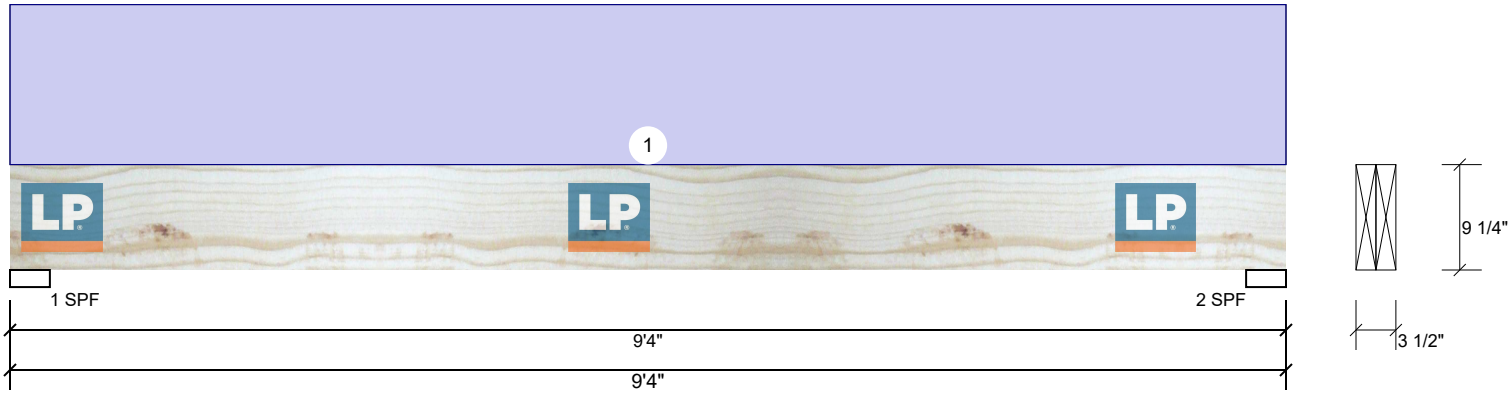
Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
APA: PR-L280, ICC-ES: ESR-2403, LADBS: RR-25783, Florida: FL15228

BMC/Locust Lumber Company
312 E. Main Street, North Carolina 28127
704-888-4411

Client:	Brad Cummings	Date:	10/13/2020
Project:		Input by:	
Address:		Job Name:	Spring Hill Church Rd
		Project #:	

Dining Room Header LP-LVL 2900Fb-2.0E 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:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	627	0	0	0
2	0	627	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	12%	627 / 0	627	Uniform	D
2 - SPF	3.500"	12%	627 / 0	627	Uniform	D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1322 ft-lb	4'8"	11174 ft-lb	0.118 (12%)	D	Uniform
Shear	492 lb	1'	5536 lb	0.089 (9%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.045 (L/2351)	4'8"	0.444 (L/240)	0.100 (10%)	D	Uniform

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 = 0.045", Long Term = 0.068"
3 Girders are designed to be supported on the bottom edge only.
4 Multiple plies must be fastened together as per manufacturer's details.
5 Top loads must be supported equally by all plies.
6 Top braced at bearings.
7 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	Uniform			Top	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Ceiling Joists
	Self Weight				9 PLF					

Notes

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This design is valid until 10/31/2021

Manufacturer Info

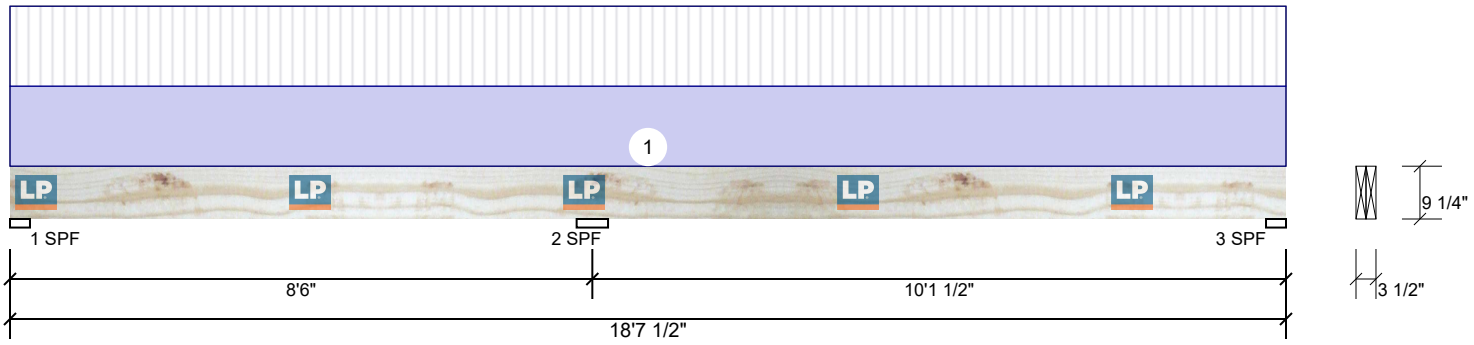
Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
APA: PR-L280, ICC-ES: ESR-2403, LADBS: RR-25783, Florida: FL15228

BMC/Locust Lumber Company
312 E. Main Street, North Carolina 28127
704-888-4411

Client:	Brad Cummings	Date:	10/13/2020
Project:		Input by:	
Address:		Job Name:	Spring Hill Church Rd
		Project #:	

Header @ Foyer LP-LVL 2900Fb-2.0E 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:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	313	342	0	0	0
2	1135	1240	0	0	0
3	415	453	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	14%	337 / 389	727	L_	D+L
2 - SPF	5.500"	29%	1249 / 1143	2391	LL	D+L
3 - SPF	3.500"	17%	449 / 450	899	_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2210 ft-lb	8'6"	12416 ft-lb	0.178 (18%)	D+L	LL
Pos Moment	1732 ft-lb	14'3 15/16"	12416 ft-lb	0.140 (14%)	D+L	_L
Shear	1097 lb	9'3 1/4"	6151 lb	0.178 (18%)	D+L	LL
LL Defl inch	0.036 (L/3257)	13'8 9/16"	0.247 (L/480)	0.150 (15%)	L	_L
TL Defl inch	0.067 (L/1769)	13'9 15/16"	0.495 (L/240)	0.140 (14%)	D+L	_L

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 = 0.031", Long Term = 0.046"
3 Girders are designed to be supported on the bottom edge only.
4 Multiple plies must be fastened together as per manufacturer's details.
5 Top loads must be supported equally by all plies.
6 Top braced at bearings.
7 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	Uniform			Top	100 PLF	100 PLF	0 PLF	0 PLF	0 PLF	Roof/Ceiling load from Great Room
	Self Weight				9 PLF					

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.

This design is valid until 10/31/2021

Manufacturer Info

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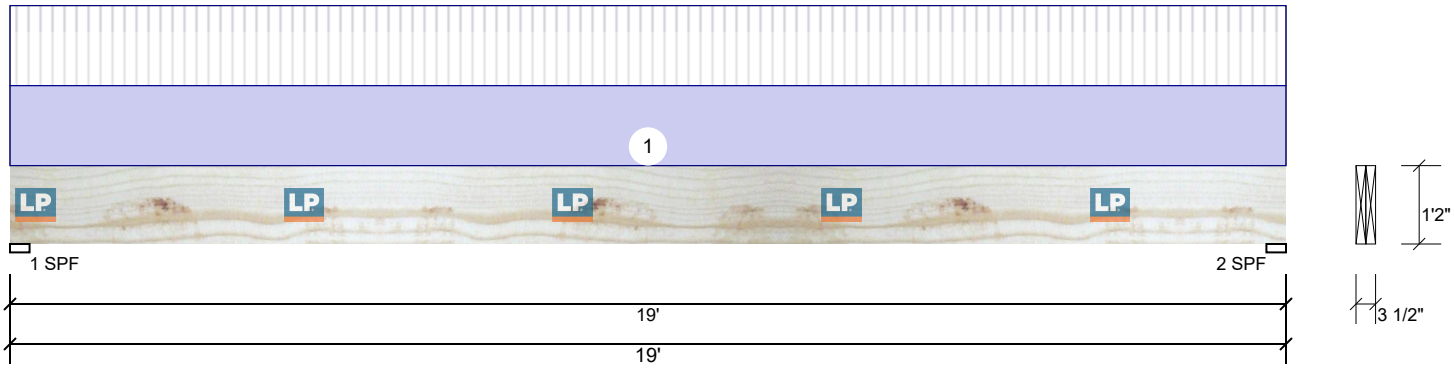
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
APA: PR-L280, ICC-ES: ESR-2403, LADBS: RR-25783, Florida: FL15228

BMC/Locust Lumber Company
312 E. Main Street, North Carolina 28127
704-888-4411

Client:	Brad Cummings	Date:	10/13/2020
Project:		Input by:	
Address:		Job Name:	Spring Hill Church Rd
		Project #:	

Ridge Beam in Great Room **LP-LVL 2900Fb-2.0E** **1.750" X 14.000"** **2-Ply - PASSED**

Level: Level



Member Information

Type:	Girder	Application:	Roof
Plies:	2	Slope:	0/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	480	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	1805	1938	0	0	0
2	1805	1938	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	72%	1938 / 1805	3743	L	D+L
2 - SPF	3.500"	72%	1938 / 1805	3743	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	16933 ft-lb	9'6"	27029 ft-lb	0.626 (63%)	D+L	L
Shear	3193 lb	1'4 3/4"	9310 lb	0.343 (34%)	D+L	L
LL Defl inch	0.335 (L/664)	9'6 1/16"	0.464 (L/480)	0.720 (72%)	L	L
TL Defl inch	0.694 (L/320)	9'6 1/16"	0.927 (L/240)	0.750 (75%)	D+L	L

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 = 0.360", Long Term = 0.539"
3. Girders are designed to be supported on the bottom edge only.
4. Multiple plies must be fastened together as per manufacturer's details.
5. Top loads must be supported equally by all plies.
6. Top must be laterally braced at a maximum of 7'2 5/8" o.c.
7. 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	Uniform			Top	190 PLF	190 PLF	0 PLF	0 PLF	0 PLF	Roof Load
	Self Weight				14 PLF					

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.

This design is valid until 10/31/2021

Manufacturer Info

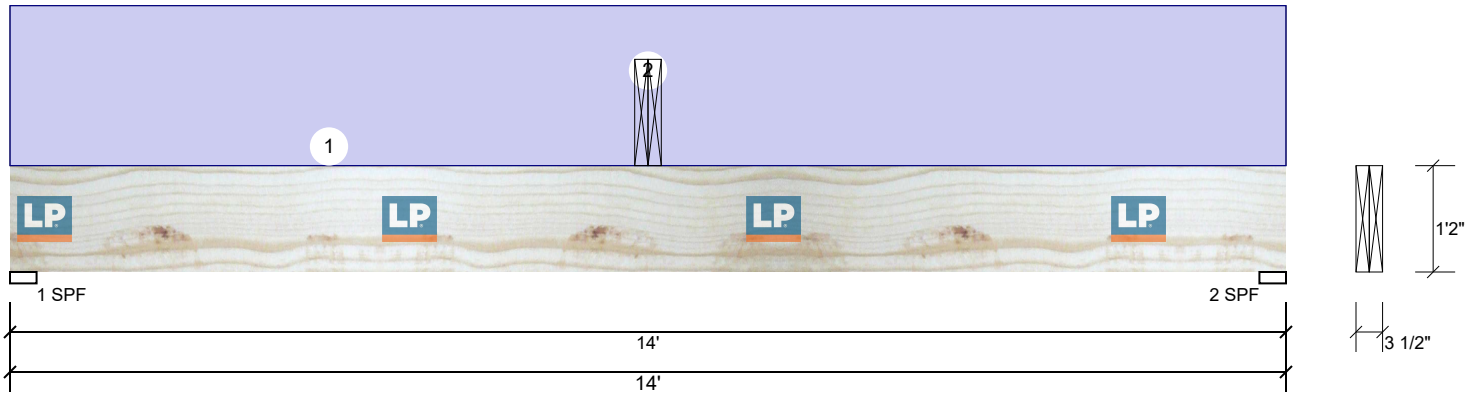
Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
APA: PR-L280, ICC-ES: ESR-2403, LADBS: RR-25783, Florida: FL15228

BMC/Locust Lumber Company
312 E. Main Street, North Carolina 28127
704-888-4411

Client:	Brad Cummings	Date:	10/13/2020
Project:		Input by:	
Address:		Job Name:	Spring Hill Church Rd
		Project #:	

Hdr. @ kit/Great Room LP-LVL 2900Fb-2.0E 1.750" X 14.000" 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:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	903	1767	0	0	0
2	903	1767	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	51%	1767 / 902	2670	L	D+L
2 - SPF	3.500"	51%	1767 / 903	2670	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15286 ft-lb	7'	27029 ft-lb	0.566 (57%)	D+L	L
Shear	2511 lb	12'7 1/4"	9310 lb	0.270 (27%)	D+L	L
LL Defl inch	0.115 (L/1411)	7' 1/16"	0.339 (L/480)	0.340 (34%)	L	L
TL Defl inch	0.299 (L/544)	7' 1/16"	0.677 (L/240)	0.440 (44%)	D+L	L

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 = 0.184", Long Term = 0.276"
3 Girders are designed to be supported on the bottom edge only.
4 Multiple plies must be fastened together as per manufacturer's details.
5 Top loads must be supported equally by all plies.
6 Top must be continuously braced.
7 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	Uniform			Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Ceiling joists over Kitchen
2	Point	7-0-0		Top	1938 lb	1805 lb	0 lb	0 lb	0 lb	Ridge Beam in Great Room Brg 2
	Bearing Length	0-3-8								
	Self Weight				14 PLF					

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.

This design is valid until 10/31/2021

Manufacturer Info

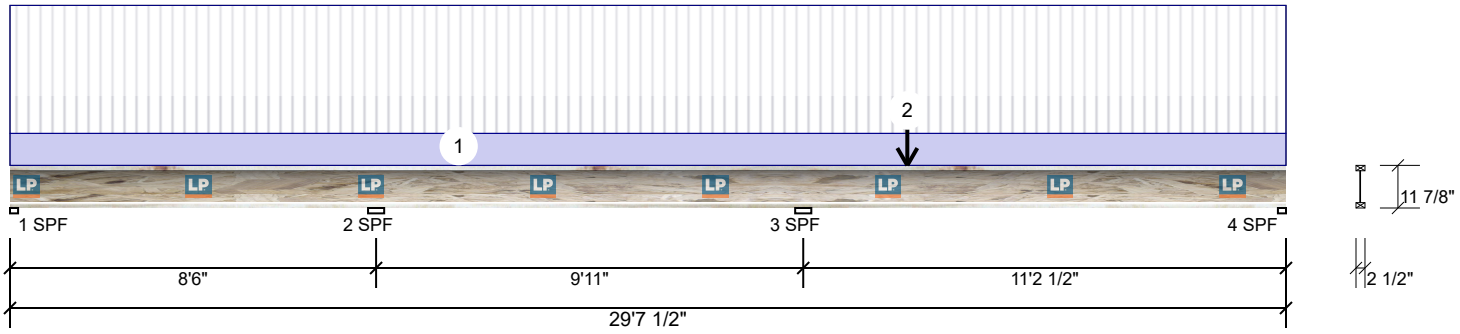
Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
APA: PR-L280, ICC-ES: ESR-2403, LADBS: RR-25783, Florida: FL15228

BMC/Locust Lumber Company
312 E. Main Street, North Carolina 28127
704-888-4411

Client:	Brad Cummings	Date:	10/13/2020
Project:		Input by:	
Address:		Job Name:	Spring Hill Church Rd
		Project #:	

Joists under Pantry-DR wall LPI 20Plus 11.875" - PASSED

Level: Level



Member Information

Type:	Joist	Application:	Floor
Spacing:	19.2" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	220	57	0	0	0
2	614	142	0	0	0
3	765	287	0	0	0
4	296	88	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.250"	31%	58 / 261	319	L_L	D+L
2 - SPF	4.500"	34%	137 / 700	837	LL_	D+L
3 - SPF	4.500"	45%	292 / 813	1105	_LL	D+L
4 - SPF	2.250"	39%	86 / 319	405	L_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1133 ft-lb	18'5"	3755 ft-lb	0.302 (30%)	D+L	_LL
Pos Moment	974 ft-lb	24'6 3/4"	3755 ft-lb	0.260 (26%)	D+L	L_L
Shear	624 lb	18'5"	1485 lb	0.420 (42%)	D+L	_LL
LL Defl inch	0.068 (L/1967)	24'2 1/16"	0.277 (L/480)	0.240 (24%)	L	L_L
TL Defl inch	0.090 (L/1485)	24'1 1/16"	0.554 (L/240)	0.160 (16%)	D+L	L_L

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 = 0.022", Long Term = 0.033"
3 Top flange must be laterally braced at a maximum of 9'3" o.c.
4 Bottom flange must be laterally braced at a maximum of 8'7" o.c.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-7-3	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Floor Load
2	Point	20-10-0		100 lb	0 lb	0 lb	0 lb	0 lb	Bearing Wall Above
	Bearing Length	0-3-0							

Notes

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This design is valid until 10/31/2021

Manufacturer Info

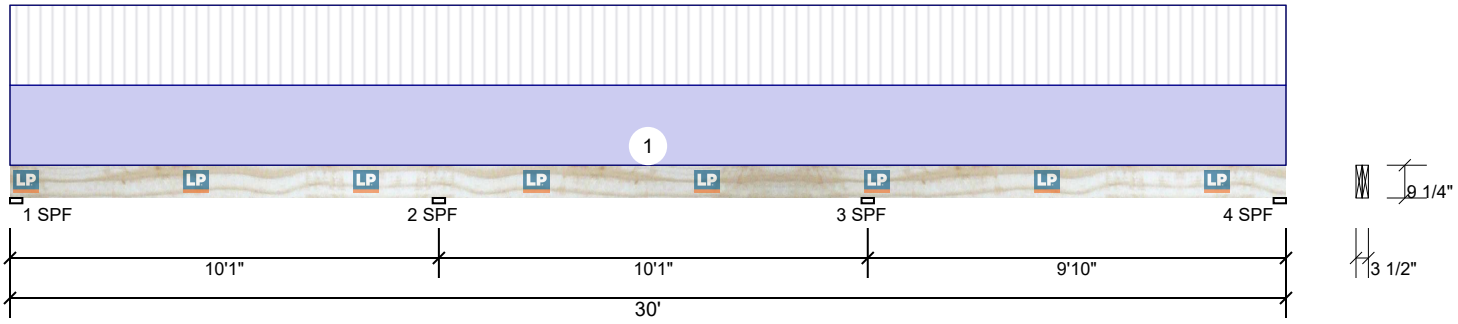
Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
APA: PR-L238, ICC-ES: ESR-1305, LADBS: RR-25099, Florida: FL15401

BMC/Locust Lumber Company
312 E. Main Street, North Carolina
28127
704-888-4411

Client:	Brad Cummings	Date:	10/13/2020
Project:		Input by:	
Address:		Job Name:	Spring Hill Church Rd
		Project #:	

Rear Porch Header LP-LVL 2900Fb-2.0E 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:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	498	537	0	0	0
2	1322	1424	0	0	0
3	1295	1394	0	0	0
4	485	523	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	21%	535 / 559	1094	L_L	D+L
2 - SPF	3.500"	55%	1425 / 1431	2857	LL_	D+L
3 - SPF	3.500"	54%	1396 / 1412	2808	_LL	D+L
4 - SPF	3.500"	21%	522 / 549	1071	L_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2677 ft-lb	10'1"	12416 ft-lb	0.216 (22%)	D+L	LL_
Pos Moment	2158 ft-lb	4'4 11/16"	12416 ft-lb	0.174 (17%)	D+L	L_L
Shear	1308 lb	9'3 3/4"	6151 lb	0.213 (21%)	D+L	LL_
LL Defl inch	0.047 (L/2503)	4'11 11/16"	0.246 (L/480)	0.190 (19%)	L	L_L
TL Defl inch	0.084 (L/1415)	4'10"	0.493 (L/240)	0.170 (17%)	D+L	L_L

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 = 0.036", Long Term = 0.055"
3 Girders are designed to be supported on the bottom edge only.
4 Multiple plies must be fastened together as per manufacturer's details.
5 Top loads must be supported equally by all plies.
6 Top braced at bearings.
7 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	Uniform			Top	120 PLF	120 PLF	0 PLF	0 PLF	0 PLF	Roof/Ceiling Load
	Self Weight				9 PLF					

Notes

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This design is valid until 10/31/2021

Manufacturer Info

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APA: PR-L280, ICC-ES: ESR-2403, LADBS: RR-25783, Florida: FL15228

BMC/Locust Lumber Company
312 E. Main Street, North Carolina 28127
704-888-4411