PROFESSIONAL BUILDERS SUPPLY JC 3/12/2019 11:56 AM
3941 US Highway 421 North Wilmington NC 28401 910-386-4300
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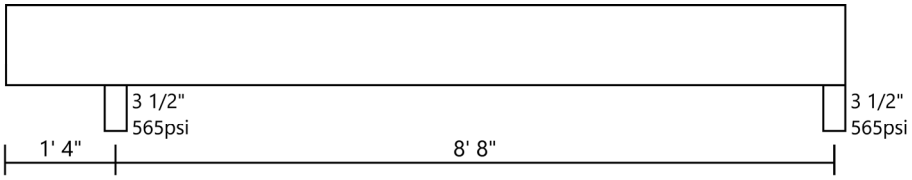
Project: **Milton Built Homes (Plan # 2662-15) - Roof Beams**
MemberID: **Beam - Roof - Valley 1**
Usage: **BEAM (Roof)**
Max Deflection: **LL = L/240 TL = L/180** Slope: **12/12**



LOADS

Project Design Loads : Roof: Live=20.0 psf, Dead=15.0 psf

#	Shape	Live+Dead Ld(T) @Start	@End	Live Ld(L) @Start	@End	LDF	Span#	Location* Starts	Ends	Additional Info
1	Trapezoidal (plf)	280.0	158.0	160.0	90.0	115%	0	0'	10'	roof load
2	Trapezoidal (plf)	140.0	0.0	80.0	0.0	115%	0	0'	10'	roof load
	Uniform (plf)	5.48					0	0'	10'	Self Weight

*Dimensions measured from left end when span# is 0, otherwise, from left end of the specified span.

LOAD PATTERNS (* = span loaded)

	1	2
1	*	*

SUPPORTS (lbs)

	1	2	
Max Reaction	2305	1176	
Max 115%	1096	554	
Min Reaction	1209	622	
Min 115%	1096	554	
DL Reaction	1209	622	
Min Bearing	3.00"	1.50"	[Based on bearing stress below]
Brg Stress (psi)	565	565	

DESIGN

	Actual	Span	Location	Group	Allow	LDF	Ratio
V(lbs)	1122	2	0' 1 3/4"	31	4540	115%	0.25
M(ft-lbs)	2858	2	4' 4"	31	12235	115%	0.23
RtRn(lbs)	1176	0	10'	31	3461		0.34
IntRn(lbs)	2305	0	1' 4"	31	3461		0.67
LLDefl(")	-0.03	1	0'	31	0.20		2L/-1313
TLDefl(")	-0.07	1	0'	31	0.25		2L/-621
LLDefl(")	0.07	2	4' 4"	31	0.61		L/1996
TLDefl(")	0.16	2	4' 4"	31	0.82		L/944

USE: **onCENTER LVL 2.0E 1 3/4" x 11 7/8" 1 Ply**
onCENTER® LVL by BlueLinx **Grade, Depth selected by user**

NOTES

1. Designed in accordance with National Design Specifications for Wood Construction and applicable approvals or research reports.
2. Provide full depth lateral support at all bearing locations. Allowable positive moment is calculated based on top edge with continuous lateral support.
3. Allowable negative moment is calculated based on bottom edge laterally supported @16" o.c.
4. Analysis valid for dry-use only (less than 16% moisture content).
5. Loads have been input by the user and have not been verified by BlueLinx Engineered Lumber Technical Services.
6. Bearing length (Min Bearing) based on allowable stress of support material (Bearing Stress); support material capacity shall be verified (by others).
7. When required by the building code, a registered design professional or building official should verify the input loads and product application.
8. Company, product or brand names referenced are trademarks or registered trademarks of their respective owners.
9. Allowable upward deflection for cantilever is the greater of 0.20" or the cantilever span (inches) multiplied by 2 and divided by the factor shown in Max Deflection (located above beam drawing).
10. Load Combinations: 10= D, 20= D + 100%, 30= D + 115%, 40= D + 125%, 50= D + 160%, 60= D + 0.75(100%+115%), 70= D + 0.75(100%+125%), 80= D + 0.75(100%+115%+160%), 90= D + 0.75(100%+125%+160%), 100= 0.6D + 160%, 110= D + Commercial (100%), 120= D + 0.75(100%+160%)
11. Group = Load Combination Number + Load Pattern number. (For simple span, Load pattern = 1 for LL, 0 for DL).