Boise Cascade

Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

Floor Bea

Dry | 3 spans | No cantilevers | 0/12 slope

April 3, 20

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 04/05/17

BC CALC® Design Report

Build 5837
Job Name: Robie Spec
Address:
City, State, Zip: Portland, ME
Customer: Eldredge Lumber
Code reports: ESR-1040

File Name: Robie-SpecPortland
Description: Designs\FB01
Specifier:
Designer:
Company:
Misc:

Total of Horizontal Design Spans = 19-01-12

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0	2,260 / 254	694 / 0			
B1	5,874 / 0	1,853 / 0			
B2	5,971 / 0	1,901 / 0			
B3	2,309 / 242	715 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Trib.
1	Standard Load	Unf. Area (lb/ft^2)	L	00-00-00	19-01-12	40	10				13-00-00
2		Unf. Area (lb/ft^2)	L	00-00-00	19-01-12	20	10				13-00-00

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	4,107 ft-lbs	29.4%	100%	2	16-03-01
Neg. Moment	-4,814 ft-lbs	34.5%	100%	5	12-07-12
End Shear	2,040 lbs	32.3%	100%	2	13-07-00
Cont. Shear	3,134 lbs	49.6%	100%	5	13-07-00
Total Load Defl.	L/999 (0.056")	n/a	n/a	2	16-00-08
Live Load Defl.	L/999 (0.045")	n/a	n/a	7	15-11-10
Total Neg. Defl.	L/999 (-0.026")	n/a	n/a	2	09-06-09
Max Defl.	0.056"	n/a	n/a	2	16-00-08
Span / Depth	8.1	n/a	n/a	0	00-00-00
Squash Blocks	Valid				

Notes

Entered/Displayed Horizontal Span Length(s) = Clear Span + 1/2 min. end bearing + 1/2 intermediate bearing
Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets arbitrary (1") Maximum total load deflection criteria.
Minimum bearing length for B0 is 1-1/2".
Minimum bearing length for B1 is 2-15/16".
Minimum bearing length for B2 is 3".
Minimum bearing length for B3 is 1-1/2".
Calculations assume member is fully braced.
Design based on Dry Service Condition.

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Connection Diagram

a minimum = 2" c = 5-1/2"
b minimum = 3" d = 24"

Member has no side loads.
Connectors are: 16d Sinker Nails

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

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