Boise Cascade

Quadruple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

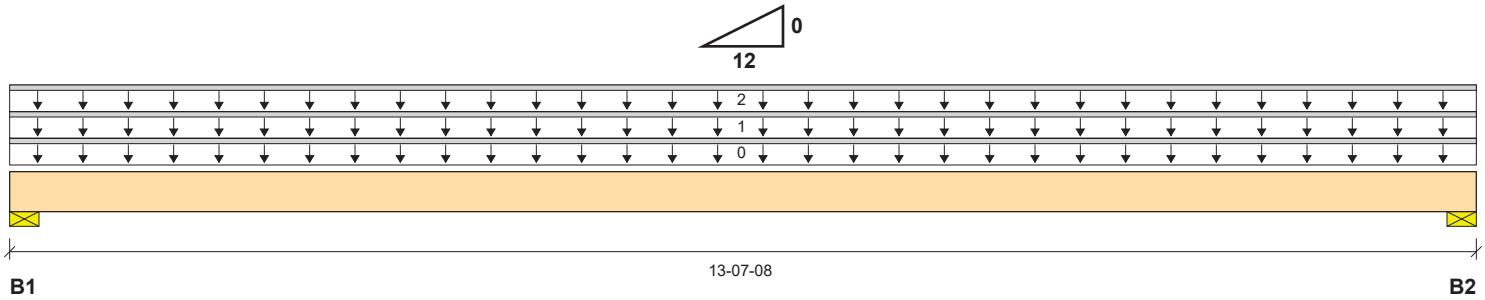
PASSED

BM7-4 (Roof Beam)

BC CALC® Member Report | Dry | 1 span | No cant. | July 10, 2019 07:28:30

Build 7082

Job name:	Ellington	File name:	
Address:		Description:	
City, State, Zip:		Specifier:	
Builder:	LAMCO	Designer:	
Code reports:	ESR-1040	Company:	BFS



Total Horizontal Product Length = 13-07-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"		5474 / 0			5310 / 0
B2, 3-1/2"		5474 / 0			5310 / 0

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	13-07-08	Top		24				00-00-00
1	A02 Trusses	Unf. Lin. (lb/ft)	L	00-00-00	13-07-08	Top		734			734	n\a
2	J02 Trusses	Unf. Lin. (lb/ft)	L	00-00-00	13-07-08	Top		46			46	n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	34305 ft-lbs	64.5 %	125%	4	06-09-12
End Shear	8756 lbs	44.4 %	125%	4	01-03-06
Total Load Deflection	L/288 (0.548")	62.4 %	n\a	4	06-09-12
Live Load Deflection	L/586 (0.27")	41.0 %	n\a	5	06-09-12
Max Defl.	0.548"	54.8 %	n\a	4	06-09-12
Span / Depth	13.3				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	3-1/2" x 7"	10785 lbs	n\a	58.7 %	Unspecified
B2	Wall/Plate	3-1/2" x 7"	10785 lbs	n\a	58.7 %	Unspecified

Cautions

For roof members with slope (1/4)/12 or less final design must ensure that ponding instability will not occur.

For roof members with slope (1/2)/12 or less final design must account for Rain-on-Snow surcharge load.

Notes

Design meets Code minimum (L/180) Total load deflection criteria.
Design meets Code minimum (L/240) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Design based on Dry Service Condition.
Beams 7 inches wide will be assumed to be either top-loaded only, or equally loaded from each side.
Bolts are assumed to be Grade A307 or Grade 2 or higher.
Member has no side loads.

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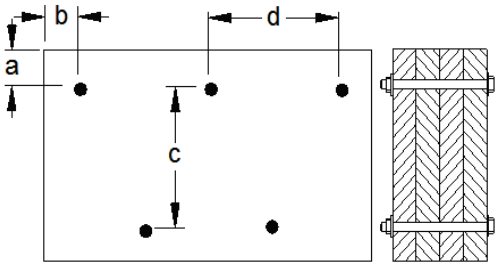
Connection Diagram: Full Length of Member



a minimum = 2" c = 7-7/8"
b minimum = 2-1/2" d = 24"

Beams 7 inches wide will be assumed to be either top-loaded only, or equally loaded from each side.
Bolts are assumed to be Grade A307 or Grade 2 or higher.
Member has no side loads.
Connectors are: 1/2 in. Staggered Through Bolt

Disclosure