

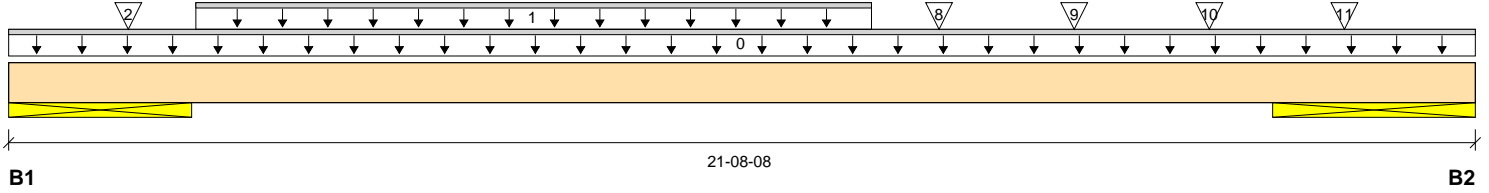
## Roof/Dropped Beams\GDH(i27) (Dropped Beam)

BC CALC® Member Report  
 Build 7493  
 Job name:  
 Address:  
 City, State, Zip:  
 Customer:  
 Code reports: ESR-1040

Dry | 1 span | No cant.

April 8, 2021 08:15:05

File name: 2100445A.mmdl  
 Description: Roof/Dropped Beams\GDH(i27)  
 Specifier:  
 Designer:  
 Company:



Total Horizontal Product Length = 21-08-08

### Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 32-1/2"		2314 / 0		1200 / 1892	2338 / 0
B2, 36"		2339 / 0		1057 / 1528	2185 / 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	21-08-08	Top		14				00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	02-09-04	12-09-04	Top		232			248	n/a
2	BSE(c1)	Conc. Pt. (lbs)	L	01-09-04	01-09-04	Top		316			368	n/a
8	B1(c3)	Conc. Pt. (lbs)	L	13-09-04	13-09-04	Top		480			526	n/a
9	B2(c1)	Conc. Pt. (lbs)	L	15-09-04	15-09-04	Top		442			449	n/a
10	B2(c1)	Conc. Pt. (lbs)	L	17-09-04	17-09-04	Top		413			391	n/a
11	B2(c1)	Conc. Pt. (lbs)	L	19-09-04	19-09-04	Top		373			313	n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	15063 ft-lbs	42.8%	125%	1	09-09-04
End Shear	2974 lbs	25.6%	125%	1	17-06-08
Total Load Deflection	L/443 (0.437")	54.2%	n/a	1	10-09-04
Live Load Deflection	L/876 (0.221")	41.1%	n/a	115	10-09-04
Max Defl.	0.437"	43.7%	n/a	1	10-09-04
Span / Depth	13.8				
Conc. Load (B1)	691 lbs	7.5%	100%		
Conc. Load (B2)	686 lbs	7.5%	100%		

### Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 32-1/2" x 3-1/2"	4653 lbs	5.6%	5.5%	Unspecified
B2	Wall/Plate 36" x 3-1/2"	4524 lbs	5.0%	4.8%	Unspecified

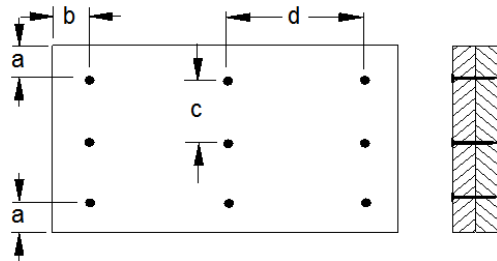
### Notes

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.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 01-10-08, Bottom: 01-10-08.  
 BC CALC® analysis is based on IBC 2012.  
 Wind loads determined from building geometry were used in selected product's verification.  
 Design based on Dry Service Condition.

BC CALC® Member Report  
 Build 7493  
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**Connection Diagram: Full Length of Member**



a minimum = 2"      c = 5"  
 b minimum = 3"      d = 24"

Connectors are: 3-1/4 in. Pneumatic Gun Nails

**Disclosure**

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is 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.

BC CALC®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

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

**PASSED**

## RoofFlush Beams\RFB1(i29) (Flush Beam)

BC CALC® Member Report

Dry | 1 span | No cant.

April 8, 2021 08:15:05

Build 7493

Job name:

File name: 2100445A.mmdl

Address:

Description: RoofFlush Beams\RFB1(i29)

City, State, Zip:

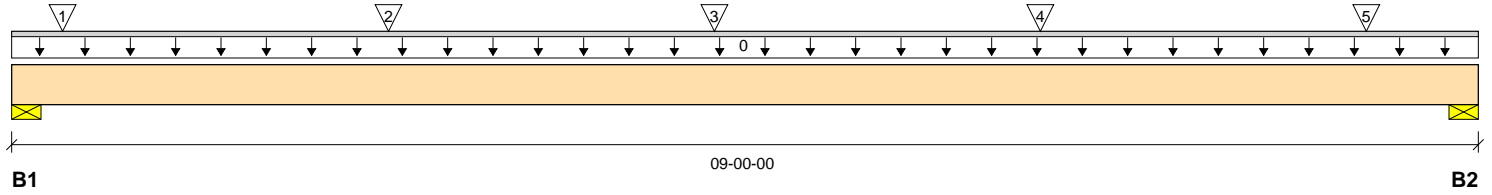
Specifier:

Customer:

Designer:

Code reports: ESR-1040

Company:



Total Horizontal Product Length = 09-00-00

### Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"		1482 / 0		806 / 1157	1609 / 0
B2, 3-1/2"		1217 / 0		661 / 972	1234 / 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	09-00-00	Top		9				00-00-00
1	A(c2)	Conc. Pt. (lbs)	L	00-03-12	00-03-12	Top		569			640	n/a
2	A(c2)	Conc. Pt. (lbs)	L	02-03-12	02-03-12	Top		580			670	n/a
3	A5(c2)	Conc. Pt. (lbs)	L	04-03-12	04-03-12	Top		504			542	n/a
4	A5(c2)	Conc. Pt. (lbs)	L	06-03-12	06-03-12	Top		504			542	n/a
5	A5(c2)	Conc. Pt. (lbs)	L	08-03-12	08-03-12	Top		458			449	n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	5102 ft-lbs	31.3%	125%	1	04-03-12
End Shear	1999 lbs	26.0%	125%	1	07-11-04
Total Load Deflection	L/731 (0.14")	32.8%	n/a	1	04-05-04
Live Load Deflection	L/999 (0.074")	n/a	n/a	115	04-05-04
Max Defl.	0.14"	14.0%	n/a	1	04-05-04
Span / Depth	11.1				

### Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	3092 lbs	59.4%	33.7%	Spruce-Pine-Fir
B2	Wall/Plate 3-1/2" x 3-1/2"	2451 lbs	47.1%	26.7%	Spruce-Pine-Fir

### Notes

- 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.
- Design meets arbitrary (0.75") Maximum live load deflection criteria.
- Calculations assume unbraced length of Top: 01-10-08, Bottom: 01-10-08.
- BC CALC® analysis is based on IBC 2012.
- Wind loads determined from building geometry were used in selected product's verification.
- Design based on Dry Service Condition.

BC CALC® Member Report

Build 7493

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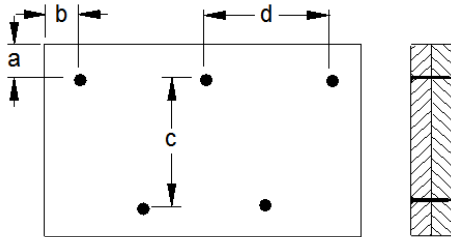
Customer:

Designer:

Code reports: ESR-1040

Company:

**Connection Diagram: Full Length of Member**



a minimum = 2"      c = 5-1/4"  
 b minimum = 3"      d = 12"

Calculated Side Load = 625.0 lb/ft  
 Connectors are: 16d Common Nails

**Disclosure**

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