

Single 14" BCI® 4500s-1.8

PASSED

1st Floor\Floor Joists\FJ-2(i2692)

BC CALC® Member Report

Dry | 2 spans | No cant. | 24 OCS | Repetitive | Glued & nailed

January 31, 2020 07:25:10

Build 6766

Job name:

File name: 2178685 WDS401 ENGAGE R SD072219.mmdl

Address:

Description: 1st Floor\Floor Joists\FJ-2(i2692)

City, State, Zip:

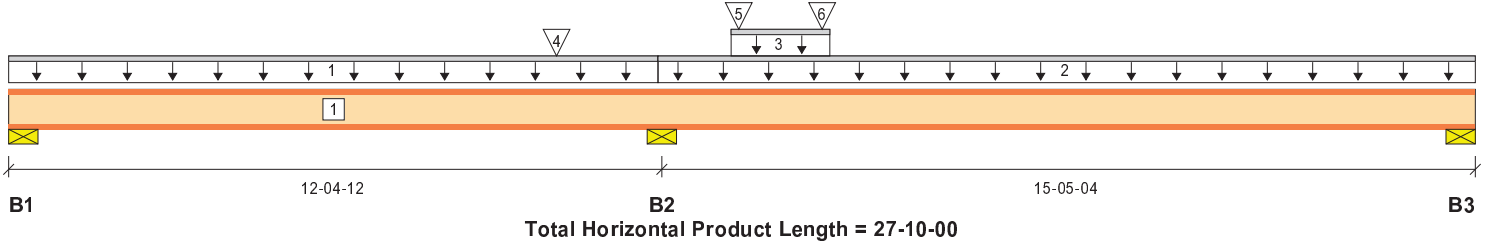
Specifier:

Customer:

Designer:

Code reports: ESR-1336

Company:



Total Horizontal Product Length = 27'-10-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-1/2"	344 / 101	49 / 0			
B2, 3-1/2"	1,241 / 0	706 / 0			
B3, 2-1/2"	543 / 32	150 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Roof Live	OCS
							100%	90%	115%	160%	125%	
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	12-03-14	Top	61	15				n/a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	12-03-14	27-10-00	Top	80	20				n/a
3	FC2 Floor Material	Unf. Lin. (lb/ft)	L	13-08-08	15-07-00	Top		30				n/a
4	19(i190)	Conc. Pt. (lbs)	L	10-04-12	10-04-12	Top		100				n/a
5	17(i193)	Conc. Pt. (lbs)	L	13-10-04	13-10-04	Top		125				n/a
6	15(i192)	Conc. Pt. (lbs)	L	15-05-04	15-05-04	Top		125				n/a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	2,301 ft-lbs	64.2%	100%	3	20-10-03
Neg. Moment	-2,493 ft-lbs	69.5%	100%	1	12-04-12
End Reaction	693 lbs	57.8%	100%	3	27-10-00
Int. Reaction	1,947 lbs	82.9%	100%	1	12-04-12
End Shear	672 lbs	36.8%	100%	3	27-07-08
Cont. Shear	1,175 lbs	64.4%	100%	1	12-06-08
Hole #1 Shear	192 lbs	26.2%	100%	1	06-04-00
Total Load Deflection	L/859 (0.214")	27.9%	n/a	3	20-04-02
Live Load Deflection	L/1,146 (0.16")	41.9%	n/a	8	20-06-02
Total Neg. Defl.	L/999 (-0.041")	n/a	n/a	3	07-07-04
Max Defl.	0.214"	14.2%	n/a	3	20-04-02
Span / Depth	13.1				
Hole Location	Valid				

Hole Summary

	Center	Elevation	Ref.	Height	Width	Shape	Orientation
H01	06-02-00	4.125"	L	6"	4"	Rectangular	Horizontal

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 2-1/2" x 1-3/4"	394 lbs	21.2%	32.8%	Unspecified
B2	Wall/Plate 3-1/2" x 1-3/4"	1,947 lbs	74.8%	82.9%	Unspecified
B3	Wall/Plate 2-1/2" x 1-3/4"	693 lbs	37.3%	57.8%	Unspecified

Cautions

Uplift of -52 lbs found at span 1 - Left.

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Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets User specified (L/480) Live load deflection criteria.

Design meets arbitrary (1.5") Maximum Total load deflection criteria.

Design meets arbitrary (1") Maximum live load deflection criteria.

Calculations assume member is fully braced.

BC CALC® analysis is based on IBC 2015.

Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.

Design based on Dry Service Condition.

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®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,