

Roof/Dropped Beams\GDH(i31) (Dropped Beam)

BC CALC® Member Report

Dry | 1 span | No cant.

October 1, 2020 14:20:06

Build 7493

Job name:

File name: 2000815A.mmdl

Address:

Description: Roof/Dropped Beams\GDH(i31)

City, State, Zip:

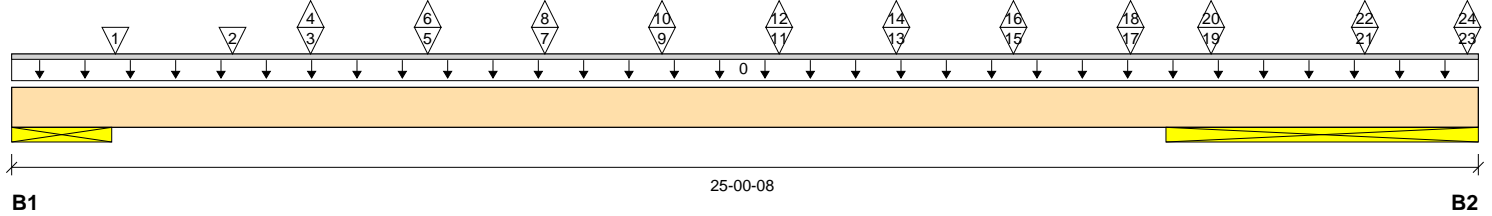
Specifier:

Customer:

Designer:

Code reports: ESR-1040

Company:



Total Horizontal Product Length = 25-00-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 20-1/2"		2510 / 0		711 / 1775	2508 / 68
B2, 64"		3633 / 0		1225 / 2703	3805 / 262

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	25-00-08	Top		16				00-00-00
1	E(c2)	Conc. Pt. (lbs)	L	01-09-04	01-09-04	Top		459			486	n/a
2	E(c1)	Conc. Pt. (lbs)	L	03-09-04	03-09-04	Top		402			372	n/a
3	DE(c1)	Conc. Pt. (lbs)	L	05-01-04	05-01-04	Top		438			460	n/a
4	DE(c1)	Conc. Pt. (lbs)	L	05-01-04	05-01-04	Top					-19	n/a
5	D(c1)	Conc. Pt. (lbs)	L	07-01-04	07-01-04	Top		452			526	n/a
6	D(c1)	Conc. Pt. (lbs)	L	07-01-04	07-01-04	Top					-33	n/a
7	D1(c1)	Conc. Pt. (lbs)	L	09-01-04	09-01-04	Top		468			524	n/a
8	D1(c1)	Conc. Pt. (lbs)	L	09-01-04	09-01-04	Top					-18	n/a
9	D1(c2)	Conc. Pt. (lbs)	L	11-01-04	11-01-04	Top		469			527	n/a
10	D1(c2)	Conc. Pt. (lbs)	L	11-01-04	11-01-04	Top					-15	n/a
11	D1(c3)	Conc. Pt. (lbs)	L	13-01-04	13-01-04	Top		442			489	n/a
12	D1(c3)	Conc. Pt. (lbs)	L	13-01-04	13-01-04	Top					-15	n/a
13	D1(c4)	Conc. Pt. (lbs)	L	15-01-04	15-01-04	Top		428			443	n/a
14	D1(c4)	Conc. Pt. (lbs)	L	15-01-04	15-01-04	Top					-15	n/a
15	D1(c5)	Conc. Pt. (lbs)	L	17-01-04	17-01-04	Top		543			673	n/a
16	D1(c5)	Conc. Pt. (lbs)	L	17-01-04	17-01-04	Top					-15	n/a
17	D1(c6)	Conc. Pt. (lbs)	L	19-01-04	19-01-04	Top		249			258	n/a
18	D1(c6)	Conc. Pt. (lbs)	L	19-01-04	19-01-04	Top					-147	n/a
19	D1A(c7)	Conc. Pt. (lbs)	L	20-05-12	20-05-12	Top		655			908	n/a
20	D1A(c7)	Conc. Pt. (lbs)	L	20-05-12	20-05-12	Top					-20	n/a
21	D1A(c8)	Conc. Pt. (lbs)	L	23-01-04	23-01-04	Top		326			239	n/a
22	D1A(c8)	Conc. Pt. (lbs)	L	23-01-04	23-01-04	Top					-15	n/a
23	D1(c1)	Conc. Pt. (lbs)	L	24-10-04	24-10-04	Top		406			408	n/a
24	D1(c1)	Conc. Pt. (lbs)	L	24-10-04	24-10-04	Top					-18	n/a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	20583 ft-lbs	47.1%	125%	1	11-01-04
End Shear	4023 lbs	30.3%	125%	1	03-00-08
Total Load Deflection	L/430 (0.505")	55.8%	n/a	1	10-07-04
Live Load Deflection	L/846 (0.257")	42.5%	n/a	163	10-07-04
Max Defl.	0.505"	50.5%	n/a	1	10-07-04
Span / Depth	13.6				
Conc. Load (B2)	1563 lbs	17.0%	100%		

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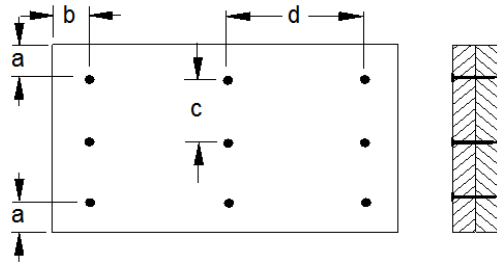
Company:

Bearing Supports	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 20-1/2" x 3-1/2"	5018 lbs	9.6%	9.3%	Unspecified
B2	Wall/Plate 64" x 3-1/2"	7438 lbs	4.6%	4.4%	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: 02-06-00, Bottom: 02-06-00.
 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.

Connection Diagram: Full Length of Member



a minimum = 2" c = 6"
 b minimum = 3" d = 24"

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

Disclosure

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