isDesign™	Client:	Date:	4/13/2017
	Project:	Designer:	CS
	Address:	Job Name:	
		Project #:	

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 04/18/17

B4 2.0E CP-LAM 1.750" X 14.000" 3-Ply - PASSED

Level: Level

Member Information

Type:	Girder	Application:	Roof
Plies:	3	Slope:	0/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	360	Building Code:	IBC 2012
Deflection TL:	240	Load Sharing:	Yes
Importance:	Normal	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1069	4392	0	0
2	0	2892	11883	0	0
3	0	738	3031	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	46%	1069 / 4575	5644	L_	D+S
2 - SPF End Grain	6.000"	55%	2892 / 11883	14775	LL	D+S
3 - SPF	5.500"	34%	738 / 3491	4229	_L	D+S

Bearings
#1 Built Up 2x6 Post
#2 PowerColumn 5½x5½
#3 Built Up 2x6 Post

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-22950 ft-lb	17'2 3/4"	51379 ft-lb	0.447 (45%)	D+S	LL
Unbraced	-22950 ft-lb	17'2 3/4"	22968 ft-lb	0.999 (100%)	D+S	LL
Pos Moment	18393 ft-lb	7'3 7/16"	51379 ft-lb	0.358 (36%)	D+S	L_
Unbraced	18393 ft-lb	7'3 7/16"	18442 ft-lb	0.997 (100%)	D+S	L_
Shear	6977 lb	16' 3/4"	16060 lb	0.434 (43%)	D+S	LL
LL Defl inch	0.275 (L/733)	8' 15/16"	0.561 (L/360)	0.490 (49%)	S	L_
TL Defl inch	0.333 (L/606)	8' 3/8"	0.842 (L/240)	0.400 (40%)	D+S	L_

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top loads must be supported equally by all plies.
4 Compression edge bracing required at 6'7" o.c. or less.
5 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		13-3-0	Top	10 PSF	0 PSF	47 PSF	0 PSF	0 PSF	
	Self Weight				19 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Pacific Woodtech Corp
1850 Park Lane
Burlington, WA 98233
(888) 707-2285
www.pacificwoodtech.com
APA: PR-L233, ICC-ES: ESR-2909

Hancock Lumber Company
158 Church Road, ME
USA
04011

HANCOCK LUMBER