2.0E CP-LAM DESIGN PROPERTIES

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 12/23/14

ALLOWABLE DESIGN PROPERTIES – 1¾" 2.0E CP-LAM

Depth	Maximum Vertical Shear (lbs)			Maximum Bending Moment (ft-lbs)			EI (x 10^6 lbs-in²)	Weight (plf)
	100%	115%	125%	100%	115%	125%		
5½"	1829	2103	2286	2664	3064	3330	49	2.50
7¼"	2411	2772	3013	4380	5037	5475	111	3.30
9½"	3159	3633	3948	7125	8194	8907	250	4.32
11⅞"	3948	4541	4936	10647	12245	13309	488	5.40
14"	4655	5353	5819	14320	16468	17900	800	6.36
16"	5320	6118	6650	18210	20942	22763	1195	7.27
18"	5985	6883	7481	22511	25888	28139	1701	8.18
23⅞"	7938	9129	9923	37428	43043	46786	3969	10.85

2.0E CP-LAM Allowable Design Stresses(1)

Modulus of Elasticity	E	=	2,000,000 psi(2)
Bending	F_b	=	3,100 psi(3)(4)
Horizontal Shear (joist)	F_v	=	285 psi
Compression Perpendicular to Grain (joist)	$F_{c\perp}$	=	850 psi(2)
Compression Parallel to Grain	F_c	=	2,750 psi

(1) These allowable design stresses apply to dry service conditions.
(2) No increase is allowed for load duration.
(3) Multiply by $(12/d)^{1/5}$ where d = depth of member (in).
(4) A factor of 1.04 may be applied for repetitive members as defined in the *National Design Specification® for Wood Construction.*

1¾" 2.0E CP-LAM

AVAILABLE SIZES (INCHES):

For additional grades and sizes, please visit our Web site at www.coastalforestproducts.com

2.0E CP-LAM FLOOR BEAMS

This table provides CP-LAM beam sizes for center support of one level of floor framing over various column spacings. Where floor joists are continuous over the beam, this table applies only when the 'A' span is between 45% and 55% of the building width.

1¾" x 2.0E CP-LAM

Width of Building (ft)	Column Spacing									
	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'
24'	2 – 11⅞"	2 – 11⅞"	2 – 11⅞"	2 – 14"	2 – 14"	2 – 16"	2 – 16"	2 – 16"	2 – 18"	2 – 18"
	3 – 9½"	3 – 9½"	3 – 11⅞"	3 – 11⅞"	3 – 11⅞"	3 – 14"	3 – 14"	3 – 14"	3 – 16"	3 – 16"
28'	2 – 11⅞"	2 – 11⅞"	2 – 14"	2 – 14"	2 – 14"	2 – 16"	2 – 16"	2 – 18"	2 – 18"	–
	3 – 9½"	3 – 11⅞"	3 – 11⅞"	3 – 11⅞"	3 – 14"	3 – 14"	3 – 14"	3 – 16"	3 – 16"	3 – 18"
32'	2 – 11⅞"	2 – 11⅞"	2 – 14"	2 – 14"	2 – 16"	2 – 16"	2 – 18"	2 – 18"+	–	–
	3 – 9½"	3 – 11⅞"	3 – 11⅞"	3 – 14"	3 – 14"	3 – 14"	3 – 16"	3 – 16"	3 – 18"	3 – 18"
36'	2 – 11⅞"	2 – 14"	2 – 14"	2 – 16"	2 – 16"	2 – 18"+	2 – 18"+	–	–	–
	3 – 11⅞"	3 – 11⅞"	3 – 11⅞"	3 – 14"	3 – 14"	3 – 16"	3 – 16"	3 – 16"	3 – 18"	3 – 18"
40'	2 – 11⅞"	2 – 14"	2 – 14"	2 – 16"	2 – 16"+	2 – 18"+	–	–	–	–
	3 – 11⅞"	3 – 11⅞"	3 – 14"	3 – 14"	3 – 14"	3 – 16"	3 – 16"	3 – 18"	3 – 18"	–

+ see note 3

Notes:

1. CP-LAM beam sizes are listed as the number of 1¾" thick pieces by the beam depth, e.g. 2 – 9½" indicates two 1¾" pieces by 9½" deep.
2. All CP-LAM beams require support across their full width.
3. The minimum required end and intermediate bearing lengths (based on 850 psi) are 3" and 7½" respectively unless the + symbol is shown. In that case, 4½" and 10½" end and intermediate bearing lengths are required.
4. CP-LAM beam sizes are based on residential floor loading of 40 psf live load and 10 psf dead load. The roof framing must be trusses supported at the exterior walls only.
5. Deflection is limited to L/360 at live load and L/240 at total load.
6. CP-LAM beam sizes are based on continuous floor joist spans and simple or continuous beam spans. If the floor joists are not continuous, it is permissible to consider a "Width of Building" dimension that is equal to 0.8 times the actual width of the building.