

# Prestressed Beam Load Table

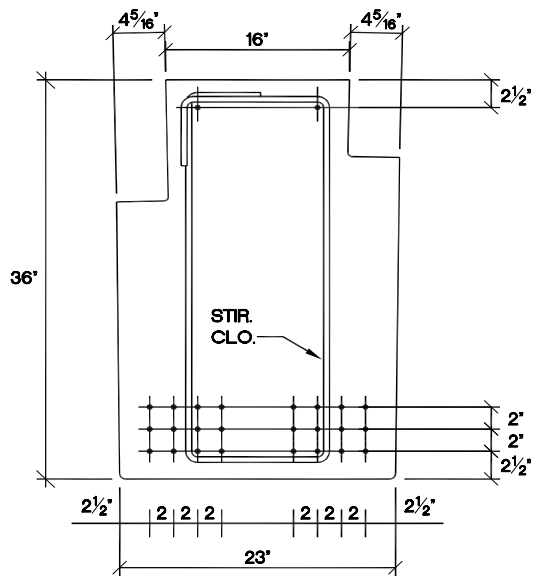
# 24IT36 Beam

Safe Load Table

UNIFORMLY DISTRIBUTED SUPERIMPOSED SERVICE LOAD IN KLF

# strand	Strand Area	$\phi Mn$ (k-ft)	Span Length (ft)												
			16	18	20	22	24	26	28	30	32	34	36	38	40
24	3.672	1832.70	16.47	14.57	13.05	11.81	10.78	9.90	9.15	8.50	7.80	6.82	5.99	5.30	4.70
22	3.366	1723.33	16.57	14.66	13.14	11.89	10.84	9.96	9.21	8.43	7.32	6.39	5.61	4.95	4.39
20	3.060	1608.91	16.69	14.77	13.23	11.97	10.93	10.04	9.17	7.88	6.83	5.96	5.23	4.61	4.08
18	2.754	1489.29	16.84	14.90	13.35	12.08	11.02	10.03	8.53	7.33	6.34	5.53	4.84	4.26	3.77
16	2.448	1364.28	17.03	15.07	13.50	12.22	11.04	9.29	7.90	6.78	5.86	5.10	4.46	3.92	3.46
14	2.142	1221.41	17.10	15.14	13.56	12.01	10.00	8.43	7.19	6.16	5.31	4.61	4.03	3.53	3.11
12	1.836	1072.75	17.21	15.23	12.80	10.48	8.71	7.33	6.24	5.36	4.63	4.04	3.53	3.11	2.75
10	1.530	918.14	17.33	13.56	10.87	8.88	7.37	6.19	5.25	4.50	3.88	3.37	2.94	2.57	2.26
8	1.224	757.40	14.19	11.08	8.86	7.22	5.97	5.00	4.23	3.60	3.09	2.67	2.32	2.02	1.76
6	0.918	577.98	10.68	8.31	6.62	5.37	4.41	3.67	3.08	2.61	2.22	1.90	1.63	1.40	1.20

 Beam Shear Capacity Limited by #4 stirrups @ 6" O.C.



A = 763.5 in<sup>2</sup>  
 b<sub>w</sub> = 16.5 in  
 I<sub>g</sub> = 72496 in<sup>4</sup>  
 y<sub>b</sub> = 16.443 in

**NOTES:**

- 1) Concrete Strengths:  $f'_{ci}$  = 3500 psi,  $f'_c$  = 9000 psi.
- 2) Strand: 270 ksi, Low Relaxation, 1/2" Diameter.
- 3) Tabulated loads are based on  $U=1.2D+1.6L$  and with all load superimposed on the section considered as live load.
- 4) Stresses at release require top reinforcement in most cases.
- 5) Beam sizes can have either 8", 10", 12" or 16" ledges which are covered by the load table.
- 6) Section properties shown are based on 12" ledges both sides.
- 7) Values in shaded area are controlled by limitations of steel shear reinforcing.
- 8) Tabulated loads do not account for torsional loading of beam which may require more in-depth analysis.
- 9) For conditions not covered on this load table contact, Molin Concrete Products, Engineering Division.
- 10) Design is based on ACI Standard, "Building Code Requirements for Reinforced Concrete (ACI) 318".



Molin Concrete Products Company • 415 Lilac Street • Lino Lakes, MN 55014  
 Office: 651.786.7722 • 800.336.6546 • Fax: 651.786.0229  
 www.molin.com • e-mail: info@molin.com

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