



BEAM PROPERTIES

BEAM TYPE	WIDTH (in.)		DEPTH (in)	Area (in ²)	I (in ⁴)	Y _b (in)	Y _t (in)	S _b (in ³)	S _t (in ³)	WEIGHT (lbs/ft)	MAX. SPAN (ft)
	Nom.	Act.									
B48-24	48	47.5	24	681	48461	11.80	12.20	4107	3972	709	74
B48-27	48	47.5	27	711	66201	13.27	13.73	4989	4822	741	82
B48-30	48	47.5	30	741	87139	14.73	15.27	5916	5707	772	91
B48-33	48	47.5	33	771	111410	16.20	16.80	6877	6632	803	97
B48-36	48	47.5	36	801	139151	17.68	18.32	7871	7596	834	104
B48-39	48	47.5	39	886	173980	19.19	19.81	9066	8782	923	113
B48-42	48	47.5	42	922	210330	20.67	21.33	10176	9861	960	121
B48-45	48	47.5	45	958	250828	22.15	22.85	11324	10977	998	127
B48-48	48	47.5	48	994	295638	23.63	24.37	12511	12131	1035	134

NOTES:

- Above drawing is not to scale.
- See Dwg. No. 4.2.8 for shear key details.
- Maximum Span lengths are approximate and are based on the following assumptions:
 - $f'_c = 6500$ psi (Precast)
 - $f'_{ci} = 4500$ psi (Precast)
 - $f'_c = 4000$ psi (5" thick Cast-in-Place Composite Deck)
 - Final Allowable Tension at bottom of beam is equal to $0.0948\sqrt{f'_c}$ ksi.
 - HL-93 Live Load
 - Time-Dependent Losses of Article 5.9.5.3 of the AASHTO-LRFD were used.
 - The CP-PL2 Barrier was assumed on the bridge.
 - 3.5" thick HMA wearing surface.
 - 0.6" diameter low relaxation strands.
 - The factor "k" in the Live Load distribution factor equation was taken as 1.5
- Weights of beams do not include the weight of the solid sections located at the transverse ties. Include the weight of the solid sections for design.
- Thickness of top flange may have to be increased in order to develop sidewalk/safety curb barrier reinforcement (see Dwg. No. 4.3.2). The Designer will have to calculate and use the modified beam properties in such cases.



LRFD BRIDGE
MANUAL, PART II

STANDARD 48" WIDE BEAMS

PRECAST CONCRETE BOX BEAMS

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