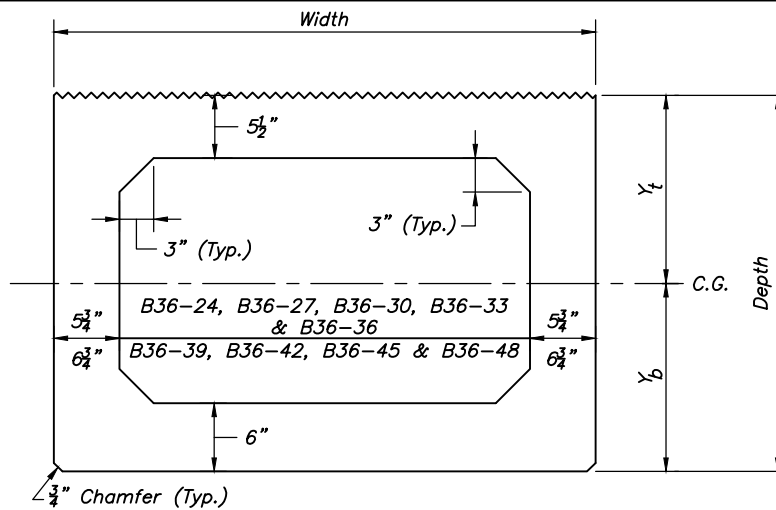




### BEAM PROPERTIES

| BEAM TYPE | WIDTH<br>(in) | DEPTH<br>(in) | AREA<br>(in <sup>2</sup> ) | I<br>(in <sup>4</sup> ) | Y <sub>b</sub><br>(in) | Y <sub>t</sub><br>(in) | S <sub>b</sub><br>(in <sup>3</sup> ) | S <sub>t</sub><br>(in <sup>3</sup> ) | WEIGHT<br>(lbs/ft) |
|-----------|---------------|---------------|----------------------------|-------------------------|------------------------|------------------------|--------------------------------------|--------------------------------------|--------------------|
| B36-24    | 35.5          | 24            | 569                        | 37392                   | 11.89                  | 12.11                  | 3145                                 | 3088                                 | 593                |
| B36-27    | 35.5          | 27            | 604                        | 51478                   | 13.37                  | 13.63                  | 3850                                 | 3777                                 | 629                |
| B36-30    | 35.5          | 30            | 638                        | 68281                   | 14.85                  | 15.15                  | 4598                                 | 4507                                 | 665                |
| B36-33    | 35.5          | 33            | 673                        | 87958                   | 16.33                  | 16.67                  | 5386                                 | 5276                                 | 701                |
| B36-36    | 35.5          | 36            | 707                        | 110661                  | 17.81                  | 18.19                  | 6213                                 | 6084                                 | 736                |
| B36-39    | 35.5          | 39            | 797                        | 140025                  | 19.33                  | 19.67                  | 7244                                 | 7119                                 | 830                |
| B36-42    | 35.5          | 42            | 837                        | 170514                  | 20.82                  | 21.18                  | 8190                                 | 8051                                 | 872                |
| B36-45    | 35.5          | 45            | 878                        | 204772                  | 22.31                  | 22.69                  | 9178                                 | 9025                                 | 915                |
| B36-48    | 35.5          | 48            | 918                        | 242981                  | 23.80                  | 24.20                  | 10209                                | 10041                                | 956                |

### MAXIMUM SPAN LENGTHS

| BEAM TYPE | Beam Spacing |       |       |       |       |        |        |        |        |
|-----------|--------------|-------|-------|-------|-------|--------|--------|--------|--------|
|           | 5 ft.        | 6 ft. | 7 ft. | 8 ft. | 9 ft. | 10 ft. | 11 ft. | 12 ft. | 13 ft. |
| B36-24    | 59           | 56    | 53    | 49    | 47    | 45     | 44     | 40     | 38     |
| B36-27    | 64           | 60    | 58    | 54    | 52    | 50     | 47     | 45     | 43     |
| B36-30    | 69           | 65    | 63    | 59    | 56    | 54     | 53     | 48     | 46     |
| B36-33    | 76           | 71    | 67    | 64    | 61    | 59     | 56     | 53     | 51     |
| B36-36    | 81           | 76    | 72    | 69    | 65    | 63     | 61     | 58     | 55     |
| B36-39    | 89           | 83    | 79    | 75    | 72    | 69     | 66     | 63     | 60     |
| B36-42    | 94           | 89    | 84    | 80    | 77    | 73     | 71     | 67     | 63     |
| B36-45    | 100          | 94    | 89    | 85    | 81    | 78     | 75     | 71     | 67     |
| B36-48    | 105          | 99    | 94    | 90    | 86    | 83     | 79     | 75     | 71     |

#### NOTES:

- Above drawing is not to scale.
- 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 (Cast-in-Place Composite Deck)
  - Interior Girders with no skew.
  - 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 CF-PL3 Barrier was assumed on the bridge.
  - 3.5" thick HMA wearing surface.
  - 0.6" diameter low relaxation strands.
- Weight of beams does not include the weight of the solid sections. Include the weight of the solid sections for design.



LRFD BRIDGE  
MANUAL, PART II

## STANDARD 36" WIDE BEAMS

PRECAST CONCRETE BOX BEAMS

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