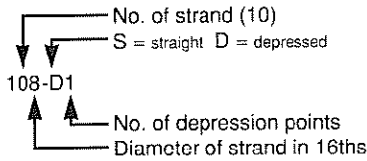


Strand Pattern Designation



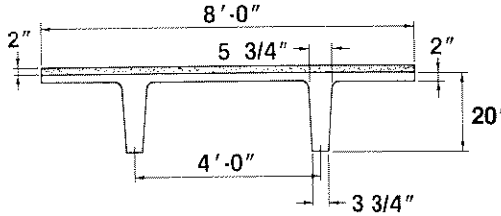
Safe loads shown include dead load of 10 psf for untopped members and 15 psf for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.

Key

- 184 — Safe superimposed service load, psf
- 0.7 — Estimated camber at erection, in.
- 0.8 — Estimated long-time camber, in.

DOUBLE TEE

8'-0" x 20"
Lightweight Concrete



$f'_c = 5,000$ psi
 $f_{pu} = 270,000$ psi

Section Properties

Untopped Topped

| | | | |
|-------|---|-------------------------|-------------------------|
| A | = | 363 in. ² | — |
| I | = | 12,551 in. ⁴ | 18,278 in. ⁴ |
| y_b | = | 14.59 in. | 17.02 in. |
| y_t | = | 5.41 in. | 4.98 in. |
| Z_b | = | 860 in. ³ | 1,074 in. ³ |
| Z_t | = | 2,320 in. ³ | 3,670 in. ³ |
| wt | = | 290 plf | 490 plf |
| | | 36 psf | 61 psf |
| V/S | = | 1.35 in. | |

8LDT20

Table of safe superimposed service load (psf) and cambers

No Topping

| Strand Pattern | e_e e_c | Span, ft. | | | | | | | | | | | | | | | | | | | | | | |
|----------------|----------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 | 62 | 64 | 66 | 68 |
| 48-S | 11.59 | 184 | 153 | 128 | 108 | 91 | 78 | 66 | 57 | 48 | 41 | 35 | | | | | | | | | | | | |
| | 11.59 | 0.7 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.1 | 1.2 | 1.2 | 1.2 | 1.2 | | | | | | | | | | | | |
| 68-S | 8.59 | 193 | 162 | 138 | 118 | 101 | 87 | 75 | 65 | 57 | 49 | 42 | 37 | 32 | | | | | | | | | | |
| | 8.59 | 0.9 | 1.0 | 1.1 | 1.2 | 1.2 | 1.3 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | | | | | | | | | | | |
| 68-D1 | 8.59 | | | | 180 | 155 | 134 | 117 | 102 | 89 | 78 | 69 | 61 | 53 | 47 | 41 | 36 | 32 | | | | | | |
| | 12.09 | | | | 1.4 | 1.5 | 1.6 | 1.8 | 2.0 | 2.1 | 2.2 | 2.3 | 2.3 | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | | | | | | |
| 88-D1 | 6.59 | | | | | | | | 137 | 121 | 107 | 95 | 85 | 76 | 68 | 60 | 54 | 48 | 43 | 38 | 34 | 30 | | |
| | 11.84 | | | | | | | | 2.4 | 2.6 | 2.8 | 2.9 | 3.1 | 3.2 | 3.4 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.4 | 3.2 | | |
| 108-D1 | 4.59 | | | | | | | | | | | | | | | | | 63 | 57 | 51 | 46 | 42 | 37 | 34 |
| | 11.59 | | | | | | | | | | | | | | | | | 1.8 | 1.7 | 1.4 | 1.4 | 1.4 | 1.3 | 1.2 |

8LDT20 + 2

Table of safe superimposed service load (psf) and cambers

2" Normal Weight Topping

| Strand Pattern | e_e e_c | Span, ft. | | | | | | | | | | | | | | | | | | | | | |
|----------------|----------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| | | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | | | | |
| 48-S | 11.59 | 188 | 153 | 125 | 103 | 85 | 70 | 57 | 46 | 31 | | | | | | | | | | | | | |
| | 11.59 | 0.7 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.1 | 1.2 | 1.2 | | | | | | | | | | | | | |
| 68-S | 8.59 | | | 167 | 140 | 117 | 98 | 82 | 69 | 58 | 48 | 39 | | | | | | | | | | | |
| | 8.59 | | | 1.0 | 1.1 | 1.2 | 1.2 | 1.3 | 1.4 | 1.5 | 1.5 | 1.5 | | | | | | | | | | | |
| 68-D1 | 8.59 | | | | 182 | 154 | 131 | 112 | 96 | 82 | 70 | 59 | 50 | 42 | 35 | | | | | | | | |
| | 12.09 | | | | 1.4 | 1.5 | 1.6 | 1.8 | 2.0 | 2.1 | 2.2 | 2.3 | 2.3 | 2.4 | 2.4 | | | | | | | | |
| 88-D1 | 6.59 | | | | | | | | 136 | 118 | 102 | 89 | 77 | 67 | 58 | 50 | 43 | 36 | | | | | |
| | 11.84 | | | | | | | | 2.4 | 2.6 | 2.8 | 2.9 | 3.1 | 3.2 | 3.4 | 3.5 | 3.5 | 3.5 | | | | | |
| 108-D1 | 4.59 | | | | | | | | | | | | | | | | | 53 | 45 | | | | |
| | 11.59 | | | | | | | | | | | | | | | | | 4.3 | 4.3 | | | | |

Strength based on strain compatibility; bottom tension limited to $12\sqrt{f'_c}$; see pages 2-3-2-6 for explanation. Shaded values require release strengths higher than 3500 psi.