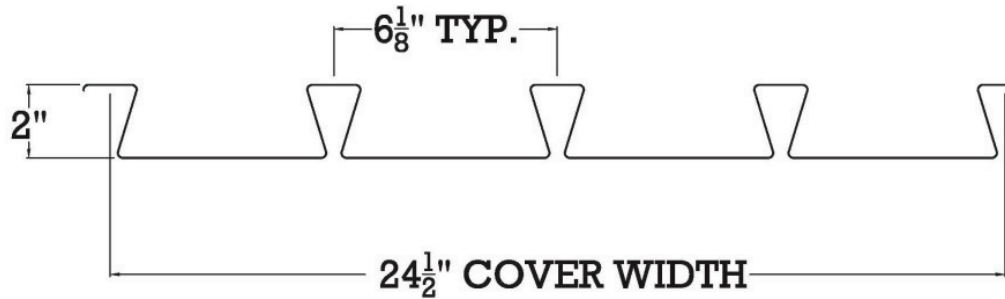


**MARCORE-S COMPOSITE DECK-18 GAUGE**  
(WITHOUT STIFFENER RIBS)



**SECTION PROPERTIES OF STEEL DECK** **F<sub>y</sub>=40 ksi**

|                                     |                     |        |
|-------------------------------------|---------------------|--------|
| THICKNESS                           | in.                 | 0.0474 |
| WEIGHT                              | psf                 | 3.6    |
| AREA                                | in <sup>2</sup>     | 1.06   |
| MOMENT OF INERTIA (I <sub>p</sub> ) | in <sup>4</sup> /ft | 0.68   |
| MOMENT OF INERTIA (I <sub>N</sub> ) | in <sup>4</sup> /ft | 0.51   |
| SECTION MODULUS (S <sub>p</sub> )   | in <sup>3</sup> /ft | 0.45   |
| SECTION MODULUS (S <sub>N</sub> )   | in <sup>3</sup> /ft | 0.50   |
| MOMENT CAPACITY (M <sub>P</sub> )   | lb-in/ft            | 10848  |
| MOMENT CAPACITY (M <sub>N</sub> )   | lb-in/ft            | 10848  |

**GENERAL INFORMATION**

|   |                     |           |           |           |       |       |           |           |           |           |
|---|---------------------|-----------|-----------|-----------|-------|-------|-----------|-----------|-----------|-----------|
| CONCRETE THICKNESS                        | in                  | 2.0       | 2.5       | 3.0       | 3.5   | 4.0   | 4.5       | 5.0       | 5.5       | 6.0       |
| COMPOSITE DECK THICKNESS                  | in                  | 4.0       | 4.5       | 5.0       | 5.5   | 6.0   | 6.5       | 7.0       | 7.5       | 8.0       |
| CONCRETE - 145 lb. NWC                    | psf                 | 44.5      | 50.5      | 56.7      | 63.3  | 68.6  | 74.6      | 80.6      | 86.5      | 92.6      |
| SECTION MODULUS (S <sub>p</sub> )         | in <sup>3</sup> /ft | 2.2       | 2.6       | 3.1       | 3.5   | 3.9   | 4.4       | 4.8       | 5.3       | 5.7       |
| EFFECTIVE AREA (A)                        | in <sup>2</sup>     | 38.0      | 42.8      | 47.5      | 52.3  | 57.0  | 61.8      | 66.5      | 71.3      | 76.0      |
| AVG/ MOMENT OF INERTIA (I <sub>av</sub> ) | in <sup>4</sup> /ft | 7.3       | 10.1      | 13.4      | 17.4  | 22.0  | 27.4      | 33.7      | 40.7      | 48.6      |
| TEMP. REINFORC. W.W. F. 6"X6"             |                     | w1.4xw1.4 | w1.4xw1.4 | w1.4xw1.4 | w2xw2 | w2xw2 | w2.9xw2.9 | w2.9xw2.9 | w2.9xw2.9 | w2.9xw2.9 |

**SHORING RECOMONDATION**

|        |                               |     |      |      |      |      |      |      |      |      |      |
|--------|-------------------------------|-----|------|------|------|------|------|------|------|------|------|
| Span   | Composite Slab Thickness, in. |     | 4.0  | 4.5  | 5.0  | 5.5  | 6.0  | 6.5  | 7.0  | 7.5  | 8.0  |
|        | MARCORE-S                     |     |      |      |      |      |      |      |      |      |      |
| Single | 18 ga.                        | ft. | 8.75 | 8.50 | 8.00 | 7.75 | 7.75 | 7.50 | 7.25 | 7.00 | 7.00 |
| Double | 18 ga.                        | ft. | 9.25 | 9.00 | 8.50 | 8.25 | 8.00 | 7.75 | 7.50 | 7.25 | 7.00 |

\*Normal Weight Concrete 145 pcf

UNDERWRITERS LABORATORIES, INC. FIRE RATED FLOOR DESIGN ASSEMBLY LIVE LOAD LIMIT FOR COMPOSITE DECK SLABS IS 250 PSF.

## MARCORE-S COMPOSITE DECK-18 GAUGE (WITHOUT STIFFENER RIBS)

### SUPERIMPOSED LIVE LOAD ON COMPOSITE DECK, SIMPLE SPAN

### 18 GAUGE

| COMPOSITE DECK THICKNESS | in  | 4.0  | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 |
|--------------------------|-----|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                          |     | MAXIMUM WORKING ALLOWABLE UNIFORM LIVE LOAD LL, LB/FT <sup>2</sup> |     |     |     |     |     |     |     |     |     |
| SPAN                     |     |  |     |     |     |     |     |     |     |     |     |
| 9                        | ft. | 357  | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| 10                       | ft. | 247  | 368 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| 11                       | ft. | 174  | 263 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| 12                       | ft. | 123  | 190 | 321 | 373 | 400 | 400 | 400 | 400 | 400 | 400 |
| 13                       | ft. | 86   | 138 | 239 | 279 | 373 | 400 | 400 | 400 | 400 | 400 |
| 14                       | ft. | 59   | 99  | 179 | 210 | 284 | 349 | 383 | 400 | 400 | 400 |
| 15                       | ft. | 39   | 71  | 133 | 158 | 217 | 286 | 325 | 354 | 383 | 400 |
| 16                       | ft. | 24   | 48  | 99  | 119 | 166 | 222 | 278 | 303 | 328 | 352 |
| 17                       | ft. | 12   | 31  | 72  | 88  | 126 | 172 | 224 | 261 | 282 | 303 |
| 18                       | ft. |  | 18  | 50  | 63  | 95  | 132 | 175 | 225 | 244 | 262 |
| 19                       | ft. |  |     | 33  | 44  | 70  | 101 | 137 | 178 | 211 | 227 |
| 20                       | ft. |  |     | 19  | 28  | 50  | 75  | 105 | 140 | 179 | 198 |
| 21                       | ft. |  |     |     | 15  | 33  | 54  | 79  | 108 | 142 | 172 |
| 22                       | ft. |  |     |     |     | 19  | 37  | 58  | 83  | 111 | 143 |
| 23                       | ft. |  |     |     |     |     | 22  | 40  | 61  | 85  | 112 |
| 24                       | ft. |  |     |     |     |     | 10  | 25  | 43  | 63  | 86  |
| 25                       | ft. |  |     |     |     |     |     | 12  | 27  | 45  | 64  |
| 26                       | ft. |  |     |     |     |     |     |     | 14  | 29  | 46  |
| 27                       | ft. |  |     |     |     |     |     |     |     | 16  | 30  |
| 28                       | ft. |  |     |     |     |     |     |     |     |     | 16  |

\*Normal Weight Concrete 145 pcf

UNDERWRITERS LABORATORIES, INC. FIRE RATED FLOOR DESIGN ASSEMBLY LIVE LOAD LIMIT FOR COMPOSITE DECK SLABS IS 250 PSF.

## MARCORE-S COMPOSITE DECK-18 GAUGE (WITHOUT STIFFENER RIBS)

| SUPERIMPOSED LIVE LOAD ON COMPOSITE DECK, DOUBLE & TRIPLE SPAN     |     |     |     |     |     |     |     | 18 GAUGE |     |
|--|-----|-----|-----|-----|-----|-----|-----|----------|-----|
| COMPOSITE DECK THICKNESS   | in  | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0      | 8.5 |
| MAXIMUM WORKING ALLOWABLE UNIFORM LIVE LOAD LL, LB/FT <sup>2</sup> |     |     |     |     |     |     |     |          |     |
| SPAN   |     |     |     |     |     |     |     |          |     |
| 16   | ft. | 169 | 181 | 206 | 231 | 255 | 280 | 305      | 329 |
| 17   | ft. | 145 | 155 | 176 | 198 | 219 | 240 | 262      | 283 |
| 18   | ft. | 124 | 132 | 152 | 170 | 189 | 207 | 226      | 244 |
| 19   | ft. | 106 | 114 | 130 | 147 | 163 | 179 | 195      | 211 |
| 20   | ft. | 91  | 98  | 112 | 126 | 141 | 155 | 169      | 183 |
| 21   | ft. | 72  | 84  | 97  | 109 | 122 | 134 | 146      | 159 |
| 22   | ft. | 54  | 68  | 83  | 94  | 105 | 116 | 127      | 138 |
| 23   | ft. | 40  | 51  | 72  | 81  | 91  | 100 | 110      | 119 |
| 24   | ft. | 27  | 37  | 61  | 70  | 78  | 87  | 95       | 103 |
| 25   | ft. | 17  | 25  | 45  | 60  | 67  | 75  | 82       | 89  |
| 26   | ft. |     | 14  | 32  | 51  | 57  | 64  | 70       | 77  |
| 27   | ft. |     |     | 21  | 39  | 48  | 54  | 60       | 65  |
| 28   | ft. |     |     | 11  | 27  | 41  | 46  | 51       | 55  |
| 29   | ft. |     |     |     | 16  | 33  | 38  | 42       | 46  |
| 30   | ft. |     |     |     |     | 21  | 31  | 35       | 38  |
| 31   | ft. |     |     |     |     | 11  | 25  | 28       | 31  |
| 32   | ft. |     |     |     |     |     | 16  | 22       | 24  |
| 33   | ft. |     |     |     |     |     |     | 16       | 18  |
| 34   | ft. |     |     |     |     |     |     |          | 13  |
| 35   | ft. |     |     |     |     |     |     |          |     |

\*Normal Weight Concrete 145 pcf

UNDERWRITERS LABORATORIES, INC. FIRE RATED FLOOR DESIGN ASSEMBLY LIVE LOAD LIMIT FOR COMPOSITE DECK SLABS IS 250 PSF

**MARCORE-S COMPOSITE DECK-18 GAUGE**  
(WITHOUT STIFFENER RIBS)

**TWO SPAN COMPOSITE DECK 18 GAUGE**  
2 SPAN CONDITION REINFORCING OVER INTERMEDIATE SUPPORT

| SPAN   | COMPOSITE SLAB THICKNESS |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|        | 4.0"                     |       |       | 4.5"  |       |       | 5.0"  |       |       | 5.5"  |       |       | 6.0"  |       |       |
|        | 25+40                    | 25+50 | 5+100 | 25+40 | 25+50 | 5+100 | 25+40 | 25+50 | 5+100 | 25+40 | 25+50 | 5+100 | 25+40 | 25+50 | 5+100 |
| 13'-0" | #4@8                     | #4@7  | #5@8  | #4@10 | #4@9  | #5@10 | #4@11 | #4@9  | #4@7  | #4@11 | #4@10 | #4@8  | #4@12 | #4@11 | #4@8  |
| 13'-6" | #4@8                     | #5@11 | #5@7  | #4@9  | #4@8  | #5@9  | #4@10 | #4@9  | #5@10 | #4@10 | #4@9  | #4@7  | #4@11 | #4@10 | #4@8  |
| 14'-0" | #5@11                    | #5@10 | #5@7  | #4@8  | #4@7  | #5@8  | #4@9  | #4@8  | #5@9  | #4@10 | #4@9  | #5@10 | #4@10 | #4@9  | #4@7  |
| 14'-6" | #5@10                    | #5@9  | #5@6  | #4@7  | #5@10 | #5@7  | #4@8  | #4@7  | #5@9  | #4@9  | #4@8  | #5@10 | #4@9  | #4@8  | #5@11 |
| 15'-0" | #5@9                     | #5@8  | #5@5  | #5@11 | #5@9  | #5@7  | #4@7  | #5@11 | #5@8  | #4@8  | #4@7  | #5@9  | #4@9  | #4@8  | #5@10 |
| 15'-6" | #5@9                     | #5@8  | #5@5  | #5@10 | #5@9  | #5@6  | #4@7  | #5@10 | #5@7  | #4@7  | #5@11 | #5@8  | #4@8  | #4@7  | #5@9  |
| 16'-0" | #5@8                     | #5@7  |       | #5@9  | #5@8  | #5@6  | #5@10 | #5@9  | #5@7  | #4@7  | #5@10 | #5@7  | #4@7  | #4@7  | #5@8  |
| 16'-6" | #5@7                     | #5@6  |       | #5@8  | #5@7  | #5@5  | #5@9  | #5@8  | #5@6  | #5@10 | #5@9  | #5@7  | #4@7  | #5@10 | #5@8  |
| 17'-0" | #5@7                     | #5@6  |       | #5@8  | #5@7  | #5@5  | #5@9  | #5@8  | #5@6  | #5@10 | #5@9  | #5@7  | #5@11 | #5@10 | #5@7  |
| 17'-6" | #5@6                     | #5@5  |       | #5@7  | #5@7  |       | #5@8  | #5@7  | #5@5  | #5@9  | #5@8  | #5@6  | #5@10 | #5@9  | #5@7  |
| 18'-0" | #5@5                     |       |       | #5@7  | #5@6  |       | #5@8  | #5@7  | #5@5  | #5@8  | #5@8  | #5@5  | #5@9  | #5@8  | #5@6  |
| 18'-6" | #5@5                     |       |       | #5@6  | #5@5  |       | #5@7  | #5@6  | #5@5  | #5@8  | #5@7  | #5@5  | #5@9  | #5@8  | #5@6  |
| 19'-0" |                          |       |       | #5@6  | #5@5  |       | #5@7  | #5@6  |       | #5@7  | #5@7  | #5@5  | #5@8  | #5@7  | #5@5  |
| 19'-6" |                          |       |       | #5@5  | #5@5  |       | #5@6  | #5@5  |       | #5@7  | #5@6  | #5@5  | #5@8  | #5@7  | #5@5  |
| 20'-0" |                          |       |       | #5@5  |       |       | #5@6  | #5@5  |       | #5@7  | #5@6  |       | #5@7  | #5@7  | #5@5  |
| 20'-6" |                          |       |       |       |       |       | #5@5  | #5@5  |       | #5@6  | #5@5  |       | #5@7  | #5@6  | #5@5  |
| 21'-0" |                          |       |       |       |       |       | #5@5  | #5@5  |       | #5@5  | #5@5  |       | #5@6  | #5@5  |       |
| 21'-6" |                          |       |       |       |       |       | #5@5  |       |       | #5@5  | #5@5  |       | #5@6  | #5@5  |       |
| 22'-0" |                          |       |       |       |       |       | #5@5  |       |       | #5@5  | #5@5  |       | #5@5  | #5@5  |       |
| 22'-6" |                          |       |       |       |       |       |       |       |       | #5@5  |       |       | #5@5  | #5@5  |       |
| 23'-0" |                          |       |       |       |       |       |       |       |       | #5@5  |       |       | #5@5  | #5@5  |       |
| 23'-6" |                          |       |       |       |       |       |       |       |       |       |       |       | #5@5  | #5@4  |       |
| 24'-0" |                          |       |       |       |       |       |       |       |       |       |       |       | #5@5  |       |       |

| SPAN   | COMPOSITE SLAB THICKNESS |       |       |       |       |       |       |       |       |       |       |       |
|--------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|        | 6.5"                     |       |       | 7.0"  |       |       | 7.5"  |       |       | 8.0"  |       |       |
|        | 25+40                    | 25+50 | 5+100 | 25+40 | 25+50 | 5+100 | 25+40 | 25+50 | 5+100 | 25+40 | 25+50 | 5+100 |
| 13'-0" | #4@13                    | #4@12 | #4@9  | #4@14 | #4@13 | #4@10 | #4@14 | #4@13 | #4@10 | #4@15 | #4@14 | #4@11 |
| 13'-6" | #4@12                    | #4@11 | #4@8  | #4@13 | #4@12 | #4@9  | #4@13 | #4@12 | #4@10 | #4@14 | #4@13 | #4@10 |
| 14'-0" | #4@11                    | #4@10 | #4@8  | #4@12 | #4@11 | #4@8  | #4@12 | #4@11 | #4@9  | #4@13 | #4@12 | #4@9  |
| 14'-6" | #4@10                    | #4@9  | #4@7  | #4@11 | #4@10 | #4@8  | #4@11 | #4@10 | #4@8  | #4@12 | #4@11 | #4@9  |
| 15'-0" | #4@9                     | #4@8  | #5@11 | #4@10 | #4@9  | #4@7  | #4@10 | #4@10 | #4@7  | #4@11 | #4@10 | #4@8  |
| 15'-6" | #4@9                     | #4@8  | #5@10 | #4@9  | #4@8  | #5@11 | #4@10 | #4@9  | #4@7  | #4@10 | #4@9  | #4@7  |
| 16'-0" | #4@8                     | #4@7  | #5@9  | #4@8  | #4@8  | #5@10 | #4@9  | #4@8  | #5@11 | #4@9  | #4@9  | #4@7  |
| 16'-6" | #4@7                     | #4@7  | #5@8  | #4@8  | #4@7  | #5@9  | #4@8  | #4@8  | #5@10 | #4@9  | #4@8  | #5@10 |
| 17'-0" | #4@7                     | #5@10 | #5@8  | #4@7  | #4@7  | #5@9  | #4@8  | #4@7  | #5@9  | #4@8  | #4@7  | #5@10 |
| 17'-6" | #5@11                    | #5@10 | #5@7  | #4@7  | #5@10 | #5@8  | #4@7  | #4@7  | #5@9  | #4@8  | #4@7  | #5@9  |
| 18'-0" | #5@10                    | #5@9  | #5@7  | #5@11 | #5@10 | #5@7  | #4@7  | #5@10 | #5@8  | #4@7  | #5@11 | #5@8  |
| 18'-6" | #5@9                     | #5@8  | #5@7  | #5@10 | #5@9  | #5@7  | #5@10 | #5@10 | #5@7  | #4@7  | #5@10 | #5@8  |
| 19'-0" | #5@9                     | #5@8  | #5@6  | #5@9  | #5@8  | #5@7  | #5@10 | #5@9  | #5@7  | #5@10 | #5@9  | #5@7  |
| 19'-6" | #5@8                     | #5@7  | #5@5  | #5@9  | #5@8  | #5@6  | #5@9  | #5@8  | #5@7  | #5@10 | #5@9  | #5@7  |
| 20'-0" | #5@8                     | #5@7  | #5@5  | #5@8  | #5@7  | #5@6  | #5@9  | #5@8  | #5@6  | #5@9  | #5@8  | #5@7  |
| 20'-6" | #5@7                     | #5@7  | #5@5  | #5@8  | #5@7  | #5@5  | #5@8  | #5@7  | #5@6  | #5@9  | #5@8  | #5@6  |
| 21'-0" | #5@7                     | #5@6  | #5@5  | #5@7  | #5@7  | #5@5  | #5@8  | #5@7  | #5@5  | #5@8  | #5@7  | #5@6  |
| 21'-6" | #5@7                     | #5@6  | #5@5  | #5@7  | #5@6  | #5@5  | #5@7  | #5@7  | #5@5  | #5@8  | #5@7  | #5@5  |
| 22'-0" | #5@6                     | #5@5  |       | #5@7  | #5@6  |       | #5@7  | #5@6  | #5@5  | #5@7  | #5@7  | #5@5  |
| 22'-6" | #5@6                     | #5@5  |       | #5@6  | #5@5  |       | #5@7  | #5@6  | #5@5  | #5@7  | #5@6  | #5@5  |
| 23'-0" | #5@5                     | #5@5  |       | #5@6  | #5@5  |       | #5@6  | #5@5  |       | #5@7  | #5@6  | #5@5  |
| 23'-6" | #5@5                     | #5@5  |       | #5@5  | #5@5  |       | #5@6  | #5@5  |       | #5@6  | #5@5  | #5@5  |
| 24'-0" | #5@5                     | #5@5  |       | #5@5  | #5@5  |       | #5@5  | #5@5  |       | #5@6  | #5@5  |       |
| 24'-6" | #5@5                     | #5@4  |       | #5@5  | #5@5  |       | #5@5  | #5@5  |       | #5@5  | #5@5  |       |
| 25'-0" | #5@4                     |       |       | #5@5  |       |       | #5@5  | #5@5  |       | #5@5  | #5@5  |       |

(\*) allowable superimposed dead and live loads (lb/ft<sup>2</sup>)