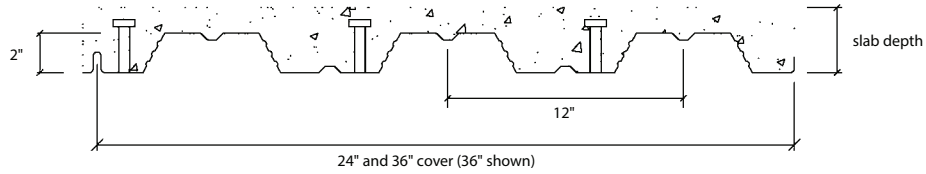


2" LOK-FLOOR

2" x 12" deck $F_y = 40$ ksi $f'_c = 3$ ksi 115 pcf concrete

S studs are not required for composite slab action. S studs on the cross-section indicate that it is possible to install studs at the beams.



DECK PROPERTIES

| Gage | t | w | A_s | I_p | S_p | S_n | R_{be} | R_{bi} | V_n | studs |
|------|--------|-----|-------|-------|-------|-------|----------|----------|-------|-------|
| 22 | 0.0295 | 1.5 | 0.440 | 0.312 | 0.251 | 0.262 | 700 | 1190 | 2160 | 0.51 |
| 20 | 0.0358 | 1.8 | 0.540 | 0.390 | 0.332 | 0.345 | 800 | 1360 | 2930 | 0.62 |
| 19 | 0.0418 | 2.1 | 0.630 | 0.455 | 0.413 | 0.424 | 1060 | 1800 | 3410 | 0.73 |
| 18 | 0.0474 | 2.4 | 0.710 | 0.517 | 0.480 | 0.483 | 1340 | 2270 | 3860 | 0.82 |
| 16 | 0.0598 | 3.1 | 0.900 | 0.653 | 0.611 | 0.611 | 2040 | 3460 | 4860 | 0.82 |

COMPOSITE PROPERTIES

| | S slab Depth | M_{nf} in.k | A_c in ² | Vol. ft ³ /ft ² | W psf | S_c in ³ | I_{av} in ⁴ | M_{no} in.k | V_{nt} lbs. | Max Unshored Span, ft. | | | A_{wwf} in ² /ft |
|---------|--------------|---------------|-----------------------|---------------------------------------|-------|-----------------------|--------------------------|---------------|---------------|------------------------|--------|--------|-------------------------------|
| | | | | | | | | | | 1 span | 2 span | 3 span | |
| 22 gage | 4.50 | 48.06 | 32.6 | 0.292 | 34 | 0.99 | 4.4 | 34.01 | 4440 | 6.60 | 8.81 | 8.96 | 0.023 |
| | 5.00 | 55.54 | 37.5 | 0.333 | 38 | 1.17 | 6.0 | 40.07 | 4780 | 6.29 | 8.43 | 8.56 | 0.027 |
| | 5.25 | 59.28 | 40.0 | 0.354 | 41 | 1.26 | 6.9 | 43.18 | 4960 | 6.16 | 8.25 | 8.39 | 0.029 |
| | 5.50 | 63.02 | 42.6 | 0.375 | 43 | 1.36 | 7.8 | 46.33 | 5140 | 6.03 | 8.08 | 8.22 | 0.032 |
| | 6.00 | 70.50 | 48.0 | 0.417 | 48 | 1.55 | 10.1 | 52.76 | 5510 | 5.80 | 7.78 | 7.92 | 0.036 |
| | 6.25 | 74.24 | 50.8 | 0.438 | 50 | 1.64 | 11.3 | 56.01 | 5710 | 5.69 | 7.64 | 7.78 | 0.038 |
| | 6.50 | 77.98 | 53.6 | 0.458 | 53 | 1.74 | 12.7 | 59.30 | 5900 | 5.59 | 7.51 | 7.65 | 0.041 |
| 20 gage | 7.00 | 85.46 | 59.5 | 0.500 | 58 | 1.94 | 15.7 | 65.93 | 6320 | 5.41 | 7.26 | 7.41 | 0.045 |
| | 4.50 | 57.78 | 32.6 | 0.292 | 34 | 1.19 | 4.8 | 40.93 | 4560 | 7.86 | 10.12 | 10.46 | 0.023 |
| | 5.00 | 66.96 | 37.5 | 0.333 | 38 | 1.41 | 6.5 | 48.24 | 5240 | 7.48 | 9.68 | 10.01 | 0.027 |
| | 5.25 | 71.55 | 40.0 | 0.354 | 41 | 1.52 | 7.4 | 52.00 | 5590 | 7.31 | 9.48 | 9.80 | 0.029 |
| | 5.50 | 76.14 | 42.6 | 0.375 | 43 | 1.63 | 8.5 | 55.81 | 5910 | 7.15 | 9.29 | 9.60 | 0.032 |
| | 6.00 | 85.32 | 48.0 | 0.417 | 48 | 1.86 | 10.9 | 63.60 | 6280 | 6.87 | 8.95 | 9.25 | 0.036 |
| | 6.25 | 89.91 | 50.8 | 0.438 | 50 | 1.98 | 12.2 | 67.55 | 6480 | 6.74 | 8.79 | 9.08 | 0.038 |
| 19 gage | 6.50 | 94.50 | 53.6 | 0.458 | 53 | 2.10 | 13.6 | 71.53 | 6670 | 6.62 | 8.64 | 8.92 | 0.041 |
| | 7.00 | 103.68 | 59.5 | 0.500 | 58 | 2.34 | 16.9 | 79.60 | 7090 | 6.39 | 8.35 | 8.63 | 0.045 |
| | 4.50 | 66.15 | 32.6 | 0.292 | 34 | 1.37 | 5.1 | 46.87 | 4560 | 8.98 | 11.21 | 11.58 | 0.023 |
| | 5.00 | 76.86 | 37.5 | 0.333 | 38 | 1.62 | 6.9 | 55.29 | 5240 | 8.53 | 10.72 | 11.08 | 0.027 |
| | 5.25 | 82.21 | 40.0 | 0.354 | 41 | 1.74 | 7.9 | 59.63 | 5590 | 8.33 | 10.50 | 10.85 | 0.029 |
| | 5.50 | 87.57 | 42.6 | 0.375 | 43 | 1.87 | 9.0 | 64.03 | 5950 | 8.15 | 10.29 | 10.64 | 0.032 |
| | 6.00 | 98.28 | 48.0 | 0.417 | 48 | 2.14 | 11.5 | 73.03 | 6700 | 7.81 | 9.91 | 10.24 | 0.036 |
| 18 gage | 6.25 | 103.63 | 50.8 | 0.438 | 50 | 2.27 | 12.9 | 77.60 | 6960 | 7.66 | 9.74 | 10.06 | 0.038 |
| | 6.50 | 108.99 | 53.6 | 0.458 | 53 | 2.41 | 14.5 | 82.21 | 7150 | 7.52 | 9.57 | 9.89 | 0.041 |
| | 7.00 | 119.70 | 59.5 | 0.500 | 58 | 2.69 | 17.9 | 91.55 | 7570 | 7.26 | 9.26 | 9.57 | 0.045 |
| | 4.50 | 73.29 | 32.6 | 0.292 | 34 | 1.52 | 5.4 | 52.11 | 4560 | 9.82 | 11.95 | 12.35 | 0.023 |
| | 5.00 | 85.36 | 37.5 | 0.333 | 38 | 1.79 | 7.2 | 61.48 | 5240 | 9.32 | 11.43 | 11.82 | 0.027 |
| | 5.25 | 91.39 | 40.0 | 0.354 | 41 | 1.94 | 8.3 | 66.32 | 5590 | 9.10 | 11.20 | 11.57 | 0.029 |
| | 5.50 | 97.43 | 42.6 | 0.375 | 43 | 2.08 | 9.4 | 71.24 | 5950 | 8.90 | 10.98 | 11.35 | 0.032 |
| 16 gage | 6.00 | 109.50 | 48.0 | 0.417 | 48 | 2.38 | 12.1 | 81.29 | 6700 | 8.53 | 10.57 | 10.93 | 0.036 |
| | 6.25 | 115.53 | 50.8 | 0.438 | 50 | 2.53 | 13.6 | 86.41 | 7090 | 8.36 | 10.39 | 10.73 | 0.038 |
| | 6.50 | 121.57 | 53.6 | 0.458 | 53 | 2.68 | 15.2 | 91.57 | 7490 | 8.21 | 10.21 | 10.55 | 0.041 |
| | 7.00 | 133.64 | 59.5 | 0.500 | 58 | 2.99 | 18.7 | 102.02 | 8020 | 7.92 | 9.88 | 10.21 | 0.045 |
| | 4.50 | 73.29 | 32.6 | 0.292 | 34 | 1.86 | 5.9 | 52.11 | 4560 | 11.29 | 13.39 | 13.49 | 0.023 |
| | 5.00 | 85.36 | 37.5 | 0.333 | 38 | 2.20 | 8.0 | 61.48 | 5240 | 10.71 | 12.82 | 13.08 | 0.027 |
| | 5.25 | 91.39 | 40.0 | 0.354 | 41 | 2.38 | 9.1 | 66.32 | 5590 | 10.46 | 12.56 | 12.90 | 0.029 |
| 16 gage | 5.50 | 97.43 | 42.6 | 0.375 | 43 | 2.56 | 10.4 | 71.24 | 5950 | 10.22 | 12.32 | 12.73 | 0.032 |
| | 6.00 | 109.50 | 48.0 | 0.417 | 48 | 2.93 | 13.3 | 81.29 | 6700 | 9.79 | 11.87 | 12.27 | 0.036 |
| | 6.25 | 115.53 | 50.8 | 0.438 | 50 | 3.12 | 15.0 | 86.41 | 7090 | 9.59 | 11.66 | 12.05 | 0.038 |
| | 6.50 | 121.57 | 53.6 | 0.458 | 53 | 3.31 | 16.7 | 91.57 | 7490 | 9.41 | 11.47 | 11.85 | 0.041 |
| | 7.00 | 133.64 | 59.5 | 0.500 | 58 | 3.70 | 20.6 | 102.02 | 8310 | 9.07 | 11.10 | 11.47 | 0.045 |

2" LOK-FLOOR - LW

2" LOK-FLOOR

2" x 12" deck F_y = 40 ksi f' _c = 3 ksi 115 pcf concrete

| Slab Depth | M _n in.k | Span " L " feet, Uniform Live Unfactored Service Loads, psf | | | | | | | | | | | | | |
|------------|------------------------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-----|
| | | 6.00 | 6.50 | 7.00 | 7.50 | 8.00 | 8.50 | 9.00 | 9.50 | 10.00 | 10.50 | 11.00 | 11.50 | 12.00 | |
| 22 gage | 4.50 | 48.06 | 400 | 400 | 380 | 330 | 285 | 250 | 220 | 195 | 175 | 155 | 140 | 125 | 110 |
| | 5.00 | 55.54 | 400 | 400 | 400 | 380 | 330 | 290 | 255 | 225 | 200 | 180 | 160 | 145 | 130 |
| | 5.25 | 59.28 | 400 | 400 | 400 | 400 | 355 | 310 | 275 | 240 | 215 | 190 | 170 | 155 | 140 |
| | 5.50 | 63.02 | 400 | 400 | 400 | 400 | 375 | 330 | 290 | 255 | 230 | 205 | 185 | 165 | 150 |
| | 6.00 | 70.50 | 400 | 400 | 400 | 400 | 400 | 370 | 325 | 290 | 255 | 230 | 205 | 185 | 165 |
| | 6.25 | 74.24 | 400 | 400 | 400 | 400 | 400 | 390 | 345 | 305 | 270 | 240 | 215 | 195 | 175 |
| | 6.50 | 77.98 | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 320 | 285 | 255 | 230 | 205 | 185 |
| 20 gage | 4.50 | 57.78 | 400 | 400 | 400 | 400 | 350 | 305 | 270 | 240 | 210 | 180 | 160 | 140 | 120 |
| | 5.00 | 66.96 | 400 | 400 | 400 | 400 | 400 | 355 | 315 | 280 | 250 | 225 | 200 | 180 | 165 |
| | 5.25 | 71.55 | 400 | 400 | 400 | 400 | 400 | 380 | 335 | 300 | 265 | 240 | 215 | 195 | 175 |
| | 5.50 | 76.14 | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 320 | 285 | 255 | 230 | 205 | 185 |
| | 6.00 | 85.32 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 355 | 320 | 285 | 255 | 230 | 210 |
| | 6.25 | 89.91 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 375 | 335 | 300 | 270 | 245 | 220 |
| | 6.50 | 94.50 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 395 | 355 | 315 | 285 | 255 | 235 |
| 19 gage | 7.00 | 103.68 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 385 | 345 | 315 | 280 | 255 |
| | 4.50 | 66.15 | 400 | 400 | 400 | 400 | 400 | 355 | 310 | 260 | 225 | 195 | 170 | 150 | 130 |
| | 5.00 | 76.86 | 400 | 400 | 400 | 400 | 400 | 400 | 365 | 325 | 290 | 260 | 225 | 200 | 175 |
| | 5.25 | 82.21 | 400 | 400 | 400 | 400 | 400 | 400 | 390 | 345 | 310 | 280 | 250 | 225 | 200 |
| | 5.50 | 87.57 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 370 | 330 | 295 | 270 | 240 | 220 |
| | 6.00 | 98.28 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 370 | 335 | 300 | 270 | 245 |
| | 6.25 | 103.64 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 390 | 350 | 320 | 285 | 260 |
| 18 gage | 6.50 | 108.99 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 370 | 335 | 300 | 275 |
| | 7.00 | 119.70 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 365 | 330 | 300 |
| | 4.50 | 73.29 | 400 | 400 | 400 | 400 | 400 | 385 | 325 | 275 | 235 | 205 | 180 | 155 | 135 |
| | 5.00 | 85.36 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 365 | 320 | 275 | 240 | 210 | 185 |
| | 5.25 | 91.39 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 390 | 350 | 315 | 275 | 240 | 210 |
| | 5.50 | 97.43 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 370 | 335 | 300 | 275 | 240 |
| | 6.00 | 109.50 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 375 | 340 | 305 | 280 |
| 16 gage | 6.25 | 115.53 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 395 | 360 | 325 | 295 |
| | 6.50 | 121.57 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 375 | 340 | 310 |
| | 7.00 | 133.64 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 375 | 340 |
| | 4.50 | 73.29 | 400 | 400 | 400 | 400 | 400 | 400 | 385 | 325 | 275 | 235 | 205 | 180 | 155 |
| | 5.00 | 85.36 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 365 | 320 | 275 | 240 | 210 | 185 |
| | 5.25 | 91.39 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 390 | 350 | 315 | 275 | 240 | 210 |
| | 5.50 | 97.43 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 370 | 335 | 300 | 275 | 240 |
| 22 gage | 6.00 | 109.50 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 375 | 340 | 305 | 280 |
| | 6.25 | 115.53 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 395 | 360 | 325 | 295 |
| | 6.50 | 121.57 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 375 | 340 | 310 |
| | 7.00 | 133.64 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 375 | 340 |
| | 4.50 | 40.07 | 365 | 310 | 265 | 225 | 195 | 170 | 150 | 130 | 115 | 100 | 90 | 80 | 70 |
| | 5.00 | 40.07 | 400 | 365 | 310 | 265 | 230 | 200 | 175 | 155 | 135 | 120 | 110 | 95 | 85 |
| | 5.25 | 43.18 | 400 | 395 | 335 | 290 | 250 | 215 | 190 | 170 | 150 | 130 | 115 | 105 | 95 |
| 20 gage | 5.50 | 46.33 | 400 | 400 | 360 | 310 | 270 | 235 | 205 | 180 | 160 | 140 | 125 | 115 | 100 |
| | 6.00 | 52.76 | 400 | 400 | 400 | 355 | 305 | 265 | 235 | 205 | 185 | 160 | 145 | 130 | 115 |
| | 6.25 | 56.01 | 400 | 400 | 400 | 375 | 325 | 285 | 250 | 220 | 195 | 175 | 155 | 140 | 125 |
| | 6.50 | 59.30 | 400 | 400 | 400 | 400 | 345 | 300 | 265 | 235 | 205 | 185 | 165 | 145 | 130 |
| | 7.00 | 65.93 | 400 | 400 | 400 | 400 | 385 | 335 | 295 | 260 | 230 | 205 | 185 | 165 | 145 |
| | 4.50 | 40.93 | 400 | 375 | 320 | 275 | 240 | 210 | 185 | 160 | 145 | 130 | 115 | 100 | 90 |
| | 5.00 | 48.24 | 400 | 400 | 380 | 325 | 285 | 250 | 220 | 195 | 170 | 150 | 135 | 120 | 110 |
| 19 gage | 5.25 | 52.00 | 400 | 400 | 400 | 355 | 305 | 270 | 235 | 210 | 185 | 165 | 145 | 130 | 120 |
| | 5.50 | 55.81 | 400 | 400 | 400 | 380 | 330 | 290 | 255 | 225 | 200 | 175 | 160 | 140 | 130 |
| | 6.00 | 63.60 | 400 | 400 | 400 | 400 | 375 | 330 | 290 | 255 | 230 | 205 | 180 | 165 | 145 |
| | 6.25 | 67.55 | 400 | 400 | 400 | 400 | 400 | 350 | 310 | 275 | 240 | 215 | 195 | 175 | 155 |
| | 6.50 | 71.53 | 400 | 400 | 400 | 400 | 400 | 370 | 325 | 290 | 255 | 230 | 205 | 185 | 165 |
| | 7.00 | 79.60 | 400 | 400 | 400 | 400 | 400 | 400 | 365 | 325 | 285 | 255 | 230 | 205 | 185 |
| | 4.50 | 46.87 | 400 | 400 | 370 | 320 | 280 | 245 | 215 | 190 | 170 | 150 | 135 | 120 | 110 |
| 18 gage | 5.00 | 55.29 | 400 | 400 | 400 | 380 | 330 | 290 | 255 | 225 | 200 | 180 | 160 | 145 | 130 |
| | 5.25 | 59.63 | 400 | 400 | 400 | 400 | 355 | 310 | 275 | 245 | 215 | 195 | 175 | 155 | 140 |
| | 5.50 | 64.03 | 400 | 400 | 400 | 400 | 385 | 335 | 295 | 260 | 235 | 210 | 185 | 170 | 150 |
| | 6.00 | 73.03 | 400 | 400 | 400 | 400 | 400 | 385 | 340 | 300 | 265 | 240 | 215 | 195 | 175 |
| | 6.25 | 77.60 | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 320 | 285 | 255 | 230 | 205 | 185 |
| | 6.50 | 82.21 | 400 | 400 | 400 | 400 | 400 | 400 | 380 | 340 | 300 | 270 | 240 | 220 | 195 |
| | 7.00 | 91.55 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 380 | 335 | 300 | 270 | 245 | 220 |
| 16 gage | 4.50 | 52.11 | 400 | 400 | 360 | 310 | 275 | 240 | 215 | 190 | 170 | 150 | 135 | 125 | 115 |
| | 5.00 | 61.48 | 400 | 400 | 400 | 370 | 325 | 285 | 255 | 225 | 200 | 180 | 165 | 145 | 135 |
| | 5.25 | 66.32 | 400 | 400 | 400 | 400 | 350 | 310 | 275 | 245 | 220 | 195 | 175 | 160 | 150 |
| | 5.50 | 71.24 | 400 | 400 | 400 | 400 | 375 | 330 | 295 | 265 | 235 | 210 | 190 | 170 | 160 |
| | 6.00 | 81.29 | 400 | 400 | 400 | 400 | 400 | 380 | 340 | 300 | 270 | 240 | 220 | 200 | 185 |
| | 6.25 | 86.41 | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 320 | 285 | 260 | 235 | 210 | 195 |
| | 6.50 | 91.57 | 400 | 400 | 400 | 400 | 400 | 400 | 380 | 340 | 305 | 275 | 245 | 225 | 210 |
| 14 gage | 7.00 | 102.02 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 380 | 340 | 305 | 275 | 250 |
| | 4.50 | 52.11 | 400 | 400 | 360 | 310 | 275 | 240 | 215 | 190 | 170 | 150 | 135 | 125 | 115 |
| | 5.00 | 61.48 | 400 | 400 | 400 | 370 | 325 | 285 | 255 | 225 | 200 | 180 | 165 | 145 | 135 |
| | 5.25 | 66.32 | 400 | 400 | 400 | 400 | 350 | 310 | 275 | 245 | 220 | 195 | 175 | 160 | 150 |
| | 5.50 | 71.24 | 400 | 400 | 400 | 400 | 375 | 330 | 295 | 265 | 235 | 210 | 190 | 170 | 160 |
| | 6.00 | 81.29 | 400 | 400 | 400 | 400 | 400 | 380 | 340 | 300 | 270 | 240 | 220 | 200 | 185 |
| | 6.25 | 86.41 | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 320 | 285 | 260 | 235 | 210 | 195 |

☐ Studs at 1 foot o.c. ◻ No Studs