1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# Introduction

Deck West steel floor and roof decks have been updated to meet the needs of the construction industry for the next millennium. The profiles manufactured by Deck West have been used with great success throughout the United States for over four decades. The manufacturing plant is centrally located in Stockton, California.

The deck west roof and floor panels are cold-rolled from steel sheets conforming to ASTM A653 SS Grade 40 (modified 46,000 psi yield). Deck West products are available with mill finish, flashcoat galvanized, G-15, G-30, G-40, G-60, G-90, G-120, G-210 AND G-235 galvanized finishes. Panels are available in four thicknesses as shown in the tables.

Deck West deck products are listed by the International Code Council Evaluation Service (ICC-ES) Report #ESR-2050, registered with the Underwriters Laboratories certification body, and Factory Mutual approved.

This catalog contains information about Deck West roof and floor deck profiles;

Section properties
Vertical load tables
Allowable diaphragm shears
Standard metal deck details

Additional information may be obtained by contacting Deck West, Inc.

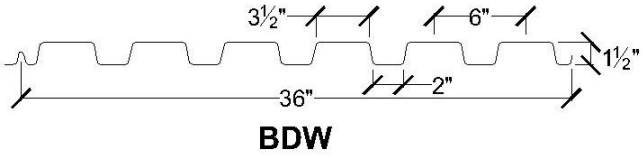
The information presented in this catalog has been prepared in accordance with recognized engineering principles and is for general information only. No information, representation, nor formula container herein is designed to replace the judgment of an experienced structural engineer. Deck West, Inc. assumes no liability whatsoever for the accuracy or completeness of the information contained in this brochure, nor for the suitability of the material for its intended purpose.

# Table of Contents

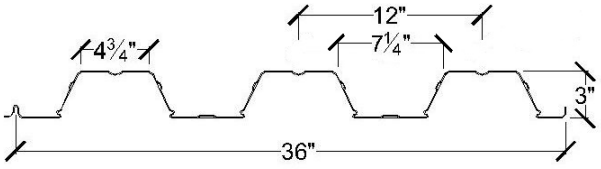
1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

**DECK WEST**

# PRODUCT PROFILES

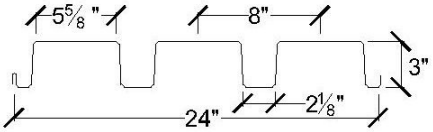



**BDW**

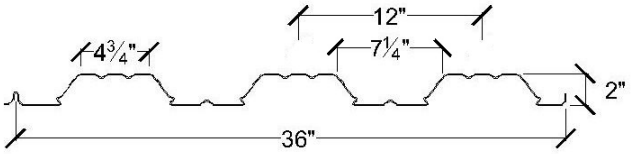



**3DW**

**BADW**




**NDW**




**2DW**

# SECTION PROPERTIES

| DECK TYPE | GAUGE | WT (psf) | DESIGN METAL THICKNESS (INCHES) | MOMENT OF INERTIA (in4/ft) | | | SECTION MODULUS (in3/ft) | |
|---|---|---|---|---|---|---|---|---|
| | | | | Ix | Ieff + | Ieff - | Seff + | Seff - |
| BDW | 22 | 1.8 | 0.0299 | 0.1996 | 0.1461 | 0.1813 | 0.1808 | 0.1947 |
| | 20 | 2.1 | 0.0359 | 0.2399 | 0.1854 | 0.2263 | 0.2361 | 0.2464 |
| | 18 | 2.9 | 0.0478 | 0.3200 | 0.2723 | 0.3184 | 0.3382 | 0.3536 |
| | 16 | 3.6 | 0.0598 | 0.4012 | 0.3685 | 0.4012 | 0.4318 | 0.4437 |
| BADW | 22 | 1.8 | 0.0299 | 0.1989 | 0.1462 | 0.1757 | 0.1821 | 0.1851 |
| | 20 | 2.1 | 0.0359 | 0.2390 | 0.1855 | 0.2204 | 0.2377 | 0.2359 |
| | 18 | 2.9 | 0.0478 | 0.3189 | 0.2728 | 0.3125 | 0.3358 | 0.3421 |
| | 16 | 3.6 | 0.0598 | 0.3998 | 0.3687 | 0.3957 | 0.4281 | 0.4326 |
| NDW | 22 | 2.2 | 0.0299 | 0.9363 | 0.5978 | 0.8653 | 0.3593 | 0.4636 |
| | 20 | 2.6 | 0.0359 | 1.1253 | 0.7543 | 1.0654 | 0.4631 | 0.5761 |
| | 18 | 3.5 | 0.0478 | 1.5010 | 1.0910 | 1.4752 | 0.6961 | 0.8089 |
| | 16 | 4.2 | 0.0598 | 1.8812 | 1.4651 | 1.8785 | 0.9463 | 1.0345 |
| 2DW | 22 | 1.7 | 0.0299 | 0.3526 | 0.3109 | 0.2789 | 0.2639 | 0.2650 |
| | 20 | 2.1 | 0.0359 | 0.4237 | 0.3854 | 0.3481 | 0.3316 | 0.3204 |
| | 18 | 2.6 | 0.0478 | 0.5654 | 0.5384 | 0.4884 | 0.4725 | 0.4308 |
| | 16 | 3.3 | 0.0598 | 0.7088 | 0.6975 | 0.6298 | 0.6207 | 0.5418 |
| 3DW | 22 | 1.8 | 0.0299 | 0.8348 | 0.7042 | 0.7718 | 0.3940 | 0.5086 |
| | 20 | 2.2 | 0.0359 | 1.0028 | 0.8939 | 0.9550 | 0.5128 | 0.6167 |
| | 18 | 2.9 | 0.0478 | 1.3362 | 1.2890 | 1.3156 | 0.7688 | 0.8283 |
| | 16 | 3.6 | 0.0598 | 1.6728 | 1.6648 | 1.6936 | 1.0078 | 1.0508 |

PROPERTIES BASED ON MINIMUM 46,000 psi YIELD STRENGTH

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Vertical Load Table

| DECK GAUGE | | | DECK SPAN (FT) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 5' -0" | 5'-6" | 6' -0" | 6' - 6" | 7' - 0" | 7' - 6" | 8' - 0" | 8' - 6" | 9' - 0" | 9' - 6" | 10' - 0" | 10' - 6" |
| SIMPLE SPAN | 22 (0.0299") | S | 113 | 110 | 9 | 79 | 68 | 59 | 52 | 46 | 41 | 37 | 33 | 30 |
| | | Δ | 112 | 84 | 65 | 51 | 41 | 33 | 28 | 23 | 20 | 16 | 14 | 12 |
| | 20 (0.0359") | S | 173 | 144 | 121 | 103 | 89 | 78 | 68 | 60 | 54 | 48 | 43 | 40 |
| | | Δ | 142 | 107 | 83 | 65 | 52 | 42 | 35 | 29 | 24 | 21 | 18 | 15 |
| | 18 (0.0478") | S | 245 | 203 | 170 | 145 | 125 | 109 | 96 | 85 | 76 | 68 | 61 | 56 |
| | | Δ | 205 | 154 | 119 | 94 | 75 | 61 | 50 | 42 | 35 | 30 | 26 | 22 |
| | 16 (0.0598") | S | 316 | 261 | 220 | 187 | 161 | 141 | 124 | 109 | 97 | 88 | 79 | 72 |
| | | Δ | 227 | 208 | 160 | 126 | 101 | 82 | 68 | 56 | 48 | 40 | 35 | 30 |
| TWO SPAN | 22 (0.0299") | S | 141 | 117 | 98 | 84 | 72 | 63 | 55 | 49 | 44 | 39 | 35 | 32 |
| | | Δ | 269 | 202 | 155 | 122 | 98 | 80 | 66 | 55 | 46 | 39 | 34 | 29 |
| | 20 (0.0359") | S | 178 | 148 | 124 | 106 | 91 | 80 | 70 | 62 | 56 | 50 | 45 | 41 |
| | | Δ | 343 | 257 | 198 | 156 | 125 | 102 | 84 | 70 | 59 | 50 | 43 | 37 |
| | 18 (0.0478") | S | 251 | 209 | 176 | 150 | 130 | 113 | 99 | 88 | 79 | 71 | 64 | 58 |
| | | Δ | 495 | 372 | 287 | 225 | 181 | 147 | 121 | 101 | 85 | 72 | 62 | 54 |
| | 16 (0.0598") | S | 319 | 264 | 222 | 190 | 164 | 143 | 126 | 112 | 100 | 90 | 81 | 74 |
| | | Δ | 667 | 501 | 386 | 304 | 243 | 198 | 163 | 136 | 114 | 97 | 83 | 72 |
| THREE OR MORE SPANS | 22 (0.0299") | S | 175 | 145 | 122 | 104 | 90 | 79 | 69 | 61 | 55 | 49 | 44 | 40 |
| | | Δ | 211 | 159 | 122 | 96 | 77 | 63 | 52 | 43 | 36 | 31 | 26 | 23 |
| | 20 (0.0359") | S | 221 | 183 | 154 | 132 | 114 | 99 | 87 | 78 | 69 | 62 | 56 | 51 |
| | | Δ | 269 | 202 | 156 | 123 | 98 | 80 | 66 | 55 | 46 | 39 | 34 | 29 |
| | 18 (0.0478") | S | 312 | 259 | 218 | 187 | 161 | 141 | 124 | 110 | 98 | 88 | 80 | 72 |
| | | Δ | 389 | 292 | 225 | 177 | 142 | 115 | 95 | 79 | 67 | 57 | 49 | 42 |
| | 16 (0.0598") | S | 395 | 328 | 277 | 236 | 204 | 178 | 157 | 139 | 124 | 112 | 101 | 92 |
| | | Δ | 524 | 394 | 303 | 239 | 191 | 155 | 128 | 107 | 90 | 77 | 66 | 57 |

S (STRESS), Δ DEFLECTION

HOW TO USE TABLE:

1. DETERMINE THE TOTAL LOAD AND THE LIVE LOAD FOR THE ROOF DECK
2. USING THE TOTAL LOAD, SELECT THE GAUGE AND THE SPAN WITH EQUAL OR GREATER VALUES FOR S (STESS)
3. USING THE LIVE LOAD, SELECT THE GAUGE AND THE SPAN WITH EQUAL OR GREATER VALUE FOR Δ (DEFLECTION) OF L/180.
4. SELECT THE GAUGE AND THE SPAN FOR THE ROOF DECK THAT MEETS BOTH STEPS 2 & 3.

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Shear Table – Button Punch

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft

| DECK GAUGE | SEAM ATTACHMENT SPACING (INCHES) **BUTTON PUNCH** | NO. PUDDLE WELDS/UNIT | FACTOR | DECK SPAN (FEET) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 5 | 6 | 7 | 8 | 9 | 10 |
| 22 (0.0299") | 12 | 5 | q | 316 | 305 | 298 | 287 | 279 | 253 |
| | | | G | 14 | 16 | 19 | 21 | 24 | 26 |
| | 24 | | q | 250 | 247 | 240 | 229 | 225 | 220 |
| | | | G | 12 | 15 | 17 | 21 | 24 | 25 |
| | 12 | 7 | q | 469 | 454 | 443 | 408 | 361 | 313 |
| | | | G | 82 | 91 | 96 | 98 | 102 | 105 |
| | 24 | | q | 488 | 458 | 446 | 397 | 351 | 281 |
| | | | G | 75 | 84 | 91 | 94 | 99 | 101 |
| 20 (0.0359") | 12 | 5 | q | 445 | 431 | 416 | 394 | 356 | 316 |
| | | | G | 14 | 16 | 19 | 21 | 24 | 28 |
| | 24 | | q | 384 | 356 | 330 | 320 | 284 | 251 |
| | | | G | 11 | 15 | 17 | 20 | 22 | 26 |
| | 12 | 7 | q | 746 | 710 | 628 | 541 | 462 | 425 |
| | | | G | 26 | 30 | 33 | 40 | 46 | 51 |
| | 24 | | q | 655 | 580 | 511 | 458 | 414 | 387 |
| | | | G | 16 | 19 | 22 | 26 | 31 | 35 |
| 18 (0.0478") | 12 | 5 | q | 910 | 776 | 681 | 603 | 561 | 507 |
| | | | G | 31 | 37 | 42 | 47 | 52 | 55 |
| | 24 | | q | 745 | 639 | 569 | 517 | 494 | 470 |
| | | | G | 28 | 33 | 38 | 42 | 46 | 50 |
| | 12 | 7 | q | 1093 | 1000 | 880 | 805 | 722 | 670 |
| | | | G | 112 | 122 | 129 | 137 | 141 | 145 |
| | 24 | | q | 1090 | 920 | 800 | 710 | 640 | 590 |
| | | | G | 88 | 95 | 101 | 108 | 114 | 120 |
| 16 (0.0598") | 12 | 5 | q | 1012 | 982 | 870 | 780 | 710 | 660 |
| | | | G | 49 | 57 | 65 | 74 | 84 | 95 |
| | 24 | | q | 1050 | 900 | 790 | 700 | 630 | 580 |
| | | | G | 42 | 51 | 59 | 68 | 77 | 88 |
| | 12 | 7 | q | 1518 | 1308 | 1205 | 1094 | 966 | 829 |
| | | | G | 140 | 151 | 164 | 177 | 190 | 203 |
| | 24 | | q | 1407 | 1207 | 1095 | 978 | 910 | 740 |
| | | | G | 99 | 110 | 122 | 135 | 148 | 161 |

NOTES

FOR SI 1 INCH=25.4mm, lbf = 4.45N, 1psi = 6.9 kpa, 1ft = 304.8mm

1. SPACING OF BOUNDARY OR PARALLEL SHEAR COLLECTOR ATTACHMENTS SHALL BE BASED ON MAXIMUM ALLOWABLE SHEAR FOR PUDDLE WELDS PER WELDING SCHEDULE.
2. TYPICAL INTERIOR END LAP SHALL BE TWO INCHES (NO LAP WELD IS REQUIRED, ARC SPOT WELD IS REQUIRED)
3. TO CONVERT SHEAR STIFFNESS (G) TO THE FLEXIBILITY FACTOR (F), F = 1000/G
4. THESE SHEAR VALUES MEET THE FACTOR OF SAFETY REQUIREMENTS LISTED IN 2007 AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, TABLE D5. THE FACTOR HAS BEEN UNIFORMLY APPLIED TO VALUES AS 3.00.
5. THE SPACING OF BOUNDARY SPOT WELDS AT PERIMETER SUPPORTS SHALL BE DETERMINED IN ACCORDANCE WITH THE VALUES SET FORTH IN THE WELDING SCHEDULE TABLE.

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Shear Table – Top Seam Weld

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft

| DECK GAUGE | SEAM ATTACHMENT SPACING (INCHES) **TOP SEAM WELD** | NO. PUDDLE WELDS/UNIT | FACTOR | DECK SPAN (FEET) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 5 | 6 | 7 | 8 | 9 | 10 |
| 22 (0.0299") | 12 | 5 | q | 666 | 622 | 589 | 566 | 546 | 530 |
| | | | G | 15 | 17 | 20 | 22 | 25 | 27 |
| | 24 | | q | 501 | 459 | 408 | 385 | 356 | 346 |
| | | | G | 14 | 17 | 19 | 21 | 24 | 26 |
| | 12 | 7 | q | 831 | 762 | 709 | 666 | 635 | 610 |
| | | | G | 78 | 85 | 91 | 96 | 100 | 104 |
| | 24 | | q | 639 | 571 | 504 | 471 | 432 | 415 |
| | | | G | 72 | 78 | 81 | 85 | 87 | 90 |
| 20 (0.0359") | 12 | 5 | q | 794 | 743 | 705 | 676 | 660 | 634 |
| | | | G | 22 | 26 | 30 | 33 | 37 | 40 |
| | 24 | | q | 598 | 551 | 489 | 465 | 427 | 415 |
| | | | G | 22 | 25 | 29 | 32 | 35 | 38 |
| | 12 | 7 | q | 993 | 908 | 848 | 799 | 760 | 731 |
| | | | G | 106 | 114 | 121 | 126 | 130 | 134 |
| | 24 | | q | 764 | 684 | 604 | 564 | 516 | 495 |
| | | | G | 96 | 102 | 105 | 109 | 110 | 113 |
| 18 (0.0478") | 12 | 5 | q | 1180 | 110 | 1020 | 960 | 910 | 870 |
| | | | G | 42 | 49 | 55 | 61 | 66 | 71 |
| | 24 | | q | 910 | 830 | 740 | 680 | 630 | 590 |
| | | | G | 37 | 43 | 49 | 54 | 58 | 63 |
| | 12 | 7 | q | 1400 | 1340 | 1220 | 1130 | 1050 | 1000 |
| | | | G | 162 | 170 | 176 | 181 | 185 | 188 |
| | 24 | | q | 1140 | 1070 | 940 | 850 | 780 | 720 |
| | | | G | 141 | 147 | 147 | 151 | 151 | 153 |
| 16 (0.0598") | 12 | 5 | q | 1680 | 1520 | 1410 | 1330 | 1280 | 1230 |
| | | | G | 70 | 79 | 88 | 96 | 104 | 110 |
| | 24 | | q | 1230 | 1170 | 1060 | 980 | 910 | 860 |
| | | | G | 65 | 74 | 80 | 87 | 92 | 97 |
| | 12 | 7 | q | 1750 | 1605 | 1382 | 1422 | 1360 | 1240 |
| | | | G | 220 | 228 | 233 | 237 | 240 | 243 |
| | 24 | | q | 1668 | 1424 | 1297 | 1187 | 1086 | 1022 |
| | | | G | 187 | 192 | 190 | 193 | 190 | 193 |

NOTES

FOR SI 1 INCH=25.4mm, lbf = 4.45N, 1psi = 6.9 kpa, 1ft = 304.8mm

1. SPACING OF BOUNDARY OR PARALLEL SHEAR COLLECTOR ATTACHMENTS SHALL BE BASED ON MAXIMUM ALLOWABLE SHEAR FOR PUDDLE WELDS PER WELDING SCHEDULE.
2. TYPICAL INTERIOR END LAP SHALL BE TWO INCHES (NO LAP WELD IS REQUIRED, ARC SPOT WELD IS REQUIRED)
3. TO CONVERT SHEAR STIFFNESS (G) TO THE FLEXIBILITY FACTOR (F), F = 1000/G
4. THESE SHEAR VALUES MEET THE FACTOR OF SAFETY REQUIREMENTS LISTED IN 2007 AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, TABLE D5. THE FACTOR HAS BEEN UNIFORMLY APPLIED TO VALUES AS 3.00.
5. THE SPACING OF BOUNDARY SPOT WELDS AT PERIMETER SUPPORTS SHALL BE DETERMINED IN ACCORDANCE WITH THE VALUES SET FORTH IN THE WELDING SCHEDULE TABLE

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Shear Table – Side Seam Weld

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft

| DECK | SEAM ATTACHMENT SPACING (INCHES) **SIDE SEAM WELD** | NO. PUDDLE WELDS/UNIT | FACTOR | DECK SPAN (FEET) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 5 | 6 | 7 | 8 | 9 | 10 |
| 22 (0.0299") | 12 | 5 | q | 583 | 558 | 540 | 525 | 514 | 505 |
| | | | G | 15 | 17 | 20 | 22 | 25 | 27 |
| | 24 | | q | 423 | 402 | 369 | 360 | 338 | 333 |
| | | | G | 14 | 17 | 19 | 21 | 24 | 26 |
| | 12 | 7 | q | 729 | 684 | 651 | 626 | 606 | 589 |
| | | | G | 78 | 85 | 91 | 96 | 100 | 104 |
| | 24 | | q | 532 | 494 | 443 | 422 | 391 | 382 |
| | | | G | 72 | 78 | 81 | 85 | 87 | 90 |
| 20 (0.0359") | 12 | 5 | q | 696 | 667 | 646 | 628 | 615 | 603 |
| | | | G | 22 | 26 | 30 | 33 | 37 | 40 |
| | 24 | | q | 505 | 480 | 441 | 430 | 404 | 398 |
| | | | G | 22 | 25 | 29 | 32 | 35 | 38 |
| | 12 | 7 | q | 872 | 818 | 779 | 749 | 725 | 706 |
| | | | G | 106 | 114 | 121 | 126 | 130 | 134 |
| | 24 | | q | 635 | 590 | 530 | 468 | 468 | 457 |
| | | | G | 96 | 102 | 105 | 109 | 110 | 113 |
| 18 (0.0478") | 12 | 5 | q | 1400 | 1290 | 1225 | 1196 | 1168 | 1145 |
| | | | G | 42 | 49 | 55 | 61 | 66 | 71 |
| | 24 | | q | 1113 | 1044 | 985 | 823 | 767 | 756 |
| | | | G | 40 | 46 | 51 | 56 | 60 | 65 |
| | 12 | 7 | q | 1652 | 1552 | 1479 | 1423 | 1369 | 1315 |
| | | | G | 162 | 170 | 176 | 181 | 185 | 188 |
| | 24 | | q | 1201 | 1117 | 1011 | 967 | 967 | 967 |
| | | | G | 141 | 147 | 147 | 151 | 151 | 153 |
| 16 (0.0598") | 12 | 5 | q | 1920 | 1760 | 1660 | 1580 | 1530 | 1490 |
| | | | G | 70 | 79 | 88 | 96 | 104 | 110 |
| | 24 | | q | 1440 | 1290 | 1180 | 1100 | 1040 | 990 |
| | | | G | 65 | 74 | 80 | 87 | 92 | 97 |
| | 12 | 7 | q | 2057 | 1941 | 2005 | 1929 | 1722 | 1678 |
| | | | G | 220 | 228 | 233 | 237 | 240 | 243 |
| | 24 | | q | 1905 | 1680 | 1390 | 1444 | 1253 | 1187 |
| | | | G | 187 | 192 | 190 | 193 | 190 | 193 |

NOTES

FOR SI 1 INCH=25.4mm, lbf = 4.45N, 1psi = 6.9 kpa, 1ft = 304.8mm

1. SPACING OF BOUNDARY OR PARALLEL SHEAR COLLECTOR ATTACHMENTS SHALL BE BASED ON MAXIMUM ALLOWABLE SHEAR FOR PUDDLE WELDS PER WELDING SCHEDULE.
2. TYPICAL INTERIOR END LAP SHALL BE TWO INCHES (NO LAP WELD IS REQUIRED, ARC SPOT WELD IS REQUIRED)
3. TO CONVERT SHEAR STIFFNESS (G) TO THE FLEXIBILITY FACTOR (F), F = 1000/G
4. THESE SHEAR VALUES MEET THE FACTOR OF SAFETY REQUIREMENTS LISTED IN 2007 AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, TABLE D5. THE FACTOR HAS BEEN UNIFORMLY APPLIED TO VALUES AS 3.00.
5. THE SPACING OF BOUNDARY SPOT WELDS AT PERIMETER SUPPORTS SHALL BE DETERMINED IN ACCORDANCE WITH THE VALUES SET FORTH IN THE WELDING SCHEDULE TABLE

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Shear Table – SHEARCORR

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft

| DECK GAUGE | SEAM ATTACHMENT SPACING (INCHES) **TOP SEAM WELD** | NO. PUDDLE WELDS/UNIT | FACTOR | DECK SPAN (FEET) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 5 | 6 | 7 | 8 | 9 | 10 |
| 22 (0.0299") | 12 | 7 | q | 1117 | 1014 | 943 | 890 | 855 | 819 |
| | | | G | 218 | 210 | 200 | 195 | 185 | 178 |
| | 18 | | q | 975 | 890 | 825 | 753 | 700 | 653 |
| | | | G | 200 | 192 | 182 | 170 | 164 | 159 |
| | 24 | | q | 872 | 793 | 720 | 668 | 633 | 610 |
| | | | G | 198 | 184 | 170 | 162 | 154 | 150 |
| 20 (0.0359") | 12 | 7 | q | 1646 | 1523 | 1423 | 1342 | 1281 | 1144 |
| | | | G | 280 | 260 | 250 | 245 | 230 | 225 |
| | 18 | | q | 1437 | 1273 | 1121 | 1170 | 1105 | 1052 |
| | | | G | 256 | 244 | 227 | 200 | 181 | 175 |
| | 24 | | q | 1290 | 1137 | 1025 | 963 | 901 | 832 |
| | | | G | 232 | 212 | 192 | 182 | 167 | 153 |
| 18 (0.0478") | 12 | 7 | q | 2206 | 2044 | 1935 | 1854 | 1644 | 1444 |
| | | | G | 385 | 370 | 355 | 345 | 330 | 319 |
| | 18 | | q | 1895 | 1711 | 1716 | 1536 | 1471 | 1415 |
| | | | G | 360 | 340 | 320 | 311 | 290 | 283 |
| | 24 | | q | 1748 | 1562 | 1416 | 1303 | 1229 | 1167 |
| | | | G | 352 | 332 | 310 | 290 | 275 | 265 |
| 16 (0.0598") | 12 | 7 | q | 2895 | 2665 | 2504 | 2357 | 2220 | 1865 |
| | | | G | 510 | 480 | 458 | 430 | 426 | 411 |
| | 18 | | q | 2502 | 2274 | 2073 | 1916 | 1793 | 1719 |
| | | | G | 479 | 455 | 436 | 406 | 392 | 365 |
| | 24 | | q | 2296 | 1986 | 1842 | 1652 | 1557 | 1472 |
| | | | G | 450 | 437 | 405 | 385 | 365 | 346 |

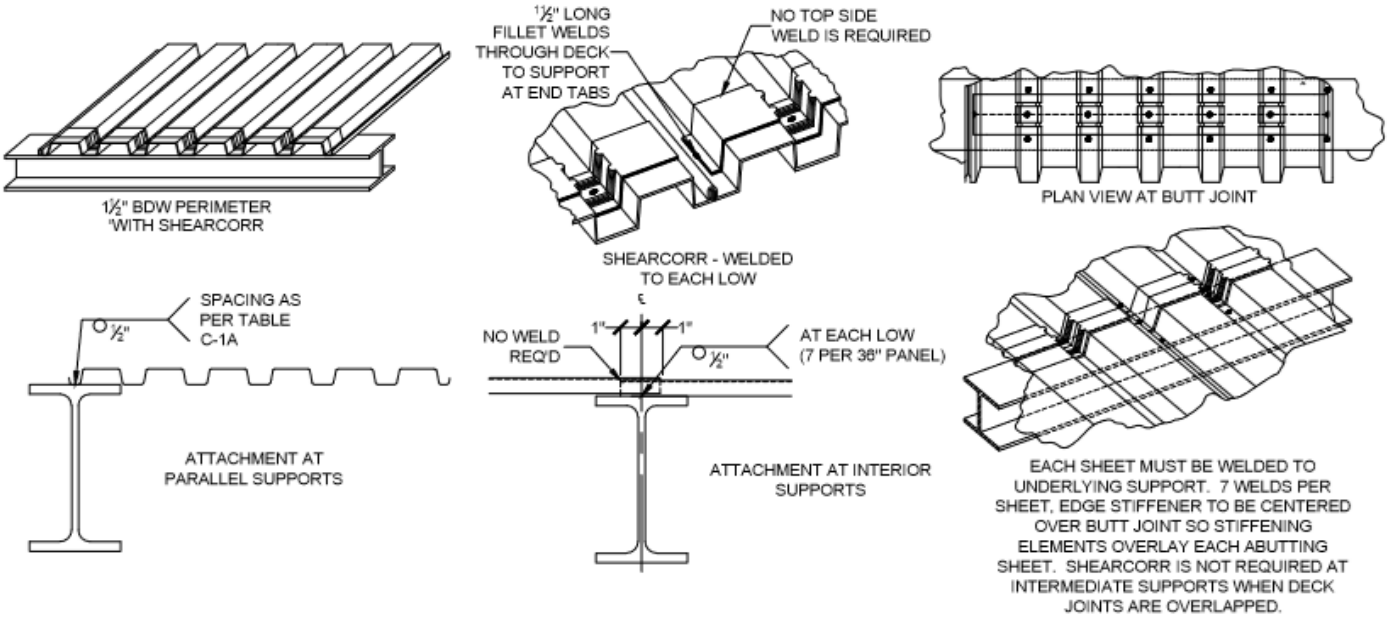
NOTES

FOR SI 1 INCH=25.4mm, lbf = 4.45N, 1psi = 6.9 kpa, 1ft = 304.8mm

1. SHEARCORR IS USED AT END OF DECK UNITS OR AT INTERIOR LINES FOR SHEAR TRANSFER PERPENDICULAR TO THE METAL DECK. SHEARCORR CAN BE PRE-PUNCHED WITH ½" DIAMETER HOLES TO FACILITATE WELDING. (UNPUNCHED SHEARCORR CAN ACCOMMODATE PIN OR SCREW INSTALLATIONS)
2. SEE SHEARCORR EDGE STIFFENING SYSTEM DETAILS
3. SPACING OF BOUNDARY OR PARALLEL SHEAR COLLECTOR ATTACHMENTS SHALL BE BASED ON MAXIMUM ALLOWABLE SHEAR FOR PUDDLE WELDS PER WELDING SCHEDULE.
4. TYPICAL INTERIOR END LAP SHALL BE TWO INCHES (NO LAP WELD IS REQUIRED, ARC SPOT WELD IS REQUIRED)
5. TO CONVERT SHEAR STIFFNESS (G) TO THE FLEXIBILITY FACTOR (F), F = 1000/G
6. THESE SHEAR VALUES MEET THE FACTOR OF SAFETY REQUIREMENTS LISTED IN 2007 AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, TABLE D5. THE FACTOR HAS BEEN UNIFORMLY APPLIED TO VALUES AS 3.00.
7. THE SPACING OF BOUNDARY SPOT WELDS AT PERIMETER SUPPORTS SHALL BE DETERMINED IN ACCORDANCE WITH THE VALUES SET FORTH IN THE WELDING SCHEDULE TABLE

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700






SHEARCORR Edge Stiffening System

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Shear Table – Side Lap Screw

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft  FLEXIBILITY FACTOR (f) IN INCHES PER POUND x $10^{-6}$

| DECK GAUGE | SEAM ATTACHMENT SPACING (INCHES) | NO. PUDDLE WELDS/UNIT | Factor | DECK SPAN (FEET) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 5 | 6 | 7 | 8 | 9 | 10 |
| 22 (0.0299") | 24 | 5 | q | 659 | 569 | 505 | 457 | 420 | 391 |
| | | | f | 5.44+161.6R | 6.21+134.7R | 6.96+115.4R | 7.7+101R | 8.43+89.8R | 9.14+80.8R |
| | 18 | | q | 696 | 606 | 542 | 495 | 458 | 429 |
| | | | f | 5.23+161.6R | 5.92+134.7R | 6.58+115.4R | 7.22+101R | 7.84+89.8R | 8.44+80.8R |
| | 12 | | q | 768 | 679 | 616 | 570 | 534 | 506 |
| | | | f | 4.87+161.6R | 5.43+134.7R | 5.96+115.4R | 6.46+101R | 6.93+89.8R | 7.37+80.8R |
| | 8 | | q | 876 | 789 | 727 | 682 | 648 | 622 |
| | | | f | 4.44+161.6R | 4.87+134.7R | 5.26+115.4R | 5.62+101R | 5.95+89.8R | 6.26+80.8R |
| | 6 | | q | 984 | 898 | 838 | 795 | 762 | 737 |
| | | | f | 4.1+161.6R | 4.44+134.7R | 4.75+115.4R | 5.02+101R | 5.27+89.8R | 5.5+80.8R |
| | 4 | | q | 1,201 | 1,118 | 1,061 | 1,020 | 990 | 968 |
| | | | f | 3.62+161.6R | 3.84+134.7R | 4.04+115.4R | 4.22+101R | 4.38+89.8R | 4.52+80.8R |
| | 24 | 7 | q | 791 | 680 | 602 | 543 | 498 | 462 |
| | | | f | 5.26+82.5R | 6.02+68.7R | 6.77+58.9R | 7.51+51.5R | 8.24+45.8R | 8.96+41.2R |
| | 18 | | q | 830 | 720 | 642 | 583 | 539 | 503 |
| | | | f | 5.08+82.5R | 5.76+68.7R | 6.43+58.9R | 7.09+51.5R | 7.72+45.8R | 8.34+41.2R |
| | 12 | | q | 908 | 798 | 721 | 664 | 621 | 586 |
| | | | f | 4.76+82.5R | 5.33+68.7R | 5.88+58.9R | 6.39+51.5R | 6.89+45.8R | 7.36+41.2R |
| | 8 | | q | 1,024 | 916 | 841 | 786 | 744 | 711 |
| | | | f | 4.38+82.5R | 4.83+68.7R | 5.24+58.9R | 5.62+51.5R | 5.98+45.8R | 6.31+41.2R |
| | 6 | | q | 1,140 | 1,034 | 961 | 907 | 866 | 835 |
| | | | f | 4.08+82.5R | 4.43+68.7R | 4.76+58.9R | 5.06+51.5R | 5.33+45.8R | 5.58+41.2R |
| | 4 | | q | 1,373 | 1,271 | 1,200 | 1,149 | 1,112 | 1,084 |
| | | | f | 3.62+82.5R | 3.87+68.7R | 4.09+58.9R | 4.28+51.5R | 4.46+45.8R | 4.62+41.2R |
| 20 (0.0359") | 24 | 5 | q | 1,043 | 893 | 786 | 706 | 645 | 596 |
| | | | f | 4.18+93.4R | 4.8+77.8R | 5.42+66.7R | 6.05+58.4R | 6.67+51.9R | 7.28+46.7R |
| | 18 | | q | 1,086 | 937 | 831 | 751 | 691 | 642 |
| | | | f | 4.06+93.4R | 4.63+77.8R | 5.2+66.7R | 5.75+58.4R | 6.3+51.9R | 6.84+46.7R |
| | 12 | | q | 1,172 | 1,024 | 919 | 841 | 782 | 735 |
| | | | f | 3.85+93.4R | 4.34+77.8R | 4.81+66.7R | 5.26+58.4R | 5.7+51.9R | 6.13+46.7R |
| | 8 | | q | 1,302 | 1,155 | 1,052 | 976 | 919 | 874 |
| | | | f | 3.58+93.4R | 3.98+77.8R | 4.35+66.7R | 4.7+58.4R | 5.03+51.9R | 5.34+46.7R |
| | 6 | | q | 1,431 | 1,286 | 1,185 | 1,111 | 1,056 | 1,012 |
| | | | f | 3.37+93.4R | 3.69+77.8R | 3.99+66.7R | 4.27+58.4R | 4.52+51.9R | 4.77+46.7R |
| | 4 | | q | 1,689 | 1,548 | 1,451 | 1,381 | 1,329 | 1,290 |
| | | | f | 3.03+93.4R | 3.26+77.8R | 3.47+66.7R | 3.66+58.4R | 3.83+51.9R | 3.99+46.7R |
| | 24 | 7 | q | 1,246 | 1,063 | 934 | 837 | 762 | 703 |
| | | | f | 4.04+47.6R | 4.64+39.7R | 5.25+34R | 5.87+29.8R | 6.49+26.5R | 7.11+23.8R |
| | 18 | | q | 1,292 | 1,110 | 981 | 885 | 811 | 753 |
| | | | f | 3.93+47.6R | 4.5+39.7R | 5.06+34R | 5.61+29.8R | 6.17+26.5R | 6.72+23.8R |
| | 12 | | q | 1,384 | 1,204 | 1,076 | 982 | 909 | 852 |
| | | | f | 3.75+47.6R | 4.24+39.7R | 4.71+34R | 5.18+29.8R | 5.63+26.5R | 6.07+23.8R |
| | 8 | | q | 1,522 | 1,344 | 1,219 | 1,127 | 1,056 | 1,001 |
| | | | f | 3.51+47.6R | 3.92+39.7R | 4.3+34R | 4.66+29.8R | 5.01+26.5R | 5.34+23.8R |
| | 6 | | q | 1,660 | 1,484 | 1,362 | 1,272 | 1,203 | 1,150 |
| | | | f | 3.32+47.6R | 3.65+39.7R | 3.97+34R | 4.26+29.8R | 4.54+26.5R | 4.8+23.8R |
| | 4 | | q | 1,936 | 1,765 | 1,647 | 1,561 | 1,497 | 1,449 |
| | | | f | 3.01+47.6R | 3.26+39.7R | 3.48+34R | 3.69+29.8R | 3.87+26.5R | 4.05+23.8R |

SEAM ATTACHMENT, (2) HILTI S-SLC 01 M HWH SELF DRILLING SCREWS

SEE BDW NOTES- Page 10

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Shear Table – Side Lap Screw Continued

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft  FLEXIBILITY FACTOR (f) IN INCHES PER POUND x $10^{-6}$

| DECK GAUGE | SEAM ATTACHMENT SPACING (INCHES) | NO. PUDDLE WELDS/UNIT | Factor | DECK SPAN (FEET) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 5 | 6 | 7 | 8 | 9 | 10 |
| 18 (0.0478") | 24 | 5 | q | 1,469 | 1,246 | 1,088 | 970 | 878 | 805 |
| | | | f | 2.75+39.6R | 3.18+33R | 3.62+28.3R | 4.06+24.7R | 4.52+22R | 4.99+19.8R |
| | 18 | | q | 1,509 | 1,287 | 1,129 | 1,011 | 921 | 848 |
| | | | f | 2.7+39.6R | 3.11+33R | 3.52+28.3R | 3.93+24.7R | 4.35+22R | 4.78+19.8R |
| | 12 | | q | 1,588 | 1,367 | 1,211 | 1,095 | 1,006 | 935 |
| | | | f | 2.61+39.6R | 2.97+33R | 3.34+28.3R | 3.7+24.7R | 4.06+22R | 4.42+19.8R |
| | 8 | | q | 1,706 | 1,488 | 1,334 | 1,220 | 1,133 | 1,065 |
| | | | f | 2.49+39.6R | 2.8+33R | 3.11+28.3R | 3.41+24.7R | 3.7+22R | 3.98+19.8R |
| | 6 | | q | 1,825 | 1,609 | 1,457 | 1,346 | 1,261 | 1,194 |
| | | | f | 2.39+39.6R | 2.66+33R | 2.92+28.3R | 3.17+24.7R | 3.41+22R | 3.65+19.8R |
| | 4 | | q | 2,062 | 1,851 | 1,704 | 1,597 | 1,516 | 1,454 |
| | | | f | 2.21+39.6R | 2.42+33R | 2.62+28.3R | 2.81+24.7R | 2.99+22R | 3.15+19.8R |
| | 24 | 7 | q | 2,028 | 1,717 | 1,497 | 1,332 | 1,204 | 1,103 |
| | | | f | 2.66+20.2R | 3.07+16.8R | 3.49+14.4R | 3.93+12.6R | 4.38+11.2R | 4.85+10.1R |
| | 18 | | q | 2,077 | 1,768 | 1,548 | 1,384 | 1,258 | 1,157 |
| | | | f | 2.61+20.2R | 3.01+16.8R | 3.41+14.4R | 3.82+12.6R | 4.24+11.2R | 4.66+10.1R |
| | 12 | | q | 2,176 | 1,869 | 1,651 | 1,489 | 1,364 | 1,266 |
| | | | f | 2.54+20.2R | 2.89+16.8R | 3.25+14.4R | 3.61+12.6R | 3.97+11.2R | 4.34+10.1R |
| | 8 | | q | 2,324 | 2,020 | 1,805 | 1,646 | 1,524 | 1,429 |
| | | | f | 2.43+20.2R | 2.74+16.8R | 3.05+14.4R | 3.35+12.6R | 3.65+11.2R | 3.94+10.1R |
| | 6 | | q | 2,472 | 2,171 | 1,959 | 1,803 | 1,684 | 1,591 |
| | | | f | 2.34+20.2R | 2.61+16.8R | 2.88+14.4R | 3.13+12.6R | 3.38+11.2R | 3.63+10.1R |
| | 4 | | q | 2,768 | 2,473 | 2,268 | 2,118 | 2,005 | 1,917 |
| | | | f | 2.18+20.2R | 2.4+16.8R | 2.6+14.4R | 2.8+12.6R | 2.98+11.2R | 3.16+10.1R |
| 16 (0.0598") | 24 | 5 | q | 1,609 | 1,359 | 1,181 | 1,049 | 946 | 864 |
| | | | f | 1.99+20.2R | 2.3+16.8R | 2.62+14.4R | 2.96+12.6R | 3.31+11.2R | 3.67+10.1R |
| | 18 | | q | 1,641 | 1,392 | 1,215 | 1,083 | 981 | 900 |
| | | | f | 1.96+20.2R | 2.26+16.8R | 2.57+14.4R | 2.89+12.6R | 3.22+11.2R | 3.55+10.1R |
| | 12 | | q | 1,706 | 1,458 | 1,283 | 1,152 | 1,051 | 971 |
| | | | f | 1.91+20.2R | 2.19+16.8R | 2.47+14.4R | 2.76+12.6R | 3.05+11.2R | 3.34+10.1R |
| | 8 | | q | 1,802 | 1,557 | 1,384 | 1,255 | 1,157 | 1,079 |
| | | | f | 1.85+20.2R | 2.09+16.8R | 2.34+14.4R | 2.59+12.6R | 2.83+11.2R | 3.08+10.1R |
| | 6 | | q | 1,899 | 1,656 | 1,485 | 1,359 | 1,262 | 1,186 |
| | | | f | 1.79+20.2R | 2.01+16.8R | 2.23+14.4R | 2.44+12.6R | 2.65+11.2R | 2.86+10.1R |
| | 4 | | q | 2,092 | 1,854 | 1,687 | 1,565 | 1,473 | 1,401 |
| | | | f | 1.69+20.2R | 1.87+16.8R | 2.04+14.4R | 2.21+12.6R | 2.37+11.2R | 2.53+10.1R |
| | 24 | 7 | q | 2,224 | 1,876 | 1,629 | 1,445 | 1,301 | 1,188 |
| | | | f | 1.92+10.3R | 2.22+8.6R | 2.54+7.4R | 2.86+6.4R | 3.21+5.7R | 3.56+5.2R |
| | 18 | | q | 2,264 | 1,918 | 1,672 | 1,488 | 1,346 | 1,233 |
| | | | f | 1.9+10.3R | 2.19+8.6R | 2.49+7.4R | 2.8+6.4R | 3.12+5.7R | 3.46+5.2R |
| | 12 | | q | 2,346 | 2,002 | 1,758 | 1,576 | 1,436 | 1,325 |
| | | | f | 1.86+10.3R | 2.12+8.6R | 2.4+7.4R | 2.68+6.4R | 2.97+5.7R | 3.27+5.2R |
| | 8 | | q | 2,469 | 2,127 | 1,886 | 1,707 | 1,570 | 1,462 |
| | | | f | 1.8+10.3R | 2.04+8.6R | 2.28+7.4R | 2.53+6.4R | 2.78+5.7R | 3.03+5.2R |
| | 6 | | q | 2,591 | 2,253 | 2,015 | 1,839 | 1,704 | 1,598 |
| | | | f | 1.75+10.3R | 1.97+8.6R | 2.18+7.4R | 2.4+6.4R | 2.61+5.7R | 2.83+5.2R |
| | 4 | | q | 2,836 | 2,504 | 2,272 | 2,101 | 1,973 | 1,872 |
| | | | f | 1.66+10.3R | 1.84+8.6R | 2.02+7.4R | 2.19+6.4R | 2.35+5.7R | 2.52+5.2R |

NOTES

FOR SI 1 INCH=25.4mm, lbf = 4.45N, 1psi = 6.9 kpa, 1ft = 304.8mm

1. SPACING OF BOUNDARY OR PARALLEL SHEAR COLLECTOR ATTACHMENTS SHALL BE BASED ON MAXIMUM ALLOWABLE SHEAR FOR PUDDLE WELDS PER WELDING SCHEDULE.
2. TYPICAL INTERIOR END LAP SHALL BE TWO INCHES (NO LAP WELD IS REQUIRED, ARC SPOT WELD IS REQUIRED)
3. TO CONVERT SHEAR STIFFNESS (G) TO THE FLEXIBILITY FACTOR (F), F = 1000/G
4. THESE SHEAR VALUES MEET THE FACTOR OF SAFETY REQUIREMENTS LISTED IN 2007 AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, TABLE D5. THE FACTOR HAS BEEN UNIFORMLY APPLIED TO VALUES AS 3.00.
5. THE SPACING OF BOUNDARY SPOT WELDS AT PERIMETER SUPPORTS SHALL BE DETERMINED IN ACCORDANCE WITH THE VALUES SET FORTH IN THE WELDING SCHEDULE TABLE

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Shear Table – Side Lap Screw + SHEARCORR

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft  FLEXIBILITY FACTOR (f) IN INCHES PER POUND x $10^{-6}$

| DECK GAUGE | SEAM ATTACHMENT SPACING (INCHES) | NO. PUDDLE WELDS/UNIT | Factor | DECK SPAN (FEET) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 5 | 6 | 7 | 8 | 9 | 10 |
| 22 (0.0299") | 24 | 7 | q | 555 | 520 | 494 | 475 | 461 | 449 |
| | | | f | 6.69+164.9R | 6.31+137.4R | 6+117.8R | 5.75+103.1R | 5.54+91.6R | 5.36+82.5R |
| | 18 | | q | 674 | 638 | 613 | 594 | 579 | 568 |
| | | | f | 6+164.9R | 5.65+137.4R | 5.38+117.8R | 5.16+103.1R | 4.98+91.6R | 4.82+82.5R |
| | 12 | | q | 911 | 876 | 850 | 832 | 817 | 805 |
| | | | f | 5.16+164.9R | 4.88+137.4R | 4.66+117.8R | 4.48+103.1R | 4.34+91.6R | 4.22+82.5R |
| | 8 | | q | 1,267 | 1,232 | 1,206 | 1,188 | 1,032 | 836 |
| | | | f | 4.49+164.9R | 4.27+137.4R | 4.1+117.8R | 3.97+103.1R | 3.87+91.6R | 3.78+82.5R |
| | 6 | | q | 1,623 | 1,588 | 1,563 | 1,306 | 1,032 | 836 |
| | | | f | 4.12+164.9R | 3.94+137.4R | 3.8+117.8R | 3.7+103.1R | 3.62+91.6R | 3.55+82.5R |
| | 4 | | q | 2,336 | 2,300 | 1,706 | 1,306 | 1,032 | 836 |
| | | | f | 3.71+164.9R | 3.58+137.4R | 3.49+117.8R | 3.41+103.1R | 3.35+91.6R | 3.31+82.5R |
| 20 (0.0359") | 24 | 7 | q | 876 | 810 | 764 | 729 | 702 | 681 |
| | | | f | 5.53+95.3R | 5.26+79.4R | 5.04+68.1R | 4.85+59.5R | 4.69+52.9R | 4.55+47.6R |
| | 18 | | q | 1,047 | 981 | 935 | 900 | 873 | 852 |
| | | | f | 5.01+95.3R | 4.75+79.4R | 4.54+68.1R | 4.37+59.5R | 4.23+52.9R | 4.1+47.6R |
| | 12 | | q | 1,389 | 1,324 | 1,277 | 1,243 | 1,216 | 1,072 |
| | | | f | 4.35+95.3R | 4.12+79.4R | 3.95+68.1R | 3.81+59.5R | 3.69+52.9R | 3.59+47.6R |
| | 8 | | q | 1,902 | 1,837 | 1,791 | 1,675 | 1,323 | 1,072 |
| | | | f | 3.8+95.3R | 3.62+79.4R | 3.48+68.1R | 3.37+59.5R | 3.28+52.9R | 3.21+47.6R |
| | 6 | | q | 2,416 | 2,350 | 2,188 | 1,675 | 1,323 | 1,072 |
| | | | f | 3.49+95.3R | 3.33+79.4R | 3.22+68.1R | 3.13+59.5R | 3.06+52.9R | 3.01+47.6R |
| | 4 | | q | 3,442 | 2,978 | 2,188 | 1,675 | 1,323 | 1,072 |
| | | | f | 3.14+95.3R | 3.03+79.4R | 2.94+68.1R | 2.88+59.5R | 2.83+52.9R | 2.79+47.6R |
| 18 (0.0478") | 24 | 7 | q | 1,355 | 1,240 | 1,152 | 1,087 | 1,037 | 997 |
| | | | f | 4.02+40.4R | 3.87+33.6R | 3.74+28.8R | 3.63+25.2R | 3.54+22.4R | 3.45+20.2R |
| | 18 | | q | 1,584 | 1,471 | 1,383 | 1,318 | 1,268 | 1,100 |
| | | | f | 3.69+40.4R | 3.54+33.6R | 3.41+28.8R | 3.3+25.2R | 3.21+22.4R | 3.13+20.2R |
| | 12 | | q | 2,043 | 1,932 | 1,845 | 1,719 | 1,358 | 1,100 |
| | | | f | 3.25+40.4R | 3.11+33.6R | 2.99+28.8R | 2.9+25.2R | 2.82+22.4R | 2.75+20.2R |
| | 8 | | q | 2,731 | 2,625 | 2,245 | 1,719 | 1,358 | 1,100 |
| | | | f | 2.87+40.4R | 2.75+33.6R | 2.65+28.8R | 2.57+25.2R | 2.51+22.4R | 2.46+20.2R |
| | 6 | | q | 3,420 | 3,056 | 2,245 | 1,719 | 1,358 | 1,100 |
| | | | f | 2.64+40.4R | 2.54+33.6R | 2.46+28.8R | 2.39+25.2R | 2.34+22.4R | 2.3+20.2R |
| | 4 | | q | 4,401 | 3,056 | 2,245 | 1,719 | 1,358 | 1,100 |
| | | | f | 2.39+40.4R | 2.3+33.6R | 2.24+28.8R | 2.2+25.2R | 2.16+22.4R | 2.13+20.2R |
| 16 (0.0598") | 24 | 7 | q | 1,734 | 1,598 | 1,506 | 1,442 | 1,395 | 1,353 |
| | | | f | 3.07+20.6R | 2.99+17.2R | 2.91+14.7R | 2.84+12.9R | 2.78+11.5R | 2.73+10.3R |
| | 18 | | q | 2,000 | 1,871 | 1,786 | 1,727 | 1,670 | 1,353 |
| | | | f | 2.85+20.6R | 2.75+17.2R | 2.67+14.7R | 2.6+12.9R | 2.54+11.5R | 2.49+10.3R |
| | 12 | | q | 2,533 | 2,417 | 2,345 | 2,114 | 1,670 | 1,353 |
| | | | f | 2.54+20.6R | 2.45+17.2R | 2.37+14.7R | 2.3+12.9R | 2.25+11.5R | 2.2+10.3R |
| | 8 | | q | 3,333 | 3,236 | 2,761 | 2,114 | 1,670 | 1,353 |
| | | | f | 1.13+10.3R | 1.09+8.6R | 1.06+7.4R | 1.03+6.4R | 1+5.7R | 0.99+5.2R |
| | 6 | | q | 4,132 | 3,757 | 2,761 | 2,114 | 1,670 | 1,353 |
| | | | f | 1.05+10.3R | 1.01+8.6R | 0.98+7.4R | 0.96+6.4R | 0.94+5.7R | 0.92+5.2R |
| | 4 | | q | 5,411 | 3,757 | 2,761 | 2,114 | 1,670 | 1,353 |
| | | | f | 0.95+10.3R | 0.92+8.6R | 0.9+7.4R | 0.88+6.4R | 0.86+5.7R | 0.85+5.2R |

SEAM ATTACHMENT, (2) HILTI S-SLC 01 M HWH SELF DRILLING SCREWS

SEE BDW NOTES- Page 7

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BADW Shear Table – Side Seam Weld

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft  FLEXIBILITY FACTOR (f) IN INCHES PER POUND x $10^{-6}$

| DECK | SEAM ATTACHMENT SPACING (INCHES) **SIDE SEAM WELD** | NO. PUDDLE WELDS/UNIT | FACTOR | DECK SPAN (FEET) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | 7 | 8 | 9 | 10 |
| 22 (0.0299") | 12 | 4 | q | 410 | 400 | 380 | 370 | 360 |
| | | | F | 7.4 + 187.0R | 6.9 + 160.0R | 6.6 + 140.0R | 6.3 + 125.0R | 6.1 + 112.0R |
| | 18 | | q | 320 | 300 | 280 | 270 | 270 |
| | | | F | 8.8 + 187.0R | 8.3 + 160.0R | 7.9 + 140.0R | 7.5 + 125.0R | 7.3 + 112.0R |
| | 24 | | q | 270 | 250 | 240 | 230 | 220 |
| | | | F | 9.8 + 187.0R | 9.3 + 160.0R | 8.9 + 140.0R | 8.6 + 125.0R | 8.3 + 112.0R |
| | 12 | 7 | q | 480 | 450 | 430 | 410 | 400 |
| | | | F | 7.2 + 46.8R | 6.9 + 40.1R | 6.6 + 35.1R | 6.3 + 31.2R | 6.1 + 28.1R |
| | 18 | | q | 380 | 350 | 330 | 310 | 300 |
| | | | F | 8.3 + 46.8R | 8.0 + 40.1R | 7.7 + 35.1R | 7.4 + 31.2R | 7.2 + 28.1R |
| | 24 | | q | 330 | 300 | 280 | 260 | 250 |
| | | | F | 9.1 + 46.8R | 8.8 + 40.1R | 8.5 + 35.1R | 8.3 + 31.2R | 8.1 + 28.1R |
| 20 (0.0359") | 12 | 4 | q | 640 | 610 | 580 | 560 | 550 |
| | | | F | 6.1 + 108.0R | 5.8 + 92.6R | 5.5 + 81.0R | 5.3 + 72.0R | 5.1 + 64.8R |
| | 18 | | q | 500 | 470 | 440 | 420 | 410 |
| | | | F | 7.2 + 108.0R | 6.8 + 92.6R | 6.6 + 81.0R | 6.3 + 72.0R | 6.1 + 64.8R |
| | 24 | | q | 440 | 400 | 370 | 350 | 340 |
| | | | F | 8.0 + 108.0R | 7.6 + 92.6R | 7.3 + 81.0R | 7.1 + 72.0R | 6.9 + 64.8R |
| | 12 | 7 | q | 750 | 700 | 660 | 630 | 610 |
| | | | F | 5.9 + 27.0R | 5.7 + 23.2R | 5.5 + 20.3R | 5.3 + 18.0R | 5.1 + 16.2R |
| | 18 | | q | 610 | 560 | 520 | 490 | 470 |
| | | | F | 6.7 + 27.0R | 6.5 + 23.2R | 6.3 + 20.3R | 6.1 + 18.0R | 6.0 + 16.2R |
| | 24 | | q | 540 | 490 | 450 | 420 | 400 |
| | | | F | 7.3 + 27.0R | 7.1 + 23.2R | 6.9 + 20.3R | 6.8 + 18.0R | 6.6 + 16.2R |
| 18 (0.0478") | 12 | 4 | q | 1290 | 1200 | 1140 | 1090 | 1050 |
| | | | F | 4.5 + 45.8R | 4.3 + 39.2R | 4.1 + 34.3R | 4.0 + 30.5R | 3.9 + 27.5R |
| | 18 | | q | 1040 | 950 | 890 | 840 | 800 |
| | | | F | 5.1 + 45.8R | 4.9 + 39.2R | 4.8 + 34.3R | 4.6 + 30.5R | 4.5 + 27.5R |
| | 24 | | q | 920 | 830 | 770 | 720 | 680 |
| | | | F | 5.6 + 45.8R | 5.4 + 39.2R | 5.3 + 34.3R | 5.1 + 30.5R | 5.0 + 27.5R |
| | 12 | 7 | q | 1520 | 1400 | 1300 | 1230 | 1170 |
| | | | F | 4.2 + 11.4R | 4.1 + 9.8R | 4.0 + 8.6R | 3.9 + 7.6R | 3.8 + 6.9R |
| | 18 | | q | 1270 | 1150 | 1060 | 980 | 930 |
| | | | F | 4.7 + 11.4R | 4.6 + 9.8R | 4.5 + 8.6R | 4.4 + 7.6R | 4.4 + 6.9R |
| | 24 | | q | 1150 | 1030 | 930 | 860 | 800 |
| | | | F | 5.0 + 11.4R | 5.0 + 9.8R | 4.9 + 8.6R | 4.8 + 7.6R | 4.8 + 6.9R |
| 16 (0.0598") | 12 | 4 | q | 1760 | 1660 | 1580 | 1530 | 1490 |
| | | | F | 3.4 + 23.4R | 3.3 + 20.0R | 3.2 + 17.5R | 3.1 + 15.6R | 3.0 + 14.0R |
| | 18 | | q | 1450 | 1340 | 1260 | 1200 | 1160 |
| | | | F | 3.8 + 23.4R | 3.7 + 20.0R | 3.6 + 17.5R | 3.6 + 15.6R | 3.5 + 14.0R |
| | 24 | | q | 1290 | 1180 | 1100 | 1040 | 990 |
| | | | F | 4.1 + 23.4R | 4.0 + 20.0R | 4.0 + 17.5R | 3.9 + 15.6R | 3.8 + 14.0R |
| | 12 | 7 | q | 2230 | 2070 | 1970 | 1890 | 1820 |
| | | | F | 3.2 + 5.8R | 3.1 + 5.0R | 3.1 + 4.4R | 3.0 + 3.9R | 3.0 + 3.5R |
| | 18 | | q | 1890 | 1730 | 1620 | 1530 | 1460 |
| | | | F | 3.5 + 5.8R | 3.5 + 5.0R | 3.4 + 4.4R | 3.4 + 3.9R | 3.4 + 3.5R |
| | 24 | | q | 1730 | 1560 | 1440 | 1350 | 1280 |
| | | | F | 3.7 + 5.8R | 3.7 + 5.0R | 3.7 + 4.4R | 3.7 + 3.9R | 3.6 + 3.5R |

SEE BDW NOTES- Page 4

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# NDW Vertical Load Table

| DECK | | | DECK SPAN (FT) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7' -0" | 7' - 6" | 8' - 0" | 8' - 6" | 9' - 0" | 9' - 6" | 10' - 0" | 10' - 6" | 11' - 0" | 12' -0" | 13' - 0" | 13'-6" |
| SIMPLE SPAN | 22 (0.0299") | S | 114 | 106 | 100 | 91 | 81 | 73 | 66 | 60 | 55 | 46 | 39 | 36 |
| | | Δ | 162 | 132 | 108 | 90 | 76 | 65 | 56 | 48 | 42 | 32 | 25 | 23 |
| | 20 (0.0359") | S | 158 | 148 | 132 | 117 | 104 | 94 | 84 | 77 | 7\0 | 59 | 50 | 47 |
| | | Δ | 205 | 167 | 138 | 115 | 97 | 82 | 70 | 61 | 53 | 41 | 32 | 29 |
| | 18 (0.0478") | S | 259 | 226 | 198 | 176 | 157 | 141 | 127 | 115 | 105 | 88 | 75 | 70 |
| | | Δ | 299 | 243 | 200 | 167 | 141 | 120 | 102 | 89 | 77 | 59 | 47 | 42 |
| | 16 (0.0598") | S | 344 | 300 | 264 | 234 | 208 | 187 | 169 | 153 | 140 | 117 | 100 | 93 |
| | | Δ | 404 | 328 | 271 | 226 | 190 | 162 | 139 | 120 | 104 | 80 | 63 | 56 |
| TWO SPAN | 22 (0.0299") | S | 129 | 121 | 113 | 106 | 100 | 90 | 81 | 74 | 68 | 57 | 49 | 45 |
| | | Δ | 390 | 317 | 261 | 218 | 183 | 156 | 134 | 116 | 101 | 77 | 61 | 54 |
| | 20 (0.0359") | S | 192 | 179 | 158 | 141 | 125 | 113 | 102 | 93 | 84 | 71 | 61 | 56 |
| | | Δ | 494 | 402 | 331 | 276 | 233 | 198 | 170 | 147 | 128 | 98 | 77 | 69 |
| | 18 (0.0478") | S | 291 | 254 | 223 | 198 | 176 | 159 | 144 | 130 | 119 | 100 | 86 | 79 |
| | | Δ | 721 | 586 | 483 | 402 | 339 | 288 | 274 | 213 | 186 | 143 | 113 | 101 |
| | 16 (0.0598") | S | 370 | 323 | 285 | 252 | 225 | 203 | 183 | 166 | 152 | 127 | 109 | 101 |
| | | Δ | 973 | 791 | 652 | 543 | 458 | 389 | 334 | 288 | 251 | 193 | 152 | 136 |
| THREE OR MORE SPANS | 22 (0.0299") | S | 142 | 133 | 124 | 117 | 110 | 105 | 100 | 92 | 84 | 71 | 65 | 56 |
| | | Δ | 306 | 249 | 205 | 171 | 144 | 123 | 105 | 91 | 79 | 61 | 54 | 43 |
| | 20 (0.0359") | S | 198 | 184 | 173 | 163 | 154 | 140 | 127 | 115 | 105 | 89 | 76 | 70 |
| | | Δ | 388 | 315 | 260 | 217 | 183 | 155 | 133 | 115 | 100 | 88 | 60 | 54 |
| | 18 (0.0478") | S | 360 | 315 | 278 | 246 | 220 | 198 | 179 | 163 | 148 | 125 | 106 | 99 |
| | | Δ | 566 | 460 | 379 | 316 | 266 | 226 | 194 | 168 | 146 | 112 | 99 | 79 |
| | 16 (0.0598") | S | 458 | 401 | 353 | 313 | 280 | 252 | 228 | 207 | 189 | 159 | 136 | 126 |
| | | Δ | 765 | 622 | 512 | 427 | 360 | 306 | 262 | 227 | 198 | 152 | 119 | 107 |

S (STRESS), Δ DEFLECTION

HOW TO USE TABLE:

1. DETERMINE THE TOTAL LOAD AND THE LIVE LOAD FOR THE ROOF DECK
2. USING THE TOTAL LOAD, SELECT THE GAUGE AND THE SPAN WITH EQUAL OR GREATER VALUES FOR S (STESS)
3. USING THE LIVE LOAD, SELECT THE GAUGE AND THE SPAN WITH EQUAL OR GREATER VALUE FOR Δ (DEFLECTION) OF L/180.
4. SELECT THE GAUGE AND THE SPAN FOR THE ROOF DECK THAT MEETS BOTH STEPS 2 & 3.

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# NDW Shear Table – Button Punch

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft  FLEXIBILITY FACTOR (f) IN INCHES PER POUND x $10^{-6}$

| DECK GAUGE | SEAM ATTACHMENT SPACING (INCHES) **BUTTON PUNCH** | NO. PUDDLE WELDS/UNIT | FACTOR | DECK SPAN (FEET) | | | |
|---|---|---|---|---|---|---|---|
| | | | | 8 | 10 | 12 | 14 |
| 22 (0.0299") | 12 | 2 | q | 170 | 160 | 150 | 140 |
| | | | F | 30.1 + 1112R | 32.7 + 889R | 34.8 + 741R | 36.5 +635R |
| | 18 | | q | 130 | 120 | 110 | 110 |
| | | | F | 37.2 + 1112R | 41.4 + 889R | 44.8 + 741R | 47.7 + 635R |
| | 24 | | q | 120 | 100 | 100 | 90 |
| | | | F | 42.4 + 1112R | 48.0 + 889R | 32.6 + 741R | 56.7 + 635R |
| | 12 | 4 | q | 240 | 220 | 200 | 190 |
| | | | F | 21.3 + 123R | 24.4 + 98.8R | 27.1 + 82.3R | 29.5 + 70.5R |
| | 18 | | q | 210 | 180 | 160 | 150 |
| | | | F | 24.4 + 123R | 28.5 + 98.8R | 32.4 + 82.3R | 35.9 + 70.5R |
| | 24 | | q | 190 | 160 | 150 | 130 |
| | | | F | 26.3 + 123R | 31.3 + 98.8R | 38.0 + 82.3R | 40.5 + 70.5R |
| 20 (0.0359") | 12 | 2 | q | 230 | 210 | 200 | 190 |
| | | | F | 25.8 + 643R | 28.6 + 514R | 30.5 + 428R | 32.7 + 367R |
| | 18 | | q | 190 | 170 | 160 | 150 |
| | | | F | 30.7 + 643R | 34.8 + 514R | 37.6 + 428R | 40.7 + 367R |
| | 24 | | q | 170 | 150 | 130 | 120 |
| | | | F | 39.1 + 643R | 45.8 + 514R | 45.8 + 428R | 50.4 + 367R |
| | 12 | 4 | q | 340 | 300 | 280 | 260 |
| | | | F | 17.6 + 71.6R | 20.4 + 57.2R | 22.7 + 47.6R | 25.2 + 40.8R |
| | 18 | | q | 300 | 260 | 230 | 220 |
| | | | F | 19.6 + 71.6R | 23.3 + 57.2R | 27.1 + 47.6R | 29.4 + 40.8R |
| | 24 | | q | 280 | 240 | 210 | 190 |
| | | | F | 20.8 + 71.6R | 25.0 + 57.2R | 29.5 + 47.6R | 33.6 + 40.8R |
| 18 (0.0478") | 12 | 2 | q | 370 | 330 | 310 | 290 |
| | | | F | 19.1 + 271R | 21.8 + 217R | 23.7 + 181R | 25.8 + 155R |
| | 18 | | q | 320 | 280 | 250 | 230 |
| | | | F | 21.8 + 271R | 25.3 + 217R | 28.7 + 181R | 32.1 + 155R |
| | 24 | | q | 290 | 250 | 230 | 210 |
| | | | F | 23.9 + 271R | 28.2 + 217R | 31.3 + 181R | 35.1 + 155R |
| | 12 | 4 | q | 580 | 490 | 440 | 400 |
| | | | F | 12.0 + 30.1R | 14.6 + 24.1R | 16.9 + 20.1R | 19.4 + 17.2R |
| | 18 | | q | 530 | 440 | 390 | 350 |
| | | | F | 15.0 + 30.1R | 16.1 + 24.1R | 18.9 + 20.1R | 21.9 + 17.2R |
| | 24 | | q | 500 | 420 | 380 | 320 |
| | | | F | 13.6 + 30.1R | 16.8 + 24.1R | 20.3 + 20.1R | 23.8 + 17.2R |
| 16 (0.0598") | 12 | 2 | q | 520 | 460 | 410 | 390 |
| | | | F | 14.2 + 139R | 16.4 + 111R | 18.8 + 92.5R | 20.3 + 79.4R |
| | 18 | | q | 460 | 400 | 360 | 330 |
| | | | F | 15.9 + 139R | 18.7 + 111R | 21.2 + 92.5R | 23.8 + 79.4R |
| | 24 | | q | 430 | 360 | 320 | 290 |
| | | | F | 16.9 + 139R | 20.6 + 111R | 23.7 + 92.5R | 26.8 + 79.4R |
| | 12 | 4 | q | 800 | 680 | 600 | 550 |
| | | | F | 8.9 + 15.4R | 10.8 + 12.3R | 12.3 + 10.3R | 14.7 + 8.8R |
| | 18 | | q | 740 | 620 | 540 | 490 |
| | | | F | 9.5 + 15.4R | 11.7 + 12.3R | 14.1 + 10.3R | 16.3 + 8.8R |
| | 24 | | q | 720 | 590 | 510 | 460 |
| | | | F | 9.7 + 15.4R | 12.3 + 12.3R | 14.8 + 10.3R | 17.3 + 8.8R |

SEE NDW SIDE SEAM NOTES- Page 16

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# NDW Shear Table – Top Seam Weld

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft  FLEXIBILITY FACTOR (f) IN INCHES PER POUND x $10^{-6}$

| DECK GAUGE | SEAM ATTACHMENT SPACING (INCHES) **TOP SEAM WELDS** | NO. PUDDLE WELDS/UNIT | FACTOR | DECK SPAN (FEET) | | | |
|---|---|---|---|---|---|---|---|
| | | | | 8 | 10 | 12 | 14 |
| 22 (0.0299") | 12 | 2 | q | 260 | 250 | 250 | 240 |
| | | | F | 11.6 + 1112R | 10.1 + 889R | 9.1 + 741R | 8.4 + 635R |
| | 18 | | q | 190 | 180 | 170 | 160 |
| | | | F | 15.0 + 1112R | 13.2 + 889R | 11.8 + 741R | 10.8 + 635R |
| | 24 | | q | 150 | 140 | 140 | 130 |
| | | | F | 18.0 + 1112R | 15.8 + 889R | 14.2 + 741R | 13.0 + 635R |
| | 12 | 4 | q | 310 | 290 | 280 | 270 |
| | | | F | 10.1 + 123R | 9.1 + 98.8R | 8.4 + 82.3R | 7.9 + 70.5R |
| | 18 | | q | 240 | 220 | 210 | 200 |
| | | | F | 11.7 + 123R | 11.2 + 98.8R | 10.4 + 82.3R | 9.8 + 70.5R |
| | 24 | | q | 200 | 180 | 170 | 160 |
| | | | F | 14.0 + 123R | 12.9 + 98.8R | 12.1 + 82.3R | 11.4 + 70.5R |
| 20 (0.0359") | 12 | 2 | q | 390 | 380 | 370 | 360 |
| | | | F | 9.9 + 643R | 8.7 + 514R | 7.9 + 429R | 7.2 + 367R |
| | 18 | | q | 290 | 270 | 260 | 250 |
| | | | F | 12.7 + 643R | 11.2 + 514R | 10.1 + 429R | 9.3 + 367R |
| | 24 | | q | 240 | 220 | 210 | 200 |
| | | | F | 15.0 + 643R | 13.3 + 514R | 12.1 + 429R | 11.1 + 367R |
| | 12 | 4 | q | 480 | 450 | 420 | 400 |
| | | | F | 8.4 + 71.4R | 7.7 + 57.2R | 7.2 + 47.6R | 6.8 + 40.8R |
| | 18 | | q | 380 | 340 | 320 | 300 |
| | | | F | 10.1 + 71.4R | 9.4 + 57.2R | 8.8 + 47.6R | 8.6 + 40.8R |
| | 24 | | q | 330 | 290 | 260 | 250 |
| | | | F | 11.3 + 71.4R | 10.6 + 57.2R | 10.1 + 47.6R | 9.6 + 40.8R |
| 18 (0.0478") | 12 | 2 | q | 840 | 800 | 780 | 770 |
| | | | F | 7.4 + 271R | 6.7 + 217R | 6.1 + 181R | 5.6 + 155R |
| | 18 | | q | 630 | 590 | 570 | 570 |
| | | | F | 9.3 + 271R | 8.5 + 217R | 7.7 + 181R | 7.0 + 155R |
| | 24 | | q | 530 | 490 | 460 | 450 |
| | | | F | 10.7 + 271R | 9.8 + 217R | 9.1 + 181R | 8.4 + 155R |
| | 12 | 4 | q | 1020 | 960 | 920 | 890 |
| | | | F | 6.1 + 30.1R | 5.7 + 24.1R | 5.3 + 20.1R | 5.1 + 17.2R |
| | 18 | | q | 770 | 680 | 620 | 580 |
| | | | F | 7.5 + 30.1R | 7.3 + 24.1R | 7.1 + 20.1R | 6.9 + 17.2R |
| | 24 | | q | 720 | 650 | 600 | 570 |
| | | | F | 7.9 + 30.1R | 7.5 + 54.1R | 7.3 + 20.1R | 7.1 + 17.2R |
| 16 (0.0598") | 12 | 2 | q | 1130 | 1080 | 1050 | 1050 |
| | | | F | 3.8 + 139R | 5.2 + 111R | 4.8 + 92.5R | 4.4 + 79.4R |
| | 18 | | q | 870 | 810 | 770 | 770 |
| | | | F | 7.2 + 139R | 6.5 + 111R | 6.0 + 92.5R | 5.5 + 79.4R |
| | 24 | | q | 740 | 680 | 640 | 620 |
| | | | F | 8.2 + 139R | 7.5 + 111R | 7.0 + 92.5R | 6.5 + 79.4R |
| | 12 | 4 | q | 1380 | 1280 | 1220 | 1190 |
| | | | F | 4.6 + 15.4R | 4.4 + 12.3R | 4.2 + 10.3R | 4.0 + 8.8R |
| | 18 | | q | 1090 | 980 | 920 | 880 |
| | | | F | 5.5 + 15.4R | 5.3 + 12.3R | 5.1 + 10.3R | 4.9 + 8.8R |
| | 24 | | q | 1000 | 890 | 820 | 770 |
| | | | F | 5.9 + 15.4R | 5.7 + 12.3R | 5.6 + 10.3R | 3.4 + 8.8R |

SEE NDW SIDE SEAM NOTES- Page 16

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# NDW Shear Table – Side Seam Weld

ALLOWABLE DIAPHRAGM SHEARS (q), lbs/ft  FLEXIBILITY FACTOR (f) IN INCHES PER POUND x $10^{-6}$

| DECK | SEAM ATTACHMENT SPACING (INCHES) **SIDE SEAM WELD** | NO. PUDDLE WELDS/UNIT | FACTOR | DECK SPAN (FEET) | | | |
|---|---|---|---|---|---|---|---|
| | | | | 8 | 10 | 12 | 14 |
| 20 (0.0359") | 12 | 2 | q | 600 | 590 | 580 | 570 |
| | | | F | 7.27 + 643R | 6.43 +515R | 5.83 + 429R | 5.42 + 367R |
| | 18 | | q | 430 | 410 | 400 | 390 |
| | | | F | 9.3 + 643R | 8.19 + 515R | 7.4 + 429R | 6.79 + 367R |
| | 24 | | q | 340 | 320 | 310 | 300 |
| | | | F | 11.1 + 643R | 9.76 + 515R | 8.81 + 429R | 8.07 + 376R |
| | 12 | 4 | q | 690 | 650 | 630 | 610 |
| | | | F | 6.54 + 71.5R | 5.97 + 57.2R | 5.56 + 47.6R | 5.23 + 40.8R |
| | 18 | | q | 520 | 480 | 460 | 440 |
| | | | F | 7.96 + 71.5R | 7.30 + 57.2R | 6.81 + 47.6R | 6.39 + 40.8R |
| | 24 | | q | 430 | 390 | 370 | 350 |
| | | | F | 9.10 + 71.5R | 8.41 + 57.2R | 7.36 + 47.6R | 7.41 + 40.8R |
| 18 (0.0478") | 12 | 2 | q | 1130 | 1090 | 1060 | 1040 |
| | | | F | 5.58 + 271R | 4.97 + 217R | 4.55 + 181R | 4.23 + 155R |
| | 18 | | q | 820 | 780 | 750 | 730 |
| | | | F | 7.05 + 271R | 6.27 + 217R | 5.71 + 181R | 5.29 + 155R |
| | 24 | | q | 660 | 620 | 590 | 570 |
| | | | F | 8.29 + 271R | 7.40 + 271R | 6.76 + 181R | 6.25 + 155R |
| | 12 | 4 | q | 1330 | 1240 | 1190 | 1140 |
| | | | F | 4.89 + 30.1R | 4.51 + 24.1R | 4.24 + 20.1R | 4.02 + 17.2R |
| | 18 | | q | 1020 | 930 | 870 | 830 |
| | | | F | 5.84 + 30.1R | 5.43 + 24.1R | 5.13 + 20.1R | 4.88 + 17.2R |
| | 24 | | q | 870 | 780 | 720 | 680 |
| | | | F | 6.58 + 30.1R | 6.17 + 24.1R | 5.86 + 20.1R | 5.60 + 17.2R |
| 16 (0.0598") | 12 | 2 | q | 1650 | 1610 | 1590 | 1580 |
| | | | F | 4.2 + 139R | 3.95 + 111R | 3.64 + 92.5R | 3.4 + 79.4R |
| | 18 | | q | 1220 | 1160 | 1130 | 1120 |
| | | | F | 5.50 + 139R | 4.94 + 111R | 4.54 + 92.5R | 4.23 + 79.4R |
| | 24 | | q | 1000 | 940 | 910 | 880 |
| | | | F | 6.40 + 139R | 5.79 + 111R | 5.33 + 92.5R | 4.96 + 79.4R |
| | 12 | 4 | q | 1880 | 1800 | 1760 | 1740 |
| | | | F | 3.78 + 15.4R | 3.54 + 12.3R | 3.52 + 10.3R | 3.20 + 8.8R |
| | 18 | | q | 1460 | 1370 | 1310 | 1280 |
| | | | F | 4.46 + 15.4R | 4.22 + 12.3R | 4.0 + 10.4R | 3.8 + 8.8R |
| | 24 | | q | 1260 | 1150 | 1090 | 1050 |
| | | | F | 4.97 + 15.4R | 4.74 + 12.3R | 4.54 + 10.4R | 4.38 + 8.8R |

Notes:

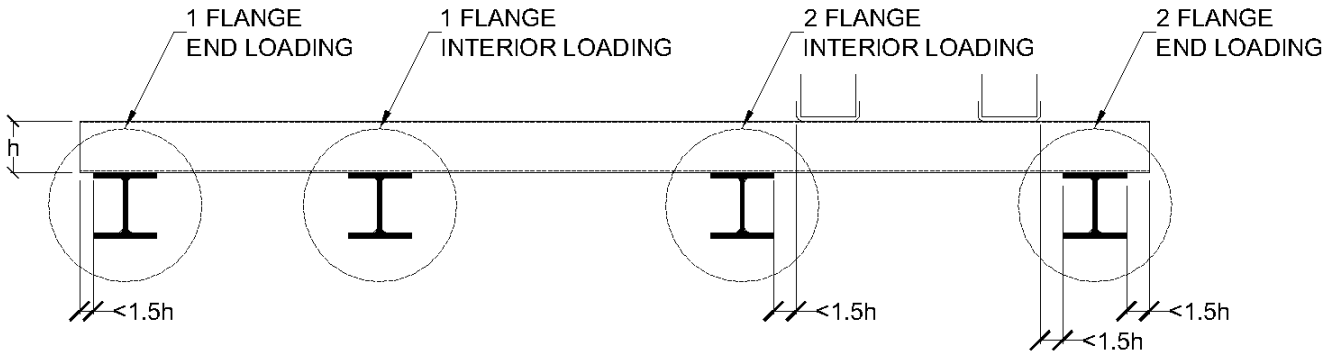
FOR SI 1 INCH=25.4mm, lbf = 4.45N, 1psi = 6.9 kpa, 1ft = 304.8mm

1. SPACING OF BOUNDARY OR PARALLEL SHEAR COLLECTOR ATTACHMENTS SHALL BE BASED ON MAXIMUM ALLOWABLE SHEAR FOR PUDDLE WELDS PER WELDING SCHEDULE.
2. TYPICAL INTERIOR END LAP SHALL BE TWO INCHES (NO LAP WELD IS REQUIRED, ARC SPOT WELD IS REQUIRED)
3. TO CONVERT SHEAR STIFFNESS (G) TO THE FLEXIBILITY FACTOR (F), F = 1000/G
4. THESE SHEAR VALUES MEET THE FACTOR OF SAFETY REQUIREMENTS LISTED IN 2007 AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, TABLE D5. THE FACTOR HAS BEEN UNIFORMLY APPLIED TO VALUES AS 3.00.
5. THE SPACING OF BOUNDARY SPOT WELDS AT PERIMETER SUPPORTS SHALL BE DETERMINED IN ACCORDANCE WITH THE VALUES SET FORTH IN THE WELDING SCHEDULE TABLE

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# Web Crippling Tables




| DECK TYPE | GAUGE | BASE METAL THICKNESS (INCHES) | ALLOWABLE REACTIONS BASED ON WEB CRIPPLING POUNDS PER FOOT OF DECK WIDTH (**1 FLANGE LOADING / END BEARING**) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 1.0 in | 1.5 in | 2.0 in | 2.5 in | 3.0 in | 3.5 in | 4.0 in |
| 3DW | 22 | 0.0299 | 510 | 578 | 635 | 685 | 731 | 773 | 812 |
| | 20 | 0.0359 | 716 | 807 | 884 | 952 | 1014 | 1070 | 1123 |
| | 18 | 0.0478 | 1228 | 1375 | 1499 | 1609 | 1708 | 1799 | 1883 |
| | 16 | 0.0598 | 1873 | 2086 | 2266 | 2424 | 2567 | 2698 | 2820 |
| 2DW | 22 | 0.0299 | 463 | 524 | 576 | 622 | 663 | 701 | 736 |
| | 20 | 0.0359 | 646 | 728 | 798 | 859 | 915 | 966 | 1013 |
| | 18 | 0.0478 | 1101 | 1233 | 1344 | 1442 | 1531 | 1612 | 1688 |
| | 16 | 0.0598 | 1672 | 1862 | 2022 | 2163 | 2290 | 2408 | 2517 |
| BDW | 22 | 0.0299 | 1203 | 1363 | 1498 | 1616 | 1724 | 1822 | 1914 |
| | 20 | 0.0359 | 1673 | 1887 | 2067 | 2226 | 2369 | 2501 | 2624 |
| | 18 | 0.0478 | 2836 | 3176 | 3462 | 3715 | 3943 | 4153 | 4348 |
| | 16 | 0.0598 | 4291 | 4779 | 5190 | 5552 | 5879 | 6180 | 6461 |
| BADW | 22 | 0.0299 | 1203 | 1363 | 1498 | 1616 | 1724 | 1822 | 1914 |
| | 20 | 0.0359 | 1673 | 1887 | 2067 | 2226 | 2369 | 2501 | 2624 |
| | 18 | 0.0478 | 2836 | 3176 | 3462 | 3715 | 3943 | 4153 | 4348 |
| | 16 | 0.0598 | 4291 | 4779 | 5190 | 5552 | 5879 | 6180 | 6461 |
| NDW | 22 | 0.0299 | 840 | 952 | 1046 | 1129 | 1204 | 1273 | 1337 |
| | 20 | 0.0359 | 1180 | 1330 | 1458 | 1570 | 1671 | 1764 | 1851 |
| | 18 | 0.0478 | 2025 | 2268 | 2473 | 2653 | 2816 | 2966 | 3106 |
| | 16 | 0.0598 | 3091 | 3442 | 3738 | 3999 | 4235 | 4452 | 4653 |

TABLES REFLECT NOMINAL STRENGTH, Rn
ASD ALLOWABLE, Rn / Ωw , Ωw = 1.70
LRFD, φ Rn , φ = 0.90

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# Web Crippling Tables

| DECK TYPE | GAUGE | BASE METAL THICKNESS (INCHES) | ALLOWABLE REACTIONS BASED ON WEB CRIPPLING POUNDS PER FOOT OF DECK WIDTH (**1 FLANGE LOADING / INTERIOR BEARING**) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 1.0 in | 1.5 in | 2.0 in | 2.5 in | 3.0 in | 3.5 in | 4.0 in |
| 3DW | 22 | 0.0299 | 853 | 948 | 1028 | 1099 | 1163 | 1222 | 1276 |
| | 20 | 0.0359 | 1215 | 1344 | 1453 | 1549 | 1636 | 1716 | 1790 |
| | 18 | 0.0478 | 2108 | 2315 | 2490 | 2644 | 2783 | 2911 | 3030 |
| | 16 | 0.0598 | 3239 | 3537 | 3789 | 4011 | 4211 | 4396 | 4567 |
| 2DW | 22 | 0.0299 | 743 | 825 | 895 | 956 | 1012 | 1063 | 1111 |
| | 20 | 0.0359 | 1057 | 1169 | 1264 | 1347 | 1423 | 1492 | 1557 |
| | 18 | 0.0478 | 1832 | 2012 | 2164 | 2298 | 2419 | 2530 | 2633 |
| | 16 | 0.0598 | 2813 | 3073 | 3291 | 3484 | 3658 | 3818 | 3967 |
| BDW | 22 | 0.0299 | 1868 | 2076 | 2252 | 2406 | 2546 | 2674 | 2794 |
| | 20 | 0.0359 | 2658 | 2940 | 3178 | 3388 | 3578 | 3752 | 3914 |
| | 18 | 0.0478 | 4604 | 5056 | 5438 | 5774 | 6078 | 6357 | 6617 |
| | 16 | 0.0598 | 7067 | 7718 | 8267 | 8751 | 9188 | 9590 | 9965 |
| BADW | 22 | 0.0299 | 1868 | 2076 | 2252 | 2406 | 2546 | 2674 | 2794 |
| | 20 | 0.0359 | 2658 | 2940 | 3178 | 3388 | 3578 | 3752 | 3914 |
| | 18 | 0.0478 | 4604 | 5056 | 5438 | 5774 | 6078 | 6357 | 6617 |
| | 16 | 0.0598 | 7067 | 7718 | 8267 | 8751 | 9188 | 9590 | 9965 |
| NDW | 22 | 0.0299 | 1411 | 1568 | 1701 | 1817 | 1923 | 2020 | 2110 |
| | 20 | 0.0359 | 2009 | 2223 | 2403 | 2562 | 2705 | 2837 | 2960 |
| | 18 | 0.0478 | 3486 | 3829 | 4118 | 4372 | 4602 | 4814 | 5011 |
| | 16 | 0.0598 | 5357 | 5850 | 6266 | 6633 | 6965 | 7269 | 7553 |

TABLES REFLECT NOMINAL STRENGTH, Rn
ASD ALLOWABLE, Rn / Ωw , Ωw = 1.75
LRFD, φ Rn , φ = 0.85

| DECK TYPE | GAUGE | BASE METAL THICKNESS (INCHES) | ALLOWABLE REACTIONS BASED ON WEB CRIPPLING POUNDS PER FOOT OF DECK WIDTH (**2 FLANGE LOADING / END BEARING**) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 1.0 in | 1.5 in | 2.0 in | 2.5 in | 3.0 in | 3.5 in | 4.0 in |
| 3DW | 22 | 0.0299 | 534 | 588 | 633 | 673 | 709 | 743 | 773 |
| | 20 | 0.0359 | 808 | 885 | 950 | 1007 | 1059 | 1106 | 1151 |
| | 18 | 0.0478 | 1515 | 1648 | 1760 | 1859 | 1948 | 2030 | 2107 |
| | 16 | 0.0598 | 2452 | 2652 | 2821 | 2970 | 3105 | 3229 | 3344 |
| 2DW | 22 | 0.0299 | 506 | 557 | 600 | 638 | 672 | 704 | 733 |
| | 20 | 0.0359 | 756 | 828 | 889 | 943 | 991 | 1036 | 1078 |
| | 18 | 0.0478 | 1398 | 1521 | 1625 | 1716 | 1798 | 1874 | 1944 |
| | 16 | 0.0598 | 2242 | 2426 | 2580 | 2717 | 2840 | 2953 | 3059 |
| BDW | 22 | 0.0299 | 1359 | 1496 | 1611 | 1713 | 1805 | 1889 | 1968 |
| | 20 | 0.0359 | 2014 | 2206 | 2368 | 2511 | 2640 | 2759 | 2870 |
| | 18 | 0.0478 | 3684 | 4008 | 4280 | 4520 | 4737 | 4937 | 5123 |
| | 16 | 0.0598 | 5867 | 6348 | 6752 | 7109 | 7431 | 7728 | 8004 |
| BADW | 22 | 0.0299 | 1359 | 1496 | 1611 | 1713 | 1805 | 1889 | 1968 |
| | 20 | 0.0359 | 2014 | 2206 | 2368 | 2511 | 2640 | 2759 | 2870 |
| | 18 | 0.0478 | 3684 | 4008 | 4280 | 4520 | 4737 | 4937 | 5123 |
| | 16 | 0.0598 | 5867 | 6348 | 6752 | 7109 | 7431 | 7728 | 8004 |
| NDW | 22 | 0.0299 | 877 | 965 | 1039 | 1105 | 1164 | 1219 | 1269 |
| | 20 | 0.0359 | 1327 | 1453 | 1560 | 1654 | 1739 | 1817 | 1890 |
| | 18 | 0.0478 | 2492 | 2711 | 2895 | 3058 | 3205 | 3340 | 3465 |
| | 16 | 0.0598 | 4036 | 4366 | 4645 | 4890 | 5112 | 5315 | 5505 |

TABLES REFLECT NOMINAL STRENGTH, Rn
ASD ALLOWABLE, Rn / Ωw , Ωw = 1.80
LRFD, φ Rn , φ = 0.85

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# Web Crippling Tables

| DECK TYPE | GAUGE | BASE METAL THICKNESS (INCHES) | ALLOWABLE REACTIONS BASED ON WEB CRIPPLING POUNDS PER FOOT OF DECK WIDTH (**2 FLANGE LOADING / INTERIOR BEARING**) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 1.0 in | 1.5 in | 2.0 in | 2.5 in | 3.0 in | 3.5 in | 4.0 in |
| 3DW | 22 | 0.0299 | 974 | 1094 | 1195 | 1284 | 1365 | 1439 | 1508 |
| | 20 | 0.0359 | 1409 | 1575 | 1715 | 1839 | 1951 | 2054 | 2149 |
| | 18 | 0.0478 | 2492 | 2767 | 2998 | 3202 | 3386 | 3555 | 3713 |
| | 16 | 0.0598 | 3876 | 4279 | 4618 | 4917 | 5187 | 5436 | 5667 |
| 2DW | 22 | 0.0299 | 873 | 981 | 1072 | 1152 | 1224 | 1291 | 1352 |
| | 20 | 0.0359 | 1259 | 1407 | 1533 | 1643 | 1743 | 1835 | 1920 |
| | 18 | 0.0478 | 2215 | 2459 | 2665 | 2846 | 3010 | 3161 | 3301 |
| | 16 | 0.0598 | 3435 | 3791 | 4092 | 4357 | 4596 | 4816 | 5021 |
| BDW | 22 | 0.0299 | 2251 | 2528 | 2762 | 2968 | 3155 | 3326 | 3486 |
| | 20 | 0.0359 | 3234 | 3616 | 3938 | 4222 | 4478 | 4714 | 4934 |
| | 18 | 0.0478 | 5670 | 6294 | 6821 | 7284 | 7704 | 8089 | 8448 |
| | 16 | 0.0598 | 8767 | 9677 | 10445 | 11121 | 11732 | 12294 | 12818 |
| BADW | 22 | 0.0299 | 2251 | 2528 | 2762 | 2968 | 3155 | 3326 | 3486 |
| | 20 | 0.0359 | 3234 | 3616 | 3938 | 4222 | 4478 | 4714 | 4934 |
| | 18 | 0.0478 | 5670 | 6294 | 6821 | 7284 | 7704 | 8089 | 8448 |
| | 16 | 0.0598 | 8767 | 9677 | 10445 | 11121 | 11732 | 12294 | 12818 |
| NDW | 22 | 0.0299 | 1606 | 1804 | 1971 | 2118 | 2251 | 2374 | 2487 |
| | 20 | 0.0359 | 2324 | 2599 | 2830 | 3034 | 3218 | 3388 | 3546 |
| | 18 | 0.0478 | 4113 | 4566 | 4948 | 5284 | 5588 | 5868 | 6128 |
| | 16 | 0.0598 | 6400 | 7064 | 7625 | 8118 | 8564 | 8975 | 9357 |

TABLES REFLECT NOMINAL STRENGTH, Rn
ASD ALLOWABLE, Rn / Ωw , Ωw = 1.75
LRFD, φ Rn , φ = 0.85

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Light Weight Concrete

| TOTAL SLAB DEPTH & CONCRETE WEIGHT (psf) | GAUGE | MAX UNSHORED SPAN (FEET - INCHES) | | | (l) Total Allowable Superimposed Load (psf)<br>($q_4$) DIAPHRAGM SHEAR VALUES (plf) - 4 ENDS WELDS/SHEET<br>($q_7$) DIAPHRAGM SHEAR VALUES (plf) - 7 ENDS WELDS/SHEET | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE | DOUBLE | THREE OR MORE | SPAN (FEET) | 6'-0" | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" |
| 3 1/2" (23.2 psf) | 22 (0.0299") | 6-6 | 8-6 | 8-3 | l | 310 | 262 | 223 | 192 | 166 | 145 | 127 | 112 | 100 | 89 | 79 |
| | | | | | q4 | 1338 | 1316 | 1299 | 1282 | 1270 | 1256 | 1248 | 1236 | 1230 | 1221 | 1214 |
| | | | | | q7 | 1451 | 1418 | 1396 | 1372 | 1355 | 1335 | 1322 | 1308 | 1296 | 1284 | 1275 |
| | 20 (0.0359") | 8-0 | 9-6 | 8-9 | l | 357 | 301 | 257 | 221 | 192 | 168 | 148 | 131 | 116 | 104 | 93 |
| | | | | | q4 | 1404 | 1375 | 1357 | 1336 | 1322 | 1305 | 1296 | 1282 | 1274 | 1262 | 1256 |
| | | | | | q7 | 1538 | 1499 | 1472 | 1443 | 1424 | 1400 | 1385 | 1366 | 1355 | 1339 | 1329 |
| | 18 (0.0478") | 10-0 | 10-6 | 10-0 | l | 338 | 285 | 243 | 209 | 182 | 159 | 139 | 123 | 109 | 97 | 87 |
| | | | | | q4 | 1541 | 1502 | 1478 | 1450 | 1433 | 1409 | 1396 | 1378 | 1368 | 1352 | 1344 |
| | | | | | q7 | 1715 | 1663 | 1629 | 1589 | 1564 | 1533 | 1513 | 1489 | 1473 | 1452 | 1440 |
| | 16 (0.0598") | 11-3 | 11-6 | 10-9 | l | 323 | 273 | 232 | 200 | 173 | 151 | 132 | 117 | 103 | 92 | 82 |
| | | | | | q4 | 1684 | 1634 | 1608 | 1570 | 1551 | 1521 | 1507 | 1482 | 1472 | 1451 | 1442 |
| | | | | | q7 | 1899 | 1833 | 1793 | 1742 | 1712 | 1673 | 1650 | 1617 | 1600 | 1573 | 1560 |
| 4" (27.8 psf) | 22 (0.0299") | 6-3 | 8-3 | 7-6 | l | 397 | 335 | 286 | 246 | 213 | 186 | 164 | 145 | 128 | 114 | 102 |
| | | | | | q4 | 1598 | 1574 | 1559 | 1541 | 1529 | 1516 | 1507 | 1495 | 1489 | 1479 | 1474 |
| | | | | | q7 | 1710 | 1678 | 1655 | 1632 | 1613 | 1595 | 1582 | 1867 | 1556 | 1543 | 1535 |
| | 20 (0.0359") | 7-6 | 9-0 | 8-6 | l | 400 | 385 | 329 | 284 | 247 | 216 | 190 | 168 | 150 | 134 | 120 |
| | | | | | q4 | 1664 | 1635 | 1617 | 1595 | 1582 | 1565 | 1555 | 1541 | 1533 | 1522 | 1516 |
| | | | | | q7 | 1797 | 1759 | 1732 | 1703 | 1682 | 1660 | 1645 | 1625 | 1613 | 1598 | 1589 |
| | 18 (0.0478") | 9-3 | 10-3 | 9-6 | l | 400 | 366 | 312 | 269 | 234 | 204 | 180 | 159 | 141 | 126 | 113 |
| | | | | | q4 | 1799 | 1760 | 1738 | 1708 | 1691 | 1668 | 1656 | 1637 | 1628 | 1612 | 1604 |
| | | | | | q7 | 1975 | 1923 | 1888 | 1849 | 1823 | 1791 | 1773 | 1747 | 1733 | 1712 | 1699 |
| | 16 (0.0598") | 10-9 | 11-3 | 10-3 | l | 400 | 350 | 299 | 257 | 223 | 195 | 171 | 151 | 134 | 120 | 107 |
| | | | | | q4 | 1944 | 1894 | 1867 | 1829 | 1810 | 1780 | 1765 | 1741 | 1730 | 1710 | 1702 |
| | | | | | q7 | 2158 | 2092 | 2051 | 2002 | 1972 | 1932 | 1910 | 1877 | 1859 | 1833 | 1819 |
| 4 3/4" (34.7 psf) | 22 (0.0299") | 5-9 | 7-9 | 7-3 | l | 400 | 400 | 385 | 332 | 289 | 252 | 222 | 197 | 175 | 156 | 140 |
| | | | | | q4 | 1986 | 1963 | 1947 | 1931 | 1919 | 1905 | 1895 | 1885 | 1877 | 1868 | 1863 |
| | | | | | q7 | 2098 | 2067 | 2044 | 220 | 2002 | 1984 | 1971 | 1955 | 1945 | 1932 | 1924 |
| | 20 (0.0359") | 7-0 | 8-6 | 8-0 | l | 400 | 400 | 400 | 384 | 334 | 293 | 258 | 229 | 204 | 182 | 164 |
| | | | | | q4 | 2053 | 2024 | 2006 | 1984 | 1971 | 1954 | 1944 | 1931 | 1921 | 1911 | 1905 |
| | | | | | q7 | 2185 | 2148 | 2120 | 2092 | 2071 | 2049 | 2033 | 2015 | 2002 | 1986 | 1977 |
| | 18 (0.0478") | 8-6 | 9-6 | 9-0 | l | 400 | 400 | 400 | 366 | 318 | 279 | 246 | 218 | 194 | 173 | 155 |
| | | | | | q4 | 2188 | 2149 | 2127 | 2097 | 2080 | 2058 | 2045 | 2025 | 2016 | 2001 | 1993 |
| | | | | | q7 | 2363 | 2311 | 2276 | 2237 | 2211 | 2181 | 2162 | 2136 | 2122 | 2101 | 2088 |
| | 16 (0.0598") | 9-9 | 10-3 | 9-6 | l | 400 | 400 | 400 | 351 | 305 | 267 | 235 | 208 | 185 | 165 | 148 |
| | | | | | q4 | 2332 | 2283 | 2256 | 2218 | 2200 | 2168 | 2154 | 2129 | 2119 | 2098 | 2090 |
| | | | | | q7 | 2548 | 2482 | 2440 | 2391 | 2361 | 2321 | 2298 | 2266 | 2248 | 2222 | 2207 |
| 5 3/4" (43.9 psf) | 22 (0.0299") | 5-6 | 7-3 | 6-6 | l | 400 | 400 | 400 | 400 | 394 | 345 | 304 | 269 | 240 | 214 | 192 |
| | | | | | q4 | 2505 | 2482 | 2466 | 2448 | 2436 | 2423 | 2414 | 2402 | 2396 | 2387 | 2380 |
| | | | | | q7 | 2617 | 2586 | 2562 | 2539 | 2521 | 2503 | 2488 | 2474 | 2564 | 2451 | 2443 |
| | 20 (0.0359") | 6-6 | 7-9 | 7-3 | l | 400 | 400 | 400 | 400 | 400 | 400 | 354 | 314 | 280 | 251 | 226 |
| | | | | | q4 | 2570 | 2543 | 2525 | 2503 | 2490 | 2473 | 2462 | 2448 | 2440 | 2430 | 2423 |
| | | | | | q7 | 2704 | 2666 | 2639 | 2609 | 2590 | 2566 | 2551 | 2532 | 2521 | 2505 | 2496 |
| | 18 (0.0478") | 7-9 | 8-9 | 8-3 | l | 400 | 400 | 400 | 400 | 400 | 385 | 339 | 301 | 268 | 240 | 216 |
| | | | | | q4 | 2707 | 2668 | 2646 | 2616 | 2599 | 2575 | 2564 | 2544 | 2535 | 2519 | 2512 |
| | | | | | q7 | 2882 | 2830 | 2795 | 2756 | 2730 | 2699 | 2681 | 2655 | 2639 | 2620 | 2601 |
| | 16 (0.0598") | 9-3 | 9-9 | 8-9 | l | 400 | 400 | 400 | 400 | 400 | 370 | 327 | 289 | 258 | 230 | 207 |
| | | | | | q4 | 2851 | 2802 | 2774 | 2737 | 2717 | 2687 | 2673 | 2648 | 2638 | 2617 | 2609 |
| | | | | | q7 | 3065 | 2999 | 2959 | 2908 | 2880 | 2839 | 2817 | 2785 | 2766 | 2740 | 2726 |

SEE BDW NORMAL WEIGHT TABLE NOTES- Page 22

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW Normal Weight Concrete

| TOTAL SLAB DEPTH & CONCRETE WEIGHT (psf) | GAUGE | MAX UNSHORED SPAN (FEET - INCHES) | | | (I) Total Allowable Superimposed Load (psf)<br>($q_4$) DIAPHRAGM SHEAR VALUES (plf) - 4 ENDS WELDS/SHEET<br>($q_7$) DIAPHRAGM SHEAR VALUES (plf) - 7 ENDS WELDS/SHEET | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE | DOUBLE | THREE OR MORE | SPAN (FEET) | 6'-0" | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" |
| 3 1/2" (30.5 psf) | 22 (0.0299") | 6-0 | 8-0 | 7-6 | I | 325 | 273 | 232 | 199 | 172 | 150 | 131 | 115 | 101 | 90 | 80 |
| | | | | | q4 | 1871 | 1847 | 1832 | 1815 | 1803 | 1789 | 1780 | 1769 | 1762 | 1752 | 1747 |
| | | | | | q7 | 2028 | 1996 | 1972 | 1948 | 1930 | 1911 | 1898 | 1882 | 1871 | 1858 | 1850 |
| | 20 (0.0359") | 7-3 | 8-8 | 8-0 | I | 376 | 317 | 270 | 232 | 201 | 175 | 153 | 135 | 120 | 106 | 94 |
| | | | | | q4 | 1937 | 1908 | 1890 | 1868 | 1855 | 1838 | 1828 | 1815 | 1806 | 1795 | 1789 |
| | | | | | q7 | 2117 | 2079 | 2050 | 2022 | 2000 | 1978 | 1962 | 1943 | 1930 | 1914 | 1905 |
| | 18 (0.0478") | 9-0 | 10-0 | 9-0 | I | 359 | 302 | 257 | 221 | 191 | 166 | 145 | 128 | 113 | 100 | 89 |
| | | | | | q4 | 2072 | 2033 | 2011 | 1981 | 1964 | 1942 | 1929 | 1910 | 1901 | 1885 | 1877 |
| | | | | | q7 | 2300 | 2246 | 2210 | 2171 | 2144 | 2113 | 2093 | 2067 | 2052 | 2031 | 2018 |
| | 16 (0.0598") | 10-3 | 10-8 | 10-0 | I | 345 | 290 | 247 | 212 | 183 | 159 | 139 | 122 | 108 | 95 | 85 |
| | | | | | q4 | 2217 | 2167 | 2140 | 2102 | 2084 | 2053 | 2038 | 2014 | 2003 | 1983 | 1975 |
| | | | | | q7 | 2488 | 2421 | 2378 | 2328 | 2297 | 2256 | 2230 | 2200 | 2181 | 2155 | 2140 |
| 4" (36.6 psf) | 22 (0.0299") | 5-8 | 7-6 | 7-3 | I | 400 | 348 | 296 | 254 | 220 | 191 | 168 | 147 | 130 | 115 | 103 |
| | | | | | q4 | 2263 | 2240 | 2224 | 2206 | 2194 | 2181 | 2172 | 2161 | 2154 | 2145 | 2139 |
| | | | | | q7 | 2430 | 2398 | 2374 | 2349 | 2331 | 2313 | 2298 | 2284 | 2273 | 2260 | 2252 |
| | 20 (0.0359") | 6-8 | 8-3 | 7-9 | I | 400 | 400 | 344 | 296 | 256 | 224 | 196 | 173 | 154 | 137 | 122 |
| | | | | | q4 | 2328 | 2301 | 2283 | 2261 | 2248 | 2231 | 2220 | 2206 | 2198 | 2187 | 2180 |
| | | | | | q7 | 2519 | 2480 | 2453 | 2422 | 2402 | 2378 | 2362 | 2343 | 2331 | 2316 | 2306 |
| | 18 (0.0478") | 8-6 | 9-6 | 8-9 | I | 400 | 386 | 329 | 282 | 245 | 213 | 187 | 165 | 146 | 129 | 115 |
| | | | | | q4 | 2465 | 2426 | 2404 | 2374 | 2357 | 2334 | 2322 | 2302 | 2293 | 2278 | 2270 |
| | | | | | q7 | 2701 | 2647 | 2612 | 2572 | 2546 | 2514 | 2494 | 2468 | 2453 | 2431 | 2419 |
| | 16 (0.0598") | 9-9 | 10-3 | 9-6 | I | 400 | 371 | 316 | 271 | 235 | 204 | 179 | 158 | 139 | 124 | 110 |
| | | | | | q4 | 2609 | 2560 | 2532 | 2495 | 2475 | 2445 | 2431 | 2406 | 2396 | 2375 | 2367 |
| | | | | | q7 | 2889 | 2821 | 2780 | 2728 | 2699 | 2657 | 2635 | 2601 | 2583 | 2556 | 2542 |
| 4 1/2" (42.7 psf) | 22 (0.0299") | 5-6 | 7-6 | 7-0 | I | 400 | 400 | 363 | 312 | 270 | 235 | 206 | 182 | 161 | 143 | 127 |
| | | | | | q4 | 2656 | 2633 | 2617 | 2599 | 2587 | 2574 | 2565 | 2553 | 2547 | 2538 | 2531 |
| | | | | | q7 | 2832 | 2800 | 2776 | 2750 | 2733 | 2715 | 2700 | 2685 | 2675 | 2661 | 2652 |
| | 20 (0.0359") | 6-6 | 8-0 | 7-3 | I | 400 | 400 | 400 | 363 | 315 | 275 | 242 | 213 | 189 | 169 | 151 |
| | | | | | q4 | 2721 | 2694 | 2674 | 2653 | 2640 | 2623 | 2613 | 2599 | 2591 | 2579 | 2573 |
| | | | | | q7 | 2921 | 2881 | 2854 | 2824 | 2804 | 2780 | 2764 | 2745 | 2733 | 2717 | 2707 |
| | 18 (0.0478") | 8-0 | 9-0 | 8-3 | I | 400 | 400 | 400 | 348 | 301 | 263 | 231 | 204 | 181 | 161 | 143 |
| | | | | | q4 | 2857 | 2818 | 2794 | 2766 | 2750 | 2726 | 2714 | 2695 | 2685 | 2669 | 2661 |
| | | | | | q7 | 3102 | 3048 | 3014 | 2974 | 2947 | 2915 | 2895 | 2870 | 2854 | 2833 | 2821 |
| | 16 (0.0598") | 9-3 | 10-0 | 9-0 | I | 400 | 400 | 390 | 335 | 290 | 253 | 222 | 196 | 173 | 154 | 137 |
| | | | | | q4 | 3002 | 2951 | 2925 | 2887 | 2868 | 2838 | 2824 | 2799 | 2789 | 2768 | 2759 |
| | | | | | q7 | 3290 | 3223 | 3182 | 3129 | 3099 | 3059 | 3035 | 3003 | 2985 | 2957 | 2943 |

SEE BDW NORMAL WEIGHT TABLE NOTES- Page 22

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# BDW Normal Weight Concrete – Continued

| TOTAL SLAB DEPTH & CONCRETE WEIGHT (psf) | GAUGE | MAX UNSHORED SPAN (FEET - INCHES) | | | (I) Total Allowable Superimposed Load (psf)<br>($q_4$) DIAPHRAGM SHEAR VALUES (plf) - 4 ENDS WELDS/SHEET<br>($q_7$) DIAPHRAGM SHEAR VALUES (plf) - 7 ENDS WELDS/SHEET | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE | DOUBLE | THREE OR MORE | SPAN (FEET) | 6'-0" | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" |
| 5" (48.7 psf) | 22 (0.0299") | 5-0 | 6-6 | 7-0 | I | 400 | 400 | 400 | 371 | 322 | 280 | 246 | 217 | 192 | 171 | 152 |
| | | | | | q4 | 3047 | 3025 | 3008 | 2991 | 2980 | 2965 | 2956 | 2946 | 2939 | 2929 | 2924 |
| | | | | | q7 | 3160 | 3128 | 3176 | 3152 | 3135 | 3115 | 3102 | 3087 | 3075 | 3063 | 3054 |
| | 20 (0.0359") | 6-0 | 8-0 | 8-0 | I | 400 | 400 | 400 | 400 | 376 | 328 | 289 | 255 | 227 | 202 | 181 |
| | | | | | q4 | 3114 | 3085 | 3067 | 3046 | 3032 | 3015 | 3004 | 2991 | 2984 | 2972 | 2965 |
| | | | | | q7 | 3322 | 3282 | 3255 | 3225 | 3205 | 3181 | 3165 | 3147 | 3133 | 3119 | 3108 |
| | 18 (0.0478") | 7-0 | 9-6 | 9-6 | I | 400 | 400 | 400 | 400 | 361 | 315 | 277 | 244 | 217 | 193 | 172 |
| | | | | | q4 | 3250 | 3211 | 3188 | 3159 | 3142 | 3119 | 3106 | 3088 | 3077 | 3062 | 3054 |
| | | | | | q7 | 3503 | 3450 | 3415 | 3374 | 3349 | 3317 | 3297 | 3272 | 3256 | 3235 | 3223 |
| | 16 (0.0598") | 8-6 | 10-6 | 10-6 | I | 400 | 400 | 400 | 400 | 348 | 304 | 267 | 235 | 208 | 185 | 165 |
| | | | | | q4 | 3393 | 3344 | 3318 | 3280 | 3260 | 3231 | 3216 | 3192 | 3181 | 3160 | 3151 |
| | | | | | q7 | 3692 | 3624 | 3583 | 3531 | 3501 | 3461 | 3437 | 3403 | 3386 | 3358 | 3344 |
| 5 1/2" (54.8 psf) | 22 (0.0299") | 4-6 | 6-6 | 6-6 | I | 400 | 400 | 400 | 400 | 374 | 327 | 287 | 253 | 224 | 199 | 178 |
| | | | | | q4 | 3440 | 3416 | 3401 | 3384 | 3372 | 3358 | 3349 | 3338 | 3331 | 3322 | 3316 |
| | | | | | q7 | 3635 | 3602 | 3578 | 3554 | 3536 | 3517 | 3503 | 3487 | 3477 | 3465 | 3455 |
| | 20 (0.0359") | 5-6 | 7-6 | 8-0 | I | 400 | 400 | 400 | 400 | 400 | 383 | 337 | 298 | 265 | 236 | 211 |
| | | | | | q4 | 3506 | 3478 | 3459 | 3439 | 3424 | 3407 | 3397 | 3384 | 3376 | 3364 | 3358 |
| | | | | | q7 | 3724 | 3684 | 3656 | 3627 | 3606 | 3583 | 3567 | 3548 | 3535 | 3521 | 3510 |
| | 18 (0.0478") | 70 | 9-0 | 9-0 | I | 400 | 400 | 400 | 400 | 400 | 368 | 324 | 286 | 254 | 226 | 202 |
| | | | | | q4 | 3641 | 3604 | 3580 | 3550 | 3535 | 3511 | 3498 | 3480 | 3470 | 3454 | 3446 |
| | | | | | q7 | 3817 | 3765 | 3731 | 3691 | 3666 | 3635 | 3615 | 3591 | 3575 | 3554 | 3541 |
| | 16 (0.0598") | 8-0 | 10-0 | 10-0 | I | 400 | 400 | 400 | 400 | 400 | 356 | 313 | 276 | 245 | 218 | 195 |
| | | | | | q4 | 3786 | 3736 | 3710 | 3671 | 3653 | 3623 | 3609 | 3584 | 3572 | 3552 | 3544 |
| | | | | | q7 | 4001 | 3935 | 3895 | 3844 | 3814 | 3774 | 3752 | 3719 | 3702 | 3675 | 3661 |
| 6" (60.8 psf) | 22 (0.0299") | 4-6 | 6-0 | 6-0 | I | 400 | 400 | 400 | 400 | 400 | 374 | 328 | 290 | 257 | 229 | 204 |
| | | | | | q4 | 3832 | 3809 | 3793 | 3777 | 3765 | 3751 | 3741 | 3731 | 3723 | 3714 | 3709 |
| | | | | | q7 | 3944 | 3913 | 3890 | 3866 | 3848 | 3830 | 3817 | 3801 | 3791 | 3778 | 3770 |
| | 20 (0.0359") | 5-6 | 7-0 | 7-6 | I | 400 | 400 | 400 | 400 | 400 | 400 | 386 | 341 | 303 | 271 | 243 |
| | | | | | q4 | 3899 | 3870 | 3852 | 3830 | 3817 | 3800 | 3790 | 3777 | 3767 | 3757 | 3751 |
| | | | | | q7 | 4031 | 3994 | 3966 | 3938 | 3917 | 3895 | 3879 | 3861 | 3848 | 3832 | 3823 |
| | 18 (0.0478") | 6-6 | 8-6 | 9-0 | I | 400 | 400 | 400 | 400 | 400 | 400 | 372 | 329 | 292 | 261 | 233 |
| | | | | | q4 | 4034 | 3995 | 3973 | 3943 | 3926 | 3904 | 3891 | 3871 | 3862 | 3847 | 3839 |
| | | | | | q7 | 4209 | 4157 | 4122 | 4083 | 4057 | 4027 | 4008 | 3982 | 3968 | 3947 | 3934 |
| | 16 (0.0598") | 7-6 | 9-6 | 10-0 | I | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 318 | 282 | 252 | 225 |
| | | | | | q4 | 4178 | 4129 | 4103 | 4064 | 4046 | 4014 | 4000 | 3975 | 3965 | 3944 | 3936 |
| | | | | | q7 | 4394 | 4328 | 4286 | 4237 | 4207 | 4167 | 4144 | 4112 | 4094 | 4068 | 4053 |

Notes:

1. ALLOWABLE SUPERIMPOSED VERTICAL LOAD (psf) FOR SIMPLY SUPPORTED DECK SECTIONS. THESE LOADS MAY BE USED WITH STEEL FLOOR UNITS ON SIMPLE OR CONTINUOUS SPANS. COMPOSITE SLAB DESIGN TO BE BASED ON SIMPLE SPAN ANALYSIS. THE CONCRETE SHALL BE REINFORCED IN ACCORDANCE APPLICABLE CODE REQUIREMENTS.
2. THE DIAPHRAGM SHEAR VALUES (plf) LISTED IN THE TABLES ARE FOR STEEL DECKS WITH FOUR PUDDLE WELDS PER PANEL JOINT, SUBJECT TO SEISMIC LOADS OR COMBINATIONS FO LOADS WHICH INCLUDE SEISMIC LOADS WHICH ARE WELDED TO SUPPORTING MEMBERS AND WELDED OR MECHANICALLY FASTENED TOGETHER OT FORM A ROOF OR FLOOR DIAPHRAGM. THESE VALUES MEET THE FACTOR OF SAFETY REQUIREMENTS LISTED IN 2007 AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, TABLE D5. THE FACTOR HAS BEEN UNIFORMLY APPLIED TO ALL VALUES AS 3.00.
3. SUFFICIENT SEAM ATTACHMENT FOR COMPOSITE DECK SECTIONS CONSIST OF FASTENING AT A 30” ON CENTER MAXIMUM, BETWEEN SUPPORTS. FASTENING MAY BE #10 SELF PIERCING/TAPPING SCREW BY ¾” LONG, WELDS 1 ½” LONG, OR BUTTON PUNCHES. ATTACHMENTS ARE ILLUSTRATED IN THE WELDING SCHEDULE FIGURE.
4. THE SPACING OF BOUNDARY SPOT WELDS AT PERIMETER SUPPORTS SHALL BE DETERMINED IN ACCORDANCE WITH THE VALUES SET FORTH IN THE WELDING SCHEDULE TABLE.
5. FOR DECK WITH NO TRENCH HEADER AND WITH CONCRETE FILL, THE FLEXIBILITY FACTOR MAY BE TAKEN AS 1.

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# 2DW Light Weight Concrete

| TOTAL SLAB DEPTH & CONCRETE WEIGHT (psf) | GAUGE | MAX UNSHORED SPAN (FEET - INCHES) | | | (l) Total Allowable Superimposed Load (psf)<br>(q) DIAPHRAGM SHEAR VALUES (plf) - 4 ENDS WELDS/SHEET<br>SPAN (FEET) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE | DOUBLE | THREE OR MORE | | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" | 11'-6" | 12'-0" | 12'-6" | 13'-0" |
| 4" (27.5 psf) | 22 (0.0299") | 8-0 | 10-3 | 10-0 | l | 264 | 227 | 192 | 172 | 151 | 133 | 118 | 105 | 94 | 84 | 75 | 68 | 61 |
| | | | | | q | 1348 | 1327 | 1321 | 1304 | 1299 | 1284 | 1281 | 1269 | 1266 | 1263 | 1260 | 1254 | 1248 |
| | 20 (0.0359") | 9-3 | 11-3 | 10-6 | l | 312 | 269 | 234 | 205 | 180 | 159 | 142 | 127 | 113 | 102 | 92 | 83 | 75 |
| | | | | | q | 1409 | 1385 | 1375 | 1356 | 1349 | 1333 | 1329 | 1314 | 1312 | 1300 | 1295 | 1290 | 1284 |
| | 18 (0.0478") | 10-9 | 12-6 | 11-6 | l | 400 | 348 | 303 | 266 | 235 | 209 | 186 | 167 | 150 | 135 | 122 | 111 | 101 |
| | | | | | q | 1522 | 1490 | 1479 | 1453 | 1444 | 1424 | 1418 | 1400 | 1395 | 1389 | 1382 | 1376 | 1370 |
| | 16 (0.0598") | 13-6 | 13-6 | 12-6 | l | 400 | 400 | 364 | 320 | 283 | 252 | 225 | 202 | 182 | 164 | 149 | 136 | 124 |
| | | | | | q | 1642 | 1602 | 1589 | 1556 | 1546 | 1520 | 1512 | 1490 | 1485 | 1480 | 1473 | 1465 | 1459 |
| 4 1/2" (32.1 psf) | 22 (0.0299") | 8-0 | 9-6 | 10-0 | l | 320 | 276 | 239 | 209 | 184 | 162 | 144 | 128 | 114 | 103 | 92 | 83 | 75 |
| | | | | | q | 1608 | 1587 | 1580 | 1563 | 1557 | 1544 | 1541 | 1529 | 1526 | 1516 | 1509 | 1500 | 1492 |
| | 20 (0.0359") | 9-0 | 10-6 | 11-0 | l | 379 | 327 | 284 | 249 | 219 | 194 | 173 | 154 | 138 | 124 | 112 | 101 | 92 |
| | | | | | q | 1668 | 1643 | 1634 | 1615 | 1608 | 1593 | 1587 | 1573 | 1570 | 1559 | 1550 | 1541 | 1533 |
| | 18 (0.0478") | 10-6 | 12-6 | 12-6 | l | 400 | 400 | 369 | 324 | 286 | 254 | 227 | 203 | 183 | 165 | 150 | 136 | 124 |
| | | | | | q | 1782 | 1750 | 1738 | 1712 | 1704 | 1682 | 1677 | 1659 | 1655 | 1639 | 1630 | 1621 | 1612 |
| | 16 (0.0598") | 11-6 | 13-0 | 13-6 | l | 400 | 400 | 400 | 390 | 345 | 307 | 275 | 247 | 222 | 201 | 183 | 166 | 152 |
| | | | | | q | 1902 | 1862 | 1847 | 1815 | 1806 | 1778 | 1772 | 1749 | 1743 | 1724 | 1712 | 1699 | 1687 |
| 5 1/4" (39.0 psf) | 22 (0.0299") | 7-6 | 9-0 | 9-0 | l | 400 | 353 | 306 | 268 | 236 | 208 | 185 | 165 | 148 | 132 | 119 | 107 | 97 |
| | | | | | q | 1997 | 1976 | 1968 | 1951 | 1946 | 1933 | 1929 | 1918 | 1915 | 1905 | 1902 | 1894 | 1893 |
| | 20 (0.0359") | 8-6 | 10-0 | 10-6 | l | 400 | 400 | 365 | 320 | 282 | 250 | 222 | 199 | 178 | 161 | 145 | 131 | 119 |
| | | | | | q | 2057 | 2032 | 2023 | 2003 | 1997 | 1981 | 1976 | 1963 | 1959 | 1947 | 1945 | 1934 | 1933 |
| | 18 (0.0478") | 10-0 | 12-0 | 12-0 | l | 400 | 400 | 400 | 400 | 369 | 328 | 293 | 263 | 237 | 214 | 194 | 176 | 161 |
| | | | | | q | 2171 | 2139 | 2127 | 2101 | 2093 | 2071 | 2060 | 2048 | 2044 | 2028 | 2025 | 2011 | 2010 |
| | 16 (0.0598") | 11-0 | 13-0 | 13-0 | l | 400 | 400 | 400 | 400 | 400 | 397 | 355 | 319 | 288 | 261 | 237 | 216 | 197 |
| | | | | | q | 2291 | 2250 | 2236 | 2204 | 2194 | 2167 | 2161 | 2137 | 2132 | 2114 | 2110 | 2093 | 2090 |
| 6 1/4" (48.2 psf) | 22 (0.0299") | 7-0 | 8-0 | 8-6 | l | 400 | 400 | 400 | 351 | 309 | 273 | 243 | 217 | 194 | 175 | 157 | 142 | 128 |
| | | | | | q | 2500 | 2495 | 2487 | 2470 | 2465 | 2452 | 2448 | 2436 | 2434 | 2423 | 2421 | 2413 | 2412 |
| | 20 (0.0359") | 7-6 | 9-0 | 9-6 | l | 400 | 400 | 400 | 400 | 370 | 328 | 292 | 262 | 235 | 212 | 192 | 174 | 158 |
| | | | | | q | 2560 | 2551 | 2542 | 2522 | 2516 | 2500 | 2495 | 2480 | 2478 | 2466 | 2464 | 2453 | 2452 |
| | 18 (0.0478") | 9-0 | 11-0 | 11-6 | l | 400 | 400 | 400 | 400 | 400 | 400 | 387 | 347 | 313 | 283 | 257 | 234 | 213 |
| | | | | | q | 2668 | 2657 | 2646 | 2620 | 2612 | 2590 | 2584 | 2566 | 2562 | 2547 | 2544 | 2530 | 2527 |
| | 16 (0.0598") | 10-0 | 12-0 | 12-0 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 382 | 346 | 315 | 287 | 263 |
| | | | | | q | 2783 | 2769 | 2755 | 2722 | 2713 | 2686 | 2679 | 2656 | 2651 | 2631 | 2629 | 2612 | 2609 |

SEE 2DW NORMAL WEIGHT TABLE NOTES- Page 25

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# 2DW Normal Weight Concrete

| TOTAL SLAB DEPTH & CONCRETE WEIGHT (psf) | GAUGE | MAX UNSHORED SPAN (FEET - INCHES) | | | (l) Total Allowable Superimposed Load (psf) (q) DIAPHRAGM SHEAR VALUES (plf) - 4 ENDS WELDS/SHEET SPAN (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE | DOUBLE | THREE OR MORE | | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" | 11'-6" |
| 4" (36.3 psf) | 22 (0.0299") | 7-6 | 9-6 | 9-3 | l | 271 | 232 | 201 | 175 | 153 | 134 | 118 | 105 | 93 | 82 |
| | | | | | q | 1881 | 1860 | 1853 | 1836 | 1830 | 1817 | 1814 | 1802 | 1799 | 1790 |
| | 20 (0.0359") | 8-6 | 10-3 | 10-0 | l | 323 | 278 | 240 | 210 | 184 | 162 | 144 | 128 | 114 | 101 |
| | | | | | q | 1941 | 1916 | 1907 | 1888 | 1881 | 1866 | 1860 | 1847 | 1843 | 1837 |
| | 18 (0.0478") | 10-0 | 11-9 | 10-9 | l | 400 | 363 | 316 | 276 | 243 | 215 | 191 | 171 | 153 | 138 |
| | | | | | q | 2055 | 2023 | 2011 | 1985 | 1977 | 1955 | 1950 | 1932 | 1928 | 1921 |
| | 16 (0.0598") | 12-3 | 12-6 | 11-6 | l | 400 | 400 | 382 | 335 | 296 | 262 | 234 | 209 | 188 | 170 |
| | | | | | q | 2175 | 2135 | 2120 | 2088 | 2079 | 2051 | 2045 | 2022 | 2016 | 2009 |
| 4 1/2" (42.3 psf) | 22 (0.0299") | 7-0 | 8-6 | 9-0 | l | 328 | 281 | 243 | 212 | 185 | 163 | 144 | 127 | 113 | 101 |
| | | | | | q | 2274 | 2253 | 2245 | 2228 | 2223 | 2209 | 2206 | 2194 | 2192 | 2181 |
| | 20 (0.0359") | 8-0 | 9-6 | 10-0 | l | 391 | 336 | 292 | 255 | 223 | 197 | 175 | 155 | 139 | 124 |
| | | | | | q | 2334 | 2309 | 2300 | 2280 | 2274 | 2257 | 2253 | 2239 | 2236 | 2224 |
| | 18 (0.0478") | 9-6 | 11-6 | 12-0 | l | 400 | 400 | 383 | 336 | 296 | 262 | 233 | 208 | 187 | 168 |
| | | | | | q | 2448 | 2415 | 2404 | 2378 | 2370 | 2348 | 2343 | 2324 | 2321 | 2305 |
| | 16 (0.0598") | 10-6 | 12-0 | 12-6 | l | 400 | 400 | 400 | 400 | 360 | 320 | 285 | 255 | 230 | 207 |
| | | | | | q | 2568 | 2527 | 2513 | 2480 | 2471 | 2444 | 2438 | 2414 | 2409 | 2389 |
| 5" (48.4 psf) | 22 (0.0299") | 7-0 | 8-0 | 8-6 | l | 387 | 333 | 288 | 251 | 219 | 193 | 171 | 151 | 134 | 120 |
| | | | | | q | 2665 | 2644 | 2638 | 2621 | 2616 | 2601 | 2597 | 2586 | 2583 | 2574 |
| | 20 (0.0359") | 7-6 | 9-0 | 9-6 | l | 400 | 398 | 345 | 302 | 265 | 234 | 207 | 185 | 165 | 148 |
| | | | | | q | 2726 | 2701 | 2692 | 2673 | 2666 | 2649 | 2646 | 2631 | 2629 | 2617 |
| | 18 (0.0478") | 9-0 | 11-0 | 11-6 | l | 400 | 400 | 400 | 398 | 351 | 311 | 277 | 248 | 222 | 200 |
| | | | | | q | 2839 | 2808 | 2796 | 2270 | 2763 | 2740 | 2735 | 2717 | 2713 | 2698 |
| | 16 (0.0598") | 10-0 | 12-0 | 12-0 | l | 400 | 400 | 400 | 400 | 400 | 380 | 339 | 304 | 274 | 247 |
| | | | | | q | 2959 | 2919 | 2906 | 2873 | 2863 | 2837 | 2829 | 2807 | 2802 | 2782 |
| 5 1/2" (54.4 psf) | 22 (0.0299") | 6-6 | 7-6 | 8-0 | l | 400 | 386 | 334 | 291 | 255 | 224 | 198 | 176 | 157 | 140 |
| | | | | | q | 3058 | 3037 | 3030 | 3013 | 3008 | 2994 | 2990 | 2978 | 2976 | 2965 |
| | 20 (0.0359") | 7-6 | 9-0 | 9-0 | l | 400 | 400 | 400 | 350 | 308 | 272 | 241 | 215 | 192 | 172 |
| | | | | | q | 3119 | 3094 | 3085 | 3065 | 3059 | 3042 | 3038 | 3024 | 3020 | 3008 |
| | 18 (0.0478") | 8-6 | 10-6 | 11-0 | l | 400 | 400 | 400 | 400 | 400 | 362 | 323 | 289 | 259 | 234 |
| | | | | | q | 3232 | 3199 | 3189 | 3163 | 3154 | 3133 | 3127 | 3110 | 3104 | 3089 |
| | 16 (0.0598") | 9-6 | 12-0 | 12-0 | l | 400 | 400 | 400 | 400 | 400 | 400 | 396 | 355 | 320 | 289 |
| | | | | | q | 3351 | 3311 | 3298 | 3266 | 3255 | 3229 | 3221 | 3199 | 3194 | 3175 |

SEE 2DW NORMAL WEIGHT TABLE NOTES- Page 25

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# 2DW Normal Weight Concrete - Continued

| TOTAL SLAB DEPTH & CONCRETE WEIGHT (psf) | GAUGE | MAX UNSHORED SPAN (FEET - INCHES) | | | (l) Total Allowable Superimposed Load (psf) (q) DIAPHRAGM SHEAR VALUES (plf) - 4 ENDS WELDS/SHEET SPAN (FEET) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE | DOUBLE | THREE OR MORE | | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" | 11'-6" |
| 6" (60.4 psf) | 22 | 6-0 | 7-0 | 7-6 | l | 400 | 400 | 381 | 332 | 291 | 257 | 227 | 202 | 179 | 160 |
| | | | | | q | 3437 | 3429 | 3422 | 3406 | 3400 | 3387 | 3383 | 3371 | 3368 | 3358 |
| | 20 | 7-0 | 8-6 | 9-0 | l | 400 | 400 | 400 | 400 | 352 | 311 | 276 | 246 | 220 | 197 |
| | | | | | q | 3493 | 3485 | 3478 | 3457 | 3452 | 3435 | 3429 | 3416 | 3413 | 3401 |
| | 18 | 8-0 | 10-0 | 10-6 | l | 400 | 400 | 400 | 400 | 400 | 400 | 370 | 331 | 298 | 268 |
| | | | | | q | 3599 | 3592 | 3580 | 3554 | 3546 | 3526 | 3519 | 3501 | 3497 | 3481 |
| | 16 | 9-0 | 11-0 | 11-6 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 367 | 332 |
| | | | | | q | 3712 | 3704 | 3689 | 3657 | 3648 | 3621 | 3614 | 3592 | 3587 | 3567 |
| 6 1/2" (66.4 psf) | 22 | 6-0 | 6-6 | 7-0 | l | 400 | 400 | 400 | 374 | 328 | 289 | 256 | 227 | 203 | 181 |
| | | | | | q | 3830 | 3822 | 3814 | 3797 | 3792 | 3779 | 3775 | 3764 | 3761 | 3751 |
| | 20 | 7-0 | 8-0 | 8-6 | l | 400 | 400 | 400 | 400 | 397 | 351 | 223 | 246 | 220 | 197 |
| | | | | | q | 3885 | 3878 | 3869 | 3849 | 3843 | 3827 | 3822 | 3809 | 3805 | 3793 |
| | 18 | 8-0 | 9-6 | 10-0 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 374 | 336 | 303 |
| | | | | | q | 3992 | 3985 | 3973 | 3974 | 3939 | 3918 | 3912 | 3894 | 3890 | 3874 |
| | 16 | 9-0 | 11-0 | 11-0 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 376 |
| | | | | | q | 4104 | 4096 | 4082 | 4050 | 4040 | 4013 | 4007 | 3983 | 3979 | 3960 |
| 7 1/4" (75.4 psf) | 22 | 5-6 | 6-0 | 6-6 | l | 400 | 400 | 400 | 400 | 384 | 339 | 300 | 267 | 238 | 213 |
| | | | | | q | 4420 | 4411 | 4403 | 4386 | 4381 | 4367 | 4363 | 4352 | 4349 | 4339 |
| | 20 | 6-6 | 7-6 | 8-0 | l | 400 | 400 | 400 | 400 | 400 | 400 | 366 | 326 | 292 | 262 |
| | | | | | q | 4473 | 4467 | 4458 | 4438 | 4432 | 4415 | 4411 | 4397 | 4394 | 4380 |
| | 18 | 7-6 | 9-0 | 9-6 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 396 | 357 |
| | | | | | q | 4580 | 4573 | 4562 | 4536 | 4528 | 4506 | 4501 | 4482 | 4479 | 4463 |
| | 16 | 8-6 | 10-0 | 10-6 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| | | | | | q | 4691 | 4685 | 4671 | 4638 | 4628 | 4602 | 4594 | 4572 | 4567 | 4547 |

NOTES:

1. ALLOWABLE SUPERIMPOSED VERTICAL LOAD (psf) FOR SIMPLY SUPPORTED DECK SECTIONS. THESE LOADS MAY BE USED WITH STEEL FLOOR UNITS ON SIMPLE OR CONTINUOUS SPANS. COMPOSITE SLAB DESIGN TO BE BASED ON SIMPLE SPAN ANALYSIS. THE CONCRETE SHALL BE REINFORCED IN ACCORDANCE APPLICABLE CODE REQUIREMENTS.
2. THE DIAPHRAGM SHEAR VALUES (plf) LISTED IN THE TABLES ARE FOR STEEL DECKS WITH FOUR PUDDLE WELDS PER PANEL JOINT, SUBJECT TO SEISMIC LOADS OR COMBINATIONS FO LOADS WHICH INCLUDE SEISMIC LOADS WHICH ARE WELDED TO SUPPORTING MEMBERS AND WELDED OR MECHANICALLY FASTENED TOGETHER OT FORM A ROOF OR FLOOR DIAPHRAGM. THESE VALUES MEET THE FACTOR OF SAFETY REQUIREMENTS LISTED IN 2007 AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, TABLE D5. THE FACTOR HAS BEEN UNIFORMLY APPLIED TO ALL VALUES AS 3.00.
3. SUFFICIENT SEAM ATTACHMENT FOR COMPOSITE DECK SECTIONS CONSIST OF FASTENING AT A 30” ON CENTER MAXIMUM, BETWEEN SUPPORTS. FASTENING MAY BE #10 SELF PIERCING/TAPPING SCREW BY ¾” LONG, WELDS 1 ½” LONG, OR BUTTON PUNCHES. ATTACHMENTS ARE ILLUSTRATED IN THE WELDING SCHEDULE FIGURE.
4. THE SPACING OF BOUNDARY SPOT WELDS AT PERIMETER SUPPORTS SHALL BE DETERMINED IN ACCORDANCE WITH THE VALUES SET FORTH IN THE WELDING SCHEDULE TABLE.
5. FOR DECK WITH NO TRENCH HEADER AND WITH CONCRETE FILL, THE FLEXIBILITY FACTOR MAY BE TAKEN AS 1.

1900 SANGUINETTI
LANE STOCKTON, CA
95205 (209) 939-9700



# 3DW Light Weight Concrete

| TOTAL SLAB DEPTH & CONCRETE WEIGHT (psf) | GAUGE | MAX UNSHORED SPAN (FEET - INCHES) | | | (l) Total Allowable Superimposed Load (psf)<br>(q) DIAPHRAGM SHEAR VALUES (plf) - 4 ENDS WELDS/SHEET<br>SPAN (FEET) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE | DOUBLE | THREE OR MORE | | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" | 11'-6" | 12'-0" | 12'-6" | 13'-0" | 13'-6" | 14'-0" | 14'-6" | 15'-0' |
| 5<br>(32.1 psf) | 22<br>(0.0299") | 9-9 | 10-9 | 11-3 | l | 248 | 217 | 190 | 168 | 149 | 133 | 119 | 107 | 96 | 86 | 78 | 71 | 64 | 58 | 52 |
| | | | | | q | 1321 | 1304 | 1299 | 1284 | 1281 | 1269 | 1266 | 1256 | 1255 | 1245 | 1244 | - | - | - | - |
| | 20<br>(0.0359") | 11-6 | 14-3 | 13-3 | l | 297 | 260 | 229 | 203 | 181 | 162 | 145 | 131 | 118 | 107 | 97 | 88 | 80 | 73 | 66 |
| | | | | | q | 1375 | 1356 | 1349 | 1333 | 1329 | 1314 | 1312 | 1299 | 1297 | 1287 | 1284 | - | - | - | - |
| | 18<br>(0.0478") | 14-3 | 15-9 | 14-6 | l | 389 | 342 | 302 | 269 | 240 | 215 | 194 | 175 | 159 | 144 | 131 | 120 | 110 | 100 | 92 |
| | | | | | q | 1479 | 1453 | 1444 | 1424 | 1418 | 1400 | 1395 | 1379 | 1377 | 1364 | 1361 | - | - | - | - |
| | 16<br>(0.0598") | 16-3 | 17-0 | 15-9 | l | 400 | 400 | 367 | 326 | 292 | 262 | 237 | 214 | 195 | 177 | 162 | 148 | 136 | 125 | 115 |
| | | | | | q | 1589 | 1556 | 1546 | 1520 | 1512 | 1490 | 1485 | 1465 | 1461 | 1444 | 1442 | - | - | - | - |
| 5 1/2"<br>(36.7 psf) | 22<br>(0.0299") | 9-3 | 10-0 | 10-3 | l | 291 | 254 | 224 | 198 | 176 | 157 | 140 | 126 | 113 | 102 | 92 | 83 | 76 | 68 | 62 |
| | | | | | q | 1580 | 1563 | 1557 | 1544 | 1541 | 1529 | 1526 | 1516 | 1513 | 1505 | 1504 | 1496 | 1495 | - | - |
| | 20<br>(0.0359") | 10-9 | 13-9 | 12-9 | l | 348 | 305 | 269 | 238 | 212 | 190 | 170 | 153 | 139 | 125 | 114 | 103 | 94 | 86 | 78 |
| | | | | | q | 1634 | 1615 | 1608 | 1593 | 1587 | 1573 | 1570 | 1559 | 1556 | 1546 | 1544 | 1535 | 1534 | - | - |
| | 18<br>(0.0478") | 13-6 | 15-3 | 14-0 | l | 400 | 400 | 354 | 314 | 281 | 252 | 227 | 205 | 186 | 169 | 154 | 141 | 129 | 118 | 108 |
| | | | | | q | 1738 | 1712 | 1704 | 1682 | 1677 | 1659 | 1655 | 1639 | 1637 | 1622 | 1620 | 1608 | 1607 | - | - |
| | 16<br>(0.0598") | 15-6 | 16-3 | 15-3 | l | 400 | 400 | 400 | 385 | 345 | 310 | 280 | 253 | 230 | 210 | 192 | 176 | 161 | 148 | 136 |
| | | | | | q | 1847 | 1815 | 1806 | 1778 | 1772 | 1749 | 1743 | 1724 | 1721 | 1704 | 1702 | 1686 | 1685 | - | - |
| 6 1/4"<br>(43.5 psf) | 22<br>(0.0299") | 8-6 | 8-9 | 9-3 | l | 360 | 315 | 277 | 246 | 218 | 195 | 175 | 157 | 141 | 127 | 115 | 104 | 95 | 86 | 78 |
| | | | | | q | 1956 | 1951 | 1946 | 1933 | 1929 | 1918 | 1915 | 1905 | 1902 | 1894 | 1893 | 1885 | 1884 | 1877 | - |
| | 20<br>(0.0359") | 10-0 | 12-3 | 12-0 | l | 400 | 378 | 333 | 295 | 263 | 236 | 212 | 191 | 172 | 156 | 142 | 129 | 118 | 107 | 98 |
| | | | | | q | 2008 | 2003 | 1997 | 1981 | 1976 | 1963 | 1959 | 1947 | 1945 | 1934 | 1933 | 1924 | 1923 | 1915 | - |
| | 18<br>(0.0478") | 12-6 | 14-6 | 13-3 | l | 400 | 400 | 400 | 389 | 348 | 312 | 281 | 255 | 231 | 210 | 192 | 175 | 160 | 147 | 135 |
| | | | | | q | 2107 | 2101 | 2093 | 2074 | 2066 | 2048 | 2047 | 2028 | 2025 | 2011 | 2010 | 1997 | 1996 | 1985 | - |
| | 16<br>(0.0598") | 14-6 | 15-6 | 14-3 | l | 400 | 400 | 400 | 400 | 400 | 384 | 347 | 314 | 286 | 261 | 238 | 219 | 201 | 185 | 170 |
| | | | | | q | 2210 | 2204 | 2194 | 2167 | 2161 | 2137 | 2132 | 2114 | 2110 | 2093 | 2090 | 2075 | 2074 | 2061 | - |
| 7 1/4"<br>(52.7 psf) | 22<br>(0.0299") | 8-0 | 7-9 | 8-3 | l | 400 | 400 | 354 | 314 | 279 | 249 | 224 | 201 | 181 | 164 | 149 | 135 | 122 | 111 | 101 |
| | | | | | q | 2476 | 2470 | 2465 | 2452 | 2448 | 2436 | 2434 | 2423 | 2421 | 2413 | 2412 | 2404 | 2402 | 2396 | 2395 |
| | 20<br>(0.0359") | 9-3 | 10-9 | 11-3 | l | 400 | 400 | 400 | 377 | 336 | 301 | 271 | 244 | 221 | 201 | 182 | 166 | 152 | 138 | 127 |
| | | | | | q | 2531 | 2522 | 2516 | 2500 | 2495 | 2480 | 2478 | 2466 | 2464 | 2453 | 2452 | 2443 | 2441 | 2432 | 2432 |
| | 18<br>(0.0478") | 11-6 | 13-6 | 12-6 | l | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 326 | 296 | 270 | 246 | 225 | 207 | 190 | 175 |
| | | | | | q | 2629 | 2620 | 2612 | 2590 | 2584 | 2566 | 2562 | 2547 | 2544 | 2530 | 2527 | 2516 | 2514 | 2504 | 2503 |
| | 16<br>(0.0598") | 13-6 | 14-6 | 13-6 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 367 | 335 | 307 | 281 | 259 | 238 | 220 |
| | | | | | q | 2733 | 2720 | 2713 | 2686 | 2679 | 2656 | 2651 | 2631 | 2629 | 2612 | 2609 | 2594 | 2592 | 2579 | 2578 |

SEE 3DW NORMAL WEIGHT TABLE NOTES- Page 28

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# 3DW Normal Weight Concrete

| TOTAL SLAB DEPTH & CONCRETE WEIGHT (psf) | GAUGE | MAX UNSHORED SPAN (FEET - INCHES) | | | (l) Total Allowable Superimposed Load (psf) (q) DIAPHRAGM SHEAR VALUES (plf) - 4 ENDS WELDS/SHEET SPAN (FEET) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE | DOUBLE | THREE OR MORE | | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" | 11'-6" | 12'-0" | 12'-6" | 13'-0" | 13'-6' |
| 5 (42.3 psf) | 22 (0.0299") | 8-9 | 9-3 | 9-9 | l | 252 | 220 | 193 | 169 | 150 | 133 | 118 | 105 | 94 | 84 | 75 | 67 |
| | | | | | q | 1853 | 1836 | 1830 | 1817 | 1814 | 1802 | 1799 | 1789 | 1786 | 1778 | 1777 | - |
| | 20 (0.0359") | 10-3 | 12-9 | 12-6 | l | 305 | 266 | 234 | 206 | 183 | 163 | 146 | 130 | 117 | 105 | 95 | 85 |
| | | | | | q | 1907 | 1888 | 1881 | 1860 | 1847 | 1843 | 1832 | 1829 | 1819 | 1817 | - | - |
| | 18 (0.0478") | 13-0 | 14-9 | 13-6 | l | 400 | 353 | 312 | 276 | 246 | 220 | 197 | 178 | 160 | 145 | 132 | 120 |
| | | | | | q | 2011 | 1985 | 1977 | 1955 | 1950 | 1932 | 1928 | 1912 | 1910 | 1895 | 1894 | - |
| | 16 (0.0598") | 15-0 | 15-9 | 14-6 | l | 400 | 400 | 385 | 342 | 305 | 273 | 246 | 222 | 201 | 183 | 166 | 152 |
| | | | | | q | 2120 | 2088 | 2079 | 2051 | 2045 | 2022 | 2016 | 1998 | 1994 | 1977 | 1975 | - |
| 5 1/2" (48.4 psf) | 22 (0.0299") | 8-6 | 8-6 | 9-0 | l | 296 | 258 | 226 | 199 | 176 | 156 | 139 | 124 | 111 | 99 | 89 | 80 |
| | | | | | q | 2245 | 2228 | 2223 | 2209 | 2206 | 2194 | 2192 | 2181 | 2179 | 2171 | 2168 | 2162 |
| | 20 (0.0359") | 9-9 | 11-9 | 11-9 | l | 357 | 312 | 274 | 242 | 215 | 191 | 171 | 153 | 138 | 124 | 112 | 101 |
| | | | | | q | 2300 | 2280 | 2274 | 2257 | 2253 | 2239 | 2236 | 2224 | 2222 | 2211 | 2210 | 2201 |
| | 18 (0.0478") | 12-3 | 14-3 | 13-3 | l | 400 | 400 | 365 | 324 | 288 | 258 | 232 | 209 | 188 | 171 | 155 | 141 |
| | | | | | q | 2404 | 2378 | 2370 | 2348 | 2343 | 2324 | 2321 | 2305 | 2301 | 2288 | 2285 | 2274 |
| | 16 (0.0598") | 14-3 | 15-3 | 14-0 | l | 400 | 400 | 400 | 400 | 357 | 320 | 289 | 261 | 236 | 215 | 196 | 179 |
| | | | | | q | 2513 | 2480 | 2471 | 2444 | 2438 | 2414 | 2409 | 2389 | 2387 | 2370 | 2367 | 2352 |
| 6" (54.4 psf) | 22 (0.0299") | 8-0 | 8-0 | 8-0 | l | 343 | 299 | 262 | 231 | 204 | 181 | 161 | 144 | 129 | 115 | 104 | 93 |
| | | | | | q | 2638 | 2621 | 2616 | 2601 | 2597 | 2586 | 2583 | 2574 | 2571 | 2562 | 2561 | 2553 |
| | 20 (0.0359") | 9-3 | 10-9 | 11-3 | l | 400 | 261 | 317 | 280 | 249 | 222 | 198 | 178 | 160 | 144 | 130 | 117 |
| | | | | | q | 2692 | 2673 | 2666 | 2649 | 2646 | 2631 | 2629 | 2617 | 2614 | 2604 | 2601 | 2592 |
| | 18 (0.0478") | 11-6 | 13-6 | 12-6 | l | 400 | 400 | 400 | 374 | 333 | 298 | 268 | 242 | 218 | 198 | 180 | 164 |
| | | | | | q | 2796 | 2770 | 2763 | 2740 | 2735 | 2717 | 2713 | 2698 | 2694 | 2681 | 2678 | 2666 |
| | 16 (0.0598") | 13-6 | 14-6 | 13-6 | l | 400 | 400 | 400 | 400 | 400 | 371 | 334 | 302 | 274 | 249 | 227 | 207 |
| | | | | | q | 2906 | 2873 | 2863 | 2837 | 2829 | 2807 | 2802 | 2782 | 2778 | 2761 | 2759 | 2744 |
| 6 1/2" (60.4 psf) | 22 (0.0299") | 7-9 | 7-3 | 7-6 | l | 391 | 341 | 299 | 264 | 233 | 207 | 185 | 165 | 148 | 132 | 119 | 107 |
| | | | | | q | 3030 | 3013 | 3008 | 2994 | 2990 | 2978 | 2976 | 2965 | 2964 | 2955 | 2954 | 2946 |
| | 20 (0.0359") | 9-0 | 10-3 | 10-6 | l | 400 | 400 | 362 | 320 | 284 | 253 | 227 | 203 | 183 | 165 | 149 | 135 |
| | | | | | q | 3085 | 3065 | 3059 | 3042 | 3038 | 3024 | 3020 | 3008 | 3007 | 2997 | 2994 | 2985 |
| | 18 (0.0478") | 11-3 | 13-3 | 12-3 | l | 400 | 400 | 400 | 400 | 381 | 341 | 306 | 276 | 250 | 227 | 206 | 187 |
| | | | | | q | 3189 | 3163 | 3154 | 3133 | 3127 | 3110 | 3104 | 3089 | 3086 | 3073 | 3071 | 3059 |
| | 16 (0.0598") | 12-9 | 14-3 | 13-3 | l | 400 | 400 | 400 | 400 | 400 | 400 | 382 | 346 | 313 | 285 | 260 | 238 |
| | | | | | q | 3298 | 3266 | 3255 | 3229 | 3221 | 3199 | 3194 | 3175 | 3171 | 3154 | 3151 | 3137 |

SEE 3DW NORMAL WEIGHT TABLE NOTES- Page 28

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# 3DW Normal Weight Concrete-Continued

| TOTAL SLAB DEPTH & CONCRETE WEIGHT (psf) | GAUGE | MAX UNSHORED SPAN (FEET - INCHES) | | | (l) Total Allowable Superimposed Load (psf) (q) DIAPHRAGM SHEAR VALUES (plf) - 4 ENDS WELDS/SHEET SPAN (FEET) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE | DOUBLE | THREE OR MORE | | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" | 11'-6" | 12'-0" | 12'-6" | 13'-0" | 13'-6' |
| 7 (66.4 psf) | 22 (0.0299") | 7-6 | 6-9 | 7-0 | l | 400 | 384 | 337 | 297 | 263 | 234 | 209 | 187 | 167 | 150 | 135 | 121 |
| | | | | | q | 3422 | 3406 | 3400 | 3387 | 3383 | 3371 | 3368 | 3358 | 3357 | 3348 | 3346 | 3338 |
| | 20 (0.0359") | 8-9 | 9-6 | 9-6 | l | 400 | 400 | 400 | 361 | 321 | 286 | 256 | 230 | 207 | 187 | 169 | 153 |
| | | | | | q | 3478 | 3457 | 3452 | 3435 | 3429 | 3416 | 3413 | 3401 | 3398 | 3388 | 3387 | 3377 |
| | 18 (0.0478") | 10-9 | 12-9 | 11-0 | l | 400 | 400 | 400 | 400 | 400 | 385 | 346 | 312 | 283 | 256 | 233 | 212 |
| | | | | | q | 3580 | 3554 | 3546 | 3526 | 3519 | 3501 | 3497 | 3481 | 3479 | 3465 | 3463 | 3452 |
| | 16 (0.0598") | 12-6 | 13-9 | 12-9 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 391 | 355 | 323 | 294 | 269 |
| | | | | | q | 3689 | 3657 | 3648 | 3621 | 3614 | 3592 | 3587 | 3567 | 3563 | 3546 | 3544 | 3528 |
| 7 1/2" (72.5 psf) | 22 (0.0299") | 7-3 | 6-3 | 6-6 | l | 400 | 400 | 377 | 332 | 294 | 262 | 234 | 209 | 187 | 168 | 151 | 136 |
| | | | | | q | 3806 | 3797 | 3792 | 3779 | 3775 | 3764 | 3761 | 3751 | 3749 | 3740 | 3739 | 3601 |
| | 20 (0.0359") | 8-6 | 8-9 | 9-3 | l | 400 | 400 | 400 | 400 | 358 | 320 | 287 | 257 | 232 | 209 | 189 | 171 |
| | | | | | q | 3855 | 3849 | 3843 | 3827 | 3822 | 3809 | 3805 | 3793 | 3791 | 3780 | 3779 | 3770 |
| | 18 (0.0478") | 10-6 | 12-6 | 11-6 | l | 400 | 400 | 400 | 400 | 400 | 400 | 387 | 349 | 316 | 287 | 261 | 238 |
| | | | | | q | 3958 | 3947 | 3939 | 3918 | 3912 | 3894 | 3890 | 3874 | 3871 | 3857 | 3856 | 3843 |
| | 16 (0.0598") | 12-3 | 13-6 | 12-6 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 397 | 362 | 330 | 302 |
| | | | | | q | 4062 | 4050 | 4040 | 4013 | 4007 | 3983 | 3979 | 3960 | 3956 | 3939 | 3936 | 3921 |
| 8 1/4" (81.4 psf) | 22 (0.0299") | 7-0 | 6-0 | 6-0 | l | 400 | 400 | 400 | 386 | 342 | 304 | 272 | 243 | 218 | 196 | 177 | 159 |
| | | | | | q | 4398 | 4386 | 4381 | 4367 | 4363 | 4352 | 4349 | 4339 | 4337 | 4329 | 4326 | 4320 |
| | 20 (0.0359") | 8-3 | 8-0 | 8-3 | l | 400 | 400 | 400 | 400 | 400 | 372 | 333 | 300 | 270 | 244 | 221 | 200 |
| | | | | | q | 4456 | 4438 | 4435 | 4418 | 4411 | 4397 | 4394 | 4382 | 4380 | 4369 | 4368 | 4358 |
| | 18 (0.0478") | 10-3 | 12-0 | 11-3 | l | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 368 | 335 | 305 | 278 |
| | | | | | q | 4548 | 4536 | 4528 | 4506 | 4501 | 4482 | 4479 | 4463 | 4459 | 4446 | 4443 | 4432 |
| | 16 (0.0598") | 11-9 | 13-0 | 12-0 | l | 400 | 40 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 385 | 353 |
| | | | | | q | 4650 | 4638 | 4628 | 4602 | 4594 | 4572 | 4567 | 4547 | 4545 | 4527 | 4525 | 4510 |

Notes:

1. ALLOWABLE SUPERIMPOSED VERTICAL LOAD (psf) FOR SIMPLY SUPPORTED DECK SECTIONS. THESE LOADS MAY BE USED WITH STEEL FLOOR UNITS ON SIMPLE OR CONTINUOUS SPANS. COMPOSITE SLAB DESIGN TO BE BASED ON SIMPLE SPAN ANALYSIS. THE CONCRETE SHALL BE REINFORCED IN ACCORDANCE APPLICABLE CODE REQUIREMENTS.

2. THE DIAPHRAGM SHEAR VALUES (plf) LISTED IN THE TABLES ARE FOR STEEL DECKS WITH FOUR PUDDLE WELDS PER PANEL JOINT, SUBJECT TO SEISMIC LOADS OR COMBINATIONS FO LOADS WHICH INCLUDE SEISMIC LOADS WHICH ARE WELDED TO SUPPORTING MEMBERS AND WELDED OR MECHANICALLY FASTENED TOGETHER OT FORM A ROOF OR FLOOR DIAPHRAGM. THESE VALUES MEET THE FACTOR OF SAFETY REQUIREMENTS LISTED IN 2007 AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, TABLE D5. THE FACTOR HAS BEEN UNIFORMLY APPLIED TO ALL VALUES AS 3.00.

3. SUFFICIENT SEAM ATTACHMENT FOR COMPOSITE DECK SECTIONS CONSIST OF FASTENING AT A 30” ON CENTER MAXIMUM, BETWEEN SUPPORTS. FASTENING MAY BE #10 SELF PIERCING/TAPPING SCREW BY ¾” LONG, WELDS 1 ½” LONG, OR BUTTON PUNCHES. ATTACHMENTS ARE ILLUSTRATED IN THE WELDING SCHEDULE FIGURE.

4. THE SPACING OF BOUNDARY SPOT WELDS AT PERIMETER SUPPORTS SHALL BE DETERMINED IN ACCORDANCE WITH THE VALUES SET FORTH IN THE WELDING SCHEDULE TABLE.

5. FOR DECK WITH NO TRENCH HEADER AND WITH CONCRETE FILL, THE FLEXIBILITY FACTOR MAY BE TAKEN AS 1.

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# WELD TABLE

| DECK TYPE | TRANSVERSE SUPPORTS | | | PARRALELL TO DECKING | | SIDELAP CONNECTION | |
|---|---|---|---|---|---|---|---|
| | SPOT WELDS | | | SPOT WELDS | | | |
| | EFFECTIVE DIAMETER | # OF WELDS PER UNIT | LOCATIONS | EFFECTIVE DIAMETER | SPACING | WELD 1 1/2" TOP OR SIDE SEAM | BUTTON PUNCH OR SCREWS |
| 3DW | 1/2" | 4 | 1,2,3,4 | 1/2" | CALCULATE PER BELOW | 12, 24, 30 | 12, 24, 30 |
| 2DW | 1/2" | 4 | 1,2,3,4 | 1/2" | CALCULATE PER BELOW | 12, 24, 30 | 12, 24, 30 |
| NDW | 1/2" | 4<br>2 | 1,2,3,4<br>1,4 | 1/2" | CALCULATE PER BELOW | 12, 18, 24 | 12, 18, 24 |
| BDW | 1/2" | 7<br>5<br>4 | 1,2,3,4,5,6,7<br>1,2,4,6,7<br>1,3,5,7 | 1/2" | CALCULATE PER BELOW | 12, 24, 30" MAX FOR COMPOSITE CONSTRUCTION | 12, 24, 30" MAX FOR COMPOSITE CONSTRUCTION |
| BADW | 1/2" | 7<br>5 | 1,2,3,4,5,6,7<br>1,3,4,5,7 | 1/2" | CALCULATE PER BELOW | 12, 18, 24 | 12, 18, 24 SCREWS ONLY |

NOMINAL SHEAR (q) ON BOUNDARY PUDDLE WELDS (lbs/ft))

| | | Qf | SPACING (FEET) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 6 in | 8 in | 12 in | 16 in | 18 in | 24 in | 30 in | 33 in | 36 |
| 16 | 0.06 | 4051 | 8101 | 6076 | 4051 | 3038 | 2700 | 2025 | 1620 | 1473 | 1350 |
| 18 | 0.048 | 3168 | 6337 | 4753 | 3168 | 2376 | 2112 | 1584 | 1267 | 1152 | 1056 |
| 20 | 0.036 | 2328 | 4656 | 3492 | 2328 | 1746 | 1552 | 1164 | 931 | 847 | 776 |
| 22 | 0.03 | 1917 | 3834 | 2876 | 1917 | 1438 | 1278 | 959 | 767 | 697 | 639 |

NOMINAL SHEAR (q) ON BOUNDARY 1 1/2 INCH FILLET WELDS (lbs/ft)

| | | Qf | SPACING (FEET) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 6 in | 8 in | 12 in | 16 in | 18 in | 24 in | 30 in | 33 in | 36 |
| 16 | 0.06 | 3252 | 6504 | 4878 | 3252 | 2439 | 2168 | 1626 | 1301 | 1183 | 1084 |
| 18 | 0.048 | 2465 | 4929 | 3697 | 2465 | 1849 | 1643 | 1232 | 986 | 896 | 822 |
| 20 | 0.036 | 1851 | 3702 | 2777 | 1851 | 1388 | 1234 | 926 | 740 | 673 | 617 |
| 22 | 0.03 | 1542 | 3083 | 2313 | 1542 | 1156 | 1028 | 771 | 617 | 561 | 514 |

1. SEE WELD FIGURE FOR SUPPORT CONNECTIONS AND CONNECTIONS AT SIDELAPS

2. FOR STRUCTURAL CONCRETE FILL, SIDE LAP CONNECTIONS MAY BE #10 SELF PIERCING/SELF TAPPING SCREWS, WELDS 1 $^{1/2}$" LONG OR BUTTON PUNCH AT 30" MAX.

3. VALUES ARE BASED ON NORTH AMERICAN STANDARD SPECIFICATION OF COLD-FORMED STEEL 2007.

4. TABLES REFLECT NOMINAL STRENGTH, Rn

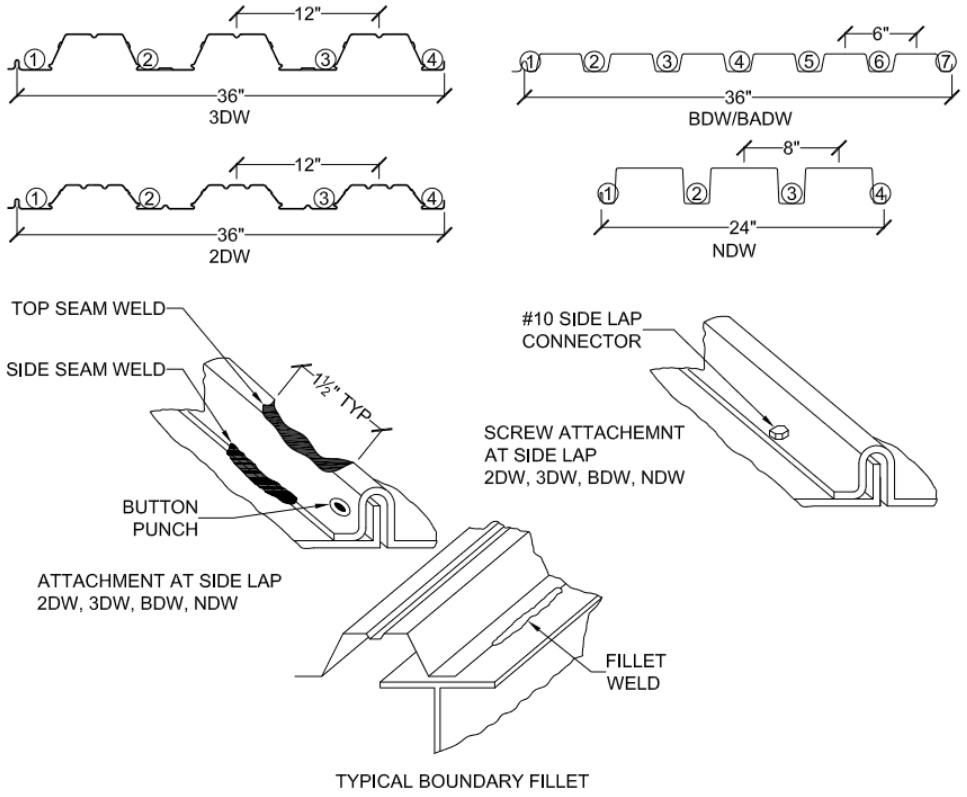
5. ASD ALLOWABLE, Rn / Ωw , Ωw = $2.20_{\text{PUDDLE WELDS}}$, Ωw = $3.05_{\text{FILLET WELDS}}$

6. LRFD, φ Rn , φ = $0.70_{\text{PUDDLE WELDS}}$, φ = $0.50_{\text{FILLET WELDS}}$

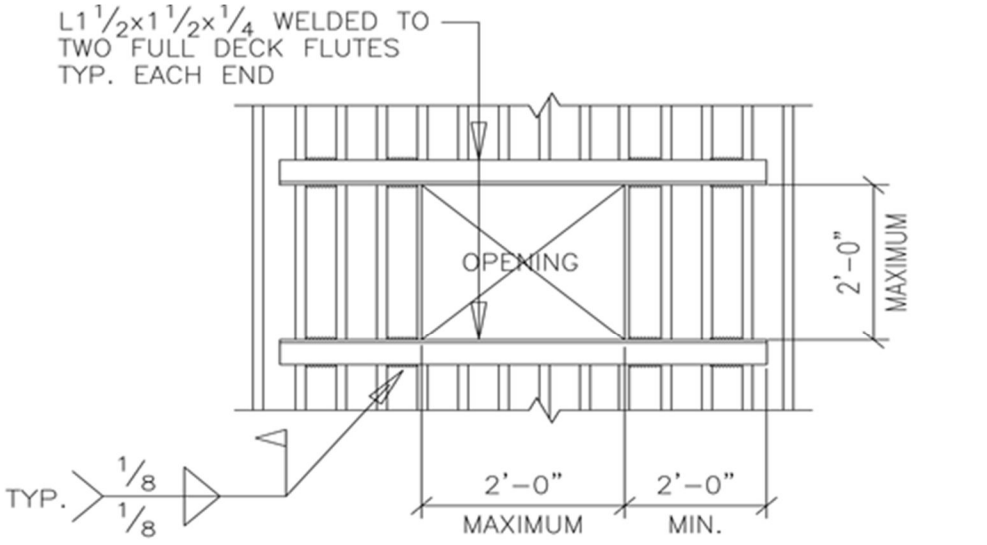
7. FOR ALTERNATE SPACING, CONNECTIONS AND ATTACHMENTS AT PERIMETER/INTERMEDIATE CONNECTIONS GENERALLY, SPACING (e) = < 1/Ω x ($Q_f/S_{ASD}$ ) OR φ x ($Q_f/S_{LRFD}$ )

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700






WELD FIGURE




NOTE: 1. NO REINFORCING ANGLE IS REQUIRED WHEN OPENING IS LESS THAN 6".

DECK OPENING BEFORE POUR

DECK OPENING

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# Diaphragm Flexibility

| F | MAXIMUM SPAN IN FET FOR MASONRY OR CONCRETE WALLS | SPAN-DEPTH LIMITATION | | | |
|---|---|---|---|---|---|
| | | ROTATION NOT CONSIDERED IN DIAPHRAGM | | ROTATION CONSIDERED IN DIAPHRAGM | |
| | | MASONRY OR CONCRETE WALLS | FLEXIBLE WALLS | MASONRY OR CONCRETE WALLS | FLEXIBILE WALLS |
| MORE THAN 150 | NOT USED | NOT USED | 2:1 | NOT USED | 1 1/2 :1 |
| 70 - 150 | 200 | 2:1 OR AS REQUIRED FOR DEFLECTION | 3:1 | NOT USED | 2:1 |
| 10 - 70 | 400 | 2 1/2:1 OR AS REQUIRED FOR DEFLECTION | 4:1 | AS REQUIRED FOR DEFLECTION | 2 1/2:1 |
| 1 - 10 | NO LIMITATION | 3:1 OR AS REQUIRED FOR DEFLECTION | 5:1 | AS REQUIRED FOR DEFLECTION | 3:1 |
| LESS THAN 1 | NO LIMITATION | AS REQUIRED FOR DEFLECTION | NO LIMITATION | AS REQUIRED FOR DEFLECTION | 3 1/2:1 |

1. ROOF DIAPHRAGMS SHALL BE INVESTIGATED REGARDING THEIR FLEXIBILITY AND SUGGESTED SPAN-DEPTH RATIO. REFER TO THE ABOVE TABLES FOR DETERMINATION OF F.
2. WHEN APPLYING THESE LIMITATION TO CANTILEVER DIAPHRAGMS, THE SUGGESTED SPAN-DEPTH RATIO SHALL BE ½ OF THOSE SHOWN IN TABLE.
3. DIAPHRAGM CLASSIFICATION (FLEXIBLE OR RIGID) AND DEFLECTION LIMITS SHALL COMPLY WITH CURRENT CODE.
4. WHEN DIAPHRAGMS ARE SUPPORTING MASONRY OR CONCRETE WALLS, THE MAXIMUM DEFLECTION SHALL BE LIMITED TO **EQUATION A**.
5. THE TOTAL DEFLECTION, Δ OF THE DIAPHRAGM IN INCHES SHALL BE COMPUTED FROM **EQUATION B**.

**EQUATION A**

$$\Delta_{WALL} = (h^2)(f_c) \times [0.01(E)(t)]^{-1} = \frac{(h)^2(fc)}{0.01(E)(t)}$$

WHERE

- h = UNSUPPORTED HEIGHT OF WALL (ft)
- t = THICKNESS OF WALL, (in)
- $E$ = MODULUS OF ELASTICITY OF WALL MATERIAL FOR DEFLECTION DETERMINATION, (psi)
- $f'_c$ = ALLOWABLE COMPRESSIVE STRENGTH OF WALL MATERIAL IN FLEXURE, (psi)
  - $f_c$ $0.45 \times f'_c$ (CONCRETE)
  - $f_c$ $0.33 \times f'_m$ (MASONRY)

**EQUATION B**

$$\Delta = \Delta_f + \Delta_w$$

WHERE

- $\Delta_f$ = FLEXURAL DEFLECTION OF THE DIAPHRAGM IN INCHES DETERMINED IN THE SAME MANNERS AS DEFLECTION FOR BEAMS, ($Md^2$ OF CHORDS)
- $\Delta_f$ = THE WEB DEFLECTION IN INCHES AS DETERMINED BY THE EQUATION, $\frac{(L)(q_{ave})(F)}{10^6}$
  - $L$ SPAN BETWEEN POINTS FOR WHICH DEFLECTION IS DETERMINED, (ft)
  - $q_{ave}$ AVERAGE SHEAR DEMAND #/ft OVER SPAN OF L
  - $F$ FLEXIBILITY FACTOR (MICRO INCHES A DIAPHRAGM WILL DEFLECT ON A SPAN OF 1 ft UNDER A SHEAR LOAD OF 1 #/ft

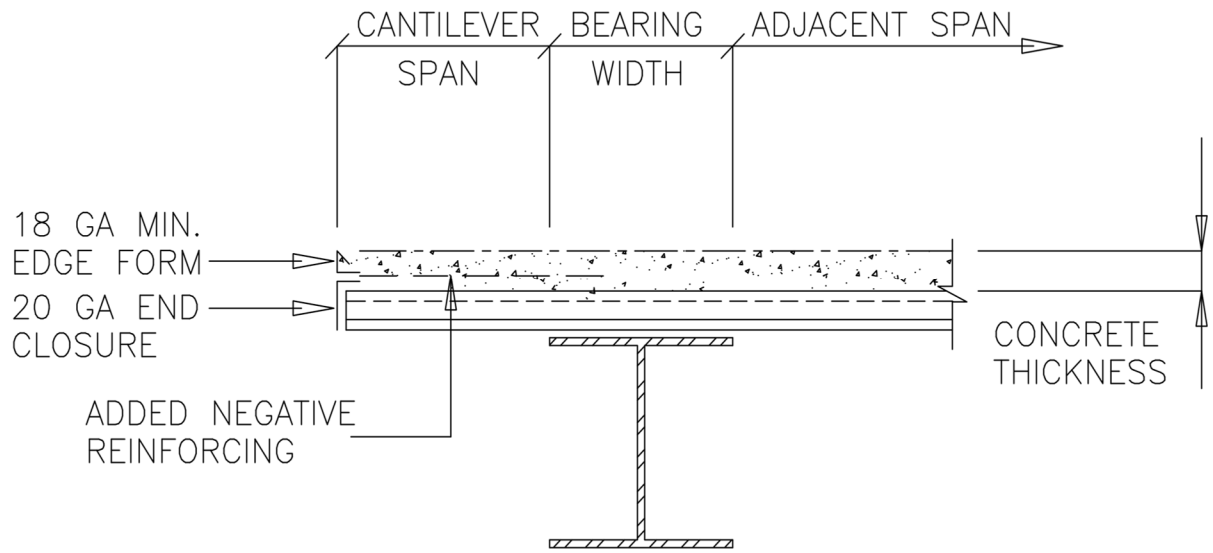
1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# CANTILEVER SPANS

| DECK TYPE | | | CONCRETE THICKNESS | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2" | 2 1/2" | 3" | 3 1/2" | 4" | 4 1/2" |
| BDW | 22 | (0.0299") | 2-0 | 1-11 | 1-11 | 1-10 | 1-10 | 1-9 |
| | 20 | (0.0359") | 2-6 | 2-5 | 2-4 | 2-3 | 2-2 | 2-2 |
| | 18 | (0.0478") | 3-2 | 3-1 | 2-11 | 2-10 | 2-9 | 2-9 |
| | 16 | (0.0598") | 3-9 | 3-8 | 3-6 | 3-5 | 3-3 | 3-2 |
| 2DW | 22 | (0.0299") | 2-8 | 2-7 | 2-6 | 2-6 | 2+5 | 2-4 |
| | 20 | (0.0359") | 3-4 | 3-2 | 3-1 | 30 | 2-11 | 2-10 |
| | 18 | (0.0478") | 4-4 | 4-2 | 4-0 | 3-11 | 3-9 | 3-8 |
| | 16 | (0.0598") | 5-1 | 4-11 | 4-9 | 4-7 | 4-5 | 4-3 |
| 3DW | 22 | (0.0299") | 3-9 | 3-7 | 3-6 | 3-5 | 3-4 | 3-3 |
| | 20 | (0.0359") | 4-6 | 4-4 | 4-2 | 4-1 | 3-11 | 3-10 |
| | 18 | (0.0478") | 5-8 | 5-6 | 5-3 | 5-1 | 4-11 | 4-10 |
| | 16 | (0.0598") | 6-8 | 6-4 | 6-1 | 5-11 | 5-9 | 5-7 |

1. NEGATIVE REINFORCING STEEL IS REQUIRED AT CANTILEVER AREAS.
2. CANTILEVER SPAN IS BASED ON NORMAL WEIGHT CONCRETE.
3. CANTILEVER SPAN IS NOT TO EXCEED 1/3 OF ADJACENT SPAN.
4. CONCRETE THICKNESS IS FROM TOP OF CONCRETE TO DECK TOP FLUTE
5. TABLE IS PROVIDED AS REFERENCE ONLY AND NOT INTENDED TO REPLACE ENGINEERS REQUIREMENTS

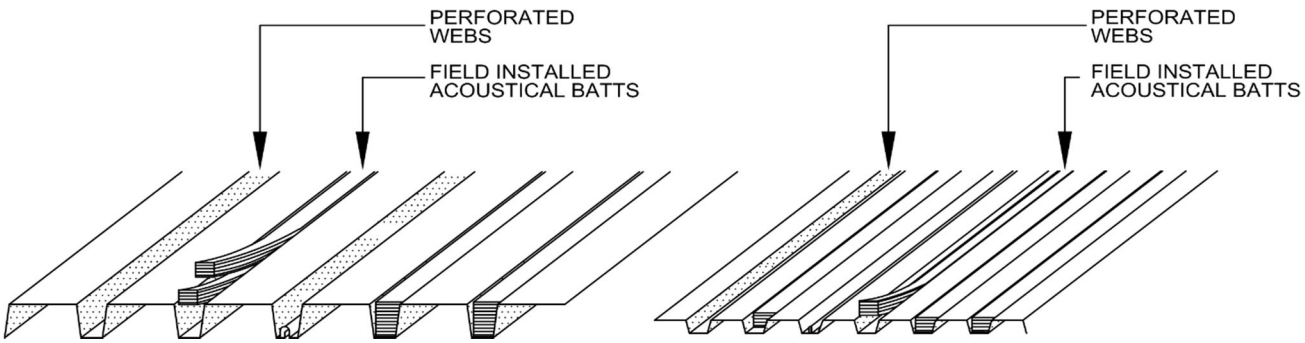


1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# BDW/NDW Acoustical Deck

Where noise is an issue Deck West offers an acoustical decking in both the NDW and BDW profiles. Vertical webs are perforated and low flutes are filled with insulation strips, (field installed) to provide one of the quietest decks available, absorbing up to 65 to 80% of the sound striking the deck.



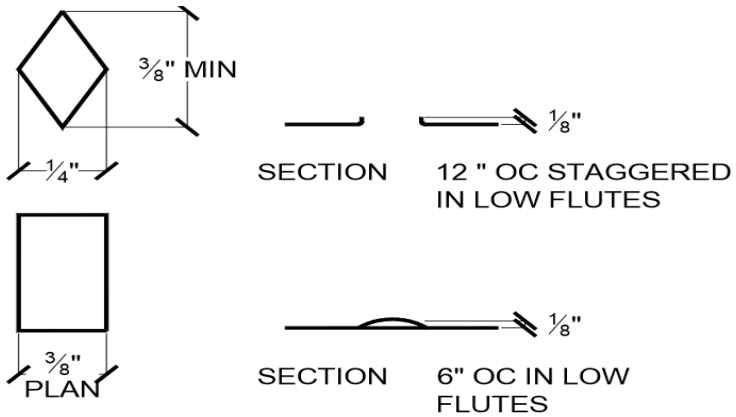

## Acoustical Information

| | ABSORPTION COEFFICIENTS | | | | | | NRC |
|---|---|---|---|---|---|---|---|
| DECK TYPE | 125 | 250 | 500 | 1000 | 2000 | 4000 | |
| BDW | 0.18 | 0.56 | 0.78 | 0.88 | 0.39 | 0.22 | 0.8 |
| NDW | 0.29 | 0.75 | 0.88 | 0.9 | 0.48 | 0.29 | 0.85 |

NRC DETERMINED BY TESTS IN COMPLIANCE WITH ANSI C423 84a AND ASTM E795 TEST CRITERIA
SECTION MODULUS (S) VALUES ARE UNCHANGED AND MOMENT OF INERTIA (I) VALUES ARE CHANGED LESS THAN 5%

## Venting

Venting is often used to provide ventilation for structural concrete and insulating concrete. Decking should be vented when the slab may be exposed to water after construction or covered with a membrane. Venting allows for the dissipation of residual water.



1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# Underwriters' Laboratories, Inc.- Fire Ratings

All of Deck West deck units have been tested by Underwriters Laboratories, Inc. and are tested in a wide variety of designs in the U.L. Fire Resistance Directory. The following is a partial list of Deck West's Floor and ceiling approvals involving only the most economical and popular assemblies.

Fire Resistance – Underwriters' Laboratories Listings

## Table of Restraint Ratings

| FIRE RATED | U.L. DESIGN # | LISTED | CONCRETE TYPE AND THICKNESS | FIREPROOFING FOR SLAB |
|---|---|---|---|---|
| 1 - HOUR | D743 | 2DW, 3DW | 2" NW/LW | CEMENTITIOUS |
| | D916 | BDW, 2DW, 3DW, INV BDW | 3 1/2" NW, 2 1/2" LW | NONE |
| | D858 | 2DW, 3DW | 2 1/2" NW/LW | FIBER |
| | D859 | 2DW, 3DW | 2" NW/LW | FIBER |
| | D902 | BDW, 2DW, 3DW, 1 1/2 INV BDW | 3 1/2" NW, 2 1/2' LW | NONE |
| | D914 | BADW, BDW, 2DW, 3DW | 2 1/2" NW/LW | NONE |
| 2 - HOUR | D712 | 2DW, 3DW | 2 1/2" NW/LW | CEMENTITIOUS |
| | D722 | 2DW, 3DW | 2 1/2" NW/LW | CEMENTITIOUS |
| | D739 | BDW, 2DW, 3DW | 2 1/2" NW/LW | CEMENTITIOUS |
| | D743 | 2DW, 3DW | 2" NW/LW | CEMENTITIOUS |
| | D826 | BDW, 2DW, 3DW | 3 1/4" LW | FIBER |
| | D832 | BDW, 2DW, 3DW | 2 1/2" NW/LW | FIBER |
| | D840 | BDW, 2DW, 3DW | 3 1/4" LW | NONE |
| | D858 | 2DW, 3DW | 2 1/2" NW/LW | FIBER |
| | D859 | 2DW, 3DW | 2" NW/LW | FIBER |
| | D916 | BDW, 2DW, 3DW | 4 1/2" NW, 3 1/4" LW | NONE |
| | D902 | BDW, 2DW, 3DW, INV BDW | 4 1/2" NW, 3 1/4" LW | NONE |
| | D907 | 2DW, 3DW | 3 1/4" LW | NONE |
| 3 - HOUR | D703 | 2DW, 3DW | 2 1/2" NW/LW | CEMENTITIOUS |
| | D708 | BDW, 2DW, 3DW | 2 1/2" NW/LW | CEMENTITIOUS |
| | D832 | BDW, 2DW, 3DW | 2 1/2" NW/LW | FIBER |
| | D858 | 2DW, 3DW | 2 1/2" NW/LW | FIBER |
| | D859 | 2DW, 3DW | 2" NW/LW | FIBER |
| | D916 | BDW, 2DW, 3DW | 5 1/4" NW, 4 7/16" LW | NONE |
| | D902 | BDW, 2DW, 3DW, INV BDW | 5 1/4" NW, 4 7/16" LW | NONE |

ALWAYS REFER TO THE LATEST EDITION OF THE U.L. FIRE RESISTANCE INDEX AND/OR LATEST INDIVIDUAL DESIGN CARDS FOR FIREPROOFING THICKNESS' AND/OR OTHER REQUIREMENTS.

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# Factory Mutual Approvals

Deck West 1 ½“ BDW and 3” NDW decks are Factory Mutual (FM) approved as metal roof decks under FM class 1 fire and I-90 windstorm rating. See the table below for FM approved spans.


| DECK TYPE | DECK GAUGE | | | |
|---|---|---|---|---|
| | 22 | 20 | 18 | 16 |
| BDW | 5'-9" | 6'-6" | 7'-9" | 9'-0" |
| NDW | x'-xx" | x'-xx" | x'-xx" | x'-xx" |

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# Concrete Volumes

| VOLUME OF CONCRETE, CUBIC FEET PER AREA (ft3/ft2) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DECK TYPE | THICKNESS OVER TOP OF DECK | | | | | | | |
| | 2" | 2 1/2" | 3" | 3 1/4" | 3 1/2" | 4" | 4 3/16" | 4 1/2" |
| BDW | - | 0.255 | 0.297 | 0.318 | 0.339 | 0.38 | 0.396 | 0.422 |
| 2DW | 0.25 | 0.292 | 0.333 | 0.354 | 0.375 | 0.417 | 0.432 | 0.458 |
| 3DW | 0.292 | 0.333 | 0.375 | 0.396 | 0.417 | 0.458 | 0.474 | 0.5 |
| NDW | - | 0.279 | 0.32 | 0.314 | 0.362 | 0.404 | 0.419 | 0.445 |
| FLAT SLAB | 0.166 | 0.208 | 0.25 | 0.271 | 0.292 | 0.333 | 0.349 | 0.375 |

1. THE CONCRETE VOLUMES LISTED ARE BASED ON THE DEPTHS SHOWN. NO ALLOWANCE HAS BEEN MADE FOR FRAME OR DECK DEFLECTION.
2. TO CALCULATE VOLUMES OF SLABS THICKER THAN SHOWN IN TABLE, ADD VOLUME OF FLAT SLAB OF SAME THICKNESS AS THE DIFFERENCE BETWEEN THE THICKNESS OF SLAB DESIRED AND ON GIVEN IN TABLE

# Structural Concrete Minimum Reinforcing

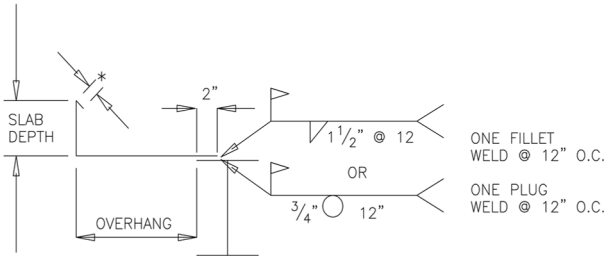
| SLAB THICKNESS (INCHES ABOVE DECK TOP FLUTE | 6 BY 6 WELED WIRE FABRIC (WIRE SIZE) |
|---|---|
| 3 1/4" OR LESS | 6x6 W1.4xW1.4 |
| 3 1/2 | 6x6 W1.7x1.7 OR 6x6 W2.1xW2.1 |
| 4 | 6x6 W2.1x2.1 |
| 4 1/2 | 6x6 W2.5x2.5 or 6x6 W2.9xW2.9 |
| 5 | 6x6 W2.9xW2.9 |
| 5 1/2 | 6x6 W2.9xW2.9 |
| 6 | 6x6 W3.4xW3.4 OR 6x6 W/D4xW/D4 |

1. A 6x6 WELDED WIRE FABRIC SHRINKAGE MESH, LOCATED 1" FROM THE TOP OF THE CONCRETE SLAB, IS RECOMMENDED FOR ALL SLAB THICKNESSES. APPLY TO BOTH STONE AND LIGHTWEIGHT CONCRETE.
2. OTHER REINFORCEMENT HAVING AN EQUIVALENT AREA AND MAXIMUM SPACING OF 18" MAY BE SUBMITTED.
3. FIBERMESH CAN BE USED AS AN ALTERNATE TO WELDED WIRE FABRIC, SEE ICBO # 4811.

# Edge Forms

| SLAB DEPTH | OVERHANG INCHES | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 4" | 20 | 20 | 20 | 20 | 18 | 18 | 16 | 14 | 12 | 12 | 12 |
| 4 1/2" | 20 | 20 | 20 | 18 | 18 | 16 | 16 | 14 | 12 | 12 | 12 |
| 5" | 20 | 20 | 18 | 18 | 16 | 16 | 14 | 14 | 12 | 12 | 10 |
| 5 1/2" | 20 | 18 | 18 | 16 | 16 | 14 | 14 | 12 | 12 | 12 | 10 |
| 6 | 18 | 18 | 16 | 16 | 14 | 14 | 12 | 12 | 12 | 10 | 10 |
| 6 1/2" | 18 | 16 | 16 | 14 | 14 | 12 | 12 | 12 | 12 | 10 | 10 |
| 7 | 16 | 16 | 14 | 14 | 12 | 12 | 12 | 12 | 10 | 10 | 10 |
| 7 1/2" | 16 | 16 | 14 | 12 | 12 | 12 | 12 | 10 | 10 | 10 | 1/4 PLATE |

1. ½" RETURN LIP REQUIRED FOR 16 GAUGE AND LIGHTER FORM.
2. TABLES BASED ON NORMAL WEIGHT CONCRETE WITH ½" MAXIMUM HORIZONTAL AND VERTICAL DEFLECTIONS.
3. TABLE IS PROVIDED AS REFERENCE ONLY AND NOT INTENDED TO REPLACE THE ENGINEERS REQUIREMENTS.




EDGE FORM

DECK WEST, INC.
PRODUCTION ORDER



| | |
|---|---|
| CUSTOMER #: | WORK ORDER #: |
| CUSTOMER: | JOB NAME: |
| | PURCHASE ORDER #: |
| | DATE REQUESTED: |
| CONTACT / PHONE: | |
| SHIP TO: | TAXABLE SALE: |
| | |
| | ADD TO ROLL SEQUENCE: |

## MATERIAL REQUIREMENTS

| TYPE | GUAGE | GALV. | CODE: | | EXTRA CHARGE: $1.00/SQ | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | EMBOSSING | | VENTS | | SIDE SEAM ATTACHMENT | | |
| | | | YES | NO | YES | NO | BUTTON PUNCH | WELD | SCREW |

| U.L. LABELS | | FM LABELS | | MILL CERTS | |
|---|---|---|---|---|---|
| YES | NO | YES | NO | YES | NO |

| BUNDLE # | # OF BUNDLES | PIECES REQUIRED | LENGTH FT & INCHES | LENGTH INCHES | SQUARES | WEIGHT | NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | TOTAL THIS SHEET |
| | | | | | | | SQ _____ |
| | | | | | | | WT _____ |
| | | | | | | | |

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700



# GENERAL NOTES

The following notes apply to the load tables and diaphragm shear tables.

1. Section properties have been computed in accordance with the American Iron and Steel Institute (AISI), North American Specification for the Design of Cold-Formed Steel Structural Members. All materials are subject to AISI tolerances. Weights shown are approximations for design purposes.

2. Arch spot or arc seam (puddle welds) shall have an effective fusion area, to supporting members equivalent to at least 3/8"x1" or ½" in diameter. Arch spot welds may be eliminated where they coincide with shear studs.

3. Deck shoud bear on support a minimum of 2" at perpendicular bearing and ½" minimum at parallel bearing conditions.

4. Seam attachment for composite deck profiles to be a minimum button punch at 30" OC or a #10 side lap "stitch" screw.

5. The minimum 28 day compressive strength for structural concrete shall be 3000 psi. The minimum depth of concrete shall be 2" over the top flute and is to be reinforced with a minimum 6x6 W1.4xW1.4 welded wire fabric or fibermesh.

6. All decks with structural concrete fill may be considered rigid diaphragms, flexibility f<1.0.

7. Seam welds for non-composite profiles are to be a minimum of 1 ½" long.

8. Where individual panels are cut, the partial panel shall be fasted as to fully transfer the shear at the point of the diaphragm to the adjacent full panels for the values specified in the tables.

9. No suspended ceiling, light fixtures, ducts, or utilities shall be supported by the metal deck without approval from the Engineer of Record (EOR)

10. Minimum E60XX or E70XX filler metal complying with the appropriate AWS standard must be used. Weld requirements must comply with the American Welding Society (AWS) D1.3. Prior to proceeding with the welding the welder shall demonstrate his/her ability to produce the prescribed weld satisfactory to the welding inspector.

11. Diaphragm shear values are the working values and are not to be increased for short duration lateral loading.

12. Typical deck manufacturing tolerances:
    Panel length ± ½"
    Panel Width -3/8" +3/4"
    Panel camber or sweep ¼" per 10' length
    Panel end square 1/8" per foot of panel width

13. Weld washers are not required for fastening Deck West products.

14. Where underside areas of floors or roofs will be left exposed, deck of 20 ga or heavier should be considered. Construction traffic, where excessive, can cause unsightly conditions that result in customer dissatisfaction. As a further precaution, design drawings should advise the contractor of exposed underside areas, on the structural drawing so that suitable precautions can be taken.

15. Admixtures containing chlorides must not be used with galvanized deck.

16. End labs of BDW and BDW+SHEARCORR should be lapped a minimum of 2" at interior supports. Composite decks should be butted to allow for stud welding.

17. Alternative Fastenign Methods:

    For attachment of decking other than welding refer to the following technical information
    Steel Deck Institute Dipharagm Design Manual DDM03

| ICC-ES Report # | Company |
|---|---|
| 2197 | HILTI Fastening systems |
| 2776 | HILTI Fastening systems |
| 4373 | HILTI Fastening systems |
| 3829 | PNEUTECK |
| 3056 | ITW BUIDEX |

18. Definition of symbols

| | |
|---|---|
| BP | = Button Punch |
| TSW | = Top Seam Weld |
| SSW | = Side Seam Weld |
| S | = Carrying capacity at allowable design stress ($lbs/ft^2$) |
| Δ | = Carrying capacity at L/180, deflection limitations ($lbs/ft^2$) |
| L | = Span (ft) |
| W | = Uniform vertical load ($lbs/ft^2$) |
| S± | = Section modulus ($in^3/ft$) |
| I | = Moment of Inertia ($in^4/ft$) |
| E | = Modulus of Elasticity of steel 29,500 ksi |
| q | = allowable shear (lbs/ft) |
| F | = Flexibility Factor": The Average micro-inches a diaphragm web will deflect in a span of 1 foot under a shear of 1 pound per foot. |
| R | = Ratio of intermediate panel supports to overall panel length, Lv/Ltotal. (R for three span deck = 1/3) |

1900 SANGUINETTI LANE
STOCKTON, CA 95205
(209) 939-9700

DECK WEST

# STEEL DECK SPECIFICATIONS

**PART 1 GENERAL**

1.01 WORK INCLUDED

FURNISH AND INSTALL STEEL DECKING AS DEFINED BY THE CONTRACT DOCUMENTS, INDICATING BASIC LAYOUT AND DECK UNIT TYPES.

1.02 WORK INCLUDED

1. SECTION 3200 – CONCRETE REINFORCEMENT
2. SECTION 3300 – CONCRETE
3. SECTION 5100 – STRUCTURAL STEEL FRAMING
4. SECTION 5200 – STEEL JOISTS
5. SECTION 7250 – FIREPROOFING
6. SECTION 9900 – PAINTING

1.03 WORK INCLUDED

1. SECTION 7500 – ACOUSTICAL BATTS

1.04 QUALITY ASSURANCE

CODES/STANDARDS – THE WORK AND MATERIALS OF THIS SECTION SHALL COMPLY WITH:

1. AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
2. AWS D1.1 & D1.3 "SPECIFICATION
3. ASTM REFERENCE
   a. ASTM A653 – STEEL SHEET/ZINC COATED
4. ICC-ES EVALUATION REPORT ESR-2050
5. UNDERWRITERS LABORATORY – FIRE RESISTANCE DIRECTORY

1.05 QUALITY ASSURANCE

1. SHOP DRAWINGS: INDICATE DECK PLAN, SUPPORT LOCATIONS, OPENINGS, DIMENSIONS, ACCESSORIES AND TYPE OF LOCATION OF WELDS.

1.06 PRODUCT HANDLING

1. METAL DECKING IS TO BE DELIVERED, STORED AND HANDLED IN A MANNER THAT WILL ASSURE ITS SHAPE AND SURFACE INTEGRITY.
2. STORE DECK OFF GROUND WITH ONE END ELEVATED FOR DRAINAGE.
3. COVER DECK WITH A WATER RESISTANT MATERIAL TO PROTECT AGAINST THE ELEMENTS.

**PART 2 PRODUCTS**

2.01 MATERIALS AND FINISHES

COMPOITE FLOOR DECK SHALL BE PROVIDED IN CONFIGURATION AS MANUFCTURED BY DECK WEST, INC., AND SHALL HAVE DEFORMATION TO PROVIDE A MECHANICAL BOUND WITH THE CONCRETE.

1. 3DW (16,18,20,22) GA 3" DEEP x 36"
2. 2DW (16,18,20,22) GA 2" DEEP x 36"
3. BDW (16,18,20,22) GA 1 ½" DEEP x 36"

STEEL ROOF DECK SHALL BE PROVIDED IN CONFIGURATION AS MANUFACTURED BY DECK WEST

1. BDW (16,18,20,22) GA 1 ½" DEEP x 36"
   (SPECIFY ACOUSTICAL IF REQUIRED)
2. BDW (16,18,20,22) GA 1 ½" DEEP x 36" W/ 18 GA SHEARCORR STIFFENER. (SPECIFY ACOUSTICAL IF REQUIRED)
3. NDW (16,18,20,22) GA 3" DEEP x 24"
   (SPECIFY ACOUSTICAL IF REQUIRED)

ACOUSTICAL DECK TO HAVE VERTICAL WEBS PERFORATED WITH 1/8" DIAMETER HOLES STAGGERED ON 3/8" CENTERS.
(SPECIFY DECK TYPES 1,2,3 ABOVE IF REQUIRED)

2.02 DECK UNIT COIL MATERIAL

1. SHEET STEEL CONFORMING TO ASTM A653, Fy=46000 psi WITH GALVANIZED COATING (AS PER REQUEST)

2.03 FABRICATION

1. MANUFACTURE DECK UNITS TO SUIT JOB APPLICATION. IN GENERAL DECKS FORMED TO MEET 3-SPAN SUPPORT CONDITION. DECKS FABRICATED WITH STANDARD INTERLOCKING SEAM, ALLOWING BUTTON PUNCH CONNECTION, TOP SEAM WELD OR SCREW SIDE SEAM CONNECTION IN BDW, NDW, 2DW AND 3DW.

2. FABRICATE STEEL DECK ACCESSORIES FROM THE SAME GAUGE AND MATERIAL AS ADJACENT STEEL DECK.

**PART 3 EXECUTION**

3.01 INSPECTION

VERIFY SUPPORTING MEMBER ARE CORRECTLY LAID OUT AND ALIGNED AND FREE OF DEBRIS. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.02 INSTALLATION

1. INSTALL DECK UNITS AND ACCESSORIES IN ACCORDANCE WITH APPROVED SHOP DRAWINGS.

2. PLACE DECK UNITS OR SUPPORTING MEMBERS AND ADJUST TO PROPER ALIGNMENT. VERIFY PROPER BEARING ON SUPPORTING MEMBERS AN ACCURATE ALIGNMENT OF END LAPS AND SIDE LAPS PRIOR TO PERMANENT ATTACHMENT.

3. FASTEN STEEL DECK SUPPORTING MEMBERS WITH ½" EFFECTIVE DIAMETER FUSION WELDS. IF STUDS ARE WELDED THROUGH DECK (UN-SHORED CONSTRUCTION ONLY), THE STUDS CAN REPLACE FUSION WELDS.

4. FASTEN SIDE LAPS BY BUTTON PUNCHING, TOP SEAM WELD, SIDE SEAM WELD OR USE OF SCREW TYPE FASTENERS.

5. ALL WELDING SHALL CONFORM TO AWS D1.1 AND D1.3. WELDERS SHALL BE CERTIFIED PRIOR TO COMMENCING WORK.