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Profiles &  
Properties

Technical  
Guidelines

B  
FORMLOK™

W2  
FORMLOK™

W3  
FORMLOK™

N  
FORMLOK™

W2/W3  
NO FILL

VERCOR™

Cellular  
FORMLOK™

| Type               | Profile<br>(dimensions in inches) | Gage Weight<br>Galv<br>psf<br><i>N/m<sup>2</sup></i> | Section Properties<br>per ft (m) of width      |                                                  |                                                  |
|--------------------|-----------------------------------|------------------------------------------------------|------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
|                    |                                   |                                                      | I<br>in. <sup>4</sup><br><i>mm<sup>4</sup></i> | + S<br>in. <sup>3</sup><br><i>mm<sup>3</sup></i> | - S<br>in. <sup>3</sup><br><i>mm<sup>3</sup></i> |
| DEEP<br>VERCOR™    |                                   | 26<br>1.1<br>52.7                                    | 0.073<br>99,688                                | 0.099<br>5,323                                   | 0.103<br>5,538                                   |
|                    |                                   | 24<br>1.4<br>67.0                                    | 0.098<br>133,828                               | 0.138<br>7,419                                   | 0.140<br>7,527                                   |
|                    |                                   | 22<br>1.7<br>81.4                                    | 0.123<br>167,967                               | 0.175<br>9,409                                   | 0.174<br>9,355                                   |
|                    |                                   | 20<br>2.1<br>100.5                                   | 0.143<br>195,279                               | 0.207<br>11,129                                  | 0.206<br>11,075                                  |
|                    |                                   | 28<br>0.9<br>43.1                                    | 0.012<br>16,387                                | 0.037<br>1,989                                   | 0.039<br>2,097                                   |
| SHALLOW<br>VERCOR™ |                                   | 26<br>1.0<br>47.9                                    | 0.013<br>17,753                                | 0.042<br>2,258                                   | 0.044<br>2,366                                   |
|                    |                                   | 24<br>1.3<br>62.2                                    | 0.017<br>23,215                                | 0.059<br>3,172                                   | 0.059<br>3,172                                   |
|                    |                                   | 22<br>1.6<br>76.6                                    | 0.023<br>31,409                                | 0.074<br>3,978                                   | 0.074<br>3,978                                   |

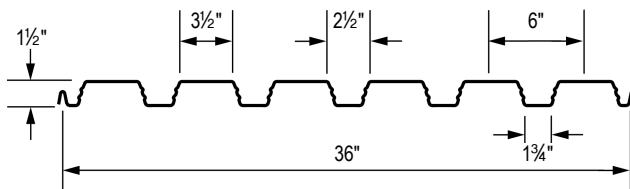
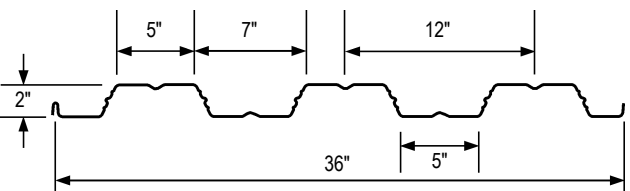
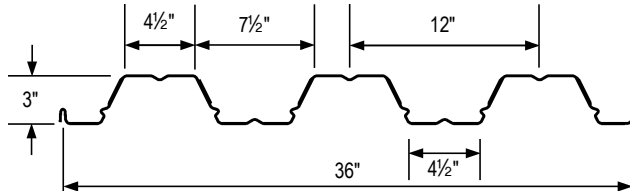
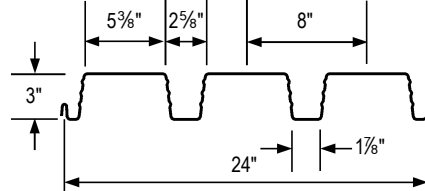
1. Section properties have been computed in accordance with the “Specification for the Design of Cold-Formed Steel Structural Members” published by AISI. The section properties are based on the following steel strengths:

| Profile           | Minimum Yield Strength ( $F_y$ )    | Bending Strength ( $F_b$ )            |
|-------------------|-------------------------------------|---------------------------------------|
| All FORMLOK™ Deck | 38 ksi (262,000 kN/m <sup>2</sup> ) | 22.8 ksi (157,200 kN/m <sup>2</sup> ) |
| Deep VERCOR™      | 80 ksi (551,581 kN/m <sup>2</sup> ) | 36.0 ksi (248,211 kN/m <sup>2</sup> ) |
| Shallow VERCOR™   | 50 ksi (344,738 kN/m <sup>2</sup> ) | 30.0 ksi (206,843 kN/m <sup>2</sup> ) |

2. Section properties and values shown apply to all available widths.
3. Material thickness is subject to AISI tolerances. See ICBO Report ER-2078P for decimal thickness of material.
4. Weights shown are approximations for design purposes.
5. All dimensions are nominal and are subject to manufacturing tolerances.

| Metric Conversions |    |       |     |       |     |
|--------------------|----|-------|-----|-------|-----|
| in.                | mm | in.   | mm  | in.   | mm  |
| 9/16               | 14 | 2 1/8 | 54  | 6     | 152 |
| 7/8                | 22 | 2 1/2 | 64  | 7     | 178 |
| 1                  | 25 | 2 5/8 | 67  | 7 1/2 | 191 |
| 1 5/16             | 33 | 3     | 76  | 8     | 203 |
| 1 1/2              | 38 | 3 1/2 | 89  | 12    | 305 |
| 1 3/4              | 44 | 4 1/2 | 114 | 24    | 610 |
| 1 7/8              | 48 | 5     | 127 | 36    | 914 |
| 2                  | 51 | 5 3/8 | 137 |       |     |



| Gage | Weight                        |                               | Section Properties                        |                                           |                                           | Profile<br>(dimensions in inches)                                                    | Type                          |
|------|-------------------------------|-------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------|
|      | Galv                          | Phos/<br>Painted              | per ft (m) of width                       |                                           |                                           |                                                                                      |                               |
|      |                               |                               | I                                         | + S                                       | – S                                       |                                                                                      |                               |
|      | psf<br><i>N/m<sup>2</sup></i> | psf<br><i>N/m<sup>2</sup></i> | in. <sup>4</sup><br><i>mm<sup>4</sup></i> | in. <sup>3</sup><br><i>mm<sup>3</sup></i> | in. <sup>3</sup><br><i>mm<sup>3</sup></i> |                                                                                      |                               |
| 22   | 1.9<br>91.0                   | 1.8<br>86.2                   | 0.175<br>238,978                          | 0.187<br>10,054                           | 0.198<br>10,645                           |    | PLB™ FORMLOK™<br>B FORMLOK™   |
| 20   | 2.3<br>110.1                  | 2.2<br>105.3                  | 0.216<br>294,967                          | 0.235<br>12,634                           | 0.248<br>13,333                           |                                                                                      |                               |
| 18   | 2.9<br>138.9                  | 2.8<br>134.1                  | 0.302<br>412,408                          | 0.322<br>17,312                           | 0.335<br>18,011                           |                                                                                      |                               |
| 16   | 3.5<br>167.6                  | 3.4<br>162.8                  | 0.377<br>514,827                          | 0.411<br>22,097                           | 0.417<br>22,419                           |                                                                                      |                               |
| 22   | 1.8<br>86.2                   | 1.7<br>81.4                   | 0.340<br>464,300                          | 0.283<br>15,215                           | 0.287<br>15,430                           |   | PLW2™ FORMLOK™<br>W2 FORMLOK™ |
| 21   | 2.0<br>95.8                   | 1.9<br>91.0                   | 0.382<br>521,655                          | 0.321<br>17,258                           | 0.328<br>17,634                           |                                                                                      |                               |
| 20   | 2.1<br>100.5                  | 2.0<br>95.8                   | 0.423<br>577,644                          | 0.361<br>19,408                           | 0.370<br>19,892                           |                                                                                      |                               |
| 19   | 2.4<br>114.9                  | 2.3<br>110.1                  | 0.508<br>693,719                          | 0.442<br>23,763                           | 0.453<br>24,355                           |                                                                                      |                               |
| 18   | 2.7<br>129.3                  | 2.5<br>119.7                  | 0.555<br>757,901                          | 0.510<br>27,419                           | 0.511<br>27,473                           |                                                                                      |                               |
| 16   | 3.3<br>158.0                  | 3.1<br>148.4                  | 0.694<br>947,718                          | 0.639<br>34,355                           | 0.639<br>34,355                           |                                                                                      |                               |
| 22   | 1.9<br>91.0                   | 1.8<br>86.2                   | 0.718<br>980,492                          | 0.418<br>22,473                           | 0.444<br>23,871                           |  | PLW3™ FORMLOK™<br>W3 FORMLOK™ |
| 21   | 2.1<br>100.5                  | 2.0<br>95.8                   | 0.837<br>1,142,997                        | 0.495<br>26,613                           | 0.531<br>28,548                           |                                                                                      |                               |
| 20   | 2.3<br>110.1                  | 2.2<br>105.3                  | 0.896<br>1,223,567                        | 0.534<br>28,709                           | 0.564<br>30,322                           |                                                                                      |                               |
| 19   | 2.7<br>129.3                  | 2.6<br>124.5                  | 1.075<br>1,468,007                        | 0.674<br>36,236                           | 0.683<br>36,720                           |                                                                                      |                               |
| 18   | 2.9<br>138.9                  | 2.7<br>129.3                  | 1.203<br>1,642,802                        | 0.767<br>41,236                           | 0.767<br>41,236                           |                                                                                      |                               |
| 16   | 3.5<br>167.6                  | 3.3<br>158.0                  | 1.509<br>2,060,672                        | 0.960<br>51,612                           | 0.960<br>51,612                           |                                                                                      |                               |
| 22   | 2.2<br>105.3                  | 2.1<br>100.5                  | 0.613<br>837,105                          | 0.361<br>19,408                           | 0.446<br>23,978                           |  | PLN™ FORMLOK™<br>N FORMLOK™   |
| 20   | 2.6<br>124.5                  | 2.5<br>119.7                  | 0.780<br>1,065,159                        | 0.466<br>25,054                           | 0.548<br>29,462                           |                                                                                      |                               |
| 18   | 3.5<br>167.6                  | 3.4<br>162.8                  | 1.146<br>1,564,964                        | 0.664<br>35,699                           | 0.737<br>39,623                           |                                                                                      |                               |
| 16   | 4.2<br>201.1                  | 4.1<br>196.3                  | 1.542<br>2,105,737                        | 0.851<br>45,752                           | 0.914<br>49,139                           |                                                                                      |                               |



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# FORMLOK™ DECK TECHNICAL GUIDELINES

VERCO FORMLOK floor decks provide savings by the elimination of temporary forms and shoring, immediate use of the deck as a working platform for all trades, positive reinforcing of the one-way slab due to the mechanical bond between the deck and the concrete; thus creating an effective composite slab. FORMLOK deformations and indentations have been specifically designed to provide the maximum dual action for vertical loading.

## FORMLOK Composite Slabs

The tables on pages 36–107 list the Allowable Superimposed Loads. This is the uniform load in addition to the weight of concrete and FORMLOK deck which the composite slab can support based on concrete with a minimum 28-day compressive strength of 3000 psi ( $20,684 \text{ kN/m}^2$ ).

The allowable superimposed loads listed in the tables are purposely limited to 300 psf ( $14,364 \text{ N/m}^2$ ) for PLB, B, PLN, and N FORMLOK deck and to 400 psf ( $19,152 \text{ N/m}^2$ ) for PLW2, W2, PLW3, and W3 FORMLOK deck. Contact the Verco Engineering Department when using heavier loads. Such loads often indicate conditions, such as concentrated or long-term loadings, that may require further evaluation.

**Note:** Vertical loads, such as allowable superimposed loads and deck or slab weights, are converted to  $\text{N/m}^2$  for ease of use.

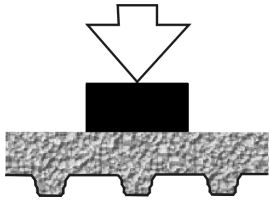
## Composite Slab Design Conditions

**Unshored:** The allowable superimposed loads are based on the composite slab acting as a one-way, simply supported concrete slab. The loads shown in the tables for unshored conditions are based on the lowest value of the following design considerations:

- A service load determined by assuming that 0.9 times the yield strain is reached at the top or bottom of the steel deck under the allowable superimposed load plus 1.2 times the composite slab dead load.
- The concrete compressive stress at the top of the slab limited to  $0.85 f'_c$ , or a strain of 0.003.
- The tensile stress at the top of the FORMLOK deck limited to yield.
- Shear-bond between the FORMLOK deck and the concrete determined by load tests performed on composite slab specimens with an average safety factor of 1.7 based on the variability of the test results.
- The immediate deflection of the composite slab limited to  $L/360$ .

**Shored:** The same design considerations apply to the shored conditions. However, the reaction load effect from the shore is applied to the composite slab as a reduction to the allowable superimposed load.

## Concentrated Loads



An approximate concentrated load capacity of FORMLOK slabs can be determined by comparing moments and shears from the allowable superimposed loads to those from the actual loading conditions (concentrated load plus actual uniform load).

Since the deck provides only positive reinforcing, composite slabs are assumed to be simple spans, even though the deck alone may be evaluated as multiple spans during construction. The published load capacity is based on a strip of slab 1 ft (305 mm) wide. A comparison of the allowable to the actual moments and shears determines the width of slab required to resist the loads. Distribution steel or other means to distribute the load may be required to allow an adequate width of slab to resist the load.

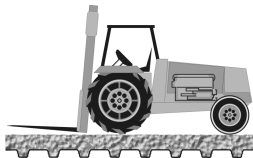
## Parking Structures



FORMLOK deck has been used successfully in parking structures. When used in such structures we suggest:

- **Do not** use where salt is used in snow or ice removal. Salt from vehicles may deteriorate the FORMLOK deck by penetrating the slab through cracks.
- A 3 in. (76 mm) minimum depth of concrete should be used over the top of the FORMLOK deck to allow more cover of rebar.
- Instead of mesh, use rebars perpendicular to the flutes of the deck as distribution steel and bars parallel to the FORMLOK deck flutes for shrinkage. Consider use of the parallel bars as negative steel.
- Seal the surface of the concrete slab to prevent water from seeping into the slab and deteriorating the deck.

## Moving/Vibratory Loads



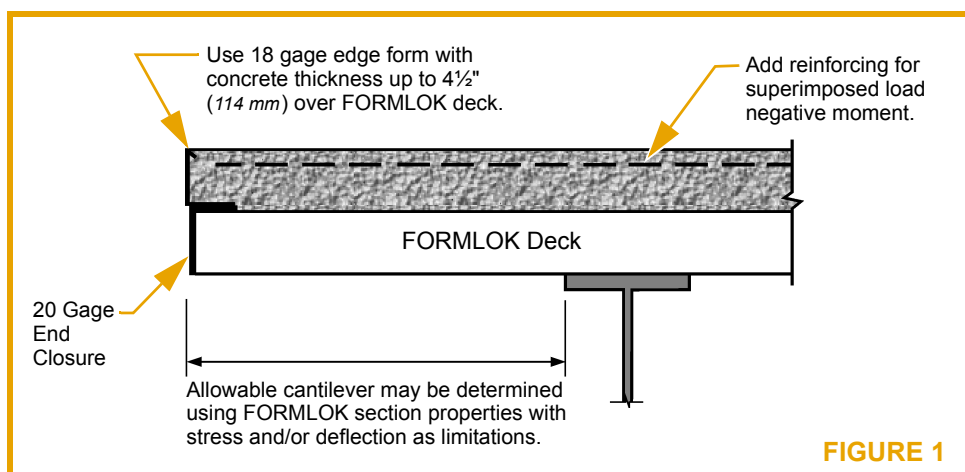
Allowable superimposed loads are based on static loading. FORMLOK composite slabs should not be used where heavy vibratory loads or heavy moving loads might occur. This type of load may be detrimental to the bond between the deck and concrete. Where moving loads such as forklifts occur, reinforced concrete design is suggested to carry the superimposed loads, with the deck acting as a permanent form.

## Hanging Loads

Where loads hanging from the slab are anticipated, the hangers should be embedded in the slab rather than connected to the deck. The FORMLOK slab selected should be evaluated based on the actual loading condition including the concentrated load from the hanger.

## Cantilevered FORMLOK Deck

If FORMLOK deck is cantilevered, it acts only as a form. The length of the cantilevers can be determined by using FORMLOK section properties. Negative steel should be added over the beam to prevent cracking and to reinforce the slab for superimposed loads. An alternate method is to select the FORMLOK deck alone to meet the total load requirements. See Figure 1.



## Reinforcing in Composite FORMLOK Slabs

Minimum mesh is to be 6 x 6 - W1.4 x W1.4 (152 x 152 - MW9 x MW9). If the concrete depth over the top of the FORMLOK deck exceeds 3¼ in. (83 mm), welded-wire fabric with an area equal to 0.00083 times the area of concrete fill over the FORMLOK deck is required to comply with ICBO Report ER-2078P. Building code requirements may exceed this minimum.

The mesh should be placed at the approximate centerline of the concrete depth over the top flute of the FORMLOK deck.

## Concrete Type

The decision to use normal weight (NW) or light weight (LW) concrete should be based on the relative costs and availability. The dead load of a FORMLOK composite slab varies considerably with concrete type. The deck tables list the concrete weight to be added to the deck weight.

**Note:** The concrete weight given in the tables does not include the allowance for deflection.

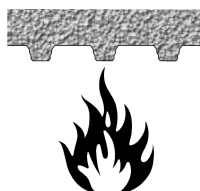
## Concrete Thickness

A minimum 2 in. (51 mm) thickness of concrete over the FORMLOK deck is required to achieve composite action. A minimum 2½ in. (64 mm) thickness is suggested for better coverage of shrinkage mesh and stiffness of the composite slab. Greater thickness may be required to meet fire ratings or specific load requirements.

## FORMLOK Vibrations

FORMLOK slab stiffness increases as the span to total slab depth ratio decreases. Span to depth ratios in the low- to mid-20s are suggested. Evaluation of floor vibrations must consider the entire floor assembly, including the supporting structure and the slab. "Floor Vibrations Due to Human Activity" (AISC Steel Design Guide Series 11) is one source of additional information.

## Fire-Rated FORMLOK Slabs



Composite slabs with FORMLOK deck may be used to meet hourly fire ratings. The type and thickness of concrete specified will determine whether fireproofing will be required on the underside of the FORMLOK deck. Typically 2½ in. (64 mm) of concrete over the top of the deck is required for fire ratings with fireproofing on the underside of the deck. Refer to the specific UL assembly, or use fireproofing manufacturer's data to determine fireproofing thickness required to meet a specific hourly rating requirement.

Table 1 summarizes the thickness of concrete required over the top of the FORMLOK deck to achieve restrained unprotected hourly ratings with no fireproofing on the deck. See specific UL assemblies for unrestrained hourly ratings.

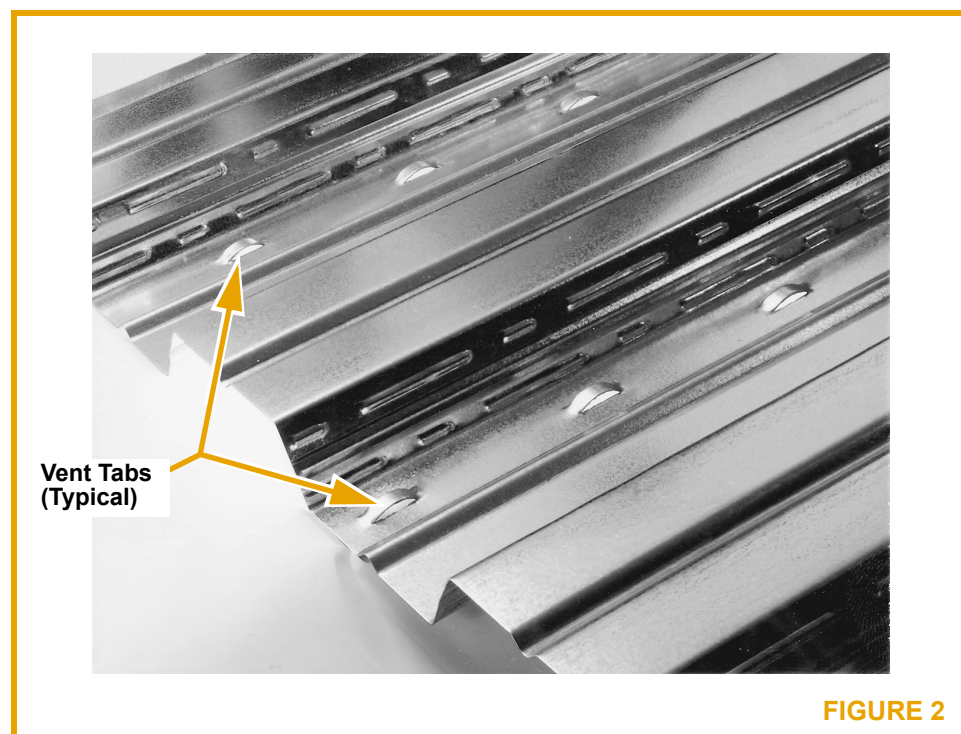
**Table 1: Unprotected Fire Resistance Rating  
Concrete Thickness over FORMLOK Deck**

| Restrained<br>Assembly<br>Rating | Normal Weight |     | Light Weight |     |
|----------------------------------|---------------|-----|--------------|-----|
|                                  | in.           | mm  | in.          | mm  |
| 1 Hour                           | 3½            | 89  | 2½           | 64  |
| 2 Hour                           | 4½            | 114 | 3¼           | 83  |
| 3 Hour                           | 5¼            | 133 | 4⅜           | 106 |

Refer to Table 8 on page 28 for a listing of UL fire-rated assemblies utilizing FORMLOK profiles. Refer to the particular UL assembly being considered for full details of construction, including specific information about concrete thickness and strength requirements, and span limitations.

### Venting FORMLOK Deck

FORMLOK deck is available with factory punched vent tabs to provide venting of the FORMLOK slab. Venting should be considered in any use. In particular, consider venting when vapor impervious materials are installed over the slab. Some leakage during concrete placement should be anticipated with vented deck.



Vent tabs projecting upwards are staggered in interior low flutes at approximately 6 in. (152 mm) on center:

- 5 rows in PLB and B FORMLOK.
- 3 rows in PLW2 and W2 FORMLOK and PLW3 and W3 FORMLOK (each low flute except at male side joint).
- 2 rows in PLN and N FORMLOK.



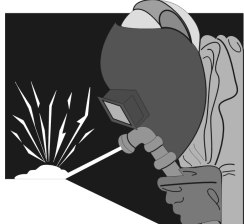
## Diaphragms with FORMLOK Deck

The diaphragm shear values in the FORMLOK deck tables are based on the attachment of the deck to the perpendicular supports with puddle welds. The weld patterns for each profile are shown in the illustrations included with the tables. The welds to the supports provide shear transfer between the deck and the structure. Increased diaphragm capacity may be achieved when shear studs are used. Refer to Table 5 on page 20 for further information about concrete diaphragms using shear studs.

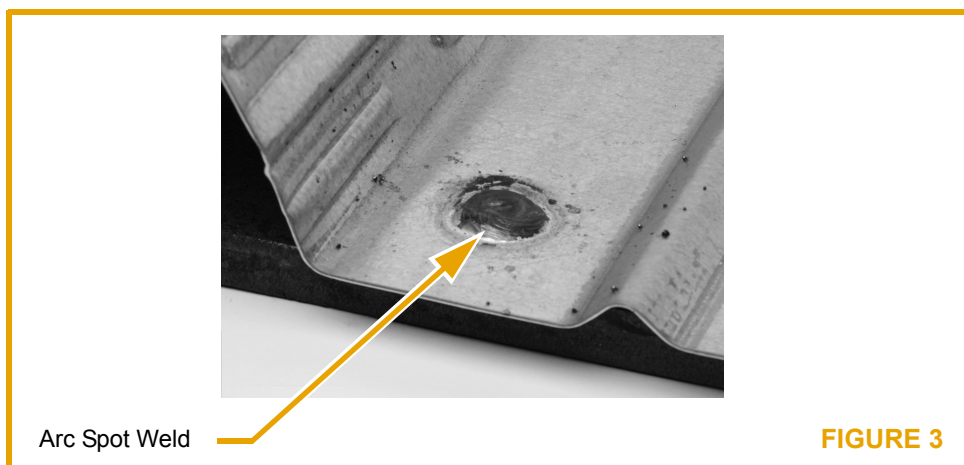
- Diaphragm values are the working values and are not to be increased one-third.
- The flexibility factor (F) is the number of microinches a diaphragm web will deflect in a span of 1 ft (305 mm) under a shear load of 1 pound per ft (14.6 N/m).
- Diaphragm shear values and flexibility factors apply to either FORMLOK deck or deck without deformations or indentations.
- Diaphragm capacities for deck fastened to supports with mechanical fasteners should be based on information furnished by the fastener manufacturer or based on the capacity of the concrete slab with shear studs.
- The diaphragm shear values and flexibility factors for decks with structural concrete fill apply whether the sidelaps are fastened or not. Sidelap connection is suggested to resist construction loads and to meet fire rating requirements.
- Diaphragm values for PLW2, W2, PLW3, and W3 FORMLOK decks used without concrete fill are on pages 114–117 and 122–125 of this catalog.

## Attachment of FORMLOK Deck

### Support Fastening



FORMLOK deck is to be welded to supports with welds having an effective fusion area of at least  $\frac{1}{2}$  in. (13 mm) diameter arc spot (puddle) welds or at least  $\frac{3}{8}$  in. x 1 in. long (10 mm x 25 mm) arc seam welds. Welds are to be spaced not more than 12 in. (305 mm) on center across the width of the unit for all FORMLOK decks.



### Shear Studs/Arc Spot Welds

Arc spot welds may be eliminated where they coincide with shear studs.



## Sidelap Connections

FORMLOK deck is to be fastened at the sidelap with the PunchLok tool, button punches, or 1½ in. (38 mm) long top seam welds at 36 in. (914 mm) on center maximum.

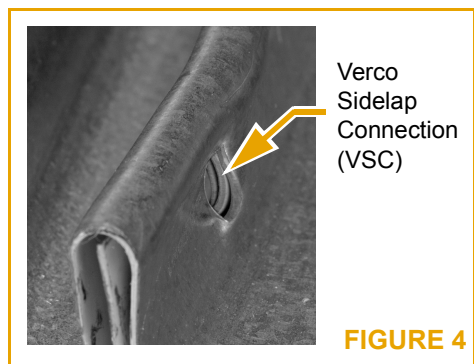


FIGURE 4

**PunchLok System:** Connect sidelaps of the PLB, PLW2, PLW3, and PLN FORMLOK decks with the Verco PunchLok tool. The PunchLok tool creates a positive connection between the male and female lips of the PunchLok composite decks. The connection made by the PunchLok tool is referred to as the VSC (Verco Sidelap Connection). An acceptable VSC connection has been made when the sidelap material has been sheared and offset so the sheared surface of the male leg is visible (Figure 4). The VSC connection may be made in either direction.

Vertical load carrying capacity of the PunchLok deck connections (VSCs) has been verified by testing. A 10 ft (3,050 mm) simple span of 20 gage, 1½ in. (38 mm) deep PLB deck was loaded with 138 psf (6,607 N/m<sup>2</sup>), equivalent to 11.4 in. (290 mm) of concrete. The buckling of the sheet (see Figure 5) shows the load transfer capability of the PunchLok connection. If further information is required, a complete copy of the Ramtech Laboratories, Inc., test report is available.

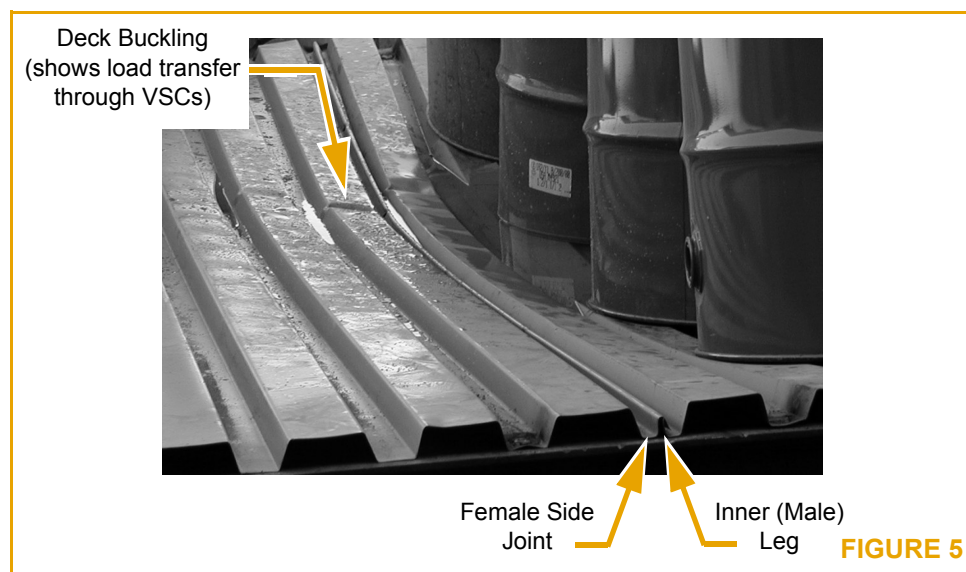


FIGURE 5

**Button Punches:** When sidelaps of FORMLOK decks are connected with button punches (BP) (Figure 6), an average-sized person should be able to stand (not jump) on the flute adjacent to the attachment without the joint coming apart.

**Top Seam Welds:** When sidelaps of FORMLOK decks are connected with top seam welds, the 1½ in. (38 mm) long weld must engage the top of the inner (male) leg. Clinch the joint before welding to create positive contact between the lips. Consider the PunchLok system as a cost-effective alternative for top seam welds.

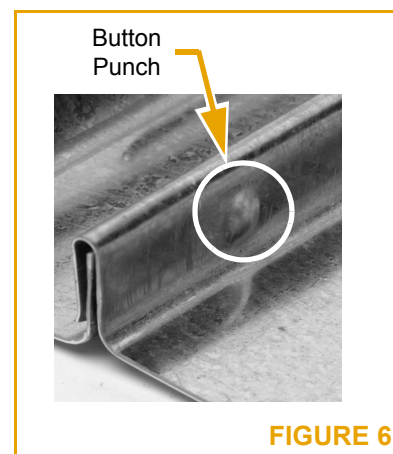


FIGURE 6



## Parallel Collectors

Spacing of arc spot welds at collectors parallel to the deck ribs should be based on the shear to be transferred. Table 2 lists allowable capacities in pounds (*newtons*) for ½ in. (13 mm) effective diameter welds.

**Note:** The values shown in Table 2 are for the minimum thickness of a given gage.

**Table 2: Allowable Shear Capacities per Weld**

| Deck Gage | lb   | N     |
|-----------|------|-------|
| 22        | 1015 | 4,515 |
| 21        | 1155 | 5,138 |
| 20        | 1225 | 5,449 |
| 19        | 1470 | 6,539 |
| 18        | 1645 | 7,317 |
| 16        | 2065 | 9,186 |

The maximum spacing of welds at parallel collectors is 3 ft (914 mm).

## Mechanical Fasteners to Supports

As an alternate to welds, FORMLOK deck may be attached to the supports with mechanical fasteners. Refer to the mechanical fastener supplier for information relating to a specific application. If shear studs are used, Refer to Table 5 on page 20 for diaphragm capacities with concrete and the FORMLOK deck attached with mechanical fasteners.

## FORMLOK Deck Finishes

FORMLOK decks are offered in various finishes:

### Phosphatized/Painted

Cold rolled steel (ASTM A 1008, formerly ASTM A 611) that has been cleaned and chemically pre-treated. The bottom (exposed) side is painted with a heat-cured gray acrylic primer applied by a roller coat process. The top side of the deck in contact with the concrete is left uncoated. The formation of light rust on the top side before placement of the concrete is normal and is not detrimental to the FORMLOK deck or the composite slab. Verco gray primer is approved by UL for use in fire-rated assemblies. Refer to Table 8 on page 28 for specific listings.

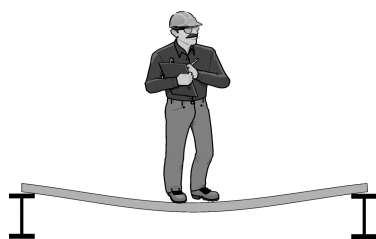
### Galvanized

Cold rolled zinc coated steel (ASTM A 653): Coating designation G60 (Z180) is the standard zinc coating of the deck industry. Coating designation G90 (Z275) is a heavier, more costly zinc coating sometimes specified for exposed exterior applications or other project specific requirements.

### Galvanized with Primer

Galvanized FORMLOK deck is available with factory gray or double white (double thickness for better coverage and whiter white) primer applied to the bottom (exposed) side of the deck for applications where the deck will be field-painted (eliminates the need for field priming) or must meet other specific requirements.

## FORMLOK Deck During Construction



The maximum spans of FORMLOK deck without shoring shown in the tables on pages 36–107 are based on the dead weight of concrete and FORMLOK deck plus the more critical of either a 20 psf ( $958 \text{ N/m}^2$ ) construction live load or a 150 lb ( $667 \text{ N}$ ) concentrated load which simulates the effects of a worker standing on the FORMLOK deck. The dead loads and uniform construction live loads are uniformly distributed over the length of the FORMLOK deck. If these loads are exceeded, there may be excessive deflection and/or buckling of the web and top flange, resulting in subsequent deck failure.

### Spans

Span length is one of the key factors in determining an appropriate FORMLOK profile. Determine logical span multiples (3 span minimum if possible) based on the bay size. The maximum length for FORMLOK deck is 45 ft ( $13,716 \text{ mm}$ ). Contact your Verco representative regarding the availability of deck lengths between 40 ft ( $12,192 \text{ mm}$ ) and 45 ft ( $13,716 \text{ mm}$ ). Handling the deck during installation should also be considered when evaluating long deck lengths, especially heavier gages.

**Table 3: Deck Span Suggestions**

| Length                                       | Deck Type          |
|----------------------------------------------|--------------------|
| <8 ft ( $2,438 \text{ mm}$ )                 | PLB or B FORMLOK   |
| 7–10 ft ( $2,134\text{--}3,048 \text{ mm}$ ) | PLW2 or W2 FORMLOK |
| 9–15 ft ( $2,743\text{--}4,572 \text{ mm}$ ) | PLW3 or W3 FORMLOK |

### Gage Selection

FORMLOK deck gage is normally selected by determining the lightest gage which meets the superimposed load requirements and which is in the unshaded, and therefore unshored, area of the tables. Unshored construction is usually more economical. When selecting FORMLOK deck gages, also consider the following:

- 20 gage minimum is recommended for multi-story construction since FORMLOK deck is used extensively for storage and as a working platform. Note that construction loads must not exceed the carrying capacity of the deck.
- Availability of 21 and 19 gage PLW2, W2, PLW3, or W3 FORMLOK deck should be checked if quick delivery is required or the quantity of FORMLOK deck is less than approximately  $22,500 \text{ ft}^2$  ( $2,090 \text{ m}^2$ ).

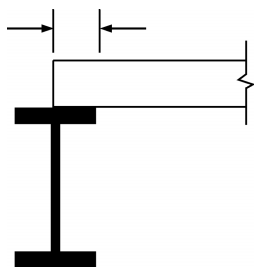
### Concrete Placement



FORMLOK deck may be overloaded by the method used to place the concrete or by excessive deflection of beams or girders that are not shored or cambered. **Place concrete first over beams and girders rather than at mid-span. Do not pile it higher than the finished depth of the slab.** If overloading is anticipated, either select a heavier gage or shore FORMLOK deck during pouring of concrete.

**Note:** Calcium chloride and concrete admixtures containing chloride salts shall not be used on FORMLOK deck.

## Bearing



## Design Criteria for FORMLOK Deck-as-a- Form

Verco recommends 2 in. (51 mm) minimum bearing for FORMLOK deck. The required bearing should be verified based on specific span conditions. Adequate bearing is required to prevent web crippling of the deck during concrete placement and to allow proper attachment of the deck. The allowable reactions shown in the tables are normally compared to the reactions due to dead load of the slab plus 20 psf (958 N/m<sup>2</sup>) uniform construction load. Allowable reactions are applicable to FORMLOK deck before the concrete has acquired minimum compressive strength.

The following design criteria and formulas were used to calculate the maximum spans of FORMLOK deck without shoring. Loading combinations utilized are illustrated for clarity.

$W_{dl}$  is the dead load of concrete plus deck plus deflection allowance.

The following allowances for FORMLOK deck deflection are included:

- 3 psf (144 N/m<sup>2</sup>) for light weight concrete,
- 4 psf (192 N/m<sup>2</sup>) for normal weight concrete.

No allowance is included for deflection of structural supports.

$W_{ll}$  is 20 psf (958 N/m<sup>2</sup>) uniform construction live load.

P is 150 pound (667 N) concentrated construction live load.

L is span length in feet (mm). Span lengths shown in tables are clear spans.

Stress is limited to 22,800 psi (157,200 kN/m<sup>2</sup>) based on  $F_y = 38,000$  psi (262,000 kN/m<sup>2</sup>) minimum.

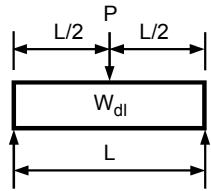
Deflection is limited to the lesser of L/180 or 3/4 in. (19 mm).

## Design Formulas

- +M = Positive Bending Moment in ft·lb (*Nm*)
- −M = Negative Bending Moment in ft·lb (*Nm*)
- Δ = Deflection in inches (*mm*)
- E = 29,500,000 psi ( $2.03 \times 10^8$  kN/m<sup>2</sup>)
- C<sub>d</sub> = 1728 (*SI = I*), Deflection Constant
- R<sub>e</sub> = End reaction in lb/ft (*N/m*)
- R<sub>i</sub> = Interior reaction in lb/ft (*N/m*)

### Single Span

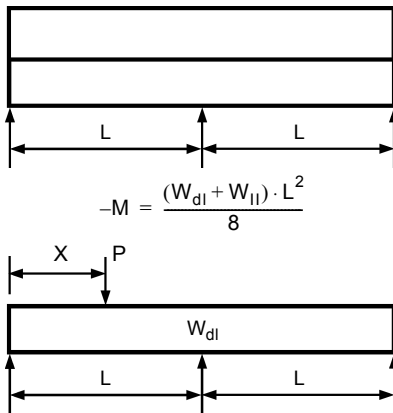
**Stress**



$$+M = \frac{W_{dl} \cdot L^2}{8} + \frac{P \cdot L}{4}$$

### Double Span

**Stress**



$$-M = \frac{(W_{dl} + W_{ll}) \cdot L^2}{8}$$

$$+M = (0.07031 \cdot W_{dl} \cdot L^2) + (0.2042 \cdot P \cdot L)$$

Where X = 0.375 · L

$$\text{or } +M = (0.06863 \cdot W_{dl} \cdot L^2) + (0.2074 \cdot P \cdot L)$$

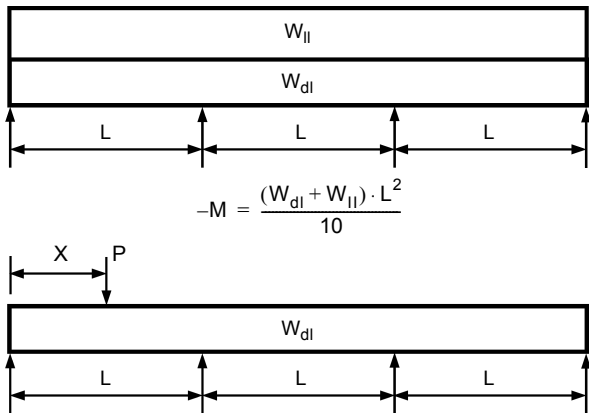
Where X = 0.433 · L

$$-M = (0.125 \cdot W_{dl} \cdot L^2) + (0.09623 \cdot P \cdot L)$$

Where X = approximately 0.6 · L

### Triple Span

**Stress**



$$-M = \frac{(W_{dl} + W_{ll}) \cdot L^2}{10}$$

$$+M = (0.08 \cdot W_{dl} \cdot L^2) + (0.2042 \cdot P \cdot L)$$

Where X = 0.4 · L

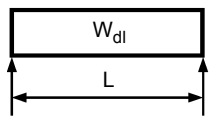
$$\text{or } +M = (0.07961 \cdot W_{dl} \cdot L^2) + (0.205 \cdot P \cdot L)$$

Where X = 0.428 · L

$$-M = (0.10 \cdot W_{dl} \cdot L^2) + (0.1026 \cdot P \cdot L)$$

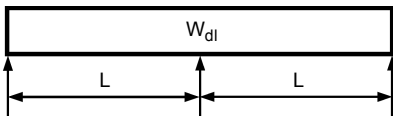
Where X = 0.5 · L

### Deflection



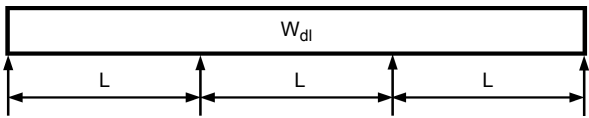
$$\Delta = \frac{0.013 \cdot W_{dl} \cdot L^4 \cdot C_d}{E \cdot I}$$

### Deflection



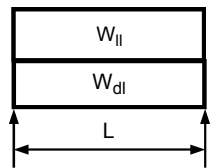
$$\Delta = \frac{0.0054 \cdot W_{dl} \cdot L^4 \cdot C_d}{E \cdot I}$$

### Deflection



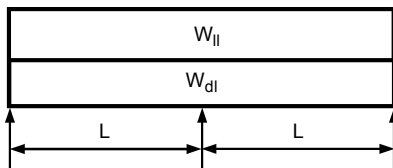
$$\Delta = \frac{0.0069 \cdot W_{dl} \cdot L^4 \cdot C_d}{E \cdot I}$$

### Reactions



$$R_e = 0.5 \cdot (W_{dl} + W_{ll}) \cdot L$$

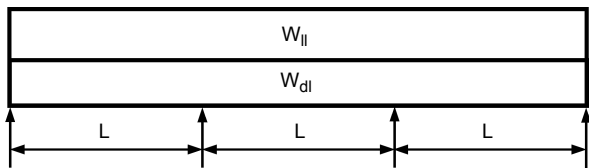
### Reactions



$$R_e = 0.375 \cdot (W_{dl} + W_{ll}) \cdot L$$

$$R_i = 1.25 \cdot (W_{dl} + W_{ll}) \cdot L$$

### Reactions



$$R_e = 0.4 \cdot (W_{dl} + W_{ll}) \cdot L$$

$$R_i = 1.1 \cdot (W_{dl} + W_{ll}) \cdot L$$

FIGURE 7

## FORMLOK Deck Design Example

### Design Goals

This is a simple design example to illustrate the steps involved in the proper selection of FORMLOK deck. Various options are outlined for each point to be considered. *This example illustrates the steps, not all possible selection options.*

The design goals for this example are as follows:

- Minimize dead load
- Maximize slab stiffness
- Eliminate temporary shoring

**Given:** 30' x 30' (9,140 mm x 9,140 mm) bay size

2-hour fire rated floor required

Underside of slab not exposed to view

Loads:

|                                |                                        |
|--------------------------------|----------------------------------------|
| Live load                      | 100 psf (4,788 N/m <sup>2</sup> )      |
| Partition                      | 20 psf ( 958 N/m <sup>2</sup> )        |
| Mechanical                     | 5 psf ( 239 N/m <sup>2</sup> )         |
| <b>Total Superimposed Load</b> | <b>125 psf (5,985 N/m<sup>2</sup>)</b> |

### Span Options

Spacing between beams determines the deck profile options. Refer to “Spans” on page 13 for more information.

Assume 5" (127 mm) wide framing members regardless of span used.

1. 15'-0" (4,570 mm) c-c span, 14'-7" (4,440 mm) clear span, 2 span condition.

Choice: PLW3 (or W3) FORMLOK - shored.

2. 10'-0" (3,050 mm) c-c span, 9'-7" (2,920 mm) clear span, 3 span condition.

Choices: PLW2 (or W2) FORMLOK **or** PLW3 (or W3) FORMLOK

3. 7'-6" (2,290 mm) c-c span, 7'-1" (2,160 mm) clear span, 4 span condition.

Choices: PLB (or B) FORMLOK **or** PLW2 (or W2) FORMLOK

➔ **Select:** Option 2 based on fewer beams required and no shoring required.

### Concrete Type/ Fire Rating Options

Use availability and relative cost of light weight (LW) versus normal weight (NW) concrete to determine the appropriate option. Refer to “Fire-Rated FORMLOK Slabs” on page 8 and Table 8 on page 28 for more information.

1. 4½" (114 mm) NW concrete over deck – without fireproofing.
2. 3¼" (89 mm) LW concrete over deck – without fireproofing.
3. 2½" (64 mm) concrete over deck (NW or LW) – with fireproofing.

➔ **Select:** Option 2 based on reduced weight and no fireproofing of deck required.

**FORMLOK Deck Options** Select FORMLOK profile and gage such that shoring is not required. Verify that adequate bearing is provided.

| Option | FORMLOK Deck Profile | Allowable Super-imposed Load | Total Slab Depth | Concrete & FORMLOK Deck Dead Load | Span to Total Slab Depth Ratio | FORMLOK Deck Bearing |                          |
|--------|----------------------|------------------------------|------------------|-----------------------------------|--------------------------------|----------------------|--------------------------|
|        |                      | psf<br>kN/m <sup>2</sup>     | in.<br>mm        | psf<br>kN/m <sup>2</sup>          |                                | End<br>2½"<br>64 mm  | Interior<br>5"<br>127 mm |
| 1      | PLW2-20 ga           | 233<br>11.2                  | 5¼<br>133        | 44.1<br>2,112                     | 22                             | OK                   | OK                       |
| 2      | PLW3-20 ga           | 246<br>11.8                  | 6¼<br>159        | 48.8<br>2,337                     | 18                             | OK                   | OK                       |

➔ **Select:** Option 1 based on minimizing slab weight.  
Option 2 based on maximizing slab stiffness.  
Utilize the PunchLok system with either choice for the optimal combination of strength and installed cost.

### FORMLOK Finish Options

Options are listed in order of increasing cost. Based on a typical installation with the deck exposed only to an interior environment, phosphatized/painted deck offers the most economical FORMLOK option. Phosphatized/painted deck may also yield labor savings due to easier stud welding.

Refer to “FORMLOK Deck Finishes” on page 12 for more information.

1. Phosphatized, top side/Painted, bottom (exposed) side.
2. Galvanized.
3. Galvanized and painted underside.

➔ **Select:** Option 1 based on least expensive.

### Specification Considerations

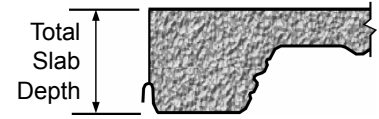
Determine whether factory-punched vent tabs should be specified in the FORMLOK deck. Specify attachment of the FORMLOK deck to supports as necessary to meet diaphragm requirements.

Refer to “Venting FORMLOK Deck” on page 9 and “Attachment of FORMLOK Deck” on page 10.



# Concrete Volumes and Weights

Table 4



| Deck Type                    | Item   | Units                                |       | Total Slab Depth |       |       |       |       |       |       |
|------------------------------|--------|--------------------------------------|-------|------------------|-------|-------|-------|-------|-------|-------|
|                              |        | in.                                  | 2½    | 3                | 3½    | 4     | 4½    | 4¾    | 5     | 5¼    |
|                              |        | mm                                   | 64    | 76               | 89    | 102   | 114   | 121   | 127   | 133   |
| Flat Slab                    | Volume | yd <sup>3</sup> /100 ft <sup>2</sup> | 0.772 | 0.926            | 1.080 | 1.235 | 1.389 | 1.466 | 1.543 | 1.620 |
|                              |        | m <sup>3</sup> /100 m <sup>2</sup>   | 6.35  | 7.62             | 8.89  | 10.16 | 11.43 | 12.06 | 12.70 | 13.33 |
|                              | Weight | NW psf                               | 30.2  | 36.3             | 42.3  | 48.3  | 54.4  | 57.4  | 60.4  | 63.4  |
|                              |        | NW N/m <sup>2</sup>                  | 1,446 | 1,738            | 2,025 | 2,313 | 2,605 | 2,748 | 2,892 | 3,036 |
|                              |        | LW psf                               | 22.9  | 27.5             | 32.1  | 36.7  | 41.3  | 43.5  | 45.8  | 48.1  |
|                              |        | LW N/m <sup>2</sup>                  | 1,096 | 1,317            | 1,537 | 1,757 | 1,977 | 2,083 | 2,193 | 2,303 |
| Shallow Vercor               | Volume | yd <sup>3</sup> /100 ft <sup>2</sup> | 0.685 | 0.839            | 0.993 | 1.148 | 1.302 | 1.379 | 1.456 | 1.534 |
|                              |        | m <sup>3</sup> /100 m <sup>2</sup>   | 5.64  | 6.90             | 8.17  | 9.45  | 10.71 | 11.35 | 11.98 | 12.62 |
|                              | Weight | NW psf                               | 26.8  | 32.9             | 38.9  | 44.9  | 51.0  | 54.0  | 57.0  | 60.0  |
|                              |        | NW N/m <sup>2</sup>                  | 1,283 | 1,575            | 1,863 | 2,150 | 2,442 | 2,586 | 2,729 | 2,873 |
|                              |        | LW psf                               | 20.3  | 24.9             | 29.5  | 34.1  | 38.7  | 41.0  | 43.3  | 45.5  |
|                              |        | LW N/m <sup>2</sup>                  | 972   | 1,192            | 1,412 | 1,633 | 1,853 | 1,963 | 2,073 | 2,179 |
| Deep Vercor                  | Volume | yd <sup>3</sup> /100 ft <sup>2</sup> |       |                  | 0.878 | 1.032 | 1.186 | 1.264 | 1.341 | 1.418 |
|                              |        | m <sup>3</sup> /100 m <sup>2</sup>   |       |                  | 7.23  | 8.49  | 9.76  | 10.40 | 11.04 | 11.67 |
|                              | Weight | NW psf                               |       |                  | 34.4  | 40.4  | 46.4  | 49.5  | 52.5  | 55.5  |
|                              |        | NW N/m <sup>2</sup>                  |       |                  | 1,647 | 1,934 | 2,222 | 2,370 | 2,514 | 2,657 |
|                              |        | LW psf                               |       |                  | 26.1  | 30.7  | 35.2  | 37.5  | 39.8  | 42.1  |
|                              |        | LW N/m <sup>2</sup>                  |       |                  | 1,250 | 1,470 | 1,685 | 1,796 | 1,906 | 2,016 |
| PLB<br>B<br>PLBCD<br>BCD     | Volume | yd <sup>3</sup> /100 ft <sup>2</sup> |       |                  | 0.781 | 0.936 | 1.090 | 1.167 | 1.244 | 1.321 |
|                              |        | m <sup>3</sup> /100 m <sup>2</sup>   |       |                  | 6.43  | 7.70  | 8.97  | 9.60  | 10.24 | 10.87 |
|                              | Weight | NW psf                               |       |                  | 30.6  | 36.6  | 42.7  | 45.7  | 48.7  | 51.7  |
|                              |        | NW N/m <sup>2</sup>                  |       |                  | 1,465 | 1,752 | 2,044 | 2,188 | 2,332 | 2,475 |
|                              |        | LW psf                               |       |                  | 23.2  | 27.8  | 32.4  | 34.7  | 37.0  | 39.2  |
|                              |        | LW N/m <sup>2</sup>                  |       |                  | 1,111 | 1,331 | 1,551 | 1,661 | 1,772 | 1,877 |
| PLW2<br>W2<br>PLW2CD<br>W2CD | Volume | yd <sup>3</sup> /100 ft <sup>2</sup> |       |                  |       | 0.926 | 1.080 | 1.157 | 1.235 | 1.312 |
|                              |        | m <sup>3</sup> /100 m <sup>2</sup>   |       |                  |       | 7.62  | 8.89  | 9.52  | 10.16 | 10.80 |
|                              | Weight | NW psf                               |       |                  |       | 36.3  | 42.3  | 45.3  | 48.3  | 51.4  |
|                              |        | NW N/m <sup>2</sup>                  |       |                  |       | 1,738 | 2,025 | 2,169 | 2,313 | 2,461 |
|                              |        | LW psf                               |       |                  |       | 27.5  | 32.1  | 34.4  | 36.7  | 39.0  |
|                              |        | LW N/m <sup>2</sup>                  |       |                  |       | 1,317 | 1,537 | 1,647 | 1,757 | 1,867 |
| PLW3<br>W3<br>PLW3CD<br>W3CD | Volume | yd <sup>3</sup> /100 ft <sup>2</sup> |       |                  |       |       |       |       | 1.080 | 1.157 |
|                              |        | m <sup>3</sup> /100 m <sup>2</sup>   |       |                  |       |       |       |       | 8.89  | 9.52  |
|                              | Weight | NW psf                               |       |                  |       |       |       |       | 42.3  | 45.3  |
|                              |        | NW N/m <sup>2</sup>                  |       |                  |       |       |       |       | 2,025 | 2,169 |
|                              |        | LW psf                               |       |                  |       |       |       |       | 32.1  | 34.4  |
|                              |        | LW N/m <sup>2</sup>                  |       |                  |       |       |       |       | 1,537 | 1,647 |
| PLN<br>N<br>PLNCD<br>NCD     | Volume | yd <sup>3</sup> /100 ft <sup>2</sup> |       |                  |       |       |       |       | 0.878 | 0.955 |
|                              |        | m <sup>3</sup> /100 m <sup>2</sup>   |       |                  |       |       |       |       | 7.23  | 7.86  |
|                              | Weight | NW psf                               |       |                  |       |       |       |       | 34.4  | 37.4  |
|                              |        | NW N/m <sup>2</sup>                  |       |                  |       |       |       |       | 1,647 | 1,791 |
|                              |        | LW psf                               |       |                  |       |       |       |       | 26.1  | 28.4  |
|                              |        | LW N/m <sup>2</sup>                  |       |                  |       |       |       |       | 1,250 | 1,360 |

Notes:  
(continued  
next page)

- Volumes and weights do not include allowance for deflection.
- Weights are for concrete only and do not include weight of steel deck.
- Volume in table is cubic yards per 100 square feet (m<sup>3</sup> per 100 m<sup>2</sup>).
- Weight given is pounds per square foot (N/m<sup>2</sup>).

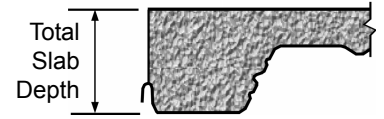


Table 4 (continued)

| Deck Type                    | Item   | Units       |           | Total Slab Depth |          |           |           |          |           |           |
|------------------------------|--------|-------------|-----------|------------------|----------|-----------|-----------|----------|-----------|-----------|
|                              |        | in.<br>mm   | 5½<br>140 | 5¾<br>146        | 6<br>152 | 6¼<br>159 | 6½<br>165 | 7<br>178 | 7¼<br>184 | 7½<br>191 |
| Flat Slab                    | Volume | yd³/100 ft² | 1.698     | 1.775            | 1.852    | 1.929     | 2.006     | 2.160    | 2.238     | 2.315     |
|                              |        | m³/100 m²   | 13.97     | 14.61            | 15.24    | 15.87     | 16.51     | 17.78    | 18.42     | 19.05     |
|                              | Weight | NW          | psf       | 66.5             | 69.5     | 72.5      | 75.5      | 78.5     | 84.6      | 90.6      |
|                              |        |             | N/m²      | 3,184            | 3,328    | 3,471     | 3,615     | 3,759    | 4,051     | 4,338     |
|                              |        | LW          | psf       | 50.4             | 52.7     | 55.0      | 57.3      | 59.6     | 64.2      | 68.8      |
|                              |        |             | N/m²      | 2,413            | 2,523    | 2,633     | 2,744     | 2,854    | 3,074     | 3,294     |
|                              | Volume | yd³/100 ft² | 1.611     | 1.688            | 1.765    | 1.842     | 1.919     | 2.074    | 2.151     | 2.228     |
|                              |        | m³/100 m²   | 13.26     | 13.89            | 14.53    | 15.16     | 15.79     | 17.07    | 17.70     | 18.34     |
| Shallow Vercor               | Weight | NW          | psf       | 63.1             | 66.1     | 69.1      | 72.1      | 75.1     | 81.2      | 87.2      |
|                              |        |             | N/m²      | 3,021            | 3,165    | 3,309     | 3,452     | 3,596    | 3,888     | 4,175     |
|                              |        | LW          | psf       | 47.8             | 50.1     | 52.4      | 54.7      | 57.0     | 61.6      | 66.2      |
|                              |        |             | N/m²      | 2,289            | 2,399    | 2,509     | 2,619     | 2,729    | 2,949     | 3,170     |
|                              | Volume | yd³/100 ft² | 1.495     | 1.572            | 1.649    | 1.726     | 1.804     | 1.958    | 2.035     | 2.112     |
|                              |        | m³/100 m²   | 12.30     | 12.94            | 13.57    | 14.20     | 14.85     | 16.11    | 16.75     | 17.38     |
|                              | Weight | NW          | psf       | 58.5             | 61.5     | 64.6      | 67.6      | 70.6     | 76.7      | 82.7      |
|                              |        |             | N/m²      | 2,801            | 2,945    | 3,093     | 3,237     | 3,380    | 3,672     | 3,960     |
| Deep Vercor                  | Weight | LW          | psf       | 44.4             | 46.7     | 49.0      | 51.3      | 53.6     | 58.2      | 62.7      |
|                              |        |             | N/m²      | 2,126            | 2,236    | 2,346     | 2,456     | 2,566    | 2,787     | 3,002     |
|                              | Volume | yd³/100 ft² | 1.399     | 1.476            | 1.553    | 1.630     | 1.707     | 1.861    | 1.939     | 2.016     |
|                              |        | m³/100 m²   | 11.51     | 12.15            | 12.78    | 13.41     | 14.05     | 15.32    | 15.96     | 16.59     |
|                              | Weight | NW          | psf       | 54.8             | 57.8     | 60.8      | 63.8      | 66.8     | 72.9      | 78.9      |
|                              |        |             | N/m²      | 2,624            | 2,767    | 2,911     | 3,055     | 3,198    | 3,490     | 3,778     |
|                              |        | LW          | psf       | 41.5             | 43.8     | 46.1      | 48.4      | 50.7     | 55.3      | 59.9      |
|                              |        |             | N/m²      | 1,987            | 2,097    | 2,207     | 2,317     | 2,428    | 2,648     | 2,868     |
| PLB<br>B<br>PLBCD<br>BCD     | Volume | yd³/100 ft² | 1.389     | 1.466            | 1.543    | 1.620     | 1.698     | 1.852    | 1.929     | 2.006     |
|                              |        | m³/100 m²   | 11.43     | 12.06            | 12.70    | 13.33     | 13.97     | 15.24    | 15.87     | 16.51     |
|                              | Weight | NW          | psf       | 54.4             | 57.4     | 60.4      | 63.4      | 66.5     | 72.5      | 78.5      |
|                              |        |             | N/m²      | 2,605            | 2,748    | 2,892     | 3,036     | 3,184    | 3,471     | 3,759     |
|                              |        | LW          | psf       | 41.3             | 43.5     | 45.8      | 48.1      | 50.4     | 55.0      | 59.6      |
|                              |        |             | N/m²      | 1,977            | 2,083    | 2,193     | 2,303     | 2,413    | 2,633     | 2,854     |
| PLW2<br>W2<br>PLW2CD<br>W2CD | Volume | yd³/100 ft² | 1.235     | 1.312            | 1.389    | 1.466     | 1.543     | 1.698    | 1.775     | 1.852     |
|                              |        | m³/100 m²   | 10.16     | 10.80            | 11.43    | 12.06     | 12.70     | 13.97    | 14.61     | 15.24     |
|                              | Weight | NW          | psf       | 48.3             | 51.4     | 54.4      | 57.4      | 60.4     | 66.5      | 72.5      |
|                              |        |             | N/m²      | 2,313            | 2,461    | 2,605     | 2,748     | 2,892    | 3,184     | 3,328     |
|                              |        | LW          | psf       | 36.7             | 39.0     | 41.3      | 43.5      | 45.8     | 50.4      | 55.0      |
|                              |        |             | N/m²      | 1,757            | 1,867    | 1,977     | 2,083     | 2,193    | 2,413     | 2,523     |
| PLW3<br>W3<br>PLW3CD<br>W3CD | Volume | yd³/100 ft² | 1.032     | 1.109            | 1.186    | 1.264     | 1.341     | 1.495    | 1.572     | 1.649     |
|                              |        | m³/100 m²   | 8.49      | 9.13             | 9.76     | 10.40     | 11.04     | 12.30    | 12.94     | 13.57     |
|                              | Weight | NW          | psf       | 40.4             | 43.4     | 46.4      | 49.5      | 52.5     | 58.5      | 64.6      |
|                              |        |             | N/m²      | 1,934            | 2,078    | 2,222     | 2,370     | 2,514    | 2,801     | 3,093     |
|                              |        | LW          | psf       | 30.7             | 32.9     | 35.2      | 37.5      | 39.8     | 44.4      | 49.0      |
|                              |        |             | N/m²      | 1,470            | 1,575    | 1,685     | 1,796     | 1,906    | 2,126     | 2,346     |
| PLN<br>N<br>PLNCD<br>NCD     | Volume | yd³/100 ft² | 1.032     | 1.109            | 1.186    | 1.264     | 1.341     | 1.495    | 1.572     | 1.649     |
|                              |        | m³/100 m²   | 8.49      | 9.13             | 9.76     | 10.40     | 11.04     | 12.30    | 12.94     | 13.57     |
|                              | Weight | NW          | psf       | 40.4             | 43.4     | 46.4      | 49.5      | 52.5     | 58.5      | 64.6      |
|                              |        |             | N/m²      | 1,934            | 2,078    | 2,222     | 2,370     | 2,514    | 2,801     | 3,093     |
|                              |        | LW          | psf       | 30.7             | 32.9     | 35.2      | 37.5      | 39.8     | 44.4      | 49.0      |
|                              |        |             | N/m²      | 1,470            | 1,575    | 1,685     | 1,796     | 1,906    | 2,126     | 2,346     |

Notes:  
(continued  
from pg 18)

- PLBCD, BCD, PLW2CD, W2CD, PLW3CD, W3CD, PLNCD, and NCD refer to cellular FORMLOK. See pages 134 and 135 for additional information.
- To calculate volumes or weights if slab is thicker than listed in table: (1) Add two total slab depths to equal given slab depth. (2) Choose corresponding volume or weight from specific profile column and flat slab column to determine total weight or value for desired depth. (3) For thicker slabs, use multiple flat slab values.

## Allowable Diaphragm Shears

**Table 5: Allowable Diaphragm Shears for FORMLOK Decks with Concrete Fill and Shear Studs at Collectors**  
(pounds/lineal foot (kN/m))<sup>1-5</sup>

| Concrete Type <sup>6</sup> | Concrete Thickness <sup>7</sup> | Spacing of Shear Studs <sup>8</sup> |               |               |               |               |               | F    |
|----------------------------|---------------------------------|-------------------------------------|---------------|---------------|---------------|---------------|---------------|------|
|                            |                                 | 12"<br>305 mm                       | 16"<br>406 mm | 18"<br>457 mm | 24"<br>610 mm | 32"<br>813 mm | 36"<br>914 mm |      |
| NW                         | 2"                              | 3780                                | 3780          | 3780          | 3400          | 2500          | 2270          | 0.40 |
|                            | 51 mm                           | 55.16                               | 55.16         | 55.16         | 49.62         | 36.48         | 33.13         | 2.3  |
|                            | 2½"                             | 4730                                | 4730          | 4530          | 3400          | 2500          | 2270          | 0.32 |
|                            | 64 mm                           | 69.03                               | 69.03         | 66.11         | 49.62         | 36.48         | 33.13         | 1.8  |
|                            | 3½"                             | 6620                                | 5100          | 4530          | 3400          | 2500          | 2270          | 0.23 |
|                            | 89 mm                           | 96.61                               | 74.43         | 66.11         | 49.62         | 36.48         | 33.13         | 1.3  |
| LW                         | 2"                              | 3540                                | 3540          | 3540          | 2900          | 2180          | 1930          | 0.56 |
|                            | 51 mm                           | 51.66                               | 51.66         | 51.66         | 42.32         | 31.81         | 28.17         | 3.2  |
|                            | 2½"                             | 4430                                | 4350          | 3860          | 2900          | 2180          | 1930          | 0.45 |
|                            | 64 mm                           | 64.65                               | 63.48         | 56.33         | 42.32         | 31.81         | 28.17         | 2.6  |
|                            | 3¼"                             | 5760                                | 4350          | 3860          | 2900          | 2180          | 1930          | 0.34 |
|                            | 83 mm                           | 84.06                               | 63.48         | 56.33         | 42.32         | 31.81         | 28.17         | 1.9  |

<sup>1</sup> The allowable values are based on concrete slab reinforcement with an area at least 0.0025 times the area of fill above the deck. Welded wire fabric of the sizes listed below meet this requirement. Where the tabulated allowable values are not required, reinforcement can be reduced with allowable diaphragm values according to the schedule below. The fabric is placed approximately 1 in. (25 mm) below the top of the concrete.

| Concrete Type | Concrete Thickness <sup>7</sup> | Minimum Fabric for<br>Tabulated Shear Values | Maximum Allowable Shears<br>for 6x6 – W1.4xW1.4<br>(152x152–MW9xMW9) |
|---------------|---------------------------------|----------------------------------------------|----------------------------------------------------------------------|
| NW            | 2"                              | 6x6–W4xW4                                    | 1600 plf*                                                            |
|               | 51 mm                           | 152x152–MW26xMW26                            | 23.35 kN/m                                                           |
|               | 2½"                             | 6x6–W4xW4                                    | 1990 plf                                                             |
|               | 64 mm                           | 152x152–MW26xMW26                            | 29.04 kN/m                                                           |
|               | 3½"                             | 4x4–W4xW4                                    | 2790 plf                                                             |
|               | 89 mm                           | 102x102–MW26xMW26                            | 40.72 kN/m                                                           |
| LW            | 2"                              | 6x6–W4xW4                                    | 1360 plf*                                                            |
|               | 51 mm                           | 152x152–MW26xMW26                            | 19.85 kN/m                                                           |
|               | 2½"                             | 6x6–W4xW4                                    | 1700 plf                                                             |
|               | 64 mm                           | 152x152–MW26xMW26                            | 24.81 kN/m                                                           |
|               | 3¼"                             | 4x4–W4xW4                                    | 2200 plf                                                             |
|               | 83 mm                           | 102x102–MW26xMW26                            | 32.11 kN/m                                                           |

\*Also compare to allowable diaphragm capacity for FORMLOK decks with concrete on pages 36 – 107.

<sup>2</sup> Connector diameter must be less than or equal to 2.5 times the steel support thickness unless connector is located directly over support web.

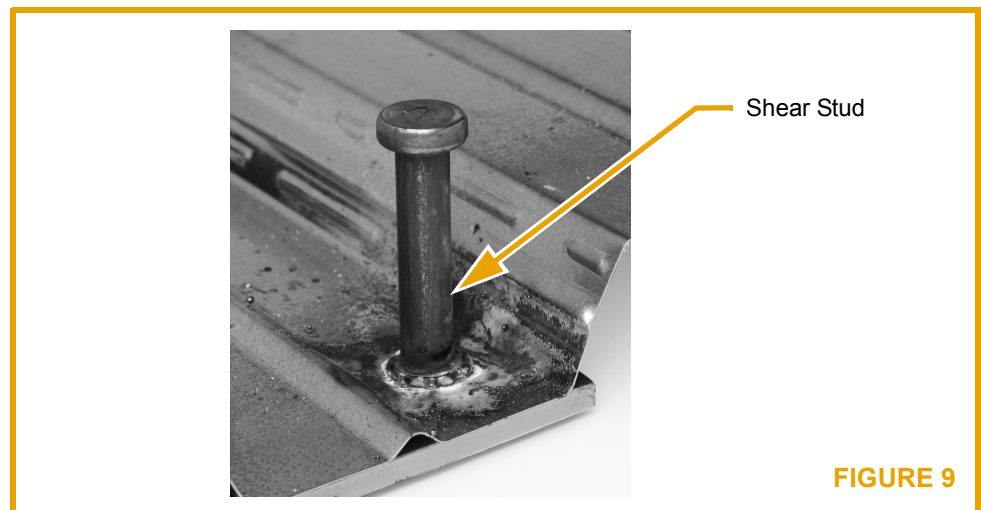
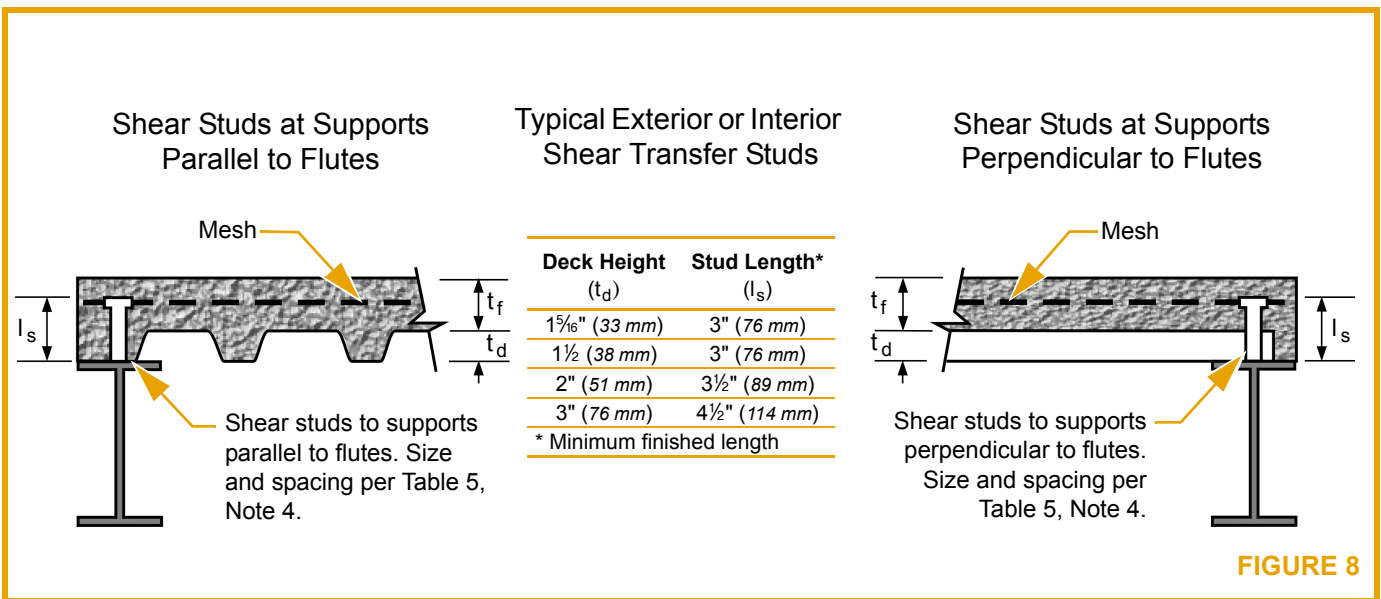
<sup>3</sup> See Figure 8 for details.

- 4 For local shear transfer within the field of the diaphragm, the following stud diameters and shear values apply:

| Deck Profile                   | Minimum Stud Ø | Kips (kN) per Stud |                        |
|--------------------------------|----------------|--------------------|------------------------|
|                                |                | NW Concrete        | Structural LW Concrete |
| PLB, B, PLBCD, and BCD FORMLOK | ½" (13 mm)     | 5.7 (25.4)         | 4.9 (21.8)             |
| PLN, N, PLNCD, and NCD FORMLOK | ¾" (19 mm)     | 3.5 (15.6)         | 3.0 (13.3)             |
| All Other Profiles             | ½" (13 mm)     | 6.8 (30.2)         | 5.8 (25.8)             |

- 5 Sidelap connection shall be at 36" (914 mm) on center maximum with either VSC, button punch, No. 10 screw, 1½" (38 mm) long top seam weld (standing seam), or 1½" (38 mm) long fillet weld (nested seam).
- 6 Design compressive strength  $f'_c = 3000$  psi (20,684 kN/m<sup>2</sup>) minimum.  
NW = Normal weight concrete (145 pcf (2,320 kg/m<sup>3</sup>)); LW = Structural light weight concrete (115 pcf (1,840 kg/m<sup>3</sup>)).
- 7 Depth of concrete ( $t_f$ ) is measured above top flute of deck.
- 8 Minimum stud diameters required for various FORMLOK deck types are as follows:

| Deck Type                          | Minimum Stud Diameter                                                     |
|------------------------------------|---------------------------------------------------------------------------|
| PLB, B, PLBCD, BCD, and BR FORMLOK | ½" (13 mm)                                                                |
| PLW2, W2, PLW2CD, and W2CD FORMLOK | ½" (13 mm)                                                                |
| PLW3, W3, PLW3CD, and W3CD FORMLOK | ⅝" (16 mm)                                                                |
| PLN, N, PLNCD, and NCD FORMLOK     | ¾" (19 mm) (Tabulated shear values shall be reduced by a factor of 0.74.) |
| Deep Vercor                        | ½" (13 mm)                                                                |



## Shear Stud Capacity

Table 6: Allowable Shear Stud Capacity in Kips (kN) for FORMLOK Deck

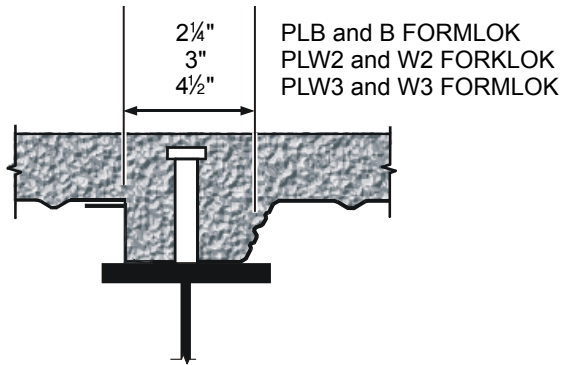
| Slab Type                  | $\frac{3}{4}$ " (19 mm) Ø Stud Welded Length<br>in. (mm)    | Studs per Rib | Normal Weight Concrete<br>145 pcf (2320 kg/m <sup>3</sup> )<br>Compressive Strength |                                         |                                         | Light Weight Concrete<br>110 pcf (1760 kg/m <sup>3</sup> )<br>Compressive Strength |                                         |                                         |
|----------------------------|-------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|
|                            |                                                             |               | 3000 psi<br>(20,684 kN/m <sup>2</sup> )                                             | 3500 psi<br>(24,132 kN/m <sup>2</sup> ) | 4000 psi<br>(27,579 kN/m <sup>2</sup> ) | 3000 psi<br>(20,684 kN/m <sup>2</sup> )                                            | 3500 psi<br>(24,132 kN/m <sup>2</sup> ) | 4000 psi<br>(27,579 kN/m <sup>2</sup> ) |
| <b>Solid</b>               | 3.0 (76)                                                    |               | 11.50 (51.2)                                                                        | 12.50 (55.6)                            | 13.30 (59.2)                            | 9.55 (42.5)                                                                        | 10.38 (46.2)                            | 11.04 (49.1)                            |
| <b>PLB and B FORMLOK</b>   | 3.0 (76)                                                    | 1             | 11.50 (51.2)                                                                        | 12.50 (55.6)                            | 13.30 (59.2)                            | 9.55 (42.5)                                                                        | 10.38 (46.2)                            | 11.04 (49.1)                            |
|                            |                                                             | 2             | 9.79 (43.5)                                                                         | 10.64 (47.3)                            | 11.32 (50.4)                            | 8.13 (36.2)                                                                        | 8.83 (39.3)                             | 9.40 (41.8)                             |
|                            |                                                             | 3             | 8.00 (35.6)                                                                         | 8.69 (38.7)                             | 9.25 (41.1)                             | 6.64 (29.5)                                                                        | 7.21 (32.1)                             | 7.67 (34.1)                             |
|                            | 3.5 (89)                                                    | 1 or 2        | 11.50 (51.2)                                                                        | 12.50 (55.6)                            | 13.30 (59.2)                            | 9.55 (42.5)                                                                        | 10.38 (46.2)                            | 11.04 (49.1)                            |
|                            |                                                             | 3             | 10.66 (47.4)                                                                        | 11.59 (51.6)                            | 12.33 (54.8)                            | 8.85 (39.4)                                                                        | 9.62 (42.8)                             | 10.23 (45.5)                            |
|                            | 3.8 (97)<br>4.5 (114)                                       | 1, 2, or 3    | 11.50 (51.2)                                                                        | 12.50 (55.6)                            | 13.30 (59.2)                            | 9.55 (42.5)                                                                        | 10.38 (46.2)                            | 11.04 (49.1)                            |
| <b>PLW2 and W2 FORMLOK</b> | 3.5 (89)<br>3.8 (97)<br>4.5 (114)<br>4.8 (122)<br>5.0 (127) | 1, 2, or 3    | 11.50 (51.2)                                                                        | 12.50 (55.6)                            | 13.30 (59.2)                            | 9.55 (42.5)                                                                        | 10.38 (46.2)                            | 11.04 (49.1)                            |
| <b>PLW3 and W3 FORMLOK</b> | 4.5 (114)                                                   | 1             | 9.78 (43.5)                                                                         | 10.63 (47.3)                            | 11.31 (50.3)                            | 8.11 (36.1)                                                                        | 8.81 (39.1)                             | 9.38 (41.7)                             |
|                            |                                                             | 2             | 6.91 (30.7)                                                                         | 7.51 (33.4)                             | 7.99 (35.5)                             | 5.74 (25.5)                                                                        | 6.24 (27.7)                             | 6.63 (29.5)                             |
|                            |                                                             | 3             | 5.64 (25.1)                                                                         | 6.13 (27.3)                             | 6.53 (29.0)                             | 4.68 (20.8)                                                                        | 5.09 (22.6)                             | 5.42 (24.1)                             |
|                            | 4.8 (122)                                                   | 1             | 11.50 (51.2)                                                                        | 12.50 (55.6)                            | 13.30 (59.2)                            | 9.55 (42.5)                                                                        | 10.38 (46.2)                            | 11.04 (49.1)                            |
|                            |                                                             | 2             | 8.29 (36.9)                                                                         | 9.02 (40.1)                             | 9.59 (42.7)                             | 6.88 (30.6)                                                                        | 7.48 (33.3)                             | 7.96 (35.4)                             |
|                            |                                                             | 3             | 6.77 (30.1)                                                                         | 7.36 (32.7)                             | 7.83 (34.8)                             | 5.62 (25.0)                                                                        | 6.11 (27.2)                             | 6.50 (28.9)                             |
|                            | 5.0 (127)                                                   | 1             | 11.50 (51.2)                                                                        | 12.50 (55.6)                            | 13.30 (59.2)                            | 9.55 (42.5)                                                                        | 10.38 (46.2)                            | 11.04 (49.1)                            |
|                            |                                                             | 2             | 9.22 (41.0)                                                                         | 10.02 (44.6)                            | 10.66 (47.4)                            | 7.65 (34.0)                                                                        | 8.31 (37.0)                             | 8.85 (39.4)                             |
|                            |                                                             | 3             | 7.52 (33.5)                                                                         | 8.18 (36.4)                             | 8.70 (38.7)                             | 6.25 (27.8)                                                                        | 6.79 (30.2)                             | 7.22 (32.1)                             |
|                            | 5.5 (140)                                                   | 1 or 2        | 11.50 (51.2)                                                                        | 12.50 (55.6)                            | 13.30 (59.2)                            | 9.55 (42.5)                                                                        | 10.38 (46.2)                            | 11.04 (49.1)                            |
|                            |                                                             | 3             | 9.41 (41.9)                                                                         | 10.22 (45.5)                            | 10.88 (48.4)                            | 7.81 (34.7)                                                                        | 8.49 (37.8)                             | 9.03 (40.2)                             |
|                            | 5.8 (147)                                                   | 1 or 2        | 11.50 (51.2)                                                                        | 12.50 (55.6)                            | 13.30 (59.2)                            | 9.55 (42.5)                                                                        | 10.38 (46.2)                            | 11.04 (49.1)                            |
|                            |                                                             | 3             | 10.53 (46.9)                                                                        | 11.45 (50.9)                            | 12.18 (54.2)                            | 8.74 (38.9)                                                                        | 9.50 (42.3)                             | 10.11 (45.0)                            |

### Notes:

1. Values in Table 6 are based on reduction formula in AISC Specification (ASD, Ninth Edition) I5.2, "Deck Ribbs Oriented Perpendicular to Steel Beam or Girder." Average rib width is  $2\frac{1}{8}$  in. (54 mm) for PLB and B FORMLOK and 6" (152 mm) for PLW2, W2, PLW3, and W3 FORMLOK.
2. When using composite beams and girders, designers should consider adding reinforcing steel in the top of the slab. A suggested minimum area of steel would be  $0.003 b \cdot d$  ("d" = effective depth). Steel should be minimum length equal to the "b" dimension of the composite beam or girder.
3. Designers should consider using partial composite design for possible reduction of the number of studs required.
4. If openings will be cut in the slab adjacent to the composite beam or girder during the life of the building, consideration should be given to the design of the composite section.

## Stud Placement and Flange Widths

### Minimum Rib Widths for Full Value of Stud



### FORMLOK Deck Parallel to Girder

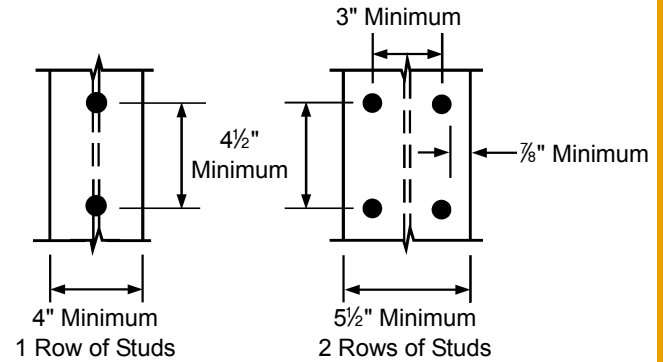
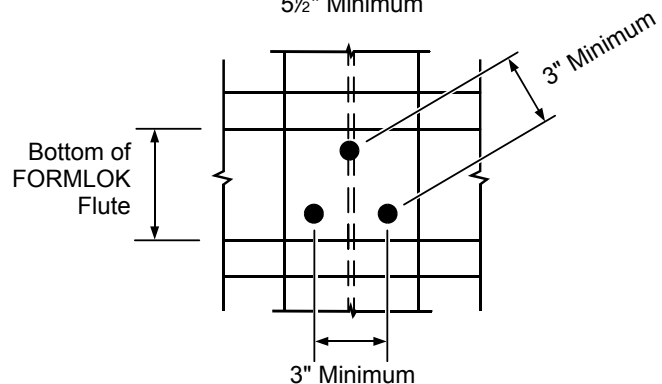
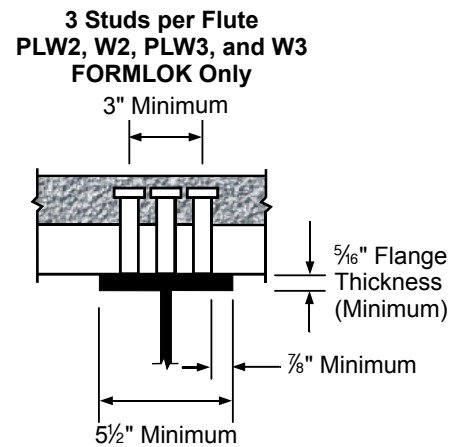
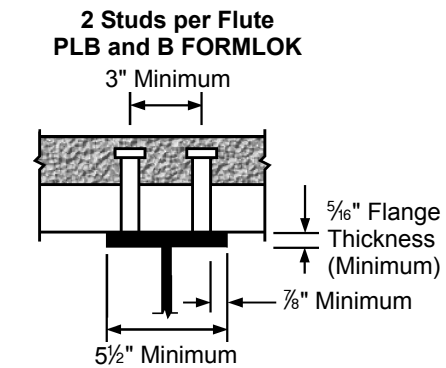
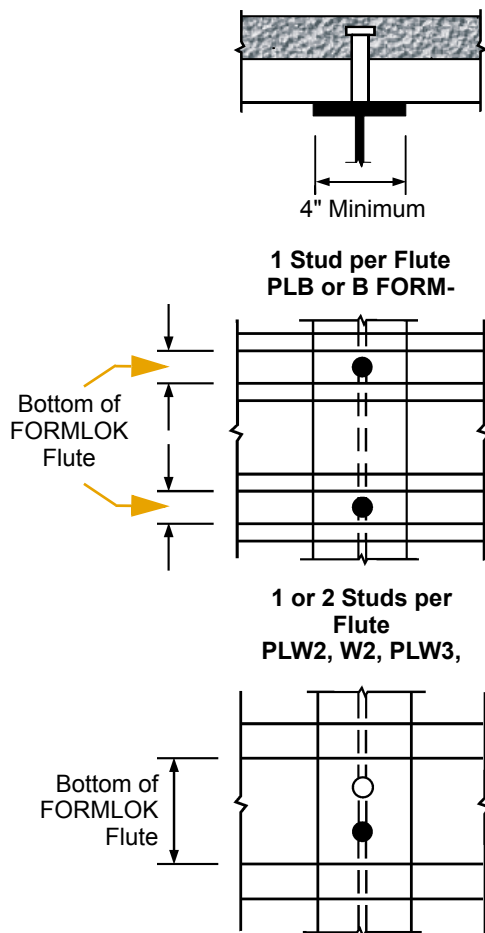


FIGURE 10

### Suggested 3/4" Diameter Stud Placement and Minimum Flange Widths



#### Metric Conversions for Figures 10 and 11

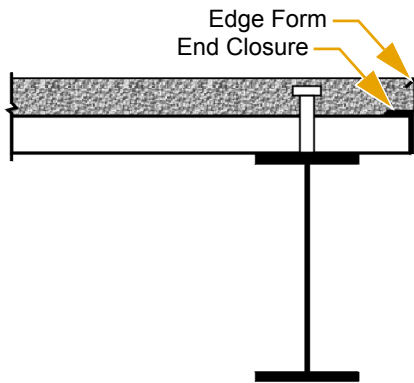
|        |       |        |        |
|--------|-------|--------|--------|
| 5/16"  | 8 mm  | 3"     | 76 mm  |
| 7/8"   | 22 mm | 4"     | 102 mm |
| 2 1/4" | 57 mm | 5 1/2" | 140 mm |

FIGURE 11

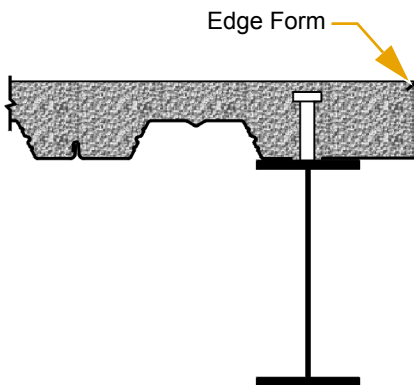
## FORMLOK Composite Floor Deck—Suggested Details

### Edge Conditions

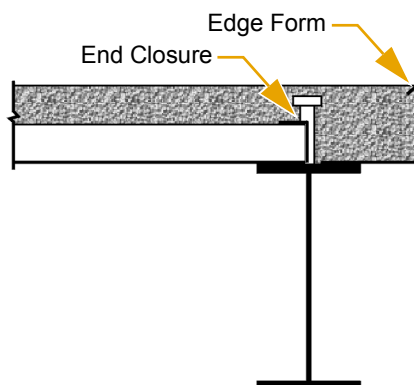
#### Cantilever



#### Parallel

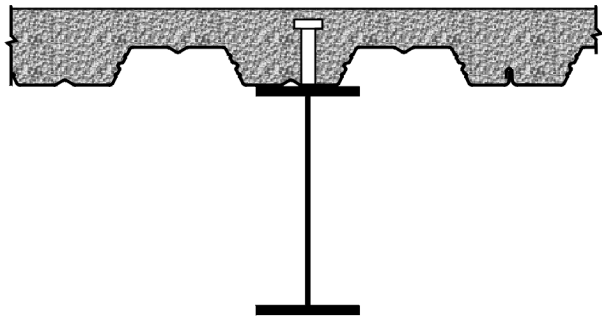


#### Perpendicular

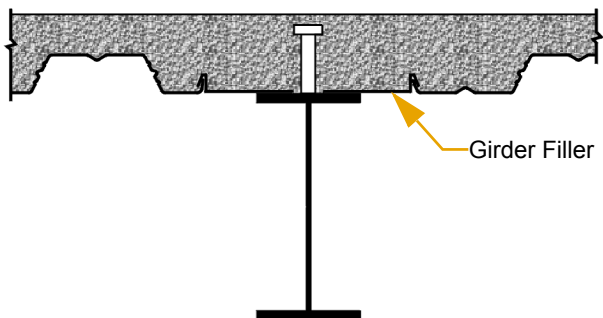


### Interior Conditions

#### Parallel



#### Parallel with Filler Plates



#### Change of Deck Direction

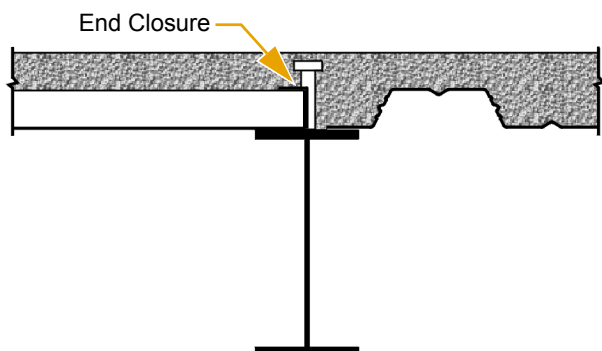
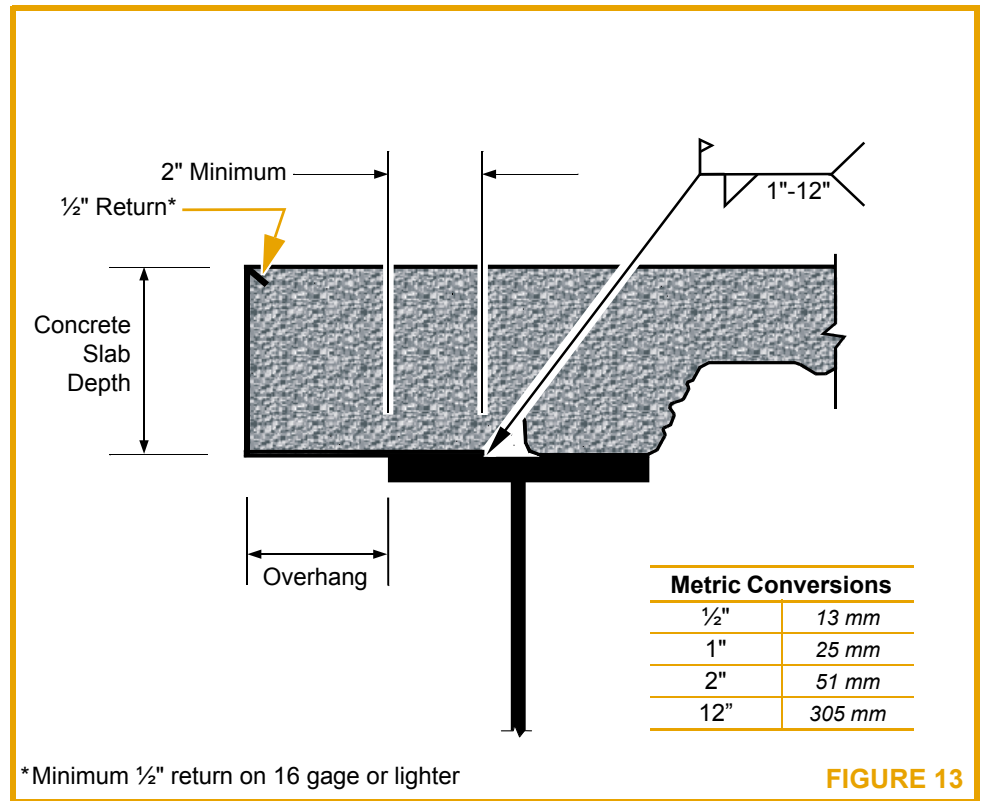


FIGURE 12



## Edge Form Suggestions



**Table 7: Edge Form Gage Selection**

| Slab<br>Depth<br>in.<br>(mm) | Overhang<br>in. (mm) |         |          |          |          |          |          |          |           |
|------------------------------|----------------------|---------|----------|----------|----------|----------|----------|----------|-----------|
|                              | 2<br>51              | 3<br>76 | 4<br>102 | 5<br>127 | 6<br>152 | 7<br>178 | 8<br>203 | 9<br>229 | 10<br>254 |
| 4 (102)                      | 18                   | 18      | 16       | 14       | 12       | 12       | 12       | 10       | 10        |
| 4½ (114)                     | 18                   | 18      | 16       | 14       | 12       | 12       | 12       | 10       | 10        |
| 5 (127)                      | 18                   | 18      | 16       | 14       | 12       | 12       | 12       | 10       | 10        |
| 5½ (140)                     | 18                   | 16      | 16       | 14       | 12       | 12       | 10       | 10       | 10        |
| 6 (152)                      | 18                   | 16      | 14       | 14       | 12       | 12       | 10       | 10       |           |
| 6½ (165)                     | 18                   | 16      | 14       | 12       | 12       | 12       | 10       | 10       |           |
| 7 (178)                      | 16                   | 16      | 14       | 12       | 12       | 12       | 10       | 10       |           |
| 7½ (191)                     | 16                   | 14      | 14       | 12       | 12       | 10       | 10       |          |           |

**Note:** Table 7 is based on concrete weight of 145 pcf ( $2,320 \text{ kg/m}^3$ ), allowable stress in steel of 20,000 psi ( $137,895 \text{ kN/m}^2$ ), and a 100 psf ( $4,788 \text{ N/m}^2$ ) superimposed load on the overhang.

For overhangs greater than those shown, additional support or bent plates are suggested.

## Openings in FORMLOK Decks

The following suggestions for openings in FORMLOK deck are intended to address support of construction loads by the deck before the concrete has fully cured and to address distributions of the reactions from superimposed loads to the adjacent composite slab.

It is suggested in all cases that the openings should be blocked out and the FORMLOK deck left intact whenever possible. After the concrete has cured, the FORMLOK deck in the area of the opening can be removed. If the deck is left intact until after the concrete has fully cured, alternative methods of reinforcing to those illustrated, such as rebar, may be used to distribute superimposed loads around the opening.

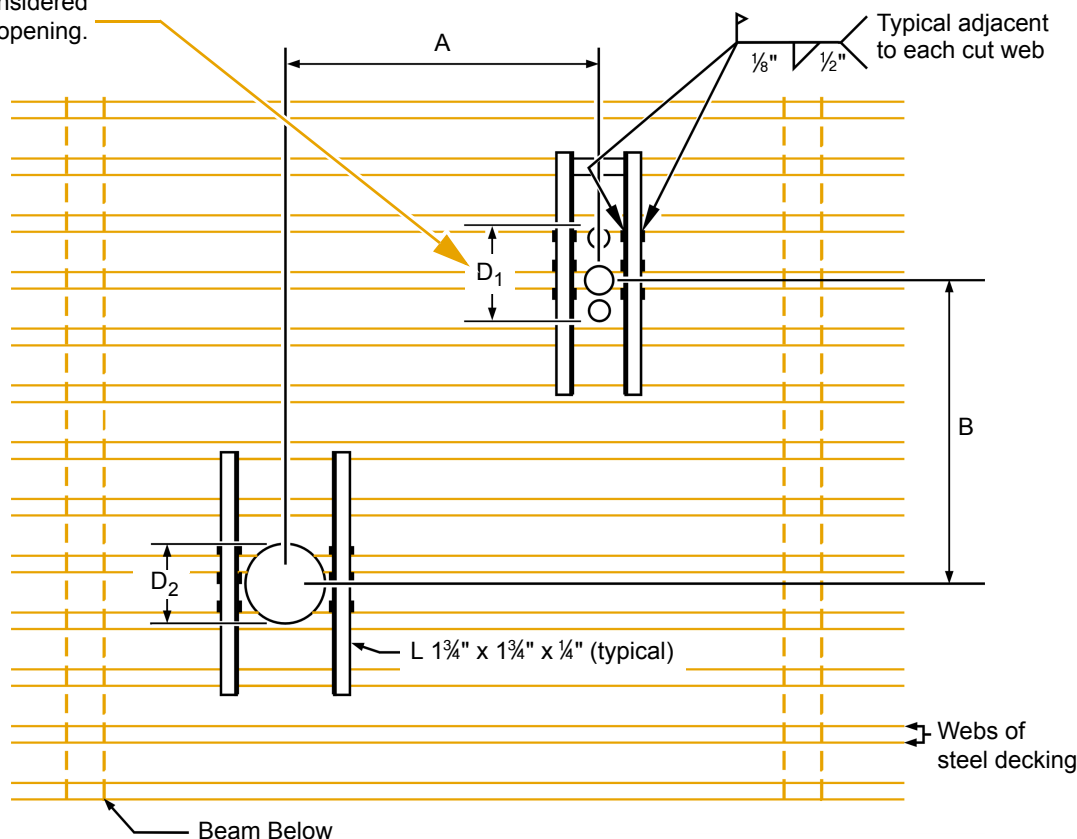
**Note:** The diagonal bars shown at larger openings are intended to address cracking at corners and are in addition to the reinforcing required for load distribution.

(continued on page 27)

### Holes cutting no more than:

- 3 adjacent webs for 6" and 8" (152 and 203 mm) module deck.
- 2 adjacent webs for 12" (305 mm) module deck.

This is considered  
a single opening.



### Notes:

1. Angles shall be placed on top of the FORMLOK deck.
2. Angles shall extend 3 webs past the deck opening (typical).
3. If Dimension A is  $>4D_1$ ,  $4D_2$ , or 32" (813 mm) whichever is larger, there is no restriction on Dimension B.
4. If Dimension B is  $>4D_1$ ,  $4D_2$ , or 32" (813 mm) whichever is larger, there is no restriction on Dimension A.
5. If Dimensions A and B are  $<4D_1$ ,  $4D_2$ , or 32" (813 mm) whichever is larger, the opening group shall be considered as a single hole, and shall be reinforced as required for the larger opening as shown in Figure 15.

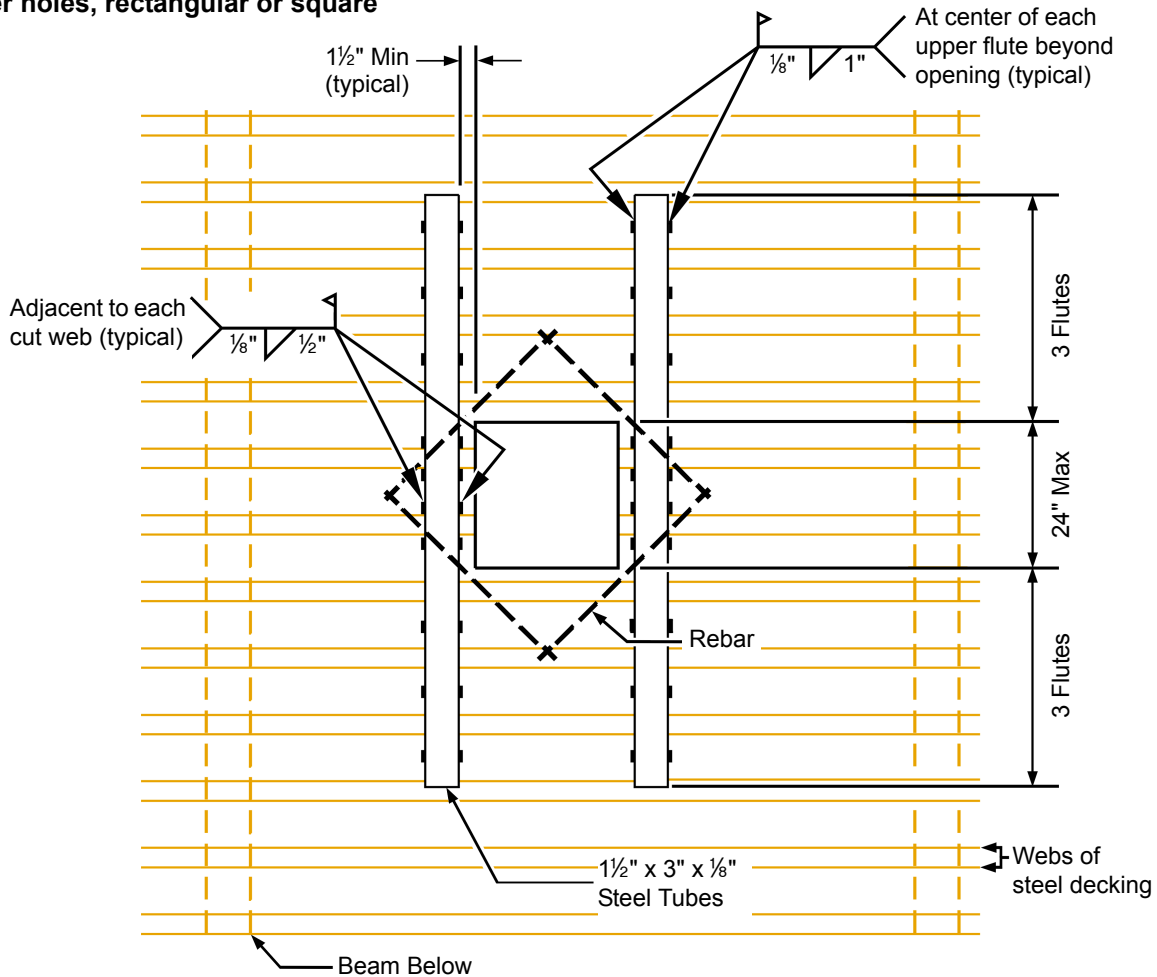
FIGURE 14

(continued from page 26)

- Individual holes less than 6 in. (152 mm) in diameter and cutting no more than one web need no reinforcing.
- Figure 14 illustrates recommendations for holes 6 in. (152 mm) in diameter, those cutting more than one web, or groups of small holes.
- Figure 15 illustrates recommendations for larger openings.
- Header beams should be placed around openings or groups of openings larger than 24 in. (610 mm).

The critical dimension for an opening or groups of openings is the width measured perpendicular to the deck span as shown in Figures 14 and 15. The length of an opening or hole measured parallel to the direction of the deck span is not limited.

#### Larger holes, rectangular or square



#### Notes:

1. Tubes shall be placed on top of the deck. Note: Availability may suggest the use of alternate members such as channels or angles with comparable strength.
2. Add rebars at corners of opening above the tubes.
3. If the opening or group of openings occurs in one FORMLOK deck unit, the opening or opening group may be cut before pouring concrete.
4. If the opening or group of openings cuts through two FORMLOK deck units, the deck shall not be cut until concrete has been placed and cured. At the time of pouring, suitable sleeves or bulkheads shall be placed around the opening.
5. When the maximum dimension of an opening or opening group exceeds 24" (610 mm), place header beams around opening.

#### Metric Conversions for Figures 14 and 15

|        |        |
|--------|--------|
| 1/8"   | 3 mm   |
| 1/4"   | 6 mm   |
| 1/2"   | 13 mm  |
| 1"     | 25 mm  |
| 1 1/2" | 38 mm  |
| 1 3/4" | 44 mm  |
| 3"     | 76 mm  |
| 24"    | 610 mm |

FIGURE 15

# FORMLOK Deck Fire Resistance Ratings

Table 8

| RESTRAINED ASSEMBLY RATING (HR) | UL # | FRAME      | CONCRETE in. (mm) | FORMLOK DECK <sup>1</sup> |    |                |                |                | GALVANIZED | PAINTED | PROTECTED <sup>2</sup> | BLENDED |
|---------------------------------|------|------------|-------------------|---------------------------|----|----------------|----------------|----------------|------------|---------|------------------------|---------|
|                                 |      |            |                   | B                         | BR | W2             | W3             | N              |            |         |                        |         |
| 1-4                             | D739 | Beam/Joist | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | CEM                    | Yes     |
| 1-3                             | D743 | Beam       | 2" (51) LW, NW    |                           |    | ✓              | ✓              |                | Yes        | Yes     | CEM                    | Yes     |
| 2                               | D750 | Beam       | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | CEM                    | No      |
| 2-3                             | D755 | Beam/Joist | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | CEM                    | Yes     |
| 1-3                             | D759 | Beam/Joist | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | CEM                    | Yes     |
| 2-4                             | D760 | Beam/Joist | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              |                | Yes        | Yes     | CEM                    | No      |
| 2                               | D764 | Beam/Joist | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | CEM                    | Yes     |
| 1-4                             | D767 | Beam/Joist | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | CEM                    | Yes     |
| 2                               | D775 | Beam       | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | CEM                    | No      |
| 1-4                             | D779 | Beam/Joist | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              |                | Yes        | Yes     | CEM                    | No      |
| 1-4                             | D787 | Beam/Joist | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | CEM                    | Yes     |
| 2                               | D826 | Beam       | 3¼" (83) LW       | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | SF                     | Yes     |
| 1-3                             | D832 | Beam       | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | SF                     | Yes     |
| 2                               | D840 | Beam       | (varies) LW       | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | SF                     | Yes     |
| 1-4                             | D858 | Beam       | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | SF                     | Yes     |
| 1-3                             | D859 | Beam       | 2" (51) LW, NW    | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | SF                     | Yes     |
| 3                               | D867 | Beam       | 2½" (64) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | SF                     | Yes     |
| 1-3                             | D871 | Beam       | 2½" (64) LW, NW   |                           |    | ✓              | ✓              |                | Yes        | Yes     | SF                     | Yes     |
| 1-3                             | D902 | Beam/Joist | (varies) LW, NW   | ◆ <sup>3</sup>            | ✓  | ◆ <sup>3</sup> | ◆ <sup>3</sup> | ◆ <sup>3</sup> | Yes        | Yes     | No                     | Yes     |
| 2                               | D907 | Beam       | 3¼" (83) LW       | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |
| ¾,1                             | D914 | Beam       | 2½" (64) LW       | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |
| ¾-3                             | D916 | Beam/Joist | (varies) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |
| 1-3                             | D919 | Beam       | (varies) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |
| 2                               | D920 | Beam       | 3¼" (83) LW       |                           |    | ✓              | ✓              |                | Yes        | Yes     | No                     | Yes     |
| ¾-3                             | D922 | Beam/Joist | (varies) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |
| ¾-3                             | D923 | Beam       | (varies) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |
| 2-3                             | D924 | Beam       | (varies) LW, NW   | ✓                         |    | ✓              | ✓              |                | Yes        | No      | No                     | No      |
| ¾-3                             | D925 | Beam/Joist | (varies) LW, NW   | ◆ <sup>3</sup>            | ✓  | ◆ <sup>3</sup> | ◆ <sup>3</sup> | ◆ <sup>3</sup> | Yes        | Yes     | No                     | Yes     |
| ¾-3                             | D927 | Beam/Joist | (varies) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |
| 1-3                             | D929 | Beam       | (varies) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |
| 2                               | D931 | Beam       | (varies) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |
| 1-3                             | D943 | Beam/Joist | (varies) LW, NW   | ✓                         | ✓  | ✓              | ✓              | ✓              | Yes        | Yes     | No                     | Yes     |

- 1 "B" = PLB and B FORMLOK "W2" = PLW2 and W2 FORMLOK  
 "N" = PLN and N FORMLOK "W3" = PLW3 and W3 FORMLOK  
 2 Spray-applied fire resistive materials: Cementitious (CEM), Sprayed Fiber (SF).  
 3 Denotes that FORMLOK profile may be fluted or cellular.  
 References: UL Fire Resistance Directory (2004 edition used above)  
 ICBO Evaluation Service Report ER-2078P for Verco Steel Deck  
 City of Los Angeles Research Report RR23789

## Notes:

- Refer to UL Fire Resistance Directory, ICBO Evaluation Service Report ER-2078P for Verco Steel Deck, or Municipality requirements for full details of construction, including concrete thickness and strength requirements, and span limitations.
- Code-compliant VERCO gray primer paint is formulated for compatibility with spray-applied fireproofing.
- Concrete thickness is measured from top of deck to top of slab.
- VERCO MANUFACTURING CO. assumes no responsibility for adhesion of any spray-applied fireproofing material, nor for any treatment, cleaning, or surface preparation of the deck surface required for adhesion of fire protection material.
- Protected assemblies have spray-applied fireproofing applied directly to the underside of the deck. Unprotected (D9XX Series) assemblies do not require spray-applied fireproofing applied to the underside of the deck.
- Blended Deck refers to the allowed combination of cellular and non-cellular deck for the floor system.
- Side-lap fastening by either button punch or seam weld is required, except for D858, which also allows screws; D871, which requires seam welds or screws; and D743 and D859, which require welds.

## Steel Floor Deck Specification 05321

The following suggested specification for Verco floor deck is in the Standard Form CSI 3-Part Section Format. Text copies are available in popular word processing formats.

### SPECIFICATION 05321 STEEL FLOOR DECK

#### **PART 1 – GENERAL**

##### 1.01 WORK INCLUDED

- A. The extent of steel decking is shown on the drawings, including basic layout and type of deck units required.

##### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- 1. Structural Steel Framing: Section 05100.
- 2. Concrete: Section 03300.
- 3. Concrete Reinforcement: Section 03200.
- 4. Temporary Shoring: Section 01524.
- 5. Fireproofing: Section 07250.

##### 1.03 QUALITY ASSURANCE

- A. Codes and Standards:
  - 1. AISI, "Specification for the Design of Cold-Formed Steel Structural Members"
  - 2. AWS D1.3, "Structural Welding Code – Sheet Steel"
  - 3. ASTM, designations as specified.
  - 4. ICBO ES Report ER-2078P.
  - 5. 1997 Uniform Building Code, Chapter 22, Division VII, Chapter 22, or 2000 International Building Code, Chapter 22, Specification for the Design of Cold-Formed Steel Structural Members.

##### 1.04 SUBMITTALS

- A. Shop Drawings
  - 1. Deck layout, framing, and supports, with dimensions and sections.
  - 2. Type and location of attachments.
  - 3. PunchLok® sidelap connection spacing.
  - 4. Details of accessories.
  - 5. Deck manufacturer with profiles, properties, load and shear capacities.

##### 1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Steel Deck:
  - 1. Store off ground with one end elevated for drainage.
  - 2. Cover deck with waterproof material, ventilated to avoid condensation.

### Notes to Specifier

American Iron and Steel Institute

American Welding Society  
American Society for Testing and Materials  
International Conference of Building Officials

Delete if PunchLok® System is not utilized and insert Button punch  
**\*\*OR\*\*** Top seam weld.

## **SPECIFICATION 05321 STEEL FLOOR DECK (cont.)**

### **PART 2 – PRODUCTS**

#### **2.01 MATERIALS**

- A. Cold Rolled Steel: ASTM A 1008, SS Grade 33 (minimum), with minimum yield strength of 38 ksi.
1. Phosphatized/painted finish: Thoroughly cleaned and chemically pretreated steel with phosphatized side in contact with concrete and the bottom (exposed) side primer painted. The rust inhibitive light gray primer is applied by a roller coat process and oven cured. 0.3 mil nominal dry film thickness.

**\*\*OR\*\***

- A. Galvanized Steel: ASTM A 653 - SS Grade 33 (minimum), with minimum yield strength of 38 ksi.
1. Zinc coated per ASTM A 653, G60

**\*\*OR\*\***

- A. Galvanized Steel: ASTM A 653 -

SS Grade 80

**\*\*OR\*\***

SS Grade 50

1. Zinc coated per ASTM A 653, G90

#### **2.02 FABRICATION**

- A. General: Form deck units in lengths to span 3 or more supports, with butted or nested end laps and interlocking side laps formed with standing seam allowing connection with the PunchLok® tool.

- B. Floor Deck Units: Provide configuration as manufactured by VERCOR as follows:

FORMLOK™ composite deck shall have deformations and indentations to provide a mechanical bond with the concrete.

1. PLB™-36 FORMLOK™, \_\_\_\_ gage, 36" wide, 1½" deep having minimum  $I = \text{____ in}^4$ ,  $S = \text{____ in}^3$ , and \_\_\_\_ psf superimposed load for \_\_\_\_ span.

**\*\*OR\*\***

1. B-36 FORMLOK™, \_\_\_\_ gage, 36" wide, 1½" deep having minimum  $I = \text{____ in}^4$ ,  $S = \text{____ in}^3$ , and \_\_\_\_ psf superimposed load for \_\_\_\_ span.

**\*\*OR\*\***

1. PLW2™-36 FORMLOK™, \_\_\_\_ gage 36" wide, 2" deep having minimum  $I = \text{____ in}^4$ ,  $S = \text{____ in}^3$ , and \_\_\_\_ psf superimposed load for \_\_\_\_ span.

**\*\*OR\*\***

1. W2-36 FORMLOK™, \_\_\_\_ gage 36" wide, 2" deep having minimum  $I = \text{____ in}^4$ ,  $S = \text{____ in}^3$ , and \_\_\_\_ psf superimposed load for \_\_\_\_ span.

**\*\*OR\*\***

## **Notes to Specifier**

for phosphatized/painted FORMLOK™ deck. Formerly A 611, Grade C.

for galvanized FORMLOK™ deck.  
Formerly A 446, Grade A.  
Formerly A 525.

For Deep or Shallow VERCOR™ deck.  
Formerly A 446.  
For Deep VERCOR™ deck.

For Shallow VERCOR™ deck.

Delete if VERCOR™ deck.

Delete if PunchLok® System not utilized and insert button punches **\*\*OR\*\*** Top seam welds.

Delete if VERCOR™ deck only.

Designate gage: 22, 20, 18, or 16.  
Designate I & S values and load.  
Designate span.

Designate gage: 22, 20, 18, or 16.  
Designate I & S values and load.  
Designate span.

Designate gage: 22, 21, 20, 19, 18, or 16.  
Designate I & S values and load.  
Designate span.

Designate gage: 22, 21, 20, 19, 18, or 16.  
Designate I & S values and load.  
Designate span.

## SPECIFICATION 05321 STEEL FLOOR DECK (cont.)

1. PLW3™-36 FORMLOK™, \_\_\_\_ gage 36" wide, 3" deep having minimum  $I = \text{____ in}^4$ ,  $S = \text{____ in}^3$ , and \_\_\_\_ psf superimposed load for \_\_\_\_ span.  
**\*\*OR\*\***
1. W3-36 FORMLOK™, \_\_\_\_ gage, 36" wide, 3" deep having minimum  $I = \text{____ in}^4$ ,  $S = \text{____ in}^3$ , and \_\_\_\_ psf superimposed load for \_\_\_\_ span.  
**\*\*OR\*\***
1. PLN™-24 FORMLOK™, \_\_\_\_ gage, 24" wide, 3" deep having minimum  $I = \text{____ in}^4$ ,  $S = \text{____ in}^3$ , and \_\_\_\_ psf superimposed load for \_\_\_\_ span.  
**\*\*OR\*\***
1. N-24 FORMLOK™, \_\_\_\_ gage, 24" wide, 3" deep having minimum  $I = \text{____ in}^4$ ,  $S = \text{____ in}^3$ , and \_\_\_\_ psf superimposed load for \_\_\_\_ span.  
**\*\*OR\*\***
1. Deep VERCOR™, \_\_\_\_ gage, 36" wide coverage,  $1\frac{5}{16}$ " deep having minimum  $I = \text{____ in}^4$  and  $S = \text{____ in}^3$ .  
**\*\*OR\*\***
1. Shallow VERCOR™, \_\_\_\_ gage, 36" wide coverage,  $\frac{9}{16}$ " deep having minimum  $I = \text{____ in}^4$  and  $S = \text{____ in}^3$ .

### 2.03 ACCESSORIES

- A. Metal Accessories: Same gage as decking except where noted or specified to be heavier material on drawings.
- B. Vent Tabs: Provide factory punched vents projecting upwards in interior low flutes approximately 6 inches on center.
- C. Sidelap Vents: Provide factory rolled-in sidelap vents.

## PART 3 -- EXECUTION

### 3.01 INSPECTION

- A. Check supporting members for correct layout and alignment.
- B. Verify that surfaces to receive floor deck are free of debris.
- C. Do not proceed with installation until defects are corrected.

### 3.02 INSTALLATION

- A. General: Install floor deck units and accessories in accordance with approved shop drawings.
- B. Placing Floor Deck Units:
  1. Position on supporting steel framework and adjust to final position with ends bearing minimum 2 in. on supporting members.
  2. Place units end to end before permanently fastening.
  3. Align ribs over entire length of run.
- C. Fastening Deck Units:
  1. Secure to supporting members with  $\frac{1}{2}$  in. effective diameter arc spot welds. If studs are welded through deck to structural steel, stud welds can replace arc spot welds.  
**\*\*OR\*\***
  1. Secure to supporting members with arc spot welds through  $\frac{3}{8}$ " diameter hole in 14 gage weld washer.

## Notes to Specifier

Designate gage: 22, 21, 20, 19, 18, or 16.  
Designate I & S values and load.  
Designate span.

Designate gage: 22, 21, 20, 19, 18, or 16.  
Designate I & S values and load.  
Designate span.

Designate gage: 22, 21, 20, 19, 18, or 16.  
Designate I & S values and load.  
Designate span.

Designate gage: 22, 20, 18, or 16.  
Designate I & S values and load.  
Designate span.

Designate gage: 26, 24, 22, or 20.  
Designate I & S values.

Designate gage: 28, 26, 24, or 22.  
Designate I & S values.

For FORMLOK™ deck. Delete if not required.

For Deep or Shallow VERCOR™ deck.  
Delete if not required.

For FORMLOK™ deck only.

For VERCOR™ deck only.



## **SPECIFICATION 05321 STEEL FLOOR DECK (cont.)**

2. Connect sidelaps with Verco PunchLok® tool to create interlocking VSC connection at \_\_\_\_" on center. VSCs may be made in either direction.

**\*\*OR\*\***

2. Connect sidelaps with button-punches at \_\_\_\_" on center.

3. Comply with AWS requirements and procedures for welding sheet steel in structures.

### **3.03 PROTECTION**

- A. Do not use deck units for storage or working platforms until permanently secured in position.
- B. Construction loads must not exceed carrying capacity of deck.
- C. Concrete must be placed with care, avoiding impacts by dropping or dumping. Runways must be planked if using buggies. Heavy concentrated loads of concrete or crews and uniform loads exceeding 20 psf must be investigated for shoring consideration.
- D. Calcium chloride and concrete admixtures containing chloride salts shall not be used with FORMLOK™ deck.

**\*END OF SECTION\***

## **Notes to Specifier**

For FORMLOK™ deck only.  
Designate spacing. VSC = Verco Sidelap Connection made with the PunchLok® tool.

Designate spacing. Replace with top seam welds if button punches not permitted.

Note: Maximum sidelap connection spacing for VSCs, BPs, or TSWs is 36" on center.



## Metric (SI) Conversions

Table 9

|                    | US                   | Multiplied by | = Metric                      |             | US                         | Multiplied by      | = Metric                         |
|--------------------|----------------------|---------------|-------------------------------|-------------|----------------------------|--------------------|----------------------------------|
| Length             | in.                  | x             | 25.4 = mm                     | Mass        | oz                         | x                  | 28.34952 = g                     |
|                    | in.                  | x             | 2.54 = cm                     |             | lb                         | x                  | 0.4535924 = kg                   |
|                    | ft                   | x             | 304.8 = mm                    |             | plf                        | x                  | 1.488164 = kg/m                  |
|                    | ft                   | x             | 30.48 = cm                    |             | psf                        | x                  | 4.882428 = kg/m <sup>2</sup>     |
|                    | ft                   | x             | 0.3048 = m                    |             | pcf                        | x                  | 16.01846 = kg/m <sup>3</sup>     |
| Area               | in. <sup>2</sup>     | x             | 645.16 = mm <sup>2</sup>      | Force       | lb                         | x                  | 4.448222 = N                     |
|                    | in. <sup>2</sup>     | x             | 6.4516 = cm <sup>2</sup>      |             | plf                        | x                  | 14.5939 = N/m                    |
|                    | ft <sup>2</sup>      | x             | 0.09290304 = m <sup>2</sup>   |             | psi                        | x                  | 6.894757 = kN/m <sup>2</sup>     |
| Volume             | in. <sup>3</sup>     | x             | 16,387.06 = mm <sup>3</sup>   |             | psf                        | x                  | 47.88026 = N/m <sup>2</sup>      |
|                    | in. <sup>3</sup>     | x             | 16.38706 = cm <sup>3</sup>    |             | in.-lb<br>(in.-kips)       | x                  | 0.1129848 = Nm (kNm)             |
|                    | ft <sup>3</sup>      | x             | 0.02831685 = m <sup>3</sup>   |             | in.-lb/ft<br>(in.-kips/ft) | x                  | 0.3706850 = Nm/m<br>(kNm/m)      |
| Moments of Inertia | in. <sup>4</sup>     | x             | 416231.4 = mm <sup>4</sup>    | Flexibility | in./lb x 10 <sup>6</sup>   | x                  | 5.71015 = mm/N x 10 <sup>6</sup> |
|                    | in. <sup>4</sup>     | x             | 41.62314 = cm <sup>4</sup>    |             | Galvanizing                | oz/ft <sup>2</sup> | x                                |
|                    | in. <sup>4</sup> /ft | x             | 1365588 = mm <sup>4</sup> /m  | Paint       |                            | mil                | x                                |
|                    | in. <sup>4</sup> /ft | x             | 136.5588 = cm <sup>4</sup> /m |             |                            |                    |                                  |
| Section Modulus    | in. <sup>3</sup> /ft | x             | 53763 = mm <sup>3</sup> /m    |             |                            |                    |                                  |
|                    | in. <sup>3</sup> /ft | x             | 53.763 = cm <sup>3</sup> /m   |             |                            |                    |                                  |

**Note:** “Metric” is the common term used to refer to measurements denoted by the formal term “Standard International” or “SI.”

Conversion factors and notation as per IEEE/ASTM SI 10-1997 and common mathematical practices. The values in this catalog were determined in standard US units and soft converted to SI units. Soft conversion denotes the mathematical conversion of standard US units to metric units with little or no rounding.

Allowable superimposed loads as well as deck and slab weights are converted to  $N/m^2$  for ease of use in calculations and comparisons. A pascal is equivalent to  $N/m^2$ .

| Metric Definitions |            |
|--------------------|------------|
| m                  | meter      |
| cm                 | centimeter |
| mm                 | millimeter |
| g                  | gram       |
| kg                 | kilogram   |
| N                  | Newton     |
| Pa                 | Pascal     |

## Using the Deck Tables

Figure 16 highlights important considerations for using the deck tables. (This figure is based on the tables found on page 38 of this catalog.)

The values in this catalog were determined in standard US units and soft converted to SI units. Allowable superimposed loads as well as deck and slab weights were converted to  $N/m^2$  for ease of use in calculations and comparisons. Please refer to page 34 for further information about converting US units to SI units.

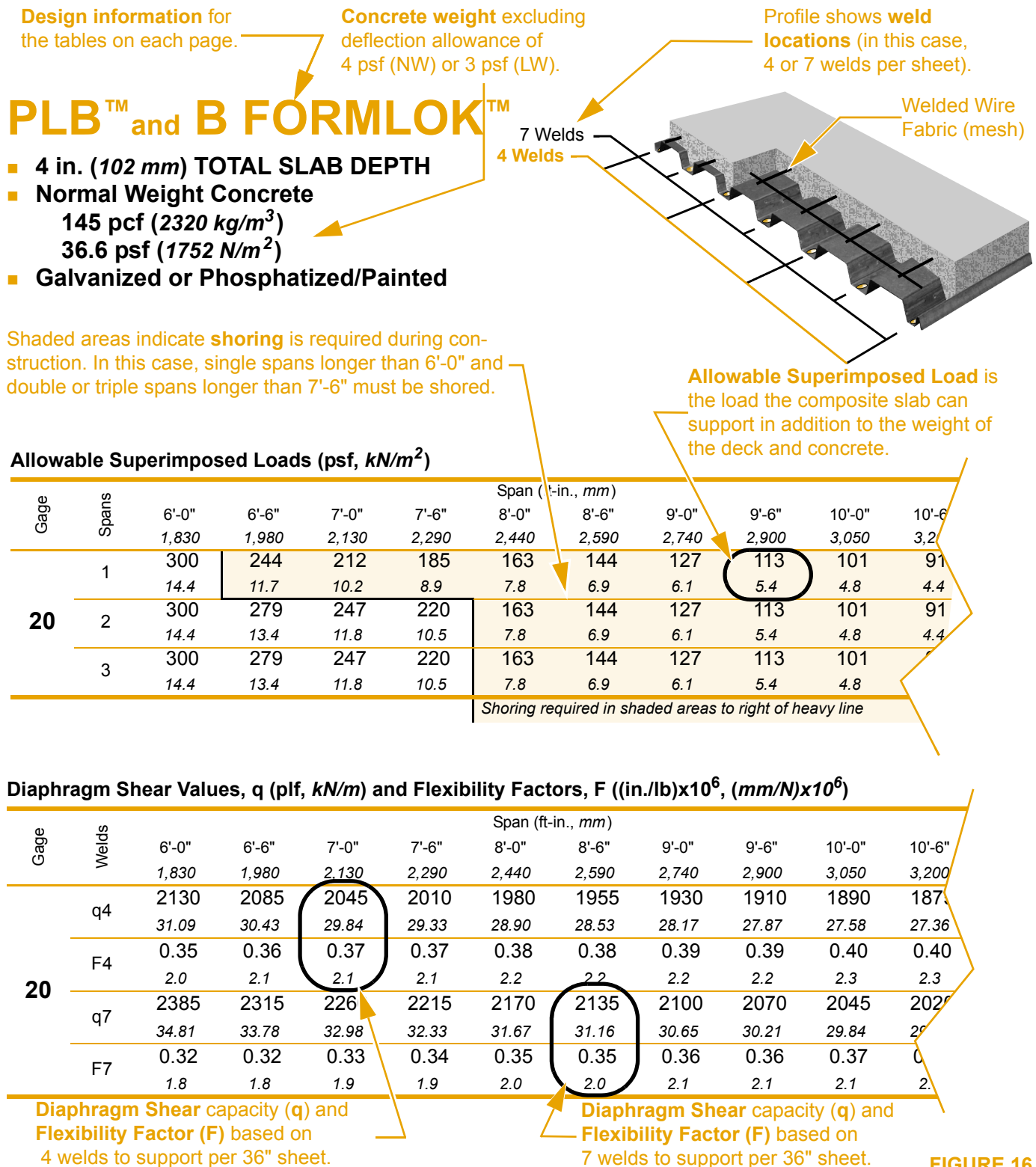
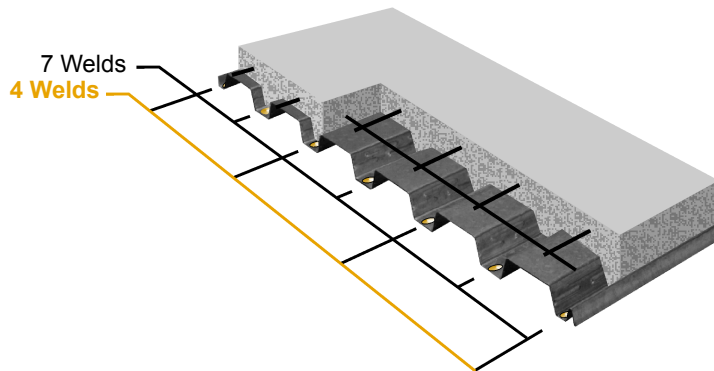


FIGURE 16

# PLB™ and B FORMLOK™

- 3½ in. (89 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
30.6 psf (1,465 N/m²)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

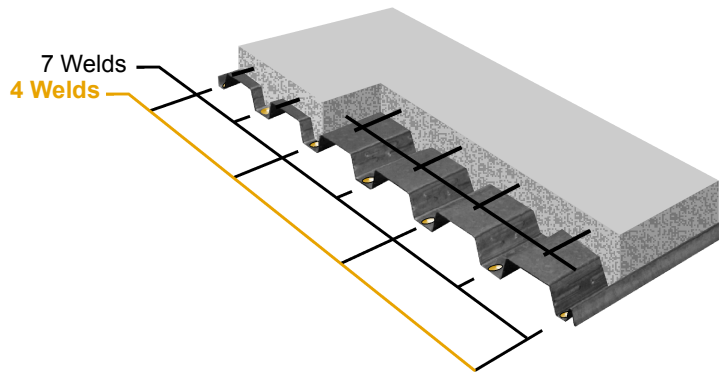
| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |               |               |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|---------------|---------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |               |               | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm   | 4"<br>102 mm  | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.175<br>238,978                         | 0.187<br>10,054                           | 0.198<br>10,645                           | 487<br>7,107                                    | 585<br>8,537  | 683<br>9,968  | 1250<br>18,242   | 1498<br>21,862 |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.216<br>294,967                         | 0.235<br>12,634                           | 0.248<br>13,333                           | 665<br>9,705                                    | 784<br>11,442 | 903<br>13,178 | 1790<br>26,123   | 2118<br>30,910 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage                                                    | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|---------------------------------------------------------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|                                                         |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|                                                         |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b>                                               | 1     | 232<br>11.1       | 199<br>9.5     | 173<br>8.3     | 151<br>7.2     | 132<br>6.3     | 117<br>5.6     | 104<br>5.0     | 92<br>4.4      | 82<br>3.9       | 74<br>3.5       | 66<br>3.2       |
|                                                         | 2     | 261<br>12.5       | 228<br>10.9    | 202<br>9.7     | 151<br>7.2     | 132<br>6.3     | 117<br>5.6     | 104<br>5.0     | 92<br>4.4      | 82<br>3.9       | 74<br>3.5       | 66<br>3.2       |
|                                                         | 3     | 261<br>12.5       | 228<br>10.9    | 202<br>9.7     | 151<br>7.2     | 132<br>6.3     | 117<br>5.6     | 104<br>5.0     | 92<br>4.4      | 82<br>3.9       | 74<br>3.5       | 66<br>3.2       |
| <b>20</b>                                               | 1     | 275<br>13.2       | 240<br>11.5    | 183<br>8.8     | 160<br>7.7     | 141<br>6.8     | 124<br>5.9     | 110<br>5.3     | 98<br>4.7      | 88<br>4.2       | 79<br>3.8       | 71<br>3.4       |
|                                                         | 2     | 275<br>13.2       | 240<br>11.5    | 212<br>10.2    | 189<br>9.0     | 170<br>8.1     | 124<br>5.9     | 110<br>5.3     | 98<br>4.7      | 88<br>4.2       | 79<br>3.8       | 71<br>3.4       |
|                                                         | 3     | 275<br>13.2       | 240<br>11.5    | 212<br>10.2    | 189<br>9.0     | 170<br>8.1     | 124<br>5.9     | 110<br>5.3     | 98<br>4.7      | 88<br>4.2       | 79<br>3.8       | 71<br>3.4       |
| Shoring required in shaded areas to right of heavy line |       |                   |                |                |                |                |                |                |                |                 |                 |                 |

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | q4    | 1825<br>26.63     | 1785<br>26.05  | 1755<br>25.61  | 1725<br>25.17  | 1700<br>24.81  | 1680<br>24.52  | 1660<br>24.23  | 1640<br>23.93  | 1625<br>23.72   | 1610<br>23.50   | 1600<br>23.35   |
|           | F4    | 0.45<br>2.6       | 0.46<br>2.6    | 0.47<br>2.7    | 0.48<br>2.7    | 0.48<br>2.7    | 0.49<br>2.8    | 0.50<br>2.9    | 0.50<br>2.9    | 0.51<br>2.9     | 0.51<br>2.9     | 0.52<br>3.0     |
|           | q7    | 2035<br>29.70     | 1980<br>28.90  | 1935<br>28.24  | 1895<br>27.66  | 1855<br>27.07  | 1825<br>26.63  | 1800<br>26.27  | 1775<br>25.90  | 1750<br>25.54   | 1730<br>25.25   | 1715<br>25.03   |
|           | F7    | 0.40<br>2.3       | 0.42<br>2.4    | 0.43<br>2.5    | 0.44<br>2.5    | 0.44<br>2.5    | 0.45<br>2.6    | 0.46<br>2.6    | 0.46<br>2.6    | 0.47<br>2.7     | 0.48<br>2.7     | 0.48<br>2.7     |
| <b>20</b> | q4    | 1890<br>27.58     | 1845<br>26.93  | 1805<br>26.34  | 1775<br>25.90  | 1745<br>25.47  | 1715<br>25.03  | 1695<br>24.74  | 1670<br>24.37  | 1655<br>24.15   | 1635<br>23.86   | 1620<br>23.64   |
|           | F4    | 0.40<br>2.3       | 0.41<br>2.3    | 0.42<br>2.4    | 0.42<br>2.4    | 0.43<br>2.5    | 0.44<br>2.5    | 0.44<br>2.5    | 0.45<br>2.6    | 0.45<br>2.6     | 0.46<br>2.6     | 0.46<br>2.6     |
|           | q7    | 2145<br>31.30     | 2080<br>30.36  | 2020<br>29.48  | 1975<br>28.82  | 1930<br>28.17  | 1895<br>27.66  | 1860<br>27.14  | 1830<br>26.71  | 1805<br>26.34   | 1780<br>25.98   | 1760<br>25.69   |
|           | F7    | 0.35<br>2.0       | 0.36<br>2.1    | 0.37<br>2.1    | 0.38<br>2.2    | 0.39<br>2.2    | 0.40<br>2.3    | 0.40<br>2.3    | 0.41<br>2.3    | 0.42<br>2.4     | 0.42<br>2.4     | 0.43<br>2.5     |



# PLB™ and B FORMLOK™

- 3½ in. (89 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 30.6 psf (1,465 N/m²)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>18</b> | 2.9<br>138.9        | 2.8<br>134.1     | 0.302<br>412,408                         | 0.322<br>17,312                           | 0.335<br>18,011                           | 1226<br>17,892                                  | 1407<br>20,534 | 1588<br>23,175 | 3062<br>44,687   | 3551<br>51,823 |
| <b>16</b> | 3.5<br>167.6        | 3.4<br>162.8     | 0.377<br>514,827                         | 0.411<br>22,097                           | 0.417<br>22,419                           | 2208<br>32,223                                  | 2484<br>36,251 | 2761<br>40,294 | 4789<br>69,890   | 5266<br>76,851 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage | Spans | Span (ft-in., mm) |       |       |       |       |       |       |       |        |        |        |
|------|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
|      |       | 6'-0"             | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" |
|      |       | 1,830             | 1,980 | 2,130 | 2,290 | 2,440 | 2,590 | 2,740 | 2,900 | 3,050  | 3,200  | 3,350  |
| 18   | 1     | 298               | 261   | 230   | 205   | 184   | 137   | 122   | 108   | 97     | 87     | 78     |
|      |       | 14.3              | 12.5  | 11.0  | 9.8   | 8.8   | 6.6   | 5.8   | 5.2   | 4.6    | 4.2    | 3.7    |
|      | 2     | 298               | 261   | 230   | 205   | 184   | 167   | 152   | 108   | 97     | 87     | 78     |
|      |       | 14.3              | 12.5  | 11.0  | 9.8   | 8.8   | 8.0   | 7.3   | 5.2   | 4.6    | 4.2    | 3.7    |
|      | 3     | 298               | 261   | 230   | 205   | 184   | 167   | 152   | 138   | 127    | 87     | 78     |
|      |       | 14.3              | 12.5  | 11.0  | 9.8   | 8.8   | 8.0   | 7.3   | 6.6   | 6.1    | 4.2    | 3.7    |
| 16   | 1     | 298               | 260   | 230   | 205   | 184   | 166   | 151   | 108   | 96     | 86     | 78     |
|      |       | 14.3              | 12.4  | 11.0  | 9.8   | 8.8   | 7.9   | 7.2   | 5.2   | 4.6    | 4.1    | 3.7    |
|      | 2     | 298               | 260   | 230   | 205   | 184   | 166   | 151   | 138   | 127    | 86     | 78     |
|      |       | 14.3              | 12.4  | 11.0  | 9.8   | 8.8   | 7.9   | 7.2   | 6.6   | 6.1    | 4.1    | 3.7    |
|      | 3     | 298               | 260   | 230   | 205   | 184   | 166   | 151   | 138   | 127    | 117    | 108    |
|      |       | 14.3              | 12.4  | 11.0  | 9.8   | 8.8   | 7.9   | 7.2   | 6.6   | 6.1    | 5.6    | 5.2    |

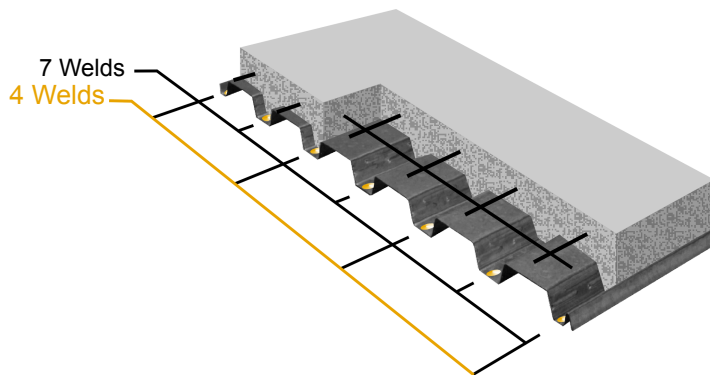
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage | Welds | Span (ft-in., <i>mm</i> ) |                       |                       |                       |                       |                       |                       |                       |                        |                        |                        |
|------|-------|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
|      |       | 6'-0"<br><i>1,830</i>     | 6'-6"<br><i>1,980</i> | 7'-0"<br><i>2,130</i> | 7'-6"<br><i>2,290</i> | 8'-0"<br><i>2,440</i> | 8'-6"<br><i>2,590</i> | 9'-0"<br><i>2,740</i> | 9'-6"<br><i>2,900</i> | 10'-0"<br><i>3,050</i> | 10'-6"<br><i>3,200</i> | 11'-0"<br><i>3,350</i> |
| 18   | q4    | 2045<br><i>29.84</i>      | 1985<br><i>28.97</i>  | 1930<br><i>28.17</i>  | 1885<br><i>27.51</i>  | 1845<br><i>26.93</i>  | 1810<br><i>26.41</i>  | 1780<br><i>25.98</i>  | 1750<br><i>25.54</i>  | 1725<br><i>25.17</i>   | 1705<br><i>24.88</i>   | 1685<br><i>24.59</i>   |
|      | F4    | 0.32<br><i>1.8</i>        | 0.33<br><i>1.9</i>    | 0.34<br><i>1.9</i>    | 0.35<br><i>2.0</i>    | 0.35<br><i>2.0</i>    | 0.36<br><i>2.1</i>    | 0.37<br><i>2.1</i>    | 0.37<br><i>2.1</i>    | 0.38<br><i>2.2</i>     | 0.38<br><i>2.2</i>     | 0.39<br><i>2.2</i>     |
|      | q7    | 2380<br><i>34.73</i>      | 2295<br><i>33.49</i>  | 2220<br><i>32.40</i>  | 2155<br><i>31.45</i>  | 2095<br><i>30.57</i>  | 2050<br><i>29.92</i>  | 2005<br><i>29.26</i>  | 1965<br><i>28.68</i>  | 1930<br><i>28.17</i>   | 1895<br><i>27.66</i>   | 1865<br><i>27.22</i>   |
|      | F7    | 0.27<br><i>1.5</i>        | 0.28<br><i>1.6</i>    | 0.29<br><i>1.7</i>    | 0.30<br><i>1.7</i>    | 0.31<br><i>1.8</i>    | 0.32<br><i>1.8</i>    | 0.33<br><i>1.9</i>    | 0.33<br><i>1.9</i>    | 0.34<br><i>1.9</i>     | 0.34<br><i>1.9</i>     | 0.35<br><i>2.0</i>     |
| 16   | q4    | 2215<br><i>32.33</i>      | 2140<br><i>31.23</i>  | 2070<br><i>30.21</i>  | 2015<br><i>29.41</i>  | 1965<br><i>28.68</i>  | 1920<br><i>28.02</i>  | 1880<br><i>27.44</i>  | 1845<br><i>26.93</i>  | 1815<br><i>26.49</i>   | 1785<br><i>26.05</i>   | 1760<br><i>25.69</i>   |
|      | F4    | 0.26<br><i>1.5</i>        | 0.27<br><i>1.5</i>    | 0.28<br><i>1.6</i>    | 0.29<br><i>1.7</i>    | 0.30<br><i>1.7</i>    | 0.30<br><i>1.7</i>    | 0.31<br><i>1.8</i>    | 0.32<br><i>1.8</i>    | 0.32<br><i>1.8</i>     | 0.33<br><i>1.9</i>     | 0.33<br><i>1.9</i>     |
|      | q7    | 2635<br><i>38.45</i>      | 2525<br><i>36.85</i>  | 2430<br><i>35.46</i>  | 2350<br><i>34.30</i>  | 2280<br><i>33.27</i>  | 2215<br><i>32.33</i>  | 2160<br><i>31.52</i>  | 2110<br><i>30.79</i>  | 2065<br><i>30.14</i>   | 2025<br><i>29.55</i>   | 1990<br><i>29.04</i>   |
|      | F7    | 0.22<br><i>1.3</i>        | 0.23<br><i>1.3</i>    | 0.24<br><i>1.4</i>    | 0.25<br><i>1.4</i>    | 0.26<br><i>1.5</i>    | 0.26<br><i>1.5</i>    | 0.27<br><i>1.5</i>    | 0.28<br><i>1.6</i>    | 0.28<br><i>1.6</i>     | 0.29<br><i>1.7</i>     | 0.29<br><i>1.7</i>     |

# PLB™ and B FORMLOK™

- 4 in. (102 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m<sup>3</sup>)  
36.6 psf (1,752 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |               |               |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|---------------|---------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |               |               | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm   | 4"<br>102 mm  | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>22</b> | 1.9<br>91.0                     | 1.8<br>86.2      | 0.175<br>238,978                         | 0.187<br>10,054                           | 0.198<br>10,645                           | 487<br>7,107                                    | 585<br>8,537  | 683<br>9,968  | 1250<br>18,242   | 1498<br>21,862 |
| <b>20</b> | 2.3<br>110.1                    | 2.2<br>105.3     | 0.216<br>294,967                         | 0.235<br>12,634                           | 0.248<br>13,333                           | 665<br>9,705                                    | 784<br>11,442 | 903<br>13,178 | 1790<br>26,123   | 2118<br>30,910 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

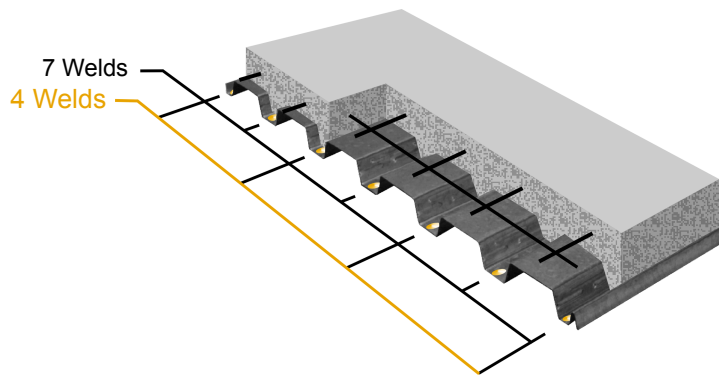
| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | 1     | 269<br>12.9       | 231<br>11.1    | 200<br>9.6     | 175<br>8.4     | 153<br>7.3     | 135<br>6.5     | 120<br>5.7     | 107<br>5.1     | 95<br>4.5       | 85<br>4.1       | 76<br>3.6       |
|           | 2     | 300<br>14.4       | 266<br>12.7    | 200<br>9.6     | 175<br>8.4     | 153<br>7.3     | 135<br>6.5     | 120<br>5.7     | 107<br>5.1     | 95<br>4.5       | 85<br>4.1       | 76<br>3.6       |
|           | 3     | 300<br>14.4       | 266<br>12.7    | 200<br>9.6     | 175<br>8.4     | 153<br>7.3     | 135<br>6.5     | 120<br>5.7     | 107<br>5.1     | 95<br>4.5       | 85<br>4.1       | 76<br>3.6       |
| <b>20</b> | 1     | 300<br>14.4       | 244<br>11.7    | 212<br>10.2    | 185<br>8.9     | 163<br>7.8     | 144<br>6.9     | 127<br>6.1     | 113<br>5.4     | 101<br>4.8      | 91<br>4.4       | 81<br>3.9       |
|           | 2     | 300<br>14.4       | 279<br>13.4    | 247<br>11.8    | 220<br>10.5    | 163<br>7.8     | 144<br>6.9     | 127<br>6.1     | 113<br>5.4     | 101<br>4.8      | 91<br>4.4       | 81<br>3.9       |
|           | 3     | 300<br>14.4       | 279<br>13.4    | 247<br>11.8    | 220<br>10.5    | 163<br>7.8     | 144<br>6.9     | 127<br>6.1     | 113<br>5.4     | 101<br>4.8      | 91<br>4.4       | 81<br>3.9       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | q4    | 2065<br>30.14     | 2025<br>29.55  | 1995<br>29.11  | 1965<br>28.68  | 1940<br>28.31  | 1915<br>27.95  | 1900<br>27.73  | 1880<br>27.44  | 1865<br>27.22   | 1850<br>27.00   | 1835<br>26.78   |
|           | F4    | 0.40<br>2.3       | 0.41<br>2.3    | 0.41<br>2.3    | 0.42<br>2.4    | 0.42<br>2.4    | 0.43<br>2.5    | 0.43<br>2.5    | 0.44<br>2.5    | 0.44<br>2.5     | 0.45<br>2.6     | 0.45<br>2.6     |
|           | q7    | 2275<br>33.20     | 2220<br>32.40  | 2170<br>31.67  | 2130<br>31.09  | 2095<br>30.57  | 2065<br>30.14  | 2035<br>29.70  | 2015<br>29.41  | 1990<br>29.04   | 1970<br>28.75   | 1950<br>28.46   |
|           | F7    | 0.36<br>2.1       | 0.37<br>2.1    | 0.38<br>2.2    | 0.39<br>2.2    | 0.39<br>2.2    | 0.40<br>2.3    | 0.40<br>2.3    | 0.41<br>2.3    | 0.41<br>2.3     | 0.42<br>2.4     | 0.42<br>2.4     |
| <b>20</b> | q4    | 2130<br>31.09     | 2085<br>30.43  | 2045<br>29.84  | 2010<br>29.33  | 1980<br>28.90  | 1955<br>28.53  | 1930<br>28.17  | 1910<br>27.87  | 1890<br>27.58   | 1875<br>27.36   | 1860<br>27.14   |
|           | F4    | 0.35<br>2.0       | 0.36<br>2.1    | 0.37<br>2.1    | 0.37<br>2.1    | 0.38<br>2.2    | 0.38<br>2.2    | 0.39<br>2.2    | 0.39<br>2.2    | 0.40<br>2.3     | 0.40<br>2.3     | 0.40<br>2.3     |
|           | q7    | 2385<br>34.81     | 2315<br>33.78  | 2260<br>32.98  | 2215<br>32.33  | 2170<br>31.67  | 2135<br>31.16  | 2100<br>30.65  | 2070<br>30.21  | 2045<br>29.84   | 2020<br>29.48   | 1995<br>29.11   |
|           | F7    | 0.32<br>1.8       | 0.32<br>1.8    | 0.33<br>1.9    | 0.34<br>1.9    | 0.35<br>2.0    | 0.35<br>2.0    | 0.36<br>2.1    | 0.36<br>2.1    | 0.37<br>2.1     | 0.37<br>2.1     | 0.38<br>2.2     |





# PLB™ and B FORMLOK™

- 4 in. (102 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m<sup>3</sup>)
- 36.6 psf (1,752 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>18</b> | 2.9<br>138.9                    | 2.8<br>134.1     | 0.302<br>412,408                         | 0.322<br>17,312                           | 0.335<br>18,011                           | 1226<br>17,892                                  | 1407<br>20,534 | 1588<br>23,175 | 3062<br>44,687   | 3551<br>51,823 |
| <b>16</b> | 3.5<br>167.6                    | 3.4<br>162.8     | 0.377<br>514,827                         | 0.411<br>22,097                           | 0.417<br>22,419                           | 2208<br>32,223                                  | 2484<br>36,251 | 2761<br>40,294 | 4789<br>69,890   | 5266<br>76,851 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
| <b>18</b> | 1     | 300<br>14.4       | 300<br>14.4    | 266<br>12.7    | 237<br>11.3    | 178<br>8.5     | 157<br>7.5     | 140<br>6.7     | 125<br>6.0     | 112<br>5.4      | 100<br>4.8      | 90<br>4.3       |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 266<br>12.7    | 237<br>11.3    | 213<br>10.2    | 193<br>9.2     | 140<br>6.7     | 125<br>6.0     | 112<br>5.4      | 100<br>4.8      | 90<br>4.3       |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 266<br>12.7    | 237<br>11.3    | 213<br>10.2    | 193<br>9.2     | 175<br>8.4     | 160<br>7.7     | 112<br>5.4      | 100<br>4.8      | 90<br>4.3       |
| <b>16</b> | 1     | 300<br>14.4       | 300<br>14.4    | 265<br>12.7    | 236<br>11.3    | 212<br>10.2    | 192<br>9.2     | 138<br>6.6     | 123<br>5.9     | 110<br>5.3      | 99<br>4.7       | 89<br>4.3       |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 265<br>12.7    | 236<br>11.3    | 212<br>10.2    | 192<br>9.2     | 174<br>8.3     | 159<br>7.6     | 110<br>5.3      | 99<br>4.7       | 89<br>4.3       |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 265<br>12.7    | 236<br>11.3    | 212<br>10.2    | 192<br>9.2     | 174<br>8.3     | 159<br>7.6     | 146<br>7.0      | 135<br>6.5      | 89<br>4.3       |

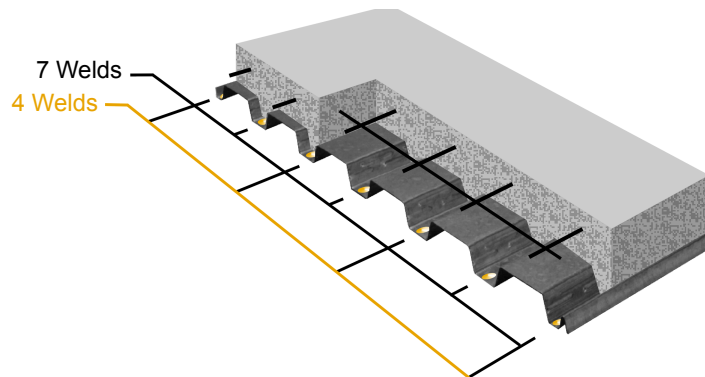
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
| <b>18</b> | q4    | 2285<br>33.35     | 2225<br>32.47  | 2170<br>31.67  | 2125<br>31.01  | 2085<br>30.43  | 2050<br>29.92  | 2020<br>29.48  | 1990<br>29.04  | 1965<br>28.68   | 1945<br>28.39   | 1925<br>28.09   |
|           | F4    | 0.29<br>1.7       | 0.29<br>1.7    | 0.30<br>1.7    | 0.31<br>1.8    | 0.31<br>1.8    | 0.32<br>1.8    | 0.32<br>1.8    | 0.33<br>1.9    | 0.33<br>1.9     | 0.34<br>1.9     | 0.34<br>1.9     |
|           | q7    | 2620<br>38.24     | 2530<br>36.92  | 2460<br>35.90  | 2395<br>34.95  | 2335<br>34.08  | 2285<br>33.35  | 2240<br>32.69  | 2205<br>32.18  | 2165<br>31.60   | 2135<br>31.16   | 2105<br>30.72   |
|           | F7    | 0.25<br>1.4       | 0.26<br>1.5    | 0.27<br>1.5    | 0.27<br>1.5    | 0.28<br>1.6    | 0.28<br>1.6    | 0.29<br>1.7    | 0.30<br>1.7    | 0.30<br>1.7     | 0.31<br>1.8     | 0.31<br>1.8     |
|           | q4    | 2455<br>35.83     | 2375<br>34.66  | 2310<br>33.71  | 2255<br>32.91  | 2205<br>32.18  | 2160<br>31.52  | 2120<br>30.94  | 2085<br>30.43  | 2055<br>29.99   | 2025<br>29.55   | 2000<br>29.19   |
| <b>16</b> | F4    | 0.24<br>1.4       | 0.25<br>1.4    | 0.25<br>1.4    | 0.26<br>1.5    | 0.26<br>1.5    | 0.27<br>1.5    | 0.27<br>1.5    | 0.28<br>1.6    | 0.28<br>1.6     | 0.29<br>1.7     | 0.29<br>1.7     |
|           | q7    | 2870<br>41.88     | 2765<br>40.35  | 2670<br>38.97  | 2590<br>37.80  | 2520<br>36.78  | 2455<br>35.83  | 2400<br>35.03  | 2350<br>34.30  | 2305<br>33.64   | 2265<br>33.06   | 2230<br>32.54   |
|           | F7    | 0.20<br>1.1       | 0.21<br>1.2    | 0.22<br>1.3    | 0.22<br>1.3    | 0.23<br>1.3    | 0.24<br>1.4    | 0.24<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4     | 0.26<br>1.5     | 0.26<br>1.5     |

# PLB™ and B FORMLOK™

- 4½ in. (114 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
42.7 psf (2,044 N/m²)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |               |               |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|---------------|---------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |               |               | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm   | 4"<br>102 mm  | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.175<br>238,978                         | 0.187<br>10,054                           | 0.198<br>10,645                           | 487<br>7,107                                    | 585<br>8,537  | 683<br>9,968  | 1250<br>18,242   | 1498<br>21,862 |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.216<br>294,967                         | 0.235<br>12,634                           | 0.248<br>13,333                           | 665<br>9,705                                    | 784<br>11,442 | 903<br>13,178 | 1790<br>26,123   | 2118<br>30,910 |

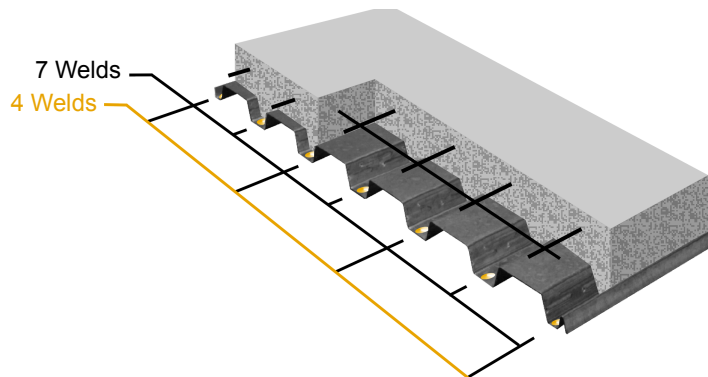
## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | 1     | 300<br>14.4       | 265<br>12.7    | 229<br>11.0    | 200<br>9.6     | 175<br>8.4     | 155<br>7.4     | 137<br>6.6     | 122<br>5.8     | 109<br>5.2      | 97<br>4.6       | 87<br>4.2       |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 229<br>11.0    | 200<br>9.6     | 175<br>8.4     | 155<br>7.4     | 137<br>6.6     | 122<br>5.8     | 109<br>5.2      | 97<br>4.6       | 87<br>4.2       |
|           | 3     | 300<br>14.4       | 265<br>12.7    | 229<br>11.0    | 200<br>9.6     | 175<br>8.4     | 155<br>7.4     | 137<br>6.6     | 122<br>5.8     | 109<br>5.2      | 97<br>4.6       | 87<br>4.2       |
| <b>20</b> | 1     | 300<br>14.4       | 279<br>13.4    | 242<br>11.6    | 211<br>10.1    | 186<br>8.9     | 164<br>7.9     | 146<br>7.0     | 129<br>6.2     | 116<br>5.6      | 103<br>4.9      | 93<br>4.5       |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 282<br>13.5    | 211<br>10.1    | 186<br>8.9     | 164<br>7.9     | 146<br>7.0     | 129<br>6.2     | 116<br>5.6      | 103<br>4.9      | 93<br>4.5       |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 282<br>13.5    | 252<br>12.1    | 186<br>8.9     | 164<br>7.9     | 146<br>7.0     | 129<br>6.2     | 116<br>5.6      | 103<br>4.9      | 93<br>4.5       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10⁶, (mm/N)x10⁶)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | q4    | 2305<br>33.64     | 2265<br>33.06  | 2230<br>32.54  | 2205<br>32.18  | 2180<br>31.81  | 2155<br>31.45  | 2135<br>31.16  | 2120<br>30.94  | 2105<br>30.72   | 2090<br>30.50   | 2075<br>30.28   |
|           | F4    | 0.36<br>2.1       | 0.36<br>2.1    | 0.37<br>2.1    | 0.37<br>2.1    | 0.38<br>2.2    | 0.38<br>2.2    | 0.39<br>2.2    | 0.39<br>2.2    | 0.39<br>2.2     | 0.39<br>2.2     | 0.40<br>2.3     |
|           | q7    | 2510<br>36.63     | 2460<br>35.90  | 2410<br>35.17  | 2370<br>34.59  | 2335<br>34.08  | 2305<br>33.64  | 2275<br>33.20  | 2250<br>32.84  | 2230<br>32.54   | 2210<br>32.25   | 2190<br>31.96   |
|           | F7    | 0.33<br>1.9       | 0.34<br>1.9    | 0.34<br>1.9    | 0.35<br>2.0    | 0.35<br>2.0    | 0.36<br>2.1    | 0.36<br>2.1    | 0.37<br>2.1    | 0.37<br>2.1     | 0.37<br>2.1     | 0.38<br>2.2     |
| <b>20</b> | q4    | 2370<br>34.59     | 2325<br>33.93  | 2285<br>33.35  | 2250<br>32.84  | 2220<br>32.40  | 2195<br>32.03  | 2170<br>31.67  | 2150<br>31.38  | 2130<br>31.09   | 2115<br>30.87   | 2100<br>30.65   |
|           | F4    | 0.32<br>1.8       | 0.32<br>1.8    | 0.33<br>1.9    | 0.33<br>1.9    | 0.34<br>1.9    | 0.34<br>1.9    | 0.35<br>2.0    | 0.35<br>2.0    | 0.35<br>2.0     | 0.36<br>2.1     | 0.36<br>2.1     |
|           | q7    | 2620<br>38.24     | 2555<br>37.29  | 2500<br>36.48  | 2450<br>35.76  | 2410<br>35.17  | 2370<br>34.59  | 2340<br>34.15  | 2310<br>33.71  | 2280<br>33.27   | 2260<br>32.98   | 2235<br>32.62   |
|           | F7    | 0.29<br>1.7       | 0.29<br>1.7    | 0.30<br>1.7    | 0.31<br>1.8    | 0.31<br>1.8    | 0.32<br>1.8    | 0.32<br>1.8    | 0.33<br>1.9    | 0.33<br>1.9     | 0.33<br>1.9     | 0.34<br>1.9     |



# PLB™ and B FORMLOK™

- 4½ in. (114 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 42.7 psf (2,044 N/m²)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>18</b> | 2.9<br>138.9        | 2.8<br>134.1     | 0.302<br>412,408                         | 0.322<br>17,312                           | 0.335<br>18,011                           | 1226<br>17,892                                  | 1407<br>20,534 | 1588<br>23,175 | 3062<br>44,687   | 3551<br>51,823 |
| <b>16</b> | 3.5<br>167.6        | 3.4<br>162.8     | 0.377<br>514,827                         | 0.411<br>22,097                           | 0.417<br>22,419                           | 2208<br>32,223                                  | 2484<br>36,251 | 2761<br>40,294 | 4789<br>69,890   | 5266<br>76,851 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
| <b>18</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 231<br>11.1    | 203<br>9.7     | 180<br>8.6     | 159<br>7.6     | 142<br>6.8     | 127<br>6.1      | 114<br>5.5      | 103<br>4.9      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 272<br>13.0    | 244<br>11.7    | 220<br>10.5    | 159<br>7.6     | 142<br>6.8     | 127<br>6.1      | 114<br>5.5      | 103<br>4.9      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 272<br>13.0    | 244<br>11.7    | 220<br>10.5    | 200<br>9.6     | 142<br>6.8     | 127<br>6.1      | 114<br>5.5      | 103<br>4.9      |
| <b>16</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 270<br>12.9    | 242<br>11.6    | 177<br>8.5     | 158<br>7.6     | 140<br>6.7     | 126<br>6.0      | 112<br>5.4      | 101<br>4.8      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 270<br>12.9    | 242<br>11.6    | 219<br>10.5    | 199<br>9.5     | 140<br>6.7     | 126<br>6.0      | 112<br>5.4      | 101<br>4.8      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 270<br>12.9    | 242<br>11.6    | 219<br>10.5    | 199<br>9.5     | 182<br>8.7     | 167<br>8.0      | 112<br>5.4      | 101<br>4.8      |

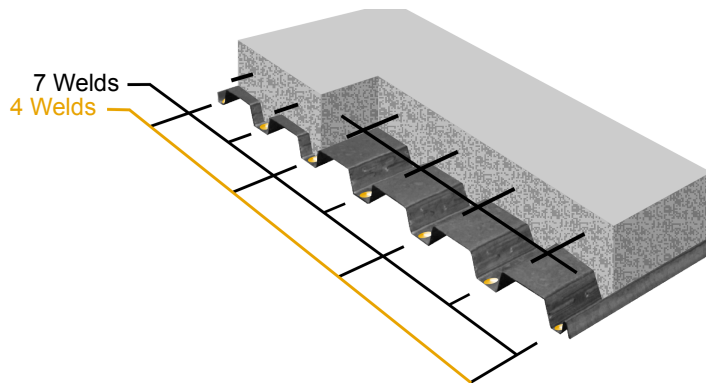
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
| <b>18</b> | q4    | 2525<br>36.85     | 2460<br>35.90  | 2410<br>35.17  | 2365<br>34.51  | 2325<br>33.93  | 2290<br>33.42  | 2260<br>32.98  | 2230<br>32.54  | 2205<br>32.18   | 2180<br>31.81   | 2160<br>31.52   |
|           | F4    | 0.26<br>1.5       | 0.26<br>1.5    | 0.27<br>1.5    | 0.28<br>1.6    | 0.28<br>1.6    | 0.28<br>1.6    | 0.29<br>1.7    | 0.29<br>1.7    | 0.30<br>1.7     | 0.30<br>1.7     | 0.30<br>1.7     |
|           | q7    | 2860<br>41.74     | 2770<br>40.43  | 2695<br>39.33  | 2630<br>38.38  | 2575<br>37.58  | 2525<br>36.85  | 2480<br>36.19  | 2440<br>35.61  | 2405<br>35.10   | 2375<br>34.66   | 2345<br>34.22   |
|           | F7    | 0.23<br>1.3       | 0.24<br>1.4    | 0.24<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4    | 0.26<br>1.5    | 0.26<br>1.5    | 0.27<br>1.5    | 0.27<br>1.5     | 0.27<br>1.5     | 0.28<br>1.6     |
| <b>16</b> | q4    | 2695<br>39.33     | 2615<br>38.16  | 2550<br>37.21  | 2495<br>36.41  | 2445<br>35.68  | 2400<br>35.03  | 2360<br>34.44  | 2325<br>33.93  | 2295<br>33.49   | 2265<br>33.06   | 2240<br>32.69   |
|           | F4    | 0.22<br>1.3       | 0.22<br>1.3    | 0.23<br>1.3    | 0.23<br>1.3    | 0.24<br>1.4    | 0.24<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4     | 0.26<br>1.5     | 0.26<br>1.5     |
|           | q7    | 3110<br>45.39     | 3000<br>43.78  | 2910<br>42.47  | 2830<br>41.30  | 2760<br>40.28  | 2695<br>39.33  | 2640<br>38.53  | 2590<br>37.80  | 2545<br>37.14   | 2505<br>36.56   | 2470<br>36.05   |
|           | F7    | 0.19<br>1.1       | 0.19<br>1.1    | 0.20<br>1.1    | 0.21<br>1.2    | 0.21<br>1.2    | 0.22<br>1.3    | 0.22<br>1.3    | 0.22<br>1.3    | 0.23<br>1.3     | 0.23<br>1.3     | 0.24<br>1.4     |

# PLB™ and B FORMLOK™

- 5 in. (127 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m<sup>3</sup>)  
48.7 psf (2,332 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



## Deck Weight and Section Properties

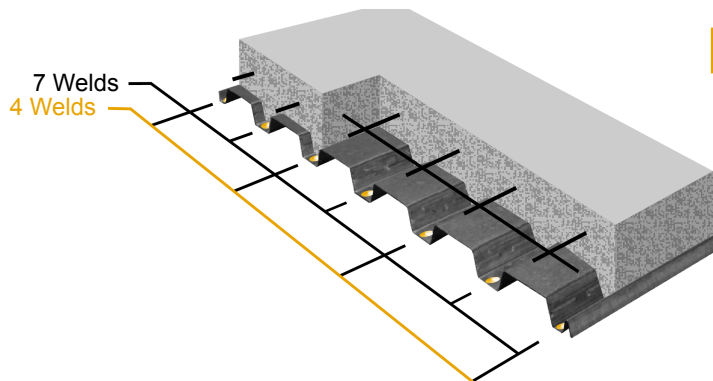
| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |               |               |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|---------------|---------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |               |               | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm   | 4"<br>102 mm  | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>22</b> | 1.9<br>91.0                     | 1.8<br>86.2      | 0.175<br>238,978                         | 0.187<br>10,054                           | 0.198<br>10,645                           | 487<br>7,107                                    | 585<br>8,537  | 683<br>9,968  | 1250<br>18,242   | 1498<br>21,862 |
| <b>20</b> | 2.3<br>110.1                    | 2.2<br>105.3     | 0.216<br>294,967                         | 0.235<br>12,634                           | 0.248<br>13,333                           | 665<br>9,705                                    | 784<br>11,442 | 903<br>13,178 | 1790<br>26,123   | 2118<br>30,910 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage                                                    | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|---------------------------------------------------------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|                                                         |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|                                                         |       | 300<br>14.4       | 299<br>14.3    | 259<br>12.4    | 226<br>10.8    | 198<br>9.5     | 175<br>8.4     | 155<br>7.4     | 138<br>6.6     | 123<br>5.9      | 109<br>5.2      | 98<br>4.7       |
| <b>22</b>                                               | 1     | 300<br>14.4       | 299<br>14.3    | 259<br>12.4    | 226<br>10.8    | 198<br>9.5     | 175<br>8.4     | 155<br>7.4     | 138<br>6.6     | 123<br>5.9      | 109<br>5.2      | 98<br>4.7       |
|                                                         | 2     | 300<br>14.4       | 299<br>14.3    | 259<br>12.4    | 226<br>10.8    | 198<br>9.5     | 175<br>8.4     | 155<br>7.4     | 138<br>6.6     | 123<br>5.9      | 109<br>5.2      | 98<br>4.7       |
|                                                         | 3     | 300<br>14.4       | 299<br>14.3    | 259<br>12.4    | 226<br>10.8    | 198<br>9.5     | 175<br>8.4     | 155<br>7.4     | 138<br>6.6     | 123<br>5.9      | 109<br>5.2      | 98<br>4.7       |
| <b>20</b>                                               | 1     | 300<br>14.4       | 300<br>14.4    | 274<br>13.1    | 239<br>11.4    | 210<br>10.1    | 185<br>8.9     | 164<br>7.9     | 146<br>7.0     | 131<br>6.3      | 117<br>5.6      | 105<br>5.0      |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 239<br>11.4    | 210<br>10.1    | 185<br>8.9     | 164<br>7.9     | 146<br>7.0     | 131<br>6.3      | 117<br>5.6      | 105<br>5.0      |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 239<br>11.4    | 210<br>10.1    | 185<br>8.9     | 164<br>7.9     | 146<br>7.0     | 131<br>6.3      | 117<br>5.6      | 105<br>5.0      |
| Shoring required in shaded areas to right of heavy line |       |                   |                |                |                |                |                |                |                |                 |                 |                 |

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       | 2540<br>37.07     | 2505<br>36.56  | 2470<br>36.05  | 2440<br>35.61  | 2415<br>35.24  | 2395<br>34.95  | 2375<br>34.66  | 2360<br>34.44  | 2345<br>34.22   | 2330<br>34.00   | 2315<br>33.78   |
| <b>22</b> | q4    | 2540<br>37.07     | 2505<br>36.56  | 2470<br>36.05  | 2440<br>35.61  | 2415<br>35.24  | 2395<br>34.95  | 2375<br>34.66  | 2360<br>34.44  | 2345<br>34.22   | 2330<br>34.00   | 2315<br>33.78   |
|           | F4    | 0.32<br>1.8       | 0.33<br>1.9    | 0.33<br>1.9    | 0.34<br>1.9    | 0.34<br>1.9    | 0.34<br>1.9    | 0.35<br>2.0    | 0.35<br>2.0    | 0.35<br>2.0     | 0.35<br>2.0     | 0.36<br>2.1     |
|           | q7    | 2750<br>40.13     | 2695<br>39.33  | 2650<br>38.67  | 2610<br>38.09  | 2575<br>37.58  | 2545<br>37.14  | 2515<br>36.70  | 2490<br>36.34  | 2470<br>36.05   | 2450<br>35.76   | 2430<br>35.46   |
|           | F7    | 0.30<br>1.7       | 0.31<br>1.8    | 0.31<br>1.8    | 0.32<br>1.8    | 0.32<br>1.8    | 0.32<br>1.8    | 0.33<br>1.9    | 0.33<br>1.9    | 0.33<br>1.9     | 0.34<br>1.9     | 0.34<br>1.9     |
| <b>20</b> | q4    | 2610<br>38.09     | 2565<br>37.43  | 2525<br>36.85  | 2490<br>36.34  | 2460<br>35.90  | 2435<br>35.54  | 2410<br>35.17  | 2390<br>34.88  | 2370<br>34.59   | 2355<br>34.37   | 2340<br>34.15   |
|           | F4    | 0.29<br>1.7       | 0.29<br>1.7    | 0.30<br>1.7    | 0.30<br>1.7    | 0.31<br>1.8    | 0.31<br>1.8    | 0.31<br>1.8    | 0.31<br>1.8    | 0.32<br>1.8     | 0.32<br>1.8     | 0.32<br>1.8     |
|           | q7    | 2860<br>41.74     | 2795<br>40.79  | 2740<br>39.99  | 2690<br>39.26  | 2650<br>38.67  | 2610<br>38.09  | 2580<br>37.65  | 2550<br>37.21  | 2520<br>36.78   | 2495<br>36.41   | 2475<br>36.12   |
|           | F7    | 0.26<br>1.5       | 0.27<br>1.5    | 0.27<br>1.5    | 0.28<br>1.6    | 0.28<br>1.6    | 0.29<br>1.7    | 0.29<br>1.7    | 0.30<br>1.7    | 0.30<br>1.7     | 0.30<br>1.7     | 0.30<br>1.7     |



# PLB™ and B FORMLOK™

- 5 in. (127 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete
- 145 pcf (2,320 kg/m<sup>3</sup>)
- 48.7 psf (2,332 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>18</b> | 2.9<br>138.9                    | 2.8<br>134.1     | 0.302<br>412,408                         | 0.322<br>17,312                           | 0.335<br>18,011                           | 1226<br>17,892                                  | 1407<br>20,534 | 1588<br>23,175 | 3062<br>44,687   | 3551<br>51,823 |
| <b>16</b> | 3.5<br>167.6                    | 3.4<br>162.8     | 0.377<br>514,827                         | 0.411<br>22,097                           | 0.417<br>22,419                           | 2208<br>32,223                                  | 2484<br>36,251 | 2761<br>40,294 | 4789<br>69,890   | 5266<br>76,851 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>18</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 260<br>12.4    | 229<br>11.0    | 203<br>9.7     | 180<br>8.6     | 161<br>7.7     | 144<br>6.9      | 129<br>6.2      | 116<br>5.6      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 275<br>13.2    | 203<br>9.7     | 180<br>8.6     | 161<br>7.7     | 144<br>6.9      | 129<br>6.2      | 116<br>5.6      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 275<br>13.2    | 249<br>11.9    | 180<br>8.6     | 161<br>7.7     | 144<br>6.9      | 129<br>6.2      | 116<br>5.6      |
| <b>16</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 273<br>13.1    | 200<br>9.6     | 178<br>8.5     | 158<br>7.6     | 142<br>6.8      | 127<br>6.1      | 114<br>5.5      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 273<br>13.1    | 247<br>11.8    | 225<br>10.8    | 158<br>7.6     | 142<br>6.8      | 127<br>6.1      | 114<br>5.5      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 273<br>13.1    | 247<br>11.8    | 225<br>10.8    | 205<br>9.8     | 142<br>6.8      | 127<br>6.1      | 114<br>5.5      |

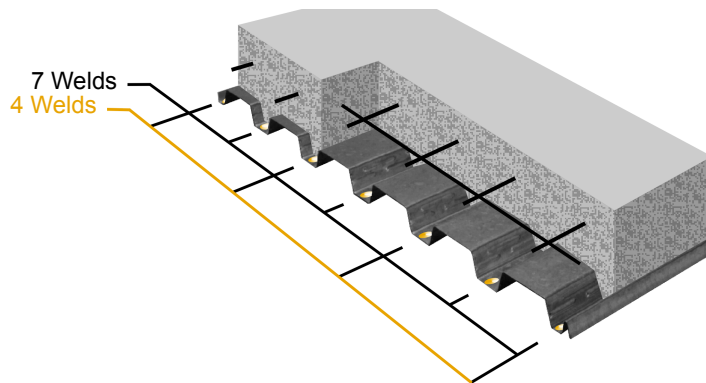
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>18</b> | q4    | 2765<br>40.35     | 2700<br>39.40  | 2650<br>38.67  | 2605<br>38.02  | 2565<br>37.43  | 2530<br>36.92  | 2495<br>36.41  | 2470<br>36.05  | 2445<br>35.68   | 2420<br>35.32   | 2400<br>35.03   |
|           | F4    | 0.24<br>1.4       | 0.24<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4    | 0.26<br>1.5    | 0.26<br>1.5    | 0.26<br>1.5    | 0.27<br>1.5     | 0.27<br>1.5     | 0.27<br>1.5     |
|           | q7    | 3095<br>45.17     | 3010<br>43.93  | 2935<br>42.83  | 2870<br>41.88  | 2815<br>41.08  | 2765<br>40.35  | 2720<br>39.70  | 2680<br>39.11  | 2645<br>38.60   | 2615<br>38.16   | 2585<br>37.73   |
|           | F7    | 0.21<br>1.2       | 0.22<br>1.3    | 0.22<br>1.3    | 0.23<br>1.3    | 0.23<br>1.3    | 0.24<br>1.4    | 0.24<br>1.4    | 0.24<br>1.4    | 0.25<br>1.4     | 0.25<br>1.4     | 0.25<br>1.4     |
| <b>16</b> | q4    | 2930<br>42.76     | 2855<br>41.67  | 2790<br>40.72  | 2730<br>39.84  | 2685<br>39.18  | 2640<br>38.53  | 2600<br>37.94  | 2565<br>37.43  | 2535<br>37.00   | 2505<br>36.56   | 2480<br>36.19   |
|           | F4    | 0.20<br>1.1       | 0.20<br>1.1    | 0.21<br>1.2    | 0.21<br>1.2    | 0.22<br>1.3    | 0.22<br>1.3    | 0.22<br>1.3    | 0.23<br>1.3    | 0.23<br>1.3     | 0.23<br>1.3     | 0.23<br>1.3     |
|           | q7    | 3350<br>48.89     | 3240<br>47.28  | 3150<br>45.97  | 3065<br>44.73  | 2995<br>43.71  | 2935<br>42.83  | 2880<br>42.03  | 2830<br>41.30  | 2785<br>40.64   | 2745<br>40.06   | 2705<br>39.48   |
|           | F7    | 0.17<br>1.0       | 0.18<br>1.0    | 0.19<br>1.1    | 0.19<br>1.1    | 0.19<br>1.1    | 0.20<br>1.1    | 0.20<br>1.1    | 0.21<br>1.2    | 0.21<br>1.2     | 0.21<br>1.2     | 0.22<br>1.3     |

# PLB™ and B FORMLOK™

- 6 in. (152 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m<sup>3</sup>)  
60.8 psf (2,911 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



## Deck Weight and Section Properties

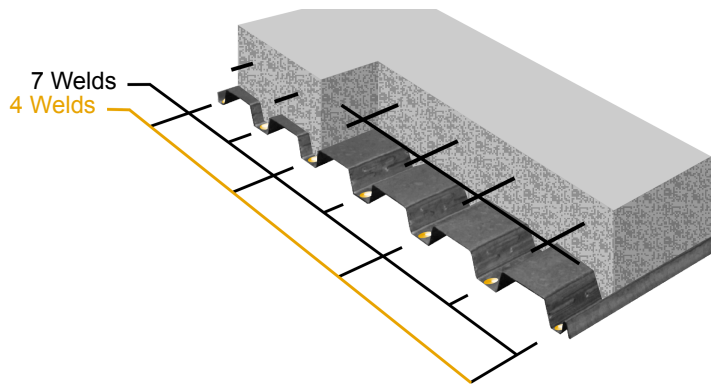
| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |               |               |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|---------------|---------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |               |               | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm   | 4"<br>102 mm  | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>22</b> | 1.9<br>91.0                     | 1.8<br>86.2      | 0.175<br>238,978                         | 0.187<br>10,054                           | 0.198<br>10,645                           | 487<br>7,107                                    | 585<br>8,537  | 683<br>9,968  | 1250<br>18,242   | 1498<br>21,862 |
| <b>20</b> | 2.3<br>110.1                    | 2.2<br>105.3     | 0.216<br>294,967                         | 0.235<br>12,634                           | 0.248<br>13,333                           | 665<br>9,705                                    | 784<br>11,442 | 903<br>13,178 | 1790<br>26,123   | 2118<br>30,910 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage                                                    | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|---------------------------------------------------------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|                                                         |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|                                                         |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b>                                               | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 280<br>13.4    | 245<br>11.7    | 216<br>10.3    | 192<br>9.2     | 170<br>8.1     | 152<br>7.3      | 135<br>6.5      | 121<br>5.8      |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 280<br>13.4    | 245<br>11.7    | 216<br>10.3    | 192<br>9.2     | 170<br>8.1     | 152<br>7.3      | 135<br>6.5      | 121<br>5.8      |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 280<br>13.4    | 245<br>11.7    | 216<br>10.3    | 192<br>9.2     | 170<br>8.1     | 152<br>7.3      | 135<br>6.5      | 121<br>5.8      |
| <b>20</b>                                               | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 296<br>14.2    | 260<br>12.4    | 229<br>11.0    | 203<br>9.7     | 181<br>8.7     | 162<br>7.8      | 144<br>6.9      | 129<br>6.2      |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 296<br>14.2    | 260<br>12.4    | 229<br>11.0    | 203<br>9.7     | 181<br>8.7     | 162<br>7.8      | 144<br>6.9      | 129<br>6.2      |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 296<br>14.2    | 260<br>12.4    | 229<br>11.0    | 203<br>9.7     | 181<br>8.7     | 162<br>7.8      | 144<br>6.9      | 129<br>6.2      |
| Shoring required in shaded areas to right of heavy line |       |                   |                |                |                |                |                |                |                |                 |                 |                 |

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | q4    | 3020<br>44.07     | 2980<br>43.49  | 2950<br>43.05  | 2920<br>42.61  | 2895<br>42.25  | 2875<br>41.96  | 2855<br>41.67  | 2835<br>41.37  | 2820<br>41.15   | 2805<br>40.94   | 2795<br>40.79   |
|           | F4    | 0.27<br>1.5       | 0.28<br>1.6    | 0.28<br>1.6    | 0.28<br>1.6    | 0.28<br>1.6    | 0.29<br>1.7    | 0.29<br>1.7    | 0.29<br>1.7    | 0.29<br>1.7     | 0.29<br>1.7     | 0.29<br>1.7     |
|           | q7    | 3230<br>47.14     | 3175<br>46.34  | 3130<br>45.68  | 3080<br>44.95  | 3055<br>44.58  | 3020<br>44.07  | 2995<br>43.71  | 2970<br>43.34  | 2945<br>42.98   | 2925<br>42.69   | 2910<br>42.47   |
|           | F7    | 0.26<br>1.5       | 0.26<br>1.5    | 0.26<br>1.5    | 0.27<br>1.5    | 0.27<br>1.5    | 0.27<br>1.5    | 0.28<br>1.6    | 0.28<br>1.6    | 0.28<br>1.6     | 0.28<br>1.6     | 0.28<br>1.6     |
| <b>20</b> | q4    | 3090<br>45.10     | 3040<br>44.37  | 3000<br>43.78  | 2970<br>43.34  | 2940<br>42.91  | 2910<br>42.47  | 2890<br>42.18  | 2865<br>41.81  | 2850<br>41.59   | 2830<br>41.30   | 2815<br>41.08   |
|           | F4    | 0.24<br>1.4       | 0.25<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4    | 0.26<br>1.5    | 0.26<br>1.5    | 0.26<br>1.5    | 0.26<br>1.5    | 0.26<br>1.5     | 0.27<br>1.5     | 0.27<br>1.5     |
|           | q7    | 3340<br>48.74     | 3275<br>47.80  | 3220<br>46.99  | 3170<br>46.26  | 3125<br>45.61  | 3090<br>45.10  | 3055<br>44.58  | 3025<br>44.15  | 3000<br>43.78   | 2975<br>43.42   | 2955<br>43.12   |
|           | F7    | 0.23<br>1.3       | 0.23<br>1.3    | 0.23<br>1.3    | 0.24<br>1.4    | 0.24<br>1.4    | 0.24<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4     | 0.25<br>1.4     | 0.25<br>1.4     |



# PLB™ and B FORMLOK™

- 6 in. (152 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete
- 145 pcf (2,320 kg/m<sup>3</sup>)
- 60.8 psf (2,911 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>18</b> | 2.9<br>138.9                    | 2.8<br>134.1     | 0.302<br>412,408                         | 0.322<br>17,312                           | 0.335<br>18,011                           | 1226<br>17,892                                  | 1407<br>20,534 | 1588<br>23,175 | 3062<br>44,687   | 3551<br>51,823 |
| <b>16</b> | 3.5<br>167.6                    | 3.4<br>162.8     | 0.377<br>514,827                         | 0.411<br>22,097                           | 0.417<br>22,419                           | 2208<br>32,223                                  | 2484<br>36,251 | 2761<br>40,294 | 4789<br>69,890   | 5266<br>76,851 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage | Spans | Span (ft-in., mm) |       |       |       |       |       |       |       |        |        |        |
|------|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
|      |       | 6'-0"             | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" |
|      |       | 1,830             | 1,980 | 2,130 | 2,290 | 2,440 | 2,590 | 2,740 | 2,900 | 3,050  | 3,200  | 3,350  |
| 18   | 1     | 300               | 300   | 300   | 300   | 283   | 251   | 223   | 199   | 178    | 159    | 143    |
|      |       | 14.4              | 14.4  | 14.4  | 14.4  | 13.6  | 12.0  | 10.7  | 9.5   | 8.5    | 7.6    | 6.8    |
|      | 2     | 300               | 300   | 300   | 300   | 283   | 251   | 223   | 199   | 178    | 159    | 143    |
|      |       | 14.4              | 14.4  | 14.4  | 14.4  | 13.6  | 12.0  | 10.7  | 9.5   | 8.5    | 7.6    | 6.8    |
|      | 3     | 300               | 300   | 300   | 300   | 300   | 251   | 223   | 199   | 178    | 159    | 143    |
|      |       | 14.4              | 14.4  | 14.4  | 14.4  | 14.4  | 12.0  | 10.7  | 9.5   | 8.5    | 7.6    | 6.8    |
| 16   | 1     | 300               | 300   | 300   | 300   | 280   | 247   | 220   | 196   | 175    | 157    | 141    |
|      |       | 14.4              | 14.4  | 14.4  | 14.4  | 13.4  | 11.8  | 10.5  | 9.4   | 8.4    | 7.5    | 6.8    |
|      | 2     | 300               | 300   | 300   | 300   | 300   | 247   | 220   | 196   | 175    | 157    | 141    |
|      |       | 14.4              | 14.4  | 14.4  | 14.4  | 14.4  | 11.8  | 10.5  | 9.4   | 8.4    | 7.5    | 6.8    |
|      | 3     | 300               | 300   | 300   | 300   | 300   | 300   | 278   | 196   | 175    | 157    | 141    |
|      |       | 14.4              | 14.4  | 14.4  | 14.4  | 14.4  | 14.4  | 13.3  | 9.4   | 8.4    | 7.5    | 6.8    |

Shoring required in shaded areas to right of heavy line

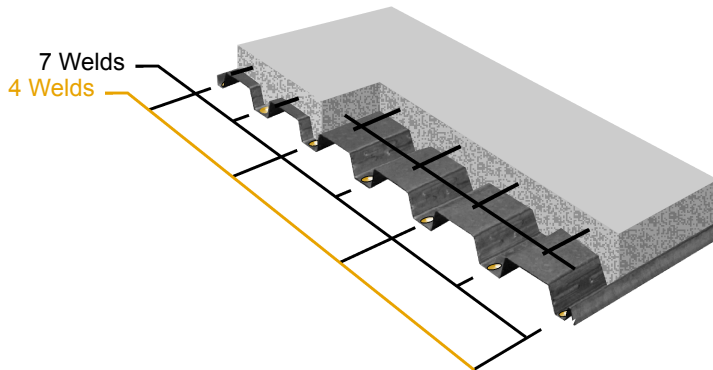
## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|      |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
| 18   | q4    | 3240<br>47.28     | 3180<br>46.41  | 3125<br>45.61  | 3080<br>44.95  | 3040<br>44.37  | 3005<br>43.85  | 2975<br>43.42  | 2950<br>43.05  | 2920<br>42.61   | 2900<br>42.32   | 2880<br>42.03   |
|      | F4    | 0.20<br>1.1       | 0.20<br>1.1    | 0.21<br>1.2    | 0.21<br>1.2    | 0.21<br>1.2    | 0.22<br>1.3    | 0.22<br>1.3    | 0.22<br>1.3    | 0.22<br>1.3     | 0.22<br>1.3     | 0.23<br>1.3     |
|      | q7    | 3575<br>52.17     | 3490<br>50.93  | 3415<br>49.84  | 3350<br>48.89  | 3295<br>48.09  | 3245<br>47.36  | 3200<br>46.70  | 3160<br>46.12  | 3125<br>45.61   | 3090<br>45.10   | 3060<br>44.66   |
|      | F7    | 0.18<br>1.0       | 0.19<br>1.1    | 0.19<br>1.1    | 0.19<br>1.1    | 0.20<br>1.1    | 0.20<br>1.1    | 0.20<br>1.1    | 0.21<br>1.2    | 0.21<br>1.2     | 0.21<br>1.2     | 0.21<br>1.2     |
| 16   | q4    | 3410<br>49.77     | 3335<br>48.67  | 3265<br>47.65  | 3210<br>46.85  | 3160<br>46.12  | 3115<br>45.46  | 3080<br>44.95  | 3045<br>44.44  | 3010<br>43.93   | 2985<br>43.56   | 2955<br>43.12   |
|      | F4    | 0.17<br>1.0       | 0.17<br>1.0    | 0.18<br>1.0    | 0.18<br>1.0    | 0.18<br>1.0    | 0.19<br>1.1    | 0.19<br>1.1    | 0.19<br>1.1    | 0.19<br>1.1     | 0.20<br>1.1     | 0.20<br>1.1     |
|      | q7    | 3830<br>55.89     | 3720<br>54.29  | 3625<br>52.90  | 3545<br>51.74  | 3475<br>50.71  | 3410<br>49.77  | 3355<br>48.96  | 3305<br>48.23  | 3260<br>47.58   | 3220<br>46.99   | 3185<br>46.48   |
|      | F7    | 0.15<br>0.9       | 0.16<br>0.9    | 0.16<br>0.9    | 0.16<br>0.9    | 0.17<br>1.0    | 0.17<br>1.0    | 0.17<br>1.0    | 0.18<br>1.0    | 0.18<br>1.0     | 0.18<br>1.0     | 0.18<br>1.0     |



# PLB™ and B FORMLOK™

- 3½ in. (89 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
23.2 psf (1,111 N/m²)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |               |               |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|---------------|---------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |               |               | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm   | 4"<br>102 mm  | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.175<br>238,978                         | 0.187<br>10,054                           | 0.198<br>10,645                           | 487<br>7,107                                    | 585<br>8,537  | 683<br>9,968  | 1250<br>18,242   | 1498<br>21,862 |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.216<br>294,967                         | 0.235<br>12,634                           | 0.248<br>13,333                           | 665<br>9,705                                    | 784<br>11,442 | 903<br>13,178 | 1790<br>26,123   | 2118<br>30,910 |

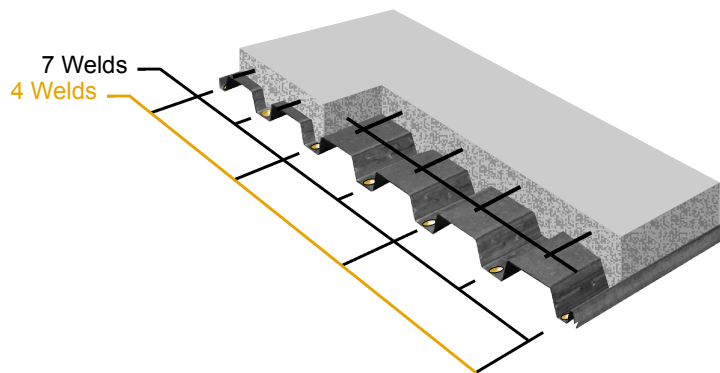
## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
| <b>22</b> | 1     | 261<br>12.5       | 206<br>9.9     | 179<br>8.6     | 157<br>7.5     | 139<br>6.7     | 124<br>5.9     | 110<br>5.3     | 99<br>4.7      | 89<br>4.3       |                 |                 |
|           | 2     | 261<br>12.5       | 228<br>10.9    | 202<br>9.7     | 180<br>8.6     | 139<br>6.7     | 124<br>5.9     | 110<br>5.3     | 99<br>4.7      | 89<br>4.3       |                 |                 |
|           | 3     | 261<br>12.5       | 228<br>10.9    | 202<br>9.7     | 180<br>8.6     | 139<br>6.7     | 124<br>5.9     | 110<br>5.3     | 99<br>4.7      | 89<br>4.3       |                 |                 |
| <b>20</b> | 1     | 275<br>13.2       | 240<br>11.5    | 212<br>10.2    | 167<br>8.0     | 147<br>7.0     | 131<br>6.3     | 117<br>5.6     | 105<br>5.0     | 94<br>4.5       | 85<br>4.1       | 77<br>3.7       |
|           | 2     | 275<br>13.2       | 240<br>11.5    | 212<br>10.2    | 189<br>9.0     | 170<br>8.1     | 154<br>7.4     | 117<br>5.6     | 105<br>5.0     | 94<br>4.5       | 85<br>4.1       | 77<br>3.7       |
|           | 3     | 275<br>13.2       | 240<br>11.5    | 212<br>10.2    | 189<br>9.0     | 170<br>8.1     | 154<br>7.4     | 117<br>5.6     | 105<br>5.0     | 94<br>4.5       | 85<br>4.1       | 77<br>3.7       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
| <b>22</b> | q4    | 1500<br>21.89     | 1460<br>21.31  | 1430<br>20.87  | 1400<br>20.43  | 1375<br>20.07  | 1355<br>19.77  | 1335<br>19.48  | 1315<br>19.19  | 1300<br>18.97   |                 |                 |
|           | F4    | 0.55<br>3.1       | 0.56<br>3.2    | 0.58<br>3.3    | 0.59<br>3.4    | 0.60<br>3.4    | 0.61<br>3.5    | 0.62<br>3.5    | 0.63<br>3.6    | 0.63<br>3.6     |                 |                 |
|           | q7    | 1710<br>24.96     | 1655<br>24.15  | 1610<br>23.50  | 1570<br>22.91  | 1555<br>22.69  | 1500<br>21.89  | 1475<br>21.53  | 1450<br>21.16  | 1425<br>20.80   |                 |                 |
|           | F7    | 0.48<br>2.7       | 0.50<br>2.9    | 0.51<br>2.9    | 0.53<br>3.0    | 0.54<br>3.1    | 0.55<br>3.1    | 0.56<br>3.2    | 0.57<br>3.3    | 0.58<br>3.3     |                 |                 |
| <b>20</b> | q4    | 1570<br>22.91     | 1520<br>22.18  | 1480<br>21.60  | 1450<br>21.16  | 1420<br>20.72  | 1390<br>20.29  | 1370<br>19.99  | 1350<br>19.70  | 1330<br>19.41   | 1310<br>19.12   | 1295<br>18.90   |
|           | F4    | 0.48<br>2.7       | 0.49<br>2.8    | 0.51<br>2.9    | 0.52<br>3.0    | 0.53<br>3.0    | 0.54<br>3.1    | 0.55<br>3.1    | 0.56<br>3.2    | 0.57<br>3.3     | 0.57<br>3.3     | 0.58<br>3.3     |
|           | q7    | 1820<br>26.56     | 1755<br>25.61  | 1700<br>24.81  | 1650<br>24.08  | 1605<br>23.42  | 1570<br>22.91  | 1535<br>22.40  | 1505<br>21.96  | 1480<br>21.60   | 1455<br>21.23   | 1435<br>20.94   |
|           | F7    | 0.41<br>2.3       | 0.43<br>2.5    | 0.44<br>2.5    | 0.46<br>2.6    | 0.47<br>2.7    | 0.48<br>2.7    | 0.49<br>2.8    | 0.50<br>2.9    | 0.51<br>2.9     | 0.52<br>3.0     | 0.52<br>3.0     |



# PLB™ and B FORMLOK™

- 3½ in. (89 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m³)
- 23.2 psf (1,111 N/m²)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>18</b> | 2.9<br>138.9        | 2.8<br>134.1     | 0.302<br>412,408                         | 0.322<br>17,312                           | 0.335<br>18,011                           | 1226<br>17,892                                  | 1407<br>20,534 | 1588<br>23,175 | 3062<br>44,687   | 3551<br>51,823 |
| <b>16</b> | 3.5<br>167.6        | 3.4<br>162.8     | 0.377<br>514,827                         | 0.411<br>22,097                           | 0.417<br>22,419                           | 2208<br>32,223                                  | 2484<br>36,251 | 2761<br>40,294 | 4789<br>69,890   | 5266<br>76,851 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage | Spans | Span (ft.-in., mm) |       |       |       |       |       |       |       |        |        |        |
|------|-------|--------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
|      |       | 6'-0"              | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" |
|      |       | 1,830              | 1,980 | 2,130 | 2,290 | 2,440 | 2,590 | 2,740 | 2,900 | 3,050  | 3,200  | 3,350  |
| 18   | 1     | 298                | 261   | 230   | 205   | 184   | 167   | 128   | 115   | 104    | 94     | 85     |
|      |       | 14.3               | 12.5  | 11.0  | 9.8   | 8.8   | 8.0   | 6.1   | 5.5   | 5.0    | 4.5    | 4.1    |
|      | 2     | 298                | 261   | 230   | 205   | 184   | 167   | 152   | 136   | 116    | 94     | 85     |
|      |       | 14.3               | 12.5  | 11.0  | 9.8   | 8.8   | 8.0   | 7.3   | 6.5   | 5.6    | 4.5    | 4.1    |
|      | 3     | 298                | 261   | 230   | 205   | 184   | 167   | 152   | 136   | 116    | 100    | 85     |
|      |       | 14.3               | 12.5  | 11.0  | 9.8   | 8.8   | 8.0   | 7.3   | 6.5   | 5.6    | 4.8    | 4.1    |
| 16   | 1     | 298                | 260   | 230   | 205   | 184   | 166   | 151   | 138   | 127    | 93     | 84     |
|      |       | 14.3               | 12.4  | 11.0  | 9.8   | 8.8   | 7.9   | 7.2   | 6.6   | 6.1    | 4.5    | 4.0    |
|      | 2     | 298                | 260   | 230   | 205   | 184   | 166   | 151   | 138   | 127    | 112    | 97     |
|      |       | 14.3               | 12.4  | 11.0  | 9.8   | 8.8   | 7.9   | 7.2   | 6.6   | 6.1    | 5.4    | 4.6    |
|      | 3     | 298                | 260   | 230   | 205   | 184   | 166   | 151   | 138   | 127    | 112    | 97     |
|      |       | 14.3               | 12.4  | 11.0  | 9.8   | 8.8   | 7.9   | 7.2   | 6.6   | 6.1    | 5.4    | 4.6    |

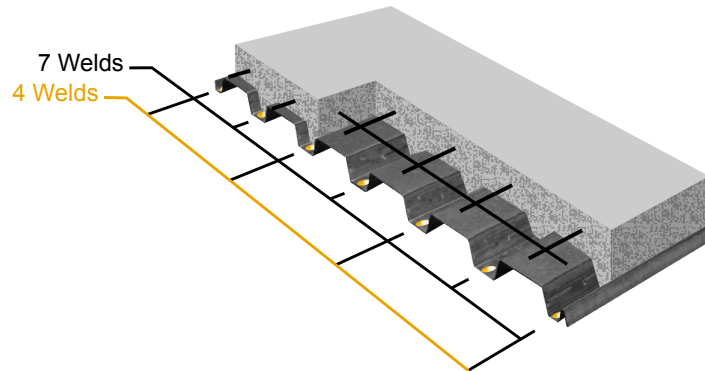
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage | Welds | Span (ft-in., <i>mm</i> ) |                       |                       |                       |                       |                       |                       |                       |                        |                        |                        |
|------|-------|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
|      |       | 6'-0"<br><i>1,830</i>     | 6'-6"<br><i>1,980</i> | 7'-0"<br><i>2,130</i> | 7'-6"<br><i>2,290</i> | 8'-0"<br><i>2,440</i> | 8'-6"<br><i>2,590</i> | 9'-0"<br><i>2,740</i> | 9'-6"<br><i>2,900</i> | 10'-0"<br><i>3,050</i> | 10'-6"<br><i>3,200</i> | 11'-0"<br><i>3,350</i> |
| 18   | q4    | 1720<br><i>25.10</i>      | 1660<br><i>24.23</i>  | 1605<br><i>23.42</i>  | 1560<br><i>22.77</i>  | 1520<br><i>22.18</i>  | 1485<br><i>21.67</i>  | 1455<br><i>21.23</i>  | 1430<br><i>20.87</i>  | 1400<br><i>20.43</i>   | 1380<br><i>20.14</i>   | 1360<br><i>19.85</i>   |
|      | F4    | 0.38<br><i>2.2</i>        | 0.39<br><i>2.2</i>    | 0.41<br><i>2.3</i>    | 0.42<br><i>2.4</i>    | 0.43<br><i>2.5</i>    | 0.44<br><i>2.5</i>    | 0.45<br><i>2.6</i>    | 0.46<br><i>2.6</i>    | 0.46<br><i>2.6</i>     | 0.47<br><i>2.7</i>     | 0.48<br><i>2.7</i>     |
|      | q7    | 2055<br><i>29.99</i>      | 1970<br><i>28.75</i>  | 1895<br><i>27.66</i>  | 1830<br><i>26.71</i>  | 1775<br><i>25.90</i>  | 1725<br><i>25.17</i>  | 1680<br><i>24.52</i>  | 1640<br><i>23.93</i>  | 1605<br><i>23.42</i>   | 1570<br><i>22.91</i>   | 1540<br><i>22.47</i>   |
|      | F7    | 0.32<br><i>1.8</i>        | 0.33<br><i>1.9</i>    | 0.34<br><i>1.9</i>    | 0.36<br><i>2.1</i>    | 0.37<br><i>2.1</i>    | 0.38<br><i>2.2</i>    | 0.39<br><i>2.2</i>    | 0.40<br><i>2.3</i>    | 0.41<br><i>2.3</i>     | 0.41<br><i>2.3</i>     | 0.42<br><i>2.4</i>     |
| 16   | q4    | 1890<br><i>27.58</i>      | 1815<br><i>26.49</i>  | 1750<br><i>25.54</i>  | 1690<br><i>24.66</i>  | 1640<br><i>23.93</i>  | 1595<br><i>23.28</i>  | 1560<br><i>22.77</i>  | 1525<br><i>22.26</i>  | 1490<br><i>21.74</i>   | 1465<br><i>21.38</i>   | 1435<br><i>20.94</i>   |
|      | F4    | 0.31<br><i>1.8</i>        | 0.32<br><i>1.8</i>    | 0.33<br><i>1.9</i>    | 0.34<br><i>1.9</i>    | 0.35<br><i>2.0</i>    | 0.36<br><i>2.1</i>    | 0.37<br><i>2.1</i>    | 0.38<br><i>2.2</i>    | 0.39<br><i>2.2</i>     | 0.40<br><i>2.3</i>     | 0.41<br><i>2.3</i>     |
|      | q7    | 2310<br><i>33.71</i>      | 2200<br><i>32.11</i>  | 2105<br><i>30.72</i>  | 2025<br><i>29.55</i>  | 1955<br><i>28.53</i>  | 1890<br><i>27.58</i>  | 1835<br><i>26.78</i>  | 1785<br><i>26.05</i>  | 1745<br><i>25.47</i>   | 1700<br><i>24.81</i>   | 1665<br><i>24.30</i>   |
|      | F7    | 0.25<br><i>1.4</i>        | 0.26<br><i>1.5</i>    | 0.28<br><i>1.6</i>    | 0.29<br><i>1.7</i>    | 0.30<br><i>1.7</i>    | 0.31<br><i>1.8</i>    | 0.32<br><i>1.8</i>    | 0.33<br><i>1.9</i>    | 0.33<br><i>1.9</i>     | 0.34<br><i>1.9</i>     | 0.35<br><i>2.0</i>     |

# PLB™ and B FORMLOK™

- 4 in. (102 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m<sup>3</sup>)  
27.8 psf (1,331 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |               |               |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|---------------|---------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |               |               | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm   | 4"<br>102 mm  | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>22</b> | 1.9<br>91.0                     | 1.8<br>86.2      | 0.175<br>238,978                         | 0.187<br>10,054                           | 0.198<br>10,645                           | 487<br>7,107                                    | 585<br>8,537  | 683<br>9,968  | 1250<br>18,242   | 1498<br>21,862 |
| <b>20</b> | 2.3<br>110.1                    | 2.2<br>105.3     | 0.216<br>294,967                         | 0.235<br>12,634                           | 0.248<br>13,333                           | 665<br>9,705                                    | 784<br>11,442 | 903<br>13,178 | 1790<br>26,123   | 2118<br>30,910 |

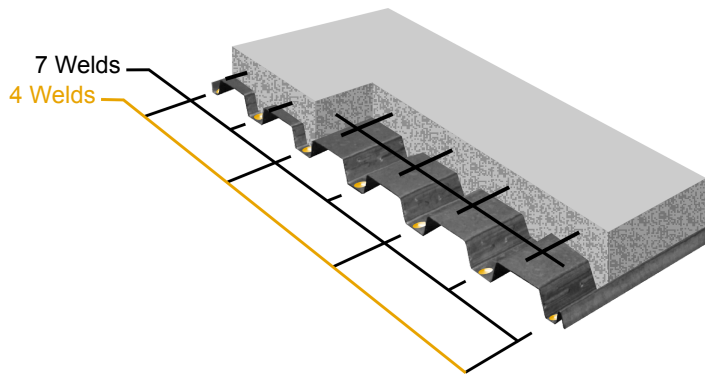
## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | 1     | 277<br>13.3       | 239<br>11.4    | 208<br>10.0    | 183<br>8.8     | 161<br>7.7     | 143<br>6.8     | 128<br>6.1     | 115<br>5.5     | 103<br>4.9      | 93<br>4.5       | 84<br>4.0       |
|           | 2     | 300<br>14.4       | 266<br>12.7    | 235<br>11.3    | 209<br>10.0    | 161<br>7.7     | 143<br>6.8     | 128<br>6.1     | 115<br>5.5     | 103<br>4.9      | 93<br>4.5       | 84<br>4.0       |
|           | 3     | 300<br>14.4       | 266<br>12.7    | 235<br>11.3    | 183<br>8.8     | 161<br>7.7     | 143<br>6.8     | 128<br>6.1     | 115<br>5.5     | 103<br>4.9      | 93<br>4.5       | 84<br>4.0       |
| <b>20</b> | 1     | 300<br>14.4       | 279<br>13.4    | 220<br>10.5    | 193<br>9.2     | 171<br>8.2     | 152<br>7.3     | 135<br>6.5     | 121<br>5.8     | 109<br>5.2      | 99<br>4.7       | 89<br>4.3       |
|           | 2     | 300<br>14.4       | 279<br>13.4    | 247<br>11.8    | 220<br>10.5    | 197<br>9.4     | 152<br>7.3     | 135<br>6.5     | 121<br>5.8     | 109<br>5.2      | 99<br>4.7       | 89<br>4.3       |
|           | 3     | 300<br>14.4       | 279<br>13.4    | 247<br>11.8    | 220<br>10.5    | 197<br>9.4     | 178<br>8.5     | 135<br>6.5     | 121<br>5.8     | 109<br>5.2      | 99<br>4.7       | 89<br>4.3       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | q4    | 1660<br>24.23     | 1620<br>23.64  | 1585<br>23.13  | 1560<br>22.77  | 1535<br>22.40  | 1510<br>22.04  | 1490<br>21.74  | 1475<br>21.53  | 1460<br>21.31   | 1445<br>21.09   | 1430<br>20.87   |
|           | F4    | 0.50<br>2.9       | 0.51<br>2.9    | 0.52<br>3.0    | 0.53<br>3.0    | 0.54<br>3.1    | 0.54<br>3.1    | 0.55<br>3.1    | 0.56<br>3.2    | 0.56<br>3.2     | 0.57<br>3.3     | 0.58<br>3.3     |
|           | q7    | 1870<br>27.29     | 1815<br>26.49  | 1765<br>25.76  | 1725<br>25.17  | 1690<br>24.66  | 1660<br>24.23  | 1630<br>23.79  | 1605<br>23.42  | 1585<br>23.13   | 1565<br>22.84   | 1545<br>22.55   |
|           | F7    | 0.44<br>2.5       | 0.45<br>2.6    | 0.47<br>2.7    | 0.48<br>2.7    | 0.49<br>2.8    | 0.50<br>2.9    | 0.50<br>2.9    | 0.51<br>2.9    | 0.52<br>3.0     | 0.53<br>3.0     | 0.53<br>3.0     |
| <b>20</b> | q4    | 1725<br>25.17     | 1680<br>24.52  | 1640<br>23.93  | 1605<br>23.42  | 1575<br>22.99  | 1550<br>22.62  | 1525<br>22.26  | 1505<br>21.96  | 1485<br>21.67   | 1470<br>21.45   | 1455<br>21.23   |
|           | F4    | 0.44<br>2.5       | 0.45<br>2.6    | 0.46<br>2.6    | 0.47<br>2.7    | 0.48<br>2.7    | 0.48<br>2.7    | 0.49<br>2.8    | 0.50<br>2.9    | 0.51<br>2.9     | 0.51<br>2.9     | 0.52<br>3.0     |
|           | q7    | 1975<br>28.82     | 1910<br>27.87  | 1855<br>27.07  | 1805<br>26.34  | 1765<br>25.76  | 1725<br>25.17  | 1695<br>24.74  | 1665<br>24.30  | 1635<br>23.86   | 1615<br>23.57   | 1590<br>23.20   |
|           | F7    | 0.38<br>2.2       | 0.39<br>2.2    | 0.41<br>2.3    | 0.42<br>2.4    | 0.43<br>2.5    | 0.44<br>2.5    | 0.44<br>2.5    | 0.45<br>2.6    | 0.46<br>2.6     | 0.47<br>2.7     | 0.47<br>2.7     |



# PLB™ and B FORMLOK™

- 4 in. (102 mm) TOTAL SLAB DEPTH
- Light Weight Concrete
- 110 pcf (1,760 kg/m<sup>3</sup>)
- 27.8 psf (1,331 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>18</b> | 2.9<br>138.9                    | 2.8<br>134.1     | 0.302<br>412,408                         | 0.322<br>17,312                           | 0.335<br>18,011                           | 1226<br>17,892                                  | 1407<br>20,534 | 1588<br>23,175 | 3062<br>44,687   | 3551<br>51,823 |
| <b>16</b> | 3.5<br>167.6                    | 3.4<br>162.8     | 0.377<br>514,827                         | 0.411<br>22,097                           | 0.417<br>22,419                           | 2208<br>32,223                                  | 2484<br>36,251 | 2761<br>40,294 | 4789<br>69,890   | 5266<br>76,851 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage | Spans | Span (ft-in., mm) |       |       |       |       |       |       |       |        |        |        |
|------|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
|      |       | 6'-0"             | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" | 10'-6" | 11'-0" |
|      |       | 1,830             | 1,980 | 2,130 | 2,290 | 2,440 | 2,590 | 2,740 | 2,900 | 3,050  | 3,200  | 3,350  |
| 18   | 1     | 300               | 300   | 266   | 237   | 213   | 165   | 148   | 133   | 120    | 108    | 98     |
|      |       | 14.4              | 14.4  | 12.7  | 11.3  | 10.2  | 7.9   | 7.1   | 6.4   | 5.7    | 5.2    | 4.7    |
|      | 2     | 300               | 300   | 266   | 237   | 213   | 193   | 175   | 160   | 120    | 108    | 98     |
|      |       | 14.4              | 14.4  | 12.7  | 11.3  | 10.2  | 9.2   | 8.4   | 7.7   | 5.7    | 5.2    | 4.7    |
|      | 3     | 300               | 300   | 266   | 237   | 213   | 193   | 175   | 160   | 147    | 108    | 98     |
|      |       | 14.4              | 14.4  | 12.7  | 11.3  | 10.2  | 9.2   | 8.4   | 7.7   | 7.0    | 5.2    | 4.7    |
| 16   | 1     | 300               | 300   | 265   | 236   | 212   | 192   | 174   | 159   | 118    | 107    | 97     |
|      |       | 14.4              | 14.4  | 12.7  | 11.3  | 10.2  | 9.2   | 8.3   | 7.6   | 5.6    | 5.1    | 4.6    |
|      | 2     | 300               | 300   | 265   | 236   | 212   | 192   | 174   | 159   | 146    | 135    | 97     |
|      |       | 14.4              | 14.4  | 12.7  | 11.3  | 10.2  | 9.2   | 8.3   | 7.6   | 7.0    | 6.5    | 4.6    |
|      | 3     | 300               | 300   | 265   | 236   | 212   | 192   | 174   | 159   | 146    | 135    | 125    |
|      |       | 14.4              | 14.4  | 12.7  | 11.3  | 10.2  | 9.2   | 8.3   | 7.6   | 7.0    | 6.5    | 6.0    |

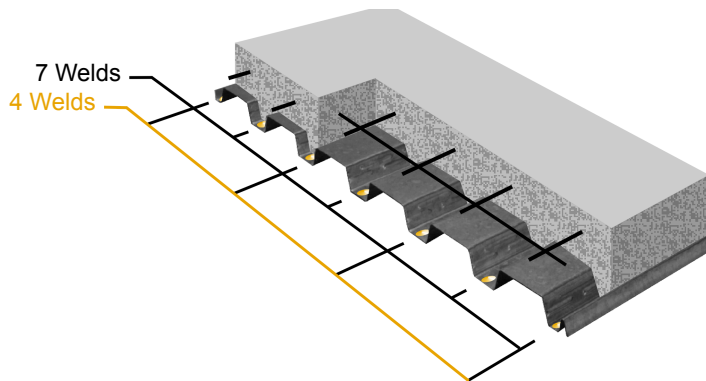
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|      |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
| 18   | q4    | 1880<br>27.44     | 1820<br>26.56  | 1765<br>25.76  | 1720<br>25.10  | 1680<br>24.52  | 1645<br>24.01  | 1615<br>23.57  | 1585<br>23.13  | 1560<br>22.77   | 1540<br>22.47   | 1515<br>22.11   |
|      | F4    | 0.35<br>2.0       | 0.36<br>2.1    | 0.37<br>2.1    | 0.38<br>2.2    | 0.39<br>2.2    | 0.40<br>2.3    | 0.40<br>2.3    | 0.41<br>2.3    | 0.42<br>2.4     | 0.42<br>2.4     | 0.43<br>2.5     |
|      | q7    | 2215<br>32.33     | 2125<br>31.01  | 2050<br>29.92  | 1985<br>28.97  | 1930<br>28.17  | 1880<br>27.44  | 1835<br>26.78  | 1795<br>26.20  | 1760<br>25.69   | 1730<br>25.25   | 1700<br>24.81   |
|      | F7    | 0.29<br>1.7       | 0.31<br>1.8    | 0.32<br>1.8    | 0.33<br>1.9    | 0.34<br>1.9    | 0.35<br>2.0    | 0.35<br>2.0    | 0.36<br>2.1    | 0.37<br>2.1     | 0.38<br>2.2     | 0.38<br>2.2     |
| 16   | q4    | 2050<br>29.92     | 1970<br>28.75  | 1905<br>27.80  | 1850<br>27.00  | 1800<br>26.27  | 1755<br>25.61  | 1715<br>25.03  | 1680<br>24.52  | 1650<br>24.08   | 1620<br>23.64   | 1595<br>23.28   |
|      | F4    | 0.28<br>1.6       | 0.30<br>1.7    | 0.31<br>1.8    | 0.32<br>1.8    | 0.32<br>1.8    | 0.33<br>1.9    | 0.34<br>1.9    | 0.35<br>2.0    | 0.35<br>2.0     | 0.36<br>2.1     | 0.37<br>2.1     |
|      | q7    | 2465<br>35.97     | 2360<br>34.44  | 2265<br>33.06  | 2185<br>31.89  | 2115<br>30.87  | 2050<br>29.92  | 1995<br>29.11  | 1945<br>28.39  | 1900<br>27.73   | 1860<br>27.14   | 1825<br>26.63   |
|      | F7    | 0.24<br>1.4       | 0.25<br>1.4    | 0.26<br>1.5    | 0.27<br>1.5    | 0.28<br>1.6    | 0.28<br>1.6    | 0.29<br>1.7    | 0.30<br>1.7    | 0.31<br>1.8     | 0.31<br>1.8     | 0.32<br>1.8     |

# PLB™ and B FORMLOK™

- 4¾ in. (121 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
34.7 psf (1,661 N/m²)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



vm

## Deck Weight and Section Properties

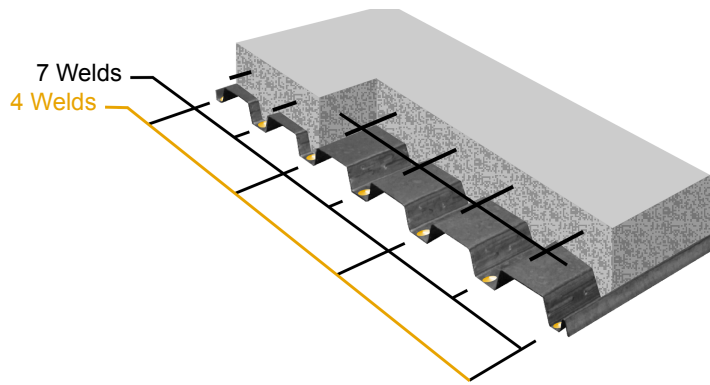
| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |               |               |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|---------------|---------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |               |               | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm   | 4"<br>102 mm  | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.175<br>238,978                         | 0.187<br>10,054                           | 0.198<br>10,645                           | 487<br>7,107                                    | 585<br>8,537  | 683<br>9,968  | 1250<br>18,242   | 1498<br>21,862 |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.216<br>294,967                         | 0.235<br>12,634                           | 0.248<br>13,333                           | 665<br>9,705                                    | 784<br>11,442 | 903<br>13,178 | 1790<br>26,123   | 2118<br>30,910 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage                                                    | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|---------------------------------------------------------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|                                                         |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|                                                         |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b>                                               | 1     | 300<br>14.4       | 292<br>14.0    | 254<br>12.2    | 223<br>10.7    | 197<br>9.4     | 175<br>8.4     | 156<br>7.5     | 140<br>6.7     | 125<br>6.0      | 113<br>5.4      | 102<br>4.9      |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 287<br>13.7    | 223<br>10.7    | 197<br>9.4     | 175<br>8.4     | 156<br>7.5     | 140<br>6.7     | 125<br>6.0      | 113<br>5.4      | 102<br>4.9      |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 254<br>12.2    | 223<br>10.7    | 197<br>9.4     | 175<br>8.4     | 156<br>7.5     | 140<br>6.7     | 125<br>6.0      | 113<br>5.4      | 102<br>4.9      |
| <b>20</b>                                               | 1     | 300<br>14.4       | 300<br>14.4    | 268<br>12.8    | 235<br>11.3    | 208<br>10.0    | 185<br>8.9     | 165<br>7.9     | 148<br>7.1     | 133<br>6.4      | 120<br>5.7      | 109<br>5.2      |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 268<br>12.8    | 208<br>10.0    | 185<br>8.9     | 165<br>7.9     | 148<br>7.1     | 133<br>6.4      | 120<br>5.7      | 109<br>5.2      |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 268<br>12.8    | 241<br>11.5    | 185<br>8.9     | 165<br>7.9     | 148<br>7.1     | 133<br>6.4      | 120<br>5.7      | 109<br>5.2      |
| Shoring required in shaded areas to right of heavy line |       |                   |                |                |                |                |                |                |                |                 |                 |                 |

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | q4    | 1895<br>27.66     | 1855<br>27.07  | 1825<br>26.63  | 1795<br>26.20  | 1770<br>25.83  | 1750<br>25.54  | 1730<br>25.25  | 1710<br>24.96  | 1695<br>24.74   | 1680<br>24.52   | 1670<br>24.37   |
|           | F4    | 0.43<br>2.5       | 0.44<br>2.5    | 0.45<br>2.6    | 0.46<br>2.6    | 0.47<br>2.7    | 0.47<br>2.7    | 0.48<br>2.7    | 0.48<br>2.7    | 0.49<br>2.8     | 0.49<br>2.8     | 0.49<br>2.8     |
|           | q7    | 2105<br>30.72     | 2050<br>29.92  | 2005<br>29.26  | 1965<br>28.68  | 1930<br>28.17  | 1895<br>27.66  | 1870<br>27.29  | 1845<br>26.93  | 1820<br>26.56   | 1800<br>26.27   | 1785<br>26.05   |
|           | F7    | 0.39<br>2.2       | 0.40<br>2.3    | 0.41<br>2.3    | 0.42<br>2.4    | 0.43<br>2.5    | 0.43<br>2.5    | 0.44<br>2.5    | 0.45<br>2.6    | 0.45<br>2.6     | 0.46<br>2.6     | 0.46<br>2.6     |
| <b>20</b> | q4    | 1965<br>28.68     | 1915<br>27.95  | 1875<br>27.36  | 1840<br>26.85  | 1810<br>26.41  | 1785<br>26.05  | 1760<br>25.69  | 1740<br>25.39  | 1725<br>25.17   | 1705<br>24.88   | 1690<br>24.66   |
|           | F4    | 0.38<br>2.2       | 0.39<br>2.2    | 0.40<br>2.3    | 0.41<br>2.3    | 0.41<br>2.3    | 0.42<br>2.4    | 0.43<br>2.5    | 0.43<br>2.5    | 0.44<br>2.5     | 0.44<br>2.5     | 0.44<br>2.5     |
|           | q7    | 2215<br>32.33     | 2150<br>31.38  | 2095<br>30.57  | 2045<br>29.84  | 2000<br>29.19  | 1965<br>28.68  | 1930<br>28.17  | 1900<br>27.73  | 1875<br>27.36   | 1850<br>27.00   | 1830<br>26.71   |
|           | F7    | 0.34<br>1.9       | 0.35<br>2.0    | 0.36<br>2.1    | 0.37<br>2.1    | 0.38<br>2.2    | 0.38<br>2.2    | 0.39<br>2.2    | 0.40<br>2.3    | 0.40<br>2.3     | 0.41<br>2.3     | 0.41<br>2.3     |



# PLB™ and B FORMLOK™

- 4¾ in. (121 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m³)
- 34.7 psf (1,661 N/m²)
- Galvanized or Phosphatized/Painted ■
- 2 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>18</b> | 2.9<br>138.9        | 2.8<br>134.1     | 0.302<br>412,408                         | 0.322<br>17,312                           | 0.335<br>18,011                           | 1226<br>17,892                                  | 1407<br>20,534 | 1588<br>23,175 | 3062<br>44,687   | 3551<br>51,823 |
| <b>16</b> | 3.5<br>167.6        | 3.4<br>162.8     | 0.377<br>514,827                         | 0.411<br>22,097                           | 0.417<br>22,419                           | 2208<br>32,223                                  | 2484<br>36,251 | 2761<br>40,294 | 4789<br>69,890   | 5266<br>76,851 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>18</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 289<br>13.8    | 226<br>10.8    | 201<br>9.6     | 180<br>8.6     | 161<br>7.7     | 145<br>6.9      | 131<br>6.3      | 119<br>5.7      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 289<br>13.8    | 260<br>12.4    | 235<br>11.3    | 213<br>10.2    | 161<br>7.7     | 145<br>6.9      | 131<br>6.3      | 119<br>5.7      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 289<br>13.8    | 260<br>12.4    | 235<br>11.3    | 213<br>10.2    | 195<br>9.3     | 145<br>6.9      | 131<br>6.3      | 119<br>5.7      |
| <b>16</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 287<br>13.7    | 258<br>12.4    | 233<br>11.2    | 212<br>10.2    | 159<br>7.6     | 143<br>6.8      | 130<br>6.2      | 117<br>5.6      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 287<br>13.7    | 258<br>12.4    | 233<br>11.2    | 212<br>10.2    | 194<br>9.3     | 178<br>8.5      | 130<br>6.2      | 117<br>5.6      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 287<br>13.7    | 258<br>12.4    | 233<br>11.2    | 212<br>10.2    | 194<br>9.3     | 178<br>8.5      | 164<br>7.9      | 152<br>7.3      |

Shoring required in shaded areas to right of heavy line

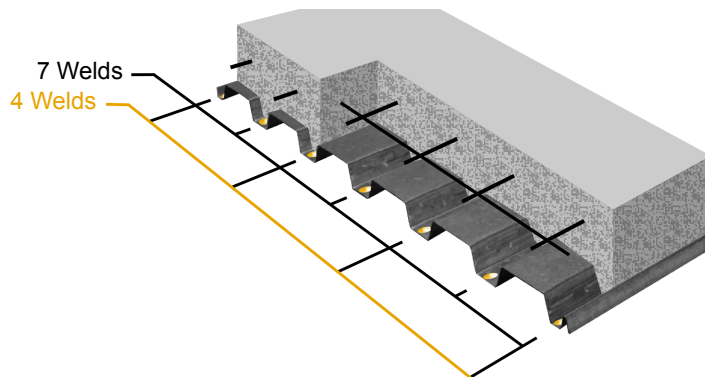
## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>18</b> | q4    | 2115<br>30.87     | 2055<br>29.99  | 2000<br>29.19  | 1955<br>28.53  | 1915<br>27.95  | 1880<br>27.44  | 1850<br>27.00  | 1825<br>26.63  | 1795<br>26.20   | 1775<br>25.90   | 1755<br>25.61   |
|           | F4    | 0.31<br>1.8       | 0.32<br>1.8    | 0.33<br>1.9    | 0.33<br>1.9    | 0.34<br>1.9    | 0.35<br>2.0    | 0.35<br>2.0    | 0.36<br>2.1    | 0.36<br>2.1     | 0.37<br>2.1     | 0.37<br>2.1     |
|           | q7    | 2450<br>35.76     | 2365<br>34.51  | 2290<br>33.42  | 2225<br>32.47  | 2170<br>31.67  | 2120<br>30.94  | 2075<br>30.28  | 2035<br>29.70  | 2000<br>29.19   | 1965<br>28.68   | 1935<br>28.24   |
|           | F7    | 0.27<br>1.5       | 0.28<br>1.6    | 0.28<br>1.6    | 0.29<br>1.7    | 0.30<br>1.7    | 0.31<br>1.8    | 0.31<br>1.8    | 0.32<br>1.8    | 0.33<br>1.9     | 0.33<br>1.9     | 0.34<br>1.9     |
| <b>16</b> | q4    | 2285<br>33.35     | 2210<br>32.25  | 2145<br>31.30  | 2085<br>30.43  | 2035<br>29.70  | 1990<br>29.04  | 1955<br>28.53  | 1920<br>28.02  | 1885<br>27.51   | 1860<br>27.14   | 1830<br>26.71   |
|           | F4    | 0.25<br>1.4       | 0.26<br>1.5    | 0.27<br>1.5    | 0.28<br>1.6    | 0.29<br>1.7    | 0.29<br>1.7    | 0.30<br>1.7    | 0.30<br>1.7    | 0.31<br>1.8     | 0.31<br>1.8     | 0.32<br>1.8     |
|           | q7    | 2705<br>39.48     | 2595<br>37.87  | 2500<br>36.48  | 2420<br>35.32  | 2350<br>34.30  | 2285<br>33.35  | 2230<br>32.54  | 2180<br>31.81  | 2140<br>31.23   | 2095<br>30.57   | 2060<br>30.06   |
|           | F7    | 0.22<br>1.3       | 0.22<br>1.3    | 0.23<br>1.3    | 0.24<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4    | 0.26<br>1.5    | 0.27<br>1.5    | 0.27<br>1.5     | 0.28<br>1.6     | 0.28<br>1.6     |



# PLB™ and B FORMLOK™

- 5¾ in. (146 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
43.8 psf (2,097 N/m²)
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |               |               |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|---------------|---------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |               |               | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm   | 4"<br>102 mm  | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.175<br>238,978                         | 0.187<br>10,054                           | 0.198<br>10,645                           | 487<br>7,107                                    | 585<br>8,537  | 683<br>9,968  | 1250<br>18,242   | 1498<br>21,862 |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.216<br>294,967                         | 0.235<br>12,634                           | 0.248<br>13,333                           | 665<br>9,705                                    | 784<br>11,442 | 903<br>13,178 | 1790<br>26,123   | 2118<br>30,910 |

## Allowable Superimposed Loads (psf, kN/m²)

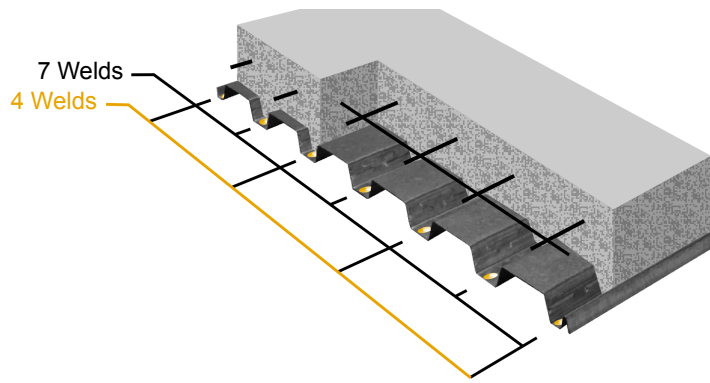
| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 279<br>13.4    | 246<br>11.8    | 219<br>10.5    | 195<br>9.3     | 175<br>8.4     | 157<br>7.5      | 141<br>6.8      | 128<br>6.1      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 279<br>13.4    | 246<br>11.8    | 219<br>10.5    | 195<br>9.3     | 175<br>8.4     | 157<br>7.5      | 141<br>6.8      | 128<br>6.1      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 279<br>13.4    | 246<br>11.8    | 219<br>10.5    | 195<br>9.3     | 175<br>8.4     | 157<br>7.5      | 141<br>6.8      | 128<br>6.1      |
| <b>20</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 294<br>14.1    | 260<br>12.4    | 231<br>11.1    | 206<br>9.9     | 185<br>8.9     | 166<br>7.9      | 150<br>7.2      | 136<br>6.5      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 294<br>14.1    | 260<br>12.4    | 231<br>11.1    | 206<br>9.9     | 185<br>8.9     | 166<br>7.9      | 150<br>7.2      | 136<br>6.5      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 294<br>14.1    | 260<br>12.4    | 231<br>11.1    | 206<br>9.9     | 185<br>8.9     | 166<br>7.9      | 150<br>7.2      | 136<br>6.5      |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10⁶, (mm/N)x10⁶)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>22</b> | q4    | 2210<br>32.25     | 2175<br>31.74  | 2140<br>31.23  | 2110<br>30.79  | 2085<br>30.43  | 2065<br>30.14  | 2045<br>29.84  | 2030<br>29.63  | 2010<br>29.33   | 2000<br>29.19   | 1985<br>28.97   |
|           | F4    | 0.37<br>2.1       | 0.38<br>2.2    | 0.38<br>2.2    | 0.39<br>2.2    | 0.39<br>2.2    | 0.40<br>2.3    | 0.40<br>2.3    | 0.41<br>2.3    | 0.41<br>2.3     | 0.41<br>2.3     | 0.41<br>2.3     |
|           | q7    | 2420<br>35.32     | 2365<br>34.51  | 2320<br>33.86  | 2280<br>33.27  | 2245<br>32.76  | 2210<br>32.25  | 2185<br>31.89  | 2160<br>31.52  | 2140<br>31.23   | 2115<br>30.87   | 2100<br>30.65   |
|           | F7    | 0.34<br>1.9       | 0.35<br>2.0    | 0.36<br>2.1    | 0.36<br>2.1    | 0.37<br>2.1    | 0.37<br>2.1    | 0.38<br>2.2    | 0.38<br>2.2    | 0.39<br>2.2     | 0.39<br>2.2     | 0.39<br>2.2     |
| <b>20</b> | q4    | 2280<br>33.27     | 2235<br>32.62  | 2195<br>32.03  | 2160<br>31.52  | 2130<br>31.09  | 2105<br>30.72  | 2080<br>30.36  | 2060<br>30.06  | 2040<br>29.77   | 2020<br>29.48   | 2005<br>29.26   |
|           | F4    | 0.33<br>1.9       | 0.34<br>1.9    | 0.34<br>1.9    | 0.35<br>2.0    | 0.35<br>2.0    | 0.36<br>2.1    | 0.36<br>2.1    | 0.37<br>2.1    | 0.37<br>2.1     | 0.37<br>2.1     | 0.37<br>2.1     |
|           | q7    | 2530<br>36.92     | 2465<br>35.97  | 2410<br>35.17  | 2360<br>34.44  | 2320<br>33.86  | 2280<br>33.27  | 2250<br>32.84  | 2215<br>32.33  | 2190<br>31.96   | 2165<br>31.60   | 2145<br>31.30   |
|           | F7    | 0.30<br>1.7       | 0.30<br>1.7    | 0.31<br>1.8    | 0.31<br>1.8    | 0.32<br>1.8    | 0.32<br>1.8    | 0.33<br>1.9    | 0.33<br>1.9    | 0.34<br>1.9     | 0.35<br>2.0     | 0.35<br>2.0     |





# PLB™ and B FORMLOK™

- 5¾ in. (146 mm) TOTAL SLAB DEPTH
- Light Weight Concrete
- 110 pcf (1,760 kg/m³)
- 43.8 psf (2,097 N/m²)
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 3"<br>76 mm      | 4"<br>102 mm   |
| <b>18</b> | 2.9<br>138.9        | 2.8<br>134.1     | 0.302<br>412,408                         | 0.322<br>17,312                           | 0.335<br>18,011                           | 1226<br>17,892                                  | 1407<br>20,534 | 1588<br>23,175 | 3062<br>44,687   | 3551<br>51,823 |
| <b>16</b> | 3.5<br>167.6        | 3.4<br>162.8     | 0.377<br>514,827                         | 0.411<br>22,097                           | 0.417<br>22,419                           | 2208<br>32,223                                  | 2484<br>36,251 | 2761<br>40,294 | 4789<br>69,890   | 5266<br>76,851 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>18</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 282<br>13.5    | 251<br>12.0    | 224<br>10.7    | 201<br>9.6     | 182<br>8.7      | 164<br>7.9      | 149<br>7.1      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 251<br>12.0    | 224<br>10.7    | 201<br>9.6     | 182<br>8.7      | 164<br>7.9      | 149<br>7.1      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 293<br>14.0    | 266<br>12.7    | 201<br>9.6     | 182<br>8.7      | 164<br>7.9      | 149<br>7.1      |
| <b>16</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 248<br>11.9    | 222<br>10.6    | 199<br>9.5     | 179<br>8.6      | 162<br>7.8      | 147<br>7.0      |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 291<br>13.9    | 264<br>12.6    | 199<br>9.5     | 179<br>8.6      | 162<br>7.8      | 147<br>7.0      |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 300<br>14.4    | 291<br>13.9    | 264<br>12.6    | 241<br>11.5    | 222<br>10.6     | 162<br>7.8      | 147<br>7.0      |

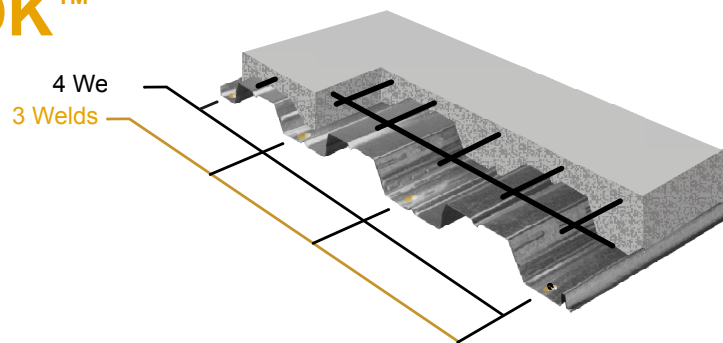
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                |                |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
|           |       | 6'-0"<br>1,830    | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 |
|           |       |                   |                |                |                |                |                |                |                |                 |                 |                 |
| <b>18</b> | q4    | 2430<br>35.46     | 2370<br>34.59  | 2320<br>33.86  | 2275<br>33.20  | 2230<br>32.54  | 2200<br>32.11  | 2165<br>31.60  | 2140<br>31.23  | 2110<br>30.79   | 2090<br>30.50   | 2070<br>30.21   |
|           | F4    | 0.27<br>1.5       | 0.27<br>1.5    | 0.28<br>1.6    | 0.29<br>1.7    | 0.29<br>1.7    | 0.30<br>1.7    | 0.30<br>1.7    | 0.30<br>1.7    | 0.31<br>1.8     | 0.31<br>1.8     | 0.31<br>1.8     |
|           | q7    | 2765<br>40.35     | 2680<br>39.11  | 2605<br>38.02  | 2540<br>37.07  | 2485<br>36.27  | 2435<br>35.54  | 2390<br>34.88  | 2350<br>34.30  | 2315<br>33.78   | 2280<br>33.27   | 2255<br>32.91   |
|           | F7    | 0.24<br>1.4       | 0.24<br>1.4    | 0.25<br>1.4    | 0.26<br>1.5    | 0.26<br>1.5    | 0.27<br>1.5    | 0.27<br>1.5    | 0.28<br>1.6    | 0.28<br>1.6     | 0.29<br>1.7     | 0.29<br>1.7     |
| <b>16</b> | q4    | 2600<br>37.94     | 2525<br>36.85  | 2460<br>35.90  | 2400<br>35.03  | 2350<br>34.30  | 2310<br>33.71  | 2270<br>33.13  | 2235<br>32.62  | 2200<br>32.11   | 2175<br>31.74   | 2150<br>31.38   |
|           | F4    | 0.22<br>1.3       | 0.23<br>1.3    | 0.24<br>1.4    | 0.24<br>1.4    | 0.25<br>1.4    | 0.25<br>1.4    | 0.26<br>1.5    | 0.26<br>1.5    | 0.26<br>1.5     | 0.27<br>1.5     | 0.27<br>1.5     |
|           | q7    | 3020<br>44.07     | 2910<br>42.47  | 2815<br>41.08  | 2735<br>39.91  | 2665<br>38.89  | 2605<br>38.02  | 2550<br>37.21  | 2500<br>36.48  | 2455<br>35.83   | 2415<br>35.24   | 2375<br>34.66   |
|           | F7    | 0.19<br>1.1       | 0.20<br>1.1    | 0.21<br>1.2    | 0.21<br>1.2    | 0.22<br>1.3    | 0.22<br>1.3    | 0.23<br>1.3    | 0.23<br>1.3    | 0.24<br>1.4     | 0.24<br>1.4     | 0.25<br>1.4     |

# PLW2™ and W2 FORMLOK™

- 4 in. (102 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m<sup>3</sup>)  
36.3 psf (1,738 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2                     | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                    | 263<br>3,838 | 306<br>4,466 | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8                     | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                    | 307<br>4,480 | 356<br>5,195 | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5                    | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 301<br>4,393                                    | 355<br>5,181 | 409<br>5,969 | 972<br>14,185    | 1123<br>16,389 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | 1     | 255<br>12.2       | 190<br>9.1     | 167<br>8.0     | 148<br>7.1     | 131<br>6.3     | 116<br>5.6     | 104<br>5.0      | 93<br>4.5       | 83<br>4.0       | 75<br>3.6       | 67<br>3.2       |
|           | 2     | 255<br>12.2       | 227<br>10.9    | 204<br>9.8     | 148<br>7.1     | 131<br>6.3     | 116<br>5.6     | 104<br>5.0      | 93<br>4.5       | 83<br>4.0       | 75<br>3.6       | 67<br>3.2       |
|           | 3     | 255<br>12.2       | 227<br>10.9    | 204<br>9.8     | 185<br>8.9     | 131<br>6.3     | 116<br>5.6     | 104<br>5.0      | 93<br>4.5       | 83<br>4.0       | 75<br>3.6       | 67<br>3.2       |
| <b>21</b> | 1     | 286<br>13.7       | 255<br>12.2    | 192<br>9.2     | 170<br>8.1     | 151<br>7.2     | 135<br>6.5     | 121<br>5.8      | 108<br>5.2      | 97<br>4.6       | 88<br>4.2       | 79<br>3.8       |
|           | 2     | 286<br>13.7       | 255<br>12.2    | 229<br>11.0    | 207<br>9.9     | 151<br>7.2     | 135<br>6.5     | 121<br>5.8      | 108<br>5.2      | 97<br>4.6       | 88<br>4.2       | 79<br>3.8       |
|           | 3     | 286<br>13.7       | 255<br>12.2    | 229<br>11.0    | 207<br>9.9     | 188<br>9.0     | 135<br>6.5     | 121<br>5.8      | 108<br>5.2      | 97<br>4.6       | 88<br>4.2       | 79<br>3.8       |
| <b>20</b> | 1     | 317<br>15.2       | 282<br>13.5    | 252<br>12.1    | 192<br>9.2     | 171<br>8.2     | 153<br>7.3     | 138<br>6.6      | 124<br>5.9      | 112<br>5.4      | 101<br>4.8      | 92<br>4.4       |
|           | 2     | 317<br>15.2       | 282<br>13.5    | 254<br>12.2    | 229<br>11.0    | 208<br>10.0    | 153<br>7.3     | 138<br>6.6      | 124<br>5.9      | 112<br>5.4      | 101<br>4.8      | 92<br>4.4       |
|           | 3     | 317<br>15.2       | 282<br>13.5    | 254<br>12.2    | 229<br>11.0    | 208<br>10.0    | 187<br>9.0     | 166<br>7.9      | 124<br>5.9      | 112<br>5.4      | 101<br>4.8      | 92<br>4.4       |

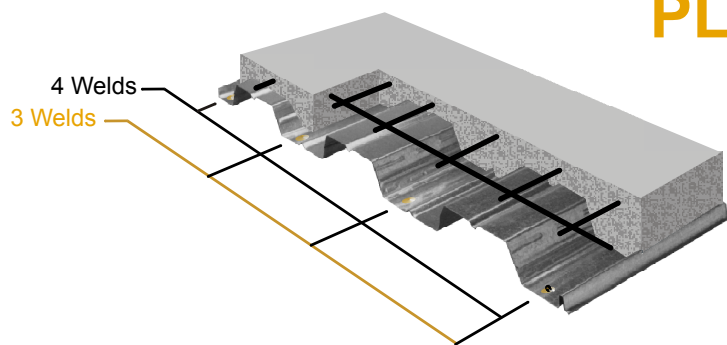
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | q3    | 1665<br>24.30     | 1650<br>24.08  | 1635<br>23.86  | 1620<br>23.64  | 1610<br>23.50  | 1595<br>23.28  | 1590<br>23.20   | 1580<br>23.06   | 1570<br>22.91   | 1565<br>22.84   | 1555<br>22.69   |
|           | q4    | 1780<br>25.98     | 1750<br>25.54  | 1720<br>25.10  | 1700<br>24.81  | 1680<br>24.52  | 1660<br>24.23  | 1640<br>23.93   | 1620<br>23.64   | 1610<br>23.50   | 1600<br>23.35   | 1590<br>23.20   |
| <b>21</b> | q3    | 1670<br>24.37     | 1655<br>24.15  | 1635<br>23.86  | 1620<br>23.64  | 1610<br>23.50  | 1595<br>23.28  | 1585<br>23.13   | 1575<br>22.99   | 1565<br>22.84   | 1560<br>22.77   | 1550<br>22.62   |
|           | q4    | 1810<br>26.41     | 1770<br>25.83  | 1740<br>25.39  | 1720<br>25.10  | 1700<br>24.81  | 1680<br>24.52  | 1660<br>24.23   | 1640<br>23.93   | 1620<br>23.64   | 1610<br>23.50   | 1600<br>23.35   |
| <b>20</b> | q3    | 1680<br>24.52     | 1660<br>24.23  | 1640<br>23.93  | 1625<br>23.72  | 1610<br>23.50  | 1595<br>23.28  | 1585<br>23.13   | 1575<br>22.99   | 1565<br>22.84   | 1555<br>22.69   | 1550<br>22.62   |
|           | q4    | 1840<br>26.85     | 1800<br>26.27  | 1770<br>25.83  | 1740<br>25.39  | 1720<br>25.10  | 1690<br>24.66  | 1670<br>24.37   | 1650<br>24.08   | 1640<br>23.93   | 1620<br>23.64   | 1610<br>23.50   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW2™ and W2 FORMLOK™



- 4 in. (102 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m<sup>3</sup>)
- 36.3 psf (1,738 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.4<br>114.9                    | 2.3<br>110.1     | 0.508<br>693,719                         | 0.442<br>23,763                           | 0.453<br>24,355                           | 396<br>5,779                                    | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3                    | 2.5<br>119.7     | 0.555<br>757,901                         | 0.510<br>27,419                           | 0.511<br>27,473                           | 533<br>7,779                                    | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0                    | 3.1<br>148.4     | 0.694<br>947,718                         | 0.639<br>34,355                           | 0.639<br>34,355                           | 981<br>14,317                                   | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | 1     | 380<br>18.2       | 339<br>16.2    | 305<br>14.6    | 259<br>12.4    | 214<br>10.2    | 191<br>9.1     | 173<br>8.3      | 156<br>7.5      | 142<br>6.8      | 129<br>6.2      | 118<br>5.6      |
|           | 2     | 380<br>18.2       | 339<br>16.2    | 305<br>14.6    | 275<br>13.2    | 249<br>11.9    | 220<br>10.5    | 195<br>9.3      | 156<br>7.5      | 142<br>6.8      | 129<br>6.2      | 118<br>5.6      |
|           | 3     | 380<br>18.2       | 339<br>16.2    | 305<br>14.6    | 275<br>13.2    | 249<br>11.9    | 220<br>10.5    | 195<br>9.3      | 174<br>8.3      | 152<br>7.3      | 129<br>6.2      | 118<br>5.6      |
| <b>18</b> | 1     | 400<br>19.2       | 388<br>18.6    | 348<br>16.7    | 303<br>14.5    | 253<br>12.1    | 211<br>10.1    | 203<br>9.7      | 184<br>8.8      | 167<br>8.0      | 147<br>7.0      | 129<br>6.2      |
|           | 2     | 400<br>19.2       | 388<br>18.6    | 348<br>16.7    | 315<br>15.1    | 278<br>13.3    | 246<br>11.8    | 218<br>10.4     | 193<br>9.2      | 167<br>8.0      | 147<br>7.0      | 129<br>6.2      |
|           | 3     | 400<br>19.2       | 388<br>18.6    | 348<br>16.7    | 315<br>15.1    | 278<br>13.3    | 246<br>11.8    | 218<br>10.4     | 193<br>9.2      | 168<br>8.0      | 147<br>7.0      | 129<br>6.2      |
| <b>16</b> | 1     | 400<br>19.2       | 388<br>18.6    | 348<br>16.7    | 315<br>15.1    | 277<br>13.3    | 245<br>11.7    | 217<br>10.4     | 194<br>9.3      | 166<br>7.9      | 152<br>7.3      | 139<br>6.7      |
|           | 2     | 400<br>19.2       | 388<br>18.6    | 348<br>16.7    | 315<br>15.1    | 277<br>13.3    | 245<br>11.7    | 217<br>10.4     | 194<br>9.3      | 173<br>8.3      | 155<br>7.4      | 140<br>6.7      |
|           | 3     | 400<br>19.2       | 388<br>18.6    | 348<br>16.7    | 315<br>15.1    | 277<br>13.3    | 245<br>11.7    | 217<br>10.4     | 194<br>9.3      | 173<br>8.3      | 155<br>7.4      | 140<br>6.7      |

Shoring required in shaded areas to right of heavy line

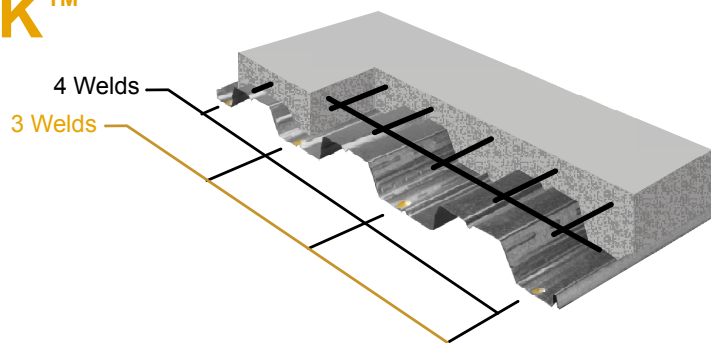
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | q3    | 1700<br>24.81     | 1680<br>24.52  | 1655<br>24.15  | 1635<br>23.86  | 1620<br>23.64  | 1605<br>23.42  | 1590<br>23.20   | 1580<br>23.06   | 1570<br>22.91   | 1560<br>22.77   | 1550<br>22.62   |
|           | q4    | 1900<br>27.73     | 1860<br>27.14  | 1820<br>26.56  | 1790<br>26.12  | 1760<br>25.69  | 1730<br>25.25  | 1710<br>24.96   | 1690<br>24.66   | 1670<br>24.37   | 1650<br>24.08   | 1640<br>23.93   |
| <b>18</b> | q3    | 1725<br>25.17     | 1700<br>24.81  | 1675<br>24.44  | 1655<br>24.15  | 1635<br>23.86  | 1615<br>23.57  | 1600<br>23.35   | 1590<br>23.20   | 1575<br>22.99   | 1565<br>22.84   | 1555<br>22.69   |
|           | q4    | 1960<br>28.60     | 1910<br>27.87  | 1870<br>27.29  | 1830<br>26.71  | 1800<br>26.27  | 1770<br>25.83  | 1750<br>25.54   | 1720<br>25.10   | 1700<br>24.81   | 1680<br>24.52   | 1660<br>24.23   |
| <b>16</b> | q3    | 1790<br>26.12     | 1760<br>25.69  | 1730<br>25.25  | 1700<br>24.81  | 1675<br>24.44  | 1655<br>24.15  | 1635<br>23.86   | 1620<br>23.64   | 1605<br>23.42   | 1590<br>23.20   | 1575<br>22.99   |
|           | q4    | 2110<br>30.79     | 2050<br>29.92  | 1990<br>29.04  | 1950<br>28.46  | 1910<br>27.87  | 1870<br>27.29  | 1840<br>26.85   | 1810<br>26.41   | 1780<br>25.98   | 1760<br>25.69   | 1740<br>25.39   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW2™ and W2 FORMLOK™

- 4½ in. (114 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
42.3 psf (2,025 N/m²)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2         | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                    | 263<br>3,838 | 306<br>4,466 | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8         | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                    | 307<br>4,480 | 356<br>5,195 | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 301<br>4,393                                    | 355<br>5,181 | 409<br>5,969 | 972<br>14,185    | 1123<br>16,389 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
|           |       |                   |                |                |                |                |                |                 |                 |                 |                 |                 |
| <b>22</b> | 1     | 246<br>11.8       | 214<br>10.2    | 188<br>9.0     | 166<br>7.9     | 147<br>7.0     | 131<br>6.3     | 117<br>5.6      | 104<br>5.0      | 93<br>4.5       | 84<br>4.0       | 75<br>3.6       |
|           | 2     | 288<br>13.8       | 257<br>12.3    | 188<br>9.0     | 166<br>7.9     | 147<br>7.0     | 131<br>6.3     | 117<br>5.6      | 104<br>5.0      | 93<br>4.5       | 84<br>4.0       | 75<br>3.6       |
|           | 3     | 288<br>13.8       | 257<br>12.3    | 231<br>11.1    | 166<br>7.9     | 147<br>7.0     | 131<br>6.3     | 117<br>5.6      | 104<br>5.0      | 93<br>4.5       | 84<br>4.0       | 75<br>3.6       |
| <b>21</b> | 1     | 322<br>15.4       | 245<br>11.7    | 216<br>10.3    | 191<br>9.1     | 170<br>8.1     | 151<br>7.2     | 135<br>6.5      | 122<br>5.8      | 109<br>5.2      | 98<br>4.7       | 89<br>4.3       |
|           | 2     | 322<br>15.4       | 287<br>13.7    | 258<br>12.4    | 191<br>9.1     | 170<br>8.1     | 151<br>7.2     | 135<br>6.5      | 122<br>5.8      | 109<br>5.2      | 98<br>4.7       | 89<br>4.3       |
|           | 3     | 322<br>15.4       | 287<br>13.7    | 258<br>12.4    | 233<br>11.2    | 170<br>8.1     | 151<br>7.2     | 135<br>6.5      | 122<br>5.8      | 109<br>5.2      | 98<br>4.7       | 89<br>4.3       |
| <b>20</b> | 1     | 357<br>17.1       | 318<br>15.2    | 243<br>11.6    | 216<br>10.3    | 192<br>9.2     | 172<br>8.2     | 154<br>7.4      | 139<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      |
|           | 2     | 357<br>17.1       | 318<br>15.2    | 286<br>13.7    | 258<br>12.4    | 192<br>9.2     | 172<br>8.2     | 154<br>7.4      | 139<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      |
|           | 3     | 357<br>17.1       | 318<br>15.2    | 286<br>13.7    | 258<br>12.4    | 235<br>11.3    | 215<br>10.3    | 154<br>7.4      | 139<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      |

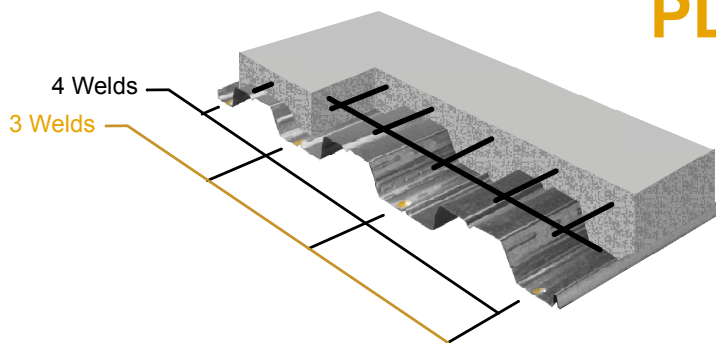
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
|           |       |                   |                |                |                |                |                |                 |                 |                 |                 |                 |
| <b>22</b> | q3    | 1905<br>27.80     | 1890<br>27.58  | 1875<br>27.36  | 1860<br>27.14  | 1845<br>26.93  | 1835<br>26.78  | 1825<br>26.63   | 1820<br>26.56   | 1810<br>26.41   | 1805<br>26.34   | 1795<br>26.20   |
|           | q4    | 2020<br>29.48     | 1990<br>29.04  | 1960<br>28.60  | 1940<br>28.31  | 1920<br>28.02  | 1900<br>27.73  | 1880<br>27.44   | 1860<br>27.14   | 1850<br>27.00   | 1840<br>26.85   | 1830<br>26.71   |
| <b>21</b> | q3    | 1910<br>27.87     | 1890<br>27.58  | 1875<br>27.36  | 1860<br>27.14  | 1845<br>26.93  | 1835<br>26.78  | 1825<br>26.63   | 1815<br>26.49   | 1805<br>26.34   | 1800<br>26.27   | 1790<br>26.12   |
|           | q4    | 2040<br>29.77     | 2010<br>29.33  | 1980<br>28.90  | 1950<br>28.46  | 1930<br>28.17  | 1910<br>27.87  | 1900<br>27.73   | 1880<br>27.44   | 1860<br>27.14   | 1850<br>27.00   | 1840<br>26.85   |
| <b>20</b> | q3    | 1920<br>28.02     | 1900<br>27.73  | 1880<br>27.44  | 1865<br>27.22  | 1850<br>27.00  | 1835<br>26.78  | 1825<br>26.63   | 1815<br>26.49   | 1805<br>26.34   | 1795<br>26.20   | 1790<br>26.12   |
|           | q4    | 2070<br>30.21     | 2040<br>29.77  | 2010<br>29.33  | 1980<br>28.90  | 1950<br>28.46  | 1930<br>28.17  | 1910<br>27.87   | 1890<br>27.58   | 1880<br>27.44   | 1860<br>27.14   | 1850<br>27.00   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW2™ and W2 FORMLOK™



- 4½ in. (114 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 42.3 psf (2,025 N/m²)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.4<br>114.9        | 2.3<br>110.1     | 0.508<br>693,719                         | 0.442<br>23,763                           | 0.453<br>24,355                           | 396<br>5,779                                    | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3        | 2.5<br>119.7     | 0.555<br>757,901                         | 0.510<br>27,419                           | 0.511<br>27,473                           | 533<br>7,779                                    | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0        | 3.1<br>148.4     | 0.694<br>947,718                         | 0.639<br>34,355                           | 0.639<br>34,355                           | 981<br>14,317                                   | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | 1     | 400<br>19.2       | 382<br>18.3    | 343<br>16.4    | 289<br>13.8    | 239<br>11.4    | 214<br>10.2    | 193<br>9.2      | 175<br>8.4      | 159<br>7.6      | 144<br>6.9      | 131<br>6.3      |
|           | 2     | 400<br>19.2       | 382<br>18.3    | 343<br>16.4    | 310<br>14.8    | 282<br>13.5    | 257<br>12.3    | 193<br>9.2      | 175<br>8.4      | 159<br>7.6      | 144<br>6.9      | 131<br>6.3      |
|           | 3     | 400<br>19.2       | 382<br>18.3    | 343<br>16.4    | 310<br>14.8    | 282<br>13.5    | 257<br>12.3    | 231<br>11.1     | 198<br>9.5      | 159<br>7.6      | 144<br>6.9      | 131<br>6.3      |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 391<br>18.7    | 342<br>16.4    | 282<br>13.5    | 251<br>12.0    | 227<br>10.9     | 206<br>9.9      | 187<br>9.0      | 171<br>8.2      | 156<br>7.5      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 391<br>18.7    | 354<br>16.9    | 322<br>15.4    | 293<br>14.0    | 260<br>12.4     | 206<br>9.9      | 187<br>9.0      | 171<br>8.2      | 156<br>7.5      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 391<br>18.7    | 354<br>16.9    | 322<br>15.4    | 293<br>14.0    | 260<br>12.4     | 232<br>11.1     | 201<br>9.6      | 172<br>8.2      | 156<br>7.5      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 390<br>18.7    | 352<br>16.9    | 320<br>15.3    | 293<br>14.0    | 269<br>12.9     | 204<br>9.8      | 185<br>8.9      | 169<br>8.1      | 155<br>7.4      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 390<br>18.7    | 352<br>16.9    | 320<br>15.3    | 293<br>14.0    | 269<br>12.9     | 248<br>11.9     | 229<br>11.0     | 213<br>10.2     | 155<br>7.4      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 390<br>18.7    | 352<br>16.9    | 320<br>15.3    | 293<br>14.0    | 269<br>12.9     | 248<br>11.9     | 229<br>11.0     | 213<br>10.2     | 198<br>9.5      |

Shoring required in shaded areas to right of heavy line

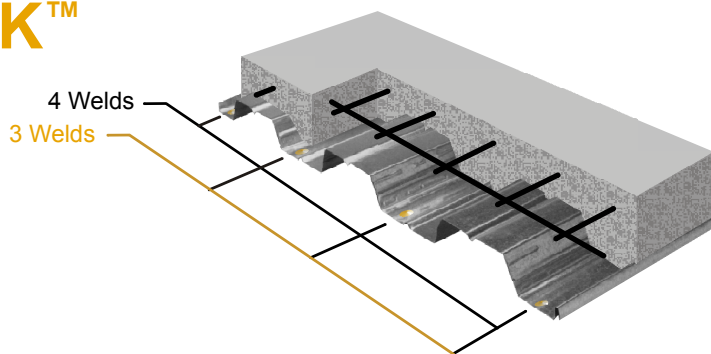
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | q3    | 1940<br>28.31     | 1915<br>27.95  | 1895<br>27.66  | 1875<br>27.36  | 1860<br>27.14  | 1845<br>26.93  | 1830<br>26.71   | 1820<br>26.56   | 1810<br>26.41   | 1795<br>26.20   | 1790<br>26.12   |
|           | q4    | 2140<br>31.23     | 2100<br>30.65  | 2060<br>30.06  | 2030<br>29.63  | 2000<br>29.19  | 1970<br>28.75  | 1950<br>28.46   | 1930<br>28.17   | 1910<br>27.87   | 1890<br>27.58   | 1880<br>27.44   |
| <b>18</b> | q3    | 1965<br>28.68     | 1935<br>28.24  | 1915<br>27.95  | 1890<br>27.58  | 1875<br>27.36  | 1855<br>27.07  | 1840<br>26.85   | 1825<br>26.63   | 1815<br>26.49   | 1805<br>26.34   | 1795<br>26.20   |
|           | q4    | 2200<br>32.11     | 2150<br>31.38  | 2110<br>30.79  | 2070<br>30.21  | 2040<br>29.77  | 2010<br>29.33  | 1990<br>29.04   | 1960<br>28.60   | 1940<br>28.31   | 1920<br>28.02   | 1900<br>27.73   |
| <b>16</b> | q3    | 2030<br>29.63     | 1995<br>29.11  | 1965<br>28.68  | 1940<br>28.31  | 1915<br>27.95  | 1895<br>27.66  | 1875<br>27.36   | 1860<br>27.14   | 1845<br>26.93   | 1830<br>26.71   | 1815<br>26.49   |
|           | q4    | 2350<br>34.30     | 2290<br>33.42  | 2240<br>32.69  | 2190<br>31.96  | 2150<br>31.38  | 2110<br>30.79  | 2080<br>30.36   | 2050<br>29.92   | 2020<br>29.48   | 2000<br>29.19   | 1980<br>28.90   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW2™ and W2 FORMLOK™

- 5 in. (127 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m<sup>3</sup>)  
48.3 psf (2,313 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2                     | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                    | 263<br>3,838 | 306<br>4,466 | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8                     | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                    | 307<br>4,480 | 356<br>5,195 | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5                    | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 301<br>4,393                                    | 355<br>5,181 | 409<br>5,969 | 972<br>14,185    | 1123<br>16,389 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | 1     | 275<br>13.2       | 240<br>11.5    | 211<br>10.1    | 186<br>8.9     | 165<br>7.9     | 146<br>7.0     | 130<br>6.2      | 117<br>5.6      | 104<br>5.0      | 93<br>4.5       | 84<br>4.0       |
|           | 2     | 323<br>15.5       | 288<br>13.8    | 211<br>10.1    | 186<br>8.9     | 165<br>7.9     | 146<br>7.0     | 130<br>6.2      | 117<br>5.6      | 104<br>5.0      | 93<br>4.5       | 84<br>4.0       |
|           | 3     | 323<br>15.5       | 288<br>13.8    | 211<br>10.1    | 186<br>8.9     | 165<br>7.9     | 146<br>7.0     | 130<br>6.2      | 117<br>5.6      | 104<br>5.0      | 93<br>4.5       | 84<br>4.0       |
| <b>21</b> | 1     | 313<br>15.0       | 274<br>13.1    | 241<br>11.5    | 213<br>10.2    | 190<br>9.1     | 169<br>8.1     | 151<br>7.2      | 136<br>6.5      | 122<br>5.8      | 110<br>5.3      | 99<br>4.7       |
|           | 2     | 361<br>17.3       | 322<br>15.4    | 289<br>13.8    | 213<br>10.2    | 190<br>9.1     | 169<br>8.1     | 151<br>7.2      | 136<br>6.5      | 122<br>5.8      | 110<br>5.3      | 99<br>4.7       |
|           | 3     | 361<br>17.3       | 322<br>15.4    | 289<br>13.8    | 261<br>12.5    | 190<br>9.1     | 169<br>8.1     | 151<br>7.2      | 136<br>6.5      | 122<br>5.8      | 110<br>5.3      | 99<br>4.7       |
| <b>20</b> | 1     | 400<br>19.2       | 308<br>14.7    | 272<br>13.0    | 241<br>11.5    | 215<br>10.3    | 192<br>9.2     | 173<br>8.3      | 155<br>7.4      | 140<br>6.7      | 127<br>6.1      | 115<br>5.5      |
|           | 2     | 400<br>19.2       | 356<br>17.0    | 320<br>15.3    | 241<br>11.5    | 215<br>10.3    | 192<br>9.2     | 173<br>8.3      | 155<br>7.4      | 140<br>6.7      | 127<br>6.1      | 115<br>5.5      |
|           | 3     | 400<br>19.2       | 356<br>17.0    | 320<br>15.3    | 289<br>13.8    | 263<br>12.6    | 192<br>9.2     | 173<br>8.3      | 155<br>7.4      | 140<br>6.7      | 127<br>6.1      | 115<br>5.5      |

Shoring required in shaded areas to right of heavy line

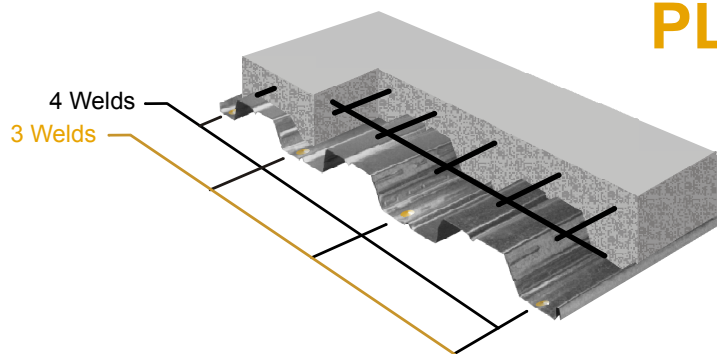
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | q3    | 2145<br>31.30     | 2125<br>31.01  | 2110<br>30.79  | 2100<br>30.65  | 2085<br>30.43  | 2075<br>30.28  | 2065<br>30.14   | 2055<br>29.99   | 2050<br>29.92   | 2040<br>29.77   | 2035<br>29.70   |
|           | q4    | 2250<br>32.84     | 2220<br>32.40  | 2190<br>31.96  | 2170<br>31.67  | 2150<br>31.38  | 2130<br>31.09  | 2120<br>30.94   | 2100<br>30.65   | 2090<br>30.50   | 2070<br>30.21   | 2060<br>30.06   |
| <b>21</b> | q3    | 2150<br>31.38     | 2130<br>31.09  | 2115<br>30.87  | 2100<br>30.65  | 2085<br>30.43  | 2075<br>30.28  | 2065<br>30.14   | 2055<br>29.99   | 2045<br>29.84   | 2035<br>29.70   | 2030<br>29.63   |
|           | q4    | 2280<br>33.27     | 2250<br>32.84  | 2220<br>32.40  | 2190<br>31.96  | 2170<br>31.67  | 2150<br>31.38  | 2130<br>31.09   | 2110<br>30.79   | 2100<br>30.65   | 2080<br>30.36   | 2070<br>30.21   |
| <b>20</b> | q3    | 2160<br>31.52     | 2135<br>31.16  | 2120<br>30.94  | 2105<br>30.72  | 2090<br>30.50  | 2075<br>30.28  | 2065<br>30.14   | 2055<br>29.99   | 2045<br>29.84   | 2035<br>29.70   | 2025<br>29.55   |
|           | q4    | 2310<br>33.71     | 2270<br>33.13  | 2240<br>32.69  | 2210<br>32.25  | 2190<br>31.96  | 2170<br>31.67  | 2150<br>31.38   | 2130<br>31.09   | 2110<br>30.79   | 2090<br>30.50   | 2080<br>30.36   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).



# PLW2™ and W2 FORMLOK™



- 5 in. (127 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete
- 145 pcf (2,320 kg/m<sup>3</sup>)
- 48.3 psf (2,313 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.4<br>114.9                    | 2.3<br>110.1     | 0.508<br>693,719                         | 0.442<br>23,763                           | 0.453<br>24,355                           | 396<br>5,779                                    | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3                    | 2.5<br>119.7     | 0.555<br>757,901                         | 0.510<br>27,419                           | 0.511<br>27,473                           | 533<br>7,779                                    | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0                    | 3.1<br>148.4     | 0.694<br>947,718                         | 0.639<br>34,355                           | 0.639<br>34,355                           | 981<br>14,317                                   | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|      |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| 19   | 1     | 400<br>19.2       | 400<br>19.2    | 383<br>18.3    | 298<br>14.3    | 267<br>12.8    | 240<br>11.5    | 216<br>10.3     | 195<br>9.3      | 177<br>8.5      | 161<br>7.7      | 147<br>7.0      |
|      | 2     | 400<br>19.2       | 400<br>19.2    | 383<br>18.3    | 347<br>16.6    | 315<br>15.1    | 240<br>11.5    | 216<br>10.3     | 195<br>9.3      | 177<br>8.5      | 161<br>7.7      | 147<br>7.0      |
|      | 3     | 400<br>19.2       | 400<br>19.2    | 383<br>18.3    | 347<br>16.6    | 315<br>15.1    | 288<br>13.8    | 257<br>12.3     | 195<br>9.3      | 177<br>8.5      | 161<br>7.7      | 147<br>7.0      |
| 18   | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 375<br>18.0    | 304<br>14.6    | 280<br>13.4    | 253<br>12.1     | 229<br>11.0     | 209<br>10.0     | 190<br>9.1      | 174<br>8.3      |
|      | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 395<br>18.9    | 359<br>17.2    | 328<br>15.7    | 301<br>14.4     | 229<br>11.0     | 209<br>10.0     | 190<br>9.1      | 174<br>8.3      |
|      | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 395<br>18.9    | 359<br>17.2    | 328<br>15.7    | 301<br>14.4     | 258<br>12.4     | 220<br>10.5     | 190<br>9.1      | 174<br>8.3      |
| 16   | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 393<br>18.8    | 357<br>17.1    | 326<br>15.6    | 250<br>12.0     | 227<br>10.9     | 206<br>9.9      | 188<br>9.0      | 172<br>8.2      |
|      | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 393<br>18.8    | 357<br>17.1    | 326<br>15.6    | 300<br>14.4     | 276<br>13.2     | 256<br>12.3     | 188<br>9.0      | 172<br>8.2      |
|      | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 393<br>18.8    | 357<br>17.1    | 326<br>15.6    | 300<br>14.4     | 276<br>13.2     | 256<br>12.3     | 237<br>11.3     | 172<br>8.2      |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

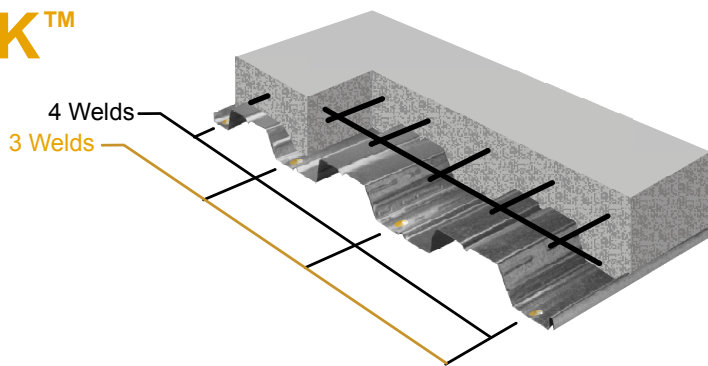
| Gage | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|      |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| 19   | q3    | 2180<br>31.81     | 2155<br>31.45  | 2135<br>31.16  | 2115<br>30.87  | 2100<br>30.65  | 2085<br>30.43  | 2070<br>30.21   | 2060<br>30.06   | 2045<br>29.84   | 2035<br>29.70   | 2025<br>29.55   |
|      | q4    | 2370<br>34.59     | 2330<br>34.00  | 2290<br>33.42  | 2260<br>32.98  | 2230<br>32.54  | 2200<br>32.11  | 2180<br>31.81   | 2160<br>31.52   | 2140<br>31.23   | 2120<br>30.94   | 2110<br>30.79   |
| 18   | q3    | 2205<br>32.18     | 2175<br>31.74  | 2150<br>31.38  | 2130<br>31.09  | 2110<br>30.79  | 2095<br>30.57  | 2080<br>30.36   | 2065<br>30.14   | 2055<br>29.99   | 2040<br>29.77   | 2030<br>29.63   |
|      | q4    | 2430<br>35.46     | 2380<br>34.73  | 2340<br>34.15  | 2300<br>33.57  | 2270<br>33.13  | 2240<br>32.69  | 2220<br>32.40   | 2190<br>31.96   | 2170<br>31.67   | 2150<br>31.38   | 2140<br>31.23   |
| 16   | q3    | 2270<br>33.13     | 2235<br>32.62  | 2205<br>32.18  | 2180<br>31.81  | 2155<br>31.45  | 2135<br>31.16  | 2115<br>30.87   | 2100<br>30.65   | 2080<br>30.36   | 2070<br>30.21   | 2055<br>29.99   |
|      | q4    | 2570<br>37.51     | 2510<br>36.63  | 2460<br>35.90  | 2420<br>35.32  | 2380<br>34.73  | 2340<br>34.15  | 2310<br>33.71   | 2280<br>33.27   | 2250<br>32.84   | 2230<br>32.54   | 2210<br>32.25   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).



# PLW2™ and W2 FORMLOK™

- 5½ in. (140 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
54.4 psf (2,605 N/m²)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2         | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                    | 263<br>3,838 | 306<br>4,466 | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8         | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                    | 307<br>4,480 | 356<br>5,195 | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 301<br>4,393                                    | 355<br>5,181 | 409<br>5,969 | 972<br>14,185    | 1123<br>16,389 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | 1     | 306<br>14.7       | 267<br>12.8    | 234<br>11.2    | 207<br>9.9     | 183<br>8.8     | 163<br>7.8     | 145<br>6.9      | 130<br>6.2      | 116<br>5.6      | 104<br>5.0      | 93<br>4.5       |
|           | 2     | 359<br>17.2       | 267<br>12.8    | 234<br>11.2    | 207<br>9.9     | 183<br>8.8     | 163<br>7.8     | 145<br>6.9      | 130<br>6.2      | 116<br>5.6      | 104<br>5.0      | 93<br>4.5       |
|           | 3     | 359<br>17.2       | 320<br>15.3    | 234<br>11.2    | 207<br>9.9     | 183<br>8.8     | 163<br>7.8     | 145<br>6.9      | 130<br>6.2      | 116<br>5.6      | 104<br>5.0      | 93<br>4.5       |
| <b>21</b> | 1     | 348<br>16.7       | 304<br>14.6    | 268<br>12.8    | 237<br>11.3    | 211<br>10.1    | 188<br>9.0     | 168<br>8.0      | 151<br>7.2      | 136<br>6.5      | 122<br>5.8      | 110<br>5.3      |
|           | 2     | 400<br>19.2       | 358<br>17.1    | 268<br>12.8    | 237<br>11.3    | 211<br>10.1    | 188<br>9.0     | 168<br>8.0      | 151<br>7.2      | 136<br>6.5      | 122<br>5.8      | 110<br>5.3      |
|           | 3     | 400<br>19.2       | 358<br>17.1    | 321<br>15.4    | 237<br>11.3    | 211<br>10.1    | 188<br>9.0     | 168<br>8.0      | 151<br>7.2      | 136<br>6.5      | 122<br>5.8      | 110<br>5.3      |
| <b>20</b> | 1     | 400<br>19.2       | 343<br>16.4    | 302<br>14.5    | 268<br>12.8    | 239<br>11.4    | 214<br>10.2    | 192<br>9.2      | 173<br>8.3      | 156<br>7.5      | 141<br>6.8      | 127<br>6.1      |
|           | 2     | 400<br>19.2       | 396<br>19.0    | 356<br>17.0    | 268<br>12.8    | 239<br>11.4    | 214<br>10.2    | 192<br>9.2      | 173<br>8.3      | 156<br>7.5      | 141<br>6.8      | 127<br>6.1      |
|           | 3     | 400<br>19.2       | 396<br>19.0    | 356<br>17.0    | 321<br>15.4    | 239<br>11.4    | 214<br>10.2    | 192<br>9.2      | 173<br>8.3      | 156<br>7.5      | 141<br>6.8      | 127<br>6.1      |

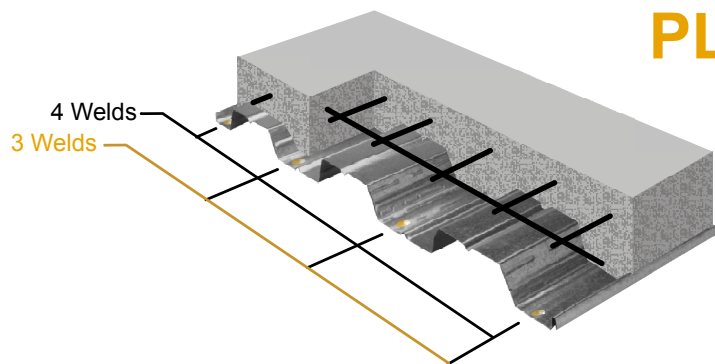
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | q3    | 2385<br>34.81     | 2365<br>34.51  | 2350<br>34.30  | 2335<br>34.08  | 2325<br>33.93  | 2315<br>33.78  | 2305<br>33.64   | 2295<br>33.49   | 2290<br>33.42   | 2280<br>33.27   | 2275<br>33.20   |
|           | q4    | 2490<br>36.34     | 2460<br>35.90  | 2440<br>35.61  | 2410<br>35.17  | 2390<br>34.88  | 2370<br>34.59  | 2360<br>34.44   | 2340<br>34.15   | 2330<br>34.00   | 2320<br>33.86   | 2310<br>33.71   |
| <b>21</b> | q3    | 2390<br>34.88     | 2370<br>34.59  | 2355<br>34.37  | 2340<br>34.15  | 2325<br>33.93  | 2315<br>33.78  | 2300<br>33.57   | 2295<br>33.49   | 2285<br>33.35   | 2275<br>33.20   | 2270<br>33.13   |
|           | q4    | 2520<br>36.78     | 2490<br>36.34  | 2460<br>35.90  | 2430<br>35.46  | 2410<br>35.17  | 2390<br>34.88  | 2370<br>34.59   | 2350<br>34.30   | 2340<br>34.15   | 2330<br>34.00   | 2320<br>33.86   |
| <b>20</b> | q3    | 2395<br>34.95     | 2375<br>34.66  | 2360<br>34.44  | 2340<br>34.15  | 2325<br>33.93  | 2315<br>33.78  | 2305<br>33.64   | 2290<br>33.42   | 2285<br>33.35   | 2275<br>33.20   | 2265<br>33.06   |
|           | q4    | 2550<br>37.21     | 2510<br>36.63  | 2480<br>36.19  | 2450<br>35.76  | 2430<br>35.46  | 2410<br>35.17  | 2390<br>34.88   | 2370<br>34.59   | 2360<br>34.44   | 2340<br>34.15   | 2330<br>34.00   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW2™ and W2 FORMLOK™



- 5½ in. (140 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 54.4 psf (2,605 N/m²)
- Galvanized or Phosphatized/Painted ■
- 1 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width |                   |                   | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|--------------------------------|-------------------|-------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in.⁴<br>mm⁴               | +S<br>in.³<br>mm³ | -S<br>in.³<br>mm³ | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                |                   |                   | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.4<br>114.9        | 2.3<br>110.1     | 0.508<br>693,719               | 0.442<br>23,763   | 0.453<br>24,355   | 396<br>5,779                                    | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3        | 2.5<br>119.7     | 0.555<br>757,901               | 0.510<br>27,419   | 0.511<br>27,473   | 533<br>7,779                                    | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0        | 3.1<br>148.4     | 0.694<br>947,718               | 0.639<br>34,355   | 0.639<br>34,355   | 981<br>14,317                                   | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 331<br>15.8    | 296<br>14.2    | 266<br>12.7    | 240<br>11.5     | 217<br>10.4     | 197<br>9.4      | 179<br>8.6      | 163<br>7.8      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 385<br>18.4    | 350<br>16.8    | 266<br>12.7    | 240<br>11.5     | 217<br>10.4     | 197<br>9.4      | 179<br>8.6      | 163<br>7.8      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 385<br>18.4    | 350<br>16.8    | 320<br>15.3    | 240<br>11.5     | 217<br>10.4     | 197<br>9.4      | 179<br>8.6      | 163<br>7.8      |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 345<br>16.5    | 311<br>14.9    | 281<br>13.5     | 255<br>12.2     | 232<br>11.1     | 211<br>10.1     | 193<br>9.2      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 399<br>19.1    | 365<br>17.5    | 281<br>13.5     | 255<br>12.2     | 232<br>11.1     | 211<br>10.1     | 193<br>9.2      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 399<br>19.1    | 365<br>17.5    | 330<br>15.8     | 279<br>13.4     | 232<br>11.1     | 211<br>10.1     | 193<br>9.2      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 396<br>19.0    | 362<br>17.3    | 277<br>13.3     | 252<br>12.1     | 229<br>11.0     | 208<br>10.0     | 190<br>9.1      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 396<br>19.0    | 362<br>17.3    | 332<br>15.9     | 306<br>14.7     | 229<br>11.0     | 208<br>10.0     | 190<br>9.1      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 396<br>19.0    | 362<br>17.3    | 332<br>15.9     | 306<br>14.7     | 283<br>13.6     | 263<br>12.6     | 190<br>9.1      |

Shoring required in shaded areas to right of heavy line

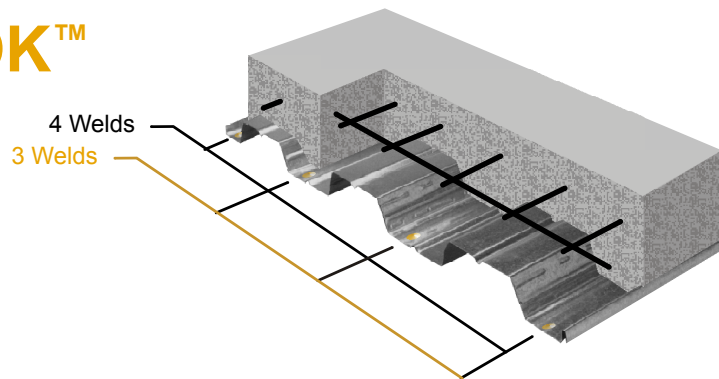
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | q3    | 2420<br>35.32     | 2395<br>34.95  | 2375<br>34.66  | 2355<br>34.37  | 2340<br>34.15  | 2325<br>33.93  | 2310<br>33.71   | 2295<br>33.49   | 2285<br>33.35   | 2275<br>33.20   | 2265<br>33.06   |
|           | q4    | 2620<br>38.24     | 2580<br>37.65  | 2540<br>37.07  | 2510<br>36.63  | 2480<br>36.19  | 2450<br>35.76  | 2430<br>35.46   | 2410<br>35.17   | 2390<br>34.88   | 2370<br>34.59   | 2350<br>34.30   |
| <b>18</b> | q3    | 2445<br>35.68     | 2415<br>35.24  | 2390<br>34.88  | 2370<br>34.59  | 2350<br>34.30  | 2335<br>34.08  | 2320<br>33.86   | 2305<br>33.64   | 2295<br>33.49   | 2280<br>33.27   | 2270<br>33.13   |
|           | q4    | 2680<br>39.11     | 2630<br>38.38  | 2590<br>37.80  | 2550<br>37.21  | 2520<br>36.78  | 2490<br>36.34  | 2460<br>35.90   | 2440<br>35.61   | 2420<br>35.32   | 2400<br>35.03   | 2380<br>34.73   |
| <b>16</b> | q3    | 2510<br>36.63     | 2475<br>36.12  | 2445<br>35.68  | 2420<br>35.32  | 2395<br>34.95  | 2375<br>34.66  | 2355<br>34.37   | 2335<br>34.08   | 2320<br>33.86   | 2305<br>33.64   | 2295<br>33.49   |
|           | q4    | 2820<br>41.15     | 2760<br>40.28  | 2710<br>39.55  | 2670<br>38.97  | 2630<br>38.38  | 2590<br>37.80  | 2560<br>37.36   | 2530<br>36.92   | 2500<br>36.48   | 2470<br>36.05   | 2450<br>35.76   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW2™ and W2 FORMLOK™

- 6½ in. (165 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
66.5 psf (3,184 N/m²)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2         | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                    | 263<br>3,838 | 306<br>4,466 | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8         | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                    | 307<br>4,480 | 356<br>5,195 | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 301<br>4,393                                    | 355<br>5,181 | 409<br>5,969 | 972<br>14,185    | 1123<br>16,389 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
|           |       |                   |                |                |                |                |                |                 |                 |                 |                 |                 |
| <b>22</b> | 1     | 370<br>17.7       | 323<br>15.5    | 283<br>13.6    | 250<br>12.0    | 221<br>10.6    | 197<br>9.4     | 175<br>8.4      | 157<br>7.5      | 140<br>6.7      | 126<br>6.0      | 113<br>5.4      |
|           | 2     | 370<br>17.7       | 323<br>15.5    | 283<br>13.6    | 250<br>12.0    | 221<br>10.6    | 197<br>9.4     | 175<br>8.4      | 157<br>7.5      | 140<br>6.7      | 126<br>6.0      | 113<br>5.4      |
|           | 3     | 400<br>19.2       | 323<br>15.5    | 283<br>13.6    | 250<br>12.0    | 221<br>10.6    | 197<br>9.4     | 175<br>8.4      | 157<br>7.5      | 140<br>6.7      | 126<br>6.0      | 113<br>5.4      |
| <b>21</b> | 1     | 400<br>19.2       | 368<br>17.6    | 324<br>15.5    | 286<br>13.7    | 255<br>12.2    | 227<br>10.9    | 203<br>9.7      | 182<br>8.7      | 164<br>7.9      | 148<br>7.1      | 133<br>6.4      |
|           | 2     | 400<br>19.2       | 368<br>17.6    | 324<br>15.5    | 286<br>13.7    | 255<br>12.2    | 227<br>10.9    | 203<br>9.7      | 182<br>8.7      | 164<br>7.9      | 148<br>7.1      | 133<br>6.4      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 324<br>15.5    | 286<br>13.7    | 255<br>12.2    | 227<br>10.9    | 203<br>9.7      | 182<br>8.7      | 164<br>7.9      | 148<br>7.1      | 133<br>6.4      |
| <b>20</b> | 1     | 400<br>19.2       | 400<br>19.2    | 365<br>17.5    | 324<br>15.5    | 288<br>13.8    | 258<br>12.4    | 232<br>11.1     | 208<br>10.0     | 188<br>9.0      | 170<br>8.1      | 154<br>7.4      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 365<br>17.5    | 324<br>15.5    | 288<br>13.8    | 258<br>12.4    | 232<br>11.1     | 208<br>10.0     | 188<br>9.0      | 170<br>8.1      | 154<br>7.4      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 324<br>15.5    | 288<br>13.8    | 258<br>12.4    | 232<br>11.1     | 208<br>10.0     | 188<br>9.0      | 170<br>8.1      | 154<br>7.4      |

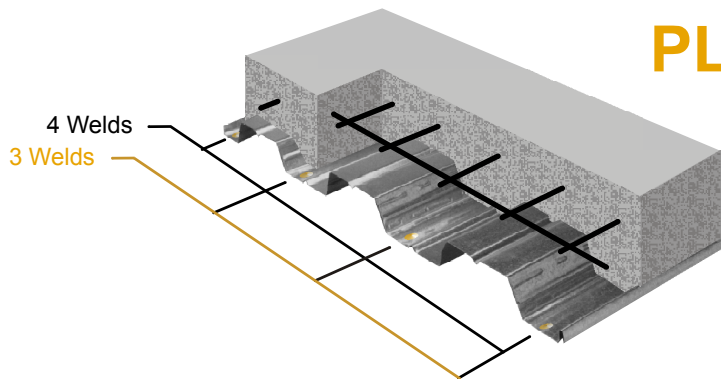
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
|           |       |                   |                |                |                |                |                |                 |                 |                 |                 |                 |
| <b>22</b> | q3    | 2860<br>41.74     | 2845<br>41.52  | 2830<br>41.30  | 2815<br>41.08  | 2805<br>40.94  | 2795<br>40.79  | 2785<br>40.64   | 2775<br>40.50   | 2765<br>40.35   | 2760<br>40.28   | 2750<br>40.13   |
|           | q4    | 2970<br>43.34     | 2940<br>42.91  | 2920<br>42.61  | 2890<br>42.18  | 2870<br>41.88  | 2850<br>41.59  | 2840<br>41.45   | 2820<br>41.15   | 2810<br>41.01   | 2790<br>40.72   | 2780<br>40.57   |
| <b>21</b> | q3    | 2865<br>41.81     | 2850<br>41.59  | 2830<br>41.30  | 2815<br>41.08  | 2805<br>40.94  | 2790<br>40.72  | 2780<br>40.57   | 2770<br>40.43   | 2760<br>40.28   | 2755<br>40.21   | 2745<br>40.06   |
|           | q4    | 3000<br>43.78     | 2970<br>43.34  | 2940<br>42.91  | 2910<br>42.47  | 2890<br>42.18  | 2870<br>41.88  | 2850<br>41.59   | 2830<br>41.30   | 2820<br>41.15   | 2800<br>40.86   | 2790<br>40.72   |
| <b>20</b> | q3    | 2875<br>41.96     | 2855<br>41.67  | 2835<br>41.37  | 2820<br>41.15  | 2805<br>40.94  | 2790<br>40.72  | 2780<br>40.57   | 2770<br>40.43   | 2760<br>40.28   | 2750<br>40.13   | 2745<br>40.06   |
|           | q4    | 3030<br>44.22     | 2990<br>43.64  | 2960<br>43.20  | 2930<br>42.76  | 2910<br>42.47  | 2890<br>42.18  | 2870<br>41.88   | 2850<br>41.59   | 2830<br>41.30   | 2820<br>41.15   | 2810<br>41.01   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW2™ and W2 FORMLOK™



- 6½ in. (165 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 66.5 psf (3,184 N/m²)
- Galvanized or Phosphatized/Painted ■
- 2 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.4<br>114.9        | 2.3<br>110.1     | 0.508<br>693,719                         | 0.442<br>23,763                           | 0.453<br>24,355                           | 396<br>5,779                                    | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3        | 2.5<br>119.7     | 0.555<br>757,901                         | 0.510<br>27,419                           | 0.511<br>27,473                           | 533<br>7,779                                    | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0        | 3.1<br>148.4     | 0.694<br>947,718                         | 0.639<br>34,355                           | 0.639<br>34,355                           | 981<br>14,317                                   | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 357<br>17.1    | 321<br>15.4    | 289<br>13.8     | 262<br>12.5     | 237<br>11.3     | 216<br>10.3     | 197<br>9.4      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 357<br>17.1    | 321<br>15.4    | 289<br>13.8     | 262<br>12.5     | 237<br>11.3     | 216<br>10.3     | 197<br>9.4      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 321<br>15.4    | 289<br>13.8     | 262<br>12.5     | 237<br>11.3     | 216<br>10.3     | 197<br>9.4      |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 375<br>18.0    | 339<br>16.2     | 307<br>14.7     | 279<br>13.4     | 255<br>12.2     | 233<br>11.2     |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 375<br>18.0    | 339<br>16.2     | 307<br>14.7     | 279<br>13.4     | 255<br>12.2     | 233<br>11.2     |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 374<br>17.9     | 307<br>14.7     | 279<br>13.4     | 255<br>12.2     | 233<br>11.2     |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 370<br>17.7    | 334<br>16.0     | 303<br>14.5     | 276<br>13.2     | 251<br>12.0     | 230<br>11.0     |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2     | 303<br>14.5     | 276<br>13.2     | 251<br>12.0     | 230<br>11.0     |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2     | 369<br>17.7     | 341<br>16.3     | 251<br>12.0     | 230<br>11.0     |

Shoring required in shaded areas to right of heavy line

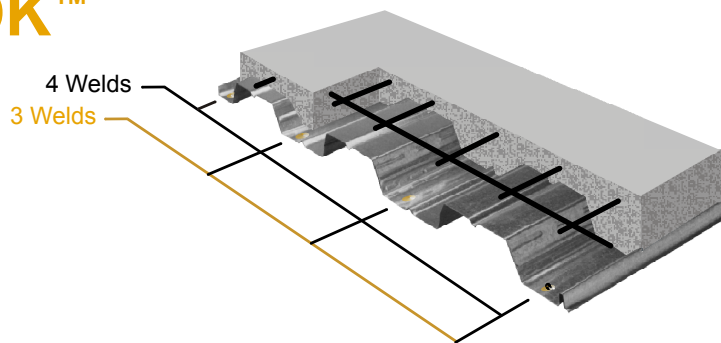
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | q3    | 2900<br>42.32     | 2875<br>41.96  | 2850<br>41.59  | 2835<br>41.37  | 2815<br>41.08  | 2800<br>40.86  | 2785<br>40.64   | 2775<br>40.50   | 2765<br>40.35   | 2755<br>40.21   | 2745<br>40.06   |
|           | q4    | 3100<br>45.24     | 3060<br>44.66  | 3020<br>44.07  | 2990<br>43.64  | 2960<br>43.20  | 2930<br>42.76  | 2910<br>42.47   | 2890<br>42.18   | 2870<br>41.88   | 2850<br>41.59   | 2830<br>41.30   |
| <b>18</b> | q3    | 2920<br>42.61     | 2895<br>42.25  | 2870<br>41.88  | 2850<br>41.59  | 2830<br>41.30  | 2810<br>41.01  | 2795<br>40.79   | 2785<br>40.64   | 2770<br>40.43   | 2760<br>40.28   | 2750<br>40.13   |
|           | q4    | 3150<br>45.97     | 3110<br>45.39  | 3070<br>44.80  | 3030<br>44.22  | 3000<br>43.78  | 2970<br>43.34  | 2940<br>42.91   | 2920<br>42.61   | 2900<br>42.32   | 2880<br>42.03   | 2860<br>41.74   |
| <b>16</b> | q3    | 2990<br>43.64     | 2955<br>43.12  | 2925<br>42.69  | 2895<br>42.25  | 2875<br>41.96  | 2850<br>41.59  | 2835<br>41.37   | 2815<br>41.08   | 2800<br>40.86   | 2785<br>40.64   | 2770<br>40.43   |
|           | q4    | 3300<br>48.16     | 3240<br>47.28  | 3190<br>46.55  | 3150<br>45.97  | 3110<br>45.39  | 3070<br>44.80  | 3040<br>44.37   | 3010<br>43.93   | 2980<br>43.49   | 2950<br>43.05   | 2930<br>42.76   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW2™ and W2 FORMLOK™

- 4 in. (102 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m<sup>3</sup>)  
27.5 psf (1,317 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2                     | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                    | 263<br>3,838 | 306<br>4,466 | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8                     | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                    | 307<br>4,480 | 356<br>5,195 | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5                    | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 301<br>4,393                                    | 355<br>5,181 | 409<br>5,969 | 972<br>14,185    | 1123<br>16,389 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | 1     | 255<br>12.2       | 227<br>10.9    | 176<br>8.4     | 156<br>7.5     | 140<br>6.7     | 125<br>6.0     | 113<br>5.4      | 102<br>4.9      | 92<br>4.4       | 83<br>4.0       | 76<br>3.6       |
|           | 2     | 255<br>12.2       | 227<br>10.9    | 204<br>9.8     | 185<br>8.9     | 140<br>6.7     | 125<br>6.0     | 113<br>5.4      | 102<br>4.9      | 92<br>4.4       | 83<br>4.0       | 76<br>3.6       |
|           | 3     | 255<br>12.2       | 227<br>10.9    | 204<br>9.8     | 185<br>8.9     | 168<br>8.0     | 125<br>6.0     | 113<br>5.4      | 102<br>4.9      | 92<br>4.4       | 83<br>4.0       | 76<br>3.6       |
| <b>21</b> | 1     | 286<br>13.7       | 255<br>12.2    | 229<br>11.0    | 178<br>8.5     | 160<br>7.7     | 143<br>6.8     | 129<br>6.2      | 117<br>5.6      | 106<br>5.1      | 97<br>4.6       | 87<br>4.2       |
|           | 2     | 286<br>13.7       | 255<br>12.2    | 229<br>11.0    | 207<br>9.9     | 188<br>9.0     | 172<br>8.2     | 129<br>6.2      | 117<br>5.6      | 106<br>5.1      | 97<br>4.6       | 87<br>4.2       |
|           | 3     | 286<br>13.7       | 255<br>12.2    | 229<br>11.0    | 207<br>9.9     | 188<br>9.0     | 172<br>8.2     | 151<br>7.2      | 117<br>5.6      | 106<br>5.1      | 97<br>4.6       | 87<br>4.2       |
| <b>20</b> | 1     | 317<br>15.2       | 282<br>13.5    | 254<br>12.2    | 229<br>11.0    | 180<br>8.6     | 162<br>7.8     | 146<br>7.0      | 133<br>6.4      | 117<br>5.6      | 103<br>4.9      | 90<br>4.3       |
|           | 2     | 317<br>15.2       | 282<br>13.5    | 254<br>12.2    | 229<br>11.0    | 208<br>10.0    | 182<br>8.7     | 156<br>7.5      | 133<br>6.4      | 117<br>5.6      | 103<br>4.9      | 90<br>4.3       |
|           | 3     | 317<br>15.2       | 282<br>13.5    | 254<br>12.2    | 229<br>11.0    | 208<br>10.0    | 182<br>8.7     | 156<br>7.5      | 135<br>6.5      | 117<br>5.6      | 103<br>4.9      | 90<br>4.3       |

Shoring required in shaded areas to right of heavy line

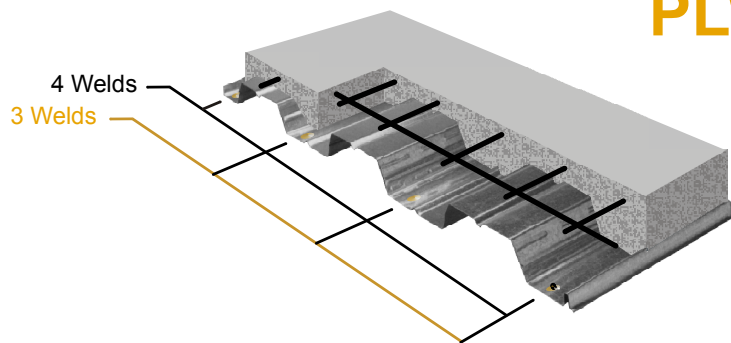
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | q3    | 1340<br>19.56     | 1325<br>19.34  | 1310<br>19.12  | 1295<br>18.90  | 1285<br>18.75  | 1275<br>18.61  | 1265<br>18.46   | 1255<br>18.32   | 1245<br>18.17   | 1240<br>18.10   | 1230<br>17.95   |
|           | q4    | 1450<br>21.16     | 1420<br>20.72  | 1400<br>20.43  | 1370<br>19.99  | 1350<br>19.70  | 1330<br>19.41  | 1320<br>19.26   | 1300<br>18.97   | 1290<br>18.83   | 1280<br>18.68   | 1270<br>18.53   |
| <b>21</b> | q3    | 1345<br>19.63     | 1330<br>19.41  | 1310<br>19.12  | 1295<br>18.90  | 1285<br>18.75  | 1270<br>18.53  | 1260<br>18.39   | 1250<br>18.24   | 1240<br>18.10   | 1235<br>18.02   | 1225<br>17.88   |
|           | q4    | 1480<br>21.60     | 1450<br>21.16  | 1420<br>20.72  | 1390<br>20.29  | 1370<br>19.99  | 1350<br>19.70  | 1330<br>19.41   | 1310<br>19.12   | 1300<br>18.97   | 1280<br>18.68   | 1270<br>18.53   |
| <b>20</b> | q3    | 1355<br>19.77     | 1335<br>19.48  | 1315<br>19.19  | 1300<br>18.97  | 1285<br>18.75  | 1275<br>18.61  | 1260<br>18.39   | 1250<br>18.24   | 1240<br>18.10   | 1230<br>17.95   | 1225<br>17.88   |
|           | q4    | 1510<br>22.04     | 1470<br>21.45  | 1440<br>21.02  | 1410<br>20.58  | 1390<br>20.29  | 1370<br>19.99  | 1350<br>19.70   | 1330<br>19.41   | 1310<br>19.12   | 1300<br>18.97   | 1290<br>18.83   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).



# PLW2™ and W2 FORMLOK™



- 4 in. (102 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m<sup>3</sup>)
- 27.5 psf (1,317 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.4<br>114.9                    | 2.3<br>110.1     | 0.508<br>693,719                         | 0.442<br>23,763                           | 0.453<br>24,355                           | 396<br>5,779                                    | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3                    | 2.5<br>119.7     | 0.555<br>757,901                         | 0.510<br>27,419                           | 0.511<br>27,473                           | 533<br>7,779                                    | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0                    | 3.1<br>148.4     | 0.694<br>947,718                         | 0.639<br>34,355                           | 0.639<br>34,355                           | 981<br>14,317                                   | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | 1     | 380<br>18.2       | 339<br>16.2    | 305<br>14.6    | 272<br>13.0    | 229<br>11.0    | 195<br>9.3     | 167<br>8.0      | 144<br>6.9      | 125<br>6.0      | 110<br>5.3      | 97<br>4.6       |
|           | 2     | 380<br>18.2       | 339<br>16.2    | 305<br>14.6    | 272<br>13.0    | 229<br>11.0    | 195<br>9.3     | 167<br>8.0      | 144<br>6.9      | 125<br>6.0      | 110<br>5.3      | 97<br>4.6       |
|           | 3     | 380<br>18.2       | 339<br>16.2    | 305<br>14.6    | 272<br>13.0    | 229<br>11.0    | 195<br>9.3     | 167<br>8.0      | 144<br>6.9      | 125<br>6.0      | 110<br>5.3      | 97<br>4.6       |
| <b>18</b> | 1     | 400<br>19.2       | 388<br>18.6    | 343<br>16.4    | 286<br>13.7    | 241<br>11.5    | 205<br>9.8     | 175<br>8.4      | 152<br>7.3      | 132<br>6.3      | 115<br>5.5      | 102<br>4.9      |
|           | 2     | 400<br>19.2       | 388<br>18.6    | 343<br>16.4    | 286<br>13.7    | 241<br>11.5    | 205<br>9.8     | 175<br>8.4      | 152<br>7.3      | 132<br>6.3      | 115<br>5.5      | 102<br>4.9      |
|           | 3     | 400<br>19.2       | 388<br>18.6    | 343<br>16.4    | 286<br>13.7    | 241<br>11.5    | 205<br>9.8     | 175<br>8.4      | 152<br>7.3      | 132<br>6.3      | 115<br>5.5      | 102<br>4.9      |
| <b>16</b> | 1     | 400<br>19.2       | 388<br>18.6    | 348<br>16.7    | 308<br>14.7    | 267<br>12.8    | 227<br>10.9    | 195<br>9.3      | 168<br>8.0      | 146<br>7.0      | 128<br>6.1      | 113<br>5.4      |
|           | 2     | 400<br>19.2       | 388<br>18.6    | 348<br>16.7    | 308<br>14.7    | 267<br>12.8    | 227<br>10.9    | 195<br>9.3      | 168<br>8.0      | 146<br>7.0      | 128<br>6.1      | 113<br>5.4      |
|           | 3     | 400<br>19.2       | 388<br>18.6    | 348<br>16.7    | 308<br>14.7    | 267<br>12.8    | 227<br>10.9    | 195<br>9.3      | 168<br>8.0      | 146<br>7.0      | 128<br>6.1      | 113<br>5.4      |

Shoring required in shaded areas to right of heavy line

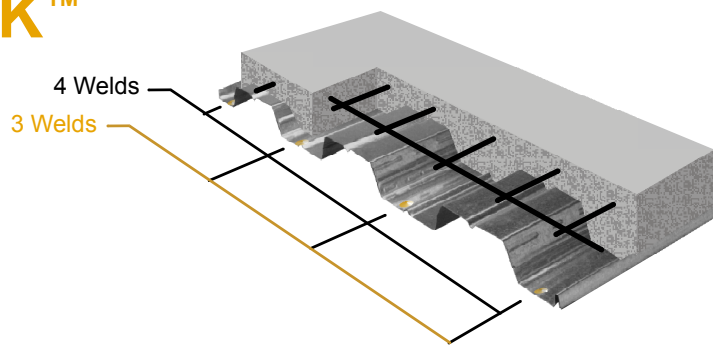
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | q3    | 1380<br>20.14     | 1355<br>19.77  | 1330<br>19.41  | 1315<br>19.19  | 1295<br>18.90  | 1280<br>18.68  | 1265<br>18.46   | 1255<br>18.32   | 1245<br>18.17   | 1235<br>18.02   | 1225<br>17.88   |
|           | q4    | 1580<br>23.06     | 1540<br>22.47  | 1500<br>21.89  | 1470<br>21.45  | 1440<br>21.02  | 1410<br>20.58  | 1390<br>20.29   | 1370<br>19.99   | 1350<br>19.70   | 1330<br>19.41   | 1310<br>19.12   |
| <b>18</b> | q3    | 1400<br>20.43     | 1375<br>20.07  | 1350<br>19.70  | 1330<br>19.41  | 1310<br>19.12  | 1295<br>18.90  | 1275<br>18.61   | 1265<br>18.46   | 1250<br>18.24   | 1240<br>18.10   | 1230<br>17.95   |
|           | q4    | 1630<br>23.79     | 1590<br>23.20  | 1550<br>22.62  | 1510<br>22.04  | 1480<br>21.60  | 1450<br>21.16  | 1420<br>20.72   | 1400<br>20.43   | 1380<br>20.14   | 1360<br>19.85   | 1340<br>19.56   |
| <b>16</b> | q3    | 1470<br>21.45     | 1435<br>20.94  | 1405<br>20.50  | 1375<br>20.07  | 1355<br>19.77  | 1330<br>19.41  | 1315<br>19.19   | 1295<br>18.90   | 1280<br>18.68   | 1265<br>18.46   | 1250<br>18.24   |
|           | q4    | 1780<br>25.98     | 1720<br>25.10  | 1670<br>24.37  | 1630<br>23.79  | 1590<br>23.20  | 1550<br>22.62  | 1520<br>22.18   | 1490<br>21.74   | 1460<br>21.31   | 1430<br>20.87   | 1410<br>20.58   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW2™ and W2 FORMLOK™

- 4½ in. (114 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
32.1 psf (1,537 N/m²)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2         | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                    | 263<br>3,838 | 306<br>4,466 | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8         | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                    | 307<br>4,480 | 356<br>5,195 | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 3071<br>4,393                                   | 355<br>5,181 | 409<br>5,969 | 972<br>14,185    | 1123<br>16,389 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | 1     | 288<br>13.8       | 225<br>10.8    | 198<br>9.5     | 176<br>8.4     | 157<br>7.5     | 141<br>6.8     | 127<br>6.1      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       |
|           | 2     | 288<br>13.8       | 257<br>12.3    | 231<br>11.1    | 208<br>10.0    | 157<br>7.5     | 141<br>6.8     | 127<br>6.1      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       |
|           | 3     | 288<br>13.8       | 257<br>12.3    | 231<br>11.1    | 208<br>10.0    | 190<br>9.1     | 141<br>6.8     | 127<br>6.1      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       |
| <b>21</b> | 1     | 322<br>15.4       | 287<br>13.7    | 226<br>10.8    | 201<br>9.6     | 180<br>8.6     | 161<br>7.7     | 146<br>7.0      | 132<br>6.3      | 119<br>5.7      | 109<br>5.2      | 99<br>4.7       |
|           | 2     | 322<br>15.4       | 287<br>13.7    | 258<br>12.4    | 233<br>11.2    | 212<br>10.2    | 161<br>7.7     | 146<br>7.0      | 132<br>6.3      | 119<br>5.7      | 109<br>5.2      | 99<br>4.7       |
|           | 3     | 322<br>15.4       | 287<br>13.7    | 258<br>12.4    | 233<br>11.2    | 212<br>10.2    | 194<br>9.3     | 146<br>7.0      | 132<br>6.3      | 119<br>5.7      | 109<br>5.2      | 99<br>4.7       |
| <b>20</b> | 1     | 357<br>17.1       | 318<br>15.2    | 286<br>13.7    | 258<br>12.4    | 202<br>9.7     | 182<br>8.7     | 165<br>7.9      | 149<br>7.1      | 136<br>6.5      | 124<br>5.9      | 113<br>5.4      |
|           | 2     | 357<br>17.1       | 318<br>15.2    | 286<br>13.7    | 258<br>12.4    | 235<br>11.3    | 215<br>10.3    | 165<br>7.9      | 149<br>7.1      | 136<br>6.5      | 124<br>5.9      | 113<br>5.4      |
|           | 3     | 357<br>17.1       | 318<br>15.2    | 286<br>13.7    | 258<br>12.4    | 235<br>11.3    | 215<br>10.3    | 197<br>9.4      | 180<br>8.6      | 136<br>6.5      | 124<br>5.9      | 113<br>5.4      |

Shoring required in shaded areas to right of heavy line

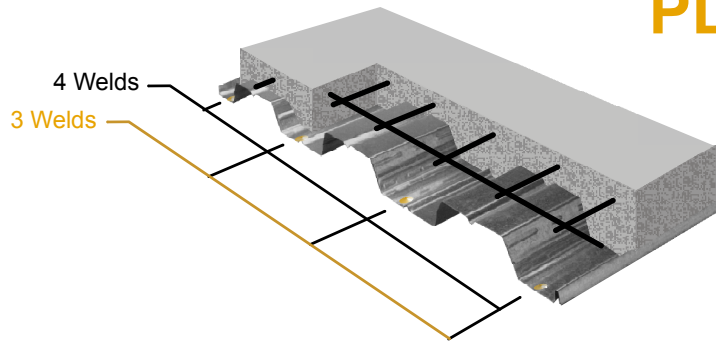
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>22</b> | q3    | 1500<br>21.89     | 1480<br>21.60  | 1465<br>21.38  | 1455<br>21.23  | 1440<br>21.02  | 1430<br>20.87  | 1420<br>20.72   | 1410<br>20.58   | 1405<br>20.50   | 1395<br>20.36   | 1390<br>20.29   |
|           | q4    | 1610<br>23.50     | 1580<br>23.06  | 1550<br>22.62  | 1530<br>22.33  | 1510<br>22.04  | 1490<br>21.74  | 1480<br>21.60   | 1460<br>21.31   | 1450<br>21.16   | 1430<br>20.87   | 1420<br>20.72   |
| <b>21</b> | q3    | 1505<br>21.96     | 1485<br>21.67  | 1470<br>21.45  | 1455<br>21.23  | 1440<br>21.02  | 1430<br>20.87  | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1390<br>20.29   | 1385<br>20.21   |
|           | q4    | 1640<br>23.93     | 1610<br>23.50  | 1580<br>23.06  | 1550<br>22.62  | 1530<br>22.33  | 1510<br>22.04  | 1490<br>21.74   | 1470<br>21.45   | 1460<br>21.31   | 1440<br>21.02   | 1430<br>20.87   |
| <b>20</b> | q3    | 1515<br>22.11     | 1495<br>21.82  | 1475<br>21.53  | 1460<br>21.31  | 1445<br>21.09  | 1430<br>20.87  | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1390<br>20.29   | 1380<br>20.14   |
|           | q4    | 1670<br>24.37     | 1630<br>23.79  | 1600<br>23.35  | 1570<br>22.91  | 1550<br>22.62  | 1530<br>22.33  | 1510<br>22.04   | 1490<br>21.74   | 1470<br>21.45   | 1450<br>21.16   | 1440<br>21.02   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).



# PLW2™ and W2 FORMLOK™



- 4½ in. (114 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m³)
- 32.1 psf (1,537 N/m²)
- Galvanized or Phosphatized/Painted ■
- 1 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.4<br>114.9        | 2.3<br>110.1     | 0.508<br>693,719                         | 0.442<br>23,763                           | 0.453<br>24,355                           | 396<br>5,779                                    | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3        | 2.5<br>119.7     | 0.555<br>757,901                         | 0.510<br>27,419                           | 0.511<br>27,473                           | 533<br>7,779                                    | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0        | 3.1<br>148.4     | 0.694<br>947,718                         | 0.639<br>34,355                           | 0.639<br>34,355                           | 981<br>14,317                                   | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | 1     | 400<br>19.2       | 382<br>18.3    | 343<br>16.4    | 310<br>14.8    | 282<br>13.5    | 236<br>11.3    | 204<br>9.8      | 185<br>8.9      | 169<br>8.1      | 152<br>7.3      | 134<br>6.4      |
|           | 2     | 400<br>19.2       | 382<br>18.3    | 343<br>16.4    | 310<br>14.8    | 282<br>13.5    | 257<br>12.3    | 231<br>11.1     | 200<br>9.6      | 169<br>8.1      | 152<br>7.3      | 134<br>6.4      |
|           | 3     | 400<br>19.2       | 382<br>18.3    | 343<br>16.4    | 310<br>14.8    | 282<br>13.5    | 257<br>12.3    | 231<br>11.1     | 200<br>9.6      | 174<br>8.3      | 152<br>7.3      | 134<br>6.4      |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 391<br>18.7    | 354<br>16.9    | 322<br>15.4    | 279<br>13.4    | 235<br>11.3     | 210<br>10.1     | 182<br>8.7      | 160<br>7.7      | 141<br>6.8      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 391<br>18.7    | 354<br>16.9    | 322<br>15.4    | 283<br>13.6    | 243<br>11.6     | 210<br>10.1     | 182<br>8.7      | 160<br>7.7      | 141<br>6.8      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 391<br>18.7    | 354<br>16.9    | 322<br>15.4    | 283<br>13.6    | 243<br>11.6     | 210<br>10.1     | 182<br>8.7      | 160<br>7.7      | 141<br>6.8      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 390<br>18.7    | 352<br>16.9    | 320<br>15.3    | 293<br>14.0    | 269<br>12.9     | 232<br>11.1     | 202<br>9.7      | 177<br>8.5      | 156<br>7.5      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 390<br>18.7    | 352<br>16.9    | 320<br>15.3    | 293<br>14.0    | 269<br>12.9     | 232<br>11.1     | 202<br>9.7      | 177<br>8.5      | 156<br>7.5      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 390<br>18.7    | 352<br>16.9    | 320<br>15.3    | 293<br>14.0    | 269<br>12.9     | 232<br>11.1     | 202<br>9.7      | 177<br>8.5      | 156<br>7.5      |

Shoring required in shaded areas to right of heavy line

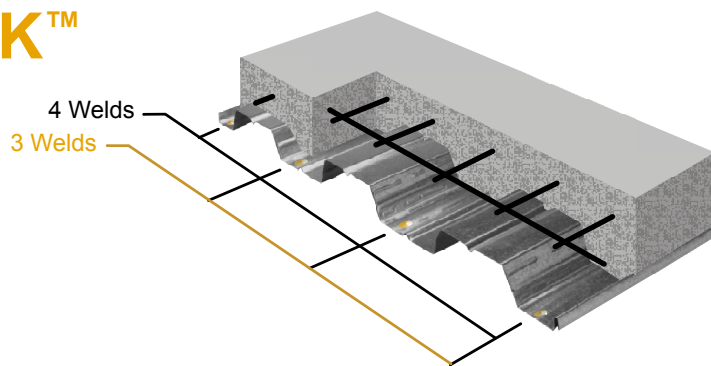
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | q3    | 1535<br>22.40     | 1510<br>22.04  | 1490<br>21.74  | 1470<br>21.45  | 1455<br>21.23  | 1440<br>21.02  | 1425<br>20.80   | 1415<br>20.65   | 1400<br>20.43   | 1390<br>20.29   | 1385<br>20.21   |
|           | q4    | 1730<br>25.25     | 1690<br>24.66  | 1650<br>24.08  | 1620<br>23.64  | 1590<br>23.20  | 1560<br>22.77  | 1540<br>22.47   | 1520<br>22.18   | 1500<br>21.89   | 1480<br>21.60   | 1470<br>21.45   |
| <b>18</b> | q3    | 1560<br>22.77     | 1530<br>22.33  | 1510<br>22.04  | 1485<br>21.67  | 1465<br>21.38  | 1450<br>21.16  | 1435<br>20.94   | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1385<br>20.21   |
|           | q4    | 1790<br>26.12     | 1740<br>25.39  | 1700<br>24.81  | 1660<br>24.23  | 1630<br>23.79  | 1600<br>23.35  | 1580<br>23.06   | 1560<br>22.77   | 1540<br>22.47   | 1520<br>22.18   | 1500<br>21.89   |
| <b>16</b> | q3    | 1625<br>23.72     | 1590<br>23.20  | 1560<br>22.77  | 1535<br>22.40  | 1510<br>22.04  | 1490<br>21.74  | 1470<br>21.45   | 1455<br>21.23   | 1440<br>21.02   | 1425<br>20.80   | 1410<br>20.58   |
|           | q4    | 1940<br>28.31     | 1880<br>27.44  | 1830<br>26.71  | 1780<br>25.98  | 1740<br>25.39  | 1700<br>24.81  | 1670<br>24.37   | 1640<br>23.93   | 1620<br>23.64   | 1590<br>23.20   | 1570<br>22.91   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW2™ and W2 FORMLOK™

- 5¼ in. (133 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
39.0 psf (1,867 N/m²)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2         | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                    | 263<br>3,838 | 306<br>4,466 | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8         | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                    | 307<br>4,480 | 356<br>5,195 | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 301<br>4,393                                    | 355<br>5,181 | 409<br>5,969 | 972<br>14,185    | 1123<br>16,389 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
|           |       |                   |                |                |                |                |                |                 |                 |                 |                 |                 |
| <b>22</b> | 1     | 303<br>14.5       | 266<br>12.7    | 235<br>11.3    | 208<br>10.0    | 186<br>8.9     | 167<br>8.0     | 150<br>7.2      | 135<br>6.5      | 122<br>5.8      | 111<br>5.3      | 100<br>4.8      |
|           | 2     | 341<br>16.3       | 304<br>14.6    | 273<br>13.1    | 208<br>10.0    | 186<br>8.9     | 167<br>8.0     | 150<br>7.2      | 135<br>6.5      | 122<br>5.8      | 111<br>5.3      | 100<br>4.8      |
|           | 3     | 341<br>16.3       | 304<br>14.6    | 273<br>13.1    | 247<br>11.8    | 186<br>8.9     | 167<br>8.0     | 150<br>7.2      | 135<br>6.5      | 122<br>5.8      | 111<br>5.3      | 100<br>4.8      |
| <b>21</b> | 1     | 381<br>18.2       | 340<br>16.3    | 267<br>12.8    | 237<br>11.3    | 212<br>10.2    | 191<br>9.1     | 172<br>8.2      | 155<br>7.4      | 141<br>6.8      | 128<br>6.1      | 117<br>5.6      |
|           | 2     | 381<br>18.2       | 340<br>16.3    | 305<br>14.6    | 276<br>13.2    | 212<br>10.2    | 191<br>9.1     | 172<br>8.2      | 155<br>7.4      | 141<br>6.8      | 128<br>6.1      | 117<br>5.6      |
|           | 3     | 381<br>18.2       | 340<br>16.3    | 305<br>14.6    | 276<br>13.2    | 251<br>12.0    | 191<br>9.1     | 172<br>8.2      | 155<br>7.4      | 141<br>6.8      | 128<br>6.1      | 117<br>5.6      |
| <b>20</b> | 1     | 400<br>19.2       | 376<br>18.0    | 338<br>16.2    | 267<br>12.8    | 239<br>11.4    | 215<br>10.3    | 194<br>9.3      | 176<br>8.4      | 160<br>7.7      | 146<br>7.0      | 133<br>6.4      |
|           | 2     | 400<br>19.2       | 376<br>18.0    | 338<br>16.2    | 305<br>14.6    | 278<br>13.3    | 215<br>10.3    | 194<br>9.3      | 176<br>8.4      | 160<br>7.7      | 146<br>7.0      | 133<br>6.4      |
|           | 3     | 400<br>19.2       | 376<br>18.0    | 338<br>16.2    | 305<br>14.6    | 278<br>13.3    | 254<br>12.2    | 233<br>11.2     | 176<br>8.4      | 160<br>7.7      | 146<br>7.0      | 133<br>6.4      |

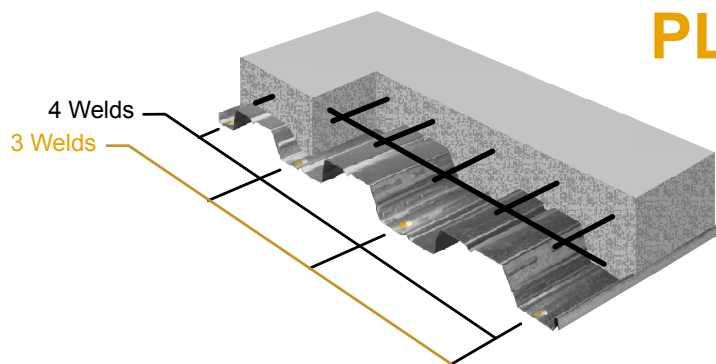
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
|           |       |                   |                |                |                |                |                |                 |                 |                 |                 |                 |
| <b>22</b> | q3    | 1735<br>25.32     | 1720<br>25.10  | 1705<br>24.88  | 1690<br>24.66  | 1680<br>24.52  | 1670<br>24.37  | 1660<br>24.23   | 1650<br>24.08   | 1640<br>23.93   | 1635<br>23.86   | 1625<br>23.72   |
|           | q4    | 1850<br>27.00     | 1820<br>26.56  | 1790<br>26.12  | 1770<br>25.83  | 1750<br>25.54  | 1730<br>25.25  | 1710<br>24.96   | 1690<br>24.66   | 1680<br>24.52   | 1670<br>24.37   | 1660<br>24.23   |
| <b>21</b> | q3    | 1740<br>25.39     | 1725<br>25.17  | 1705<br>24.88  | 1690<br>24.66  | 1680<br>24.52  | 1665<br>24.30  | 1655<br>24.15   | 1645<br>24.01   | 1635<br>23.86   | 1630<br>23.79   | 1620<br>23.64   |
|           | q4    | 1880<br>27.44     | 1840<br>26.85  | 1810<br>26.41  | 1790<br>26.12  | 1770<br>25.83  | 1750<br>25.54  | 1730<br>25.25   | 1710<br>24.96   | 1700<br>24.81   | 1680<br>24.52   | 1670<br>24.37   |
| <b>20</b> | q3    | 1750<br>25.54     | 1730<br>25.25  | 1710<br>24.96  | 1695<br>24.74  | 1680<br>24.52  | 1670<br>24.37  | 1655<br>24.15   | 1645<br>24.01   | 1635<br>23.86   | 1625<br>23.72   | 1620<br>23.64   |
|           | q4    | 1910<br>27.87     | 1870<br>27.29  | 1840<br>26.85  | 1810<br>26.41  | 1790<br>26.12  | 1760<br>25.69  | 1740<br>25.39   | 1720<br>25.10   | 1710<br>24.96   | 1690<br>24.66   | 1680<br>24.52   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW2™ and W2 FORMLOK™



- 5¼ in. (133 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m<sup>3</sup>)
- 39.0 psf (1,867 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted ■
- 2 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.4<br>114.9                    | 2.3<br>110.1     | 0.508<br>693,719                         | 0.442<br>23,763                           | 0.453<br>24,355                           | 396<br>5,779                                    | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3                    | 2.5<br>119.7     | 0.555<br>757,901                         | 0.510<br>27,419                           | 0.511<br>27,473                           | 533<br>7,779                                    | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0                    | 3.1<br>148.4     | 0.694<br>947,718                         | 0.639<br>34,355                           | 0.639<br>34,355                           | 981<br>14,317                                   | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 366<br>17.5    | 324<br>15.5    | 265<br>12.7    | 240<br>11.5     | 218<br>10.4     | 199<br>9.5      | 182<br>8.7      | 167<br>8.0      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 366<br>17.5    | 332<br>15.9    | 304<br>14.6    | 279<br>13.4     | 218<br>10.4     | 199<br>9.5      | 182<br>8.7      | 167<br>8.0      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 366<br>17.5    | 332<br>15.9    | 304<br>14.6    | 279<br>13.4     | 257<br>12.3     | 231<br>11.1     | 182<br>8.7      | 167<br>8.0      |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 379<br>18.1    | 320<br>15.3    | 279<br>13.4     | 254<br>12.2     | 232<br>11.1     | 213<br>10.2     | 195<br>9.3      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 379<br>18.1    | 346<br>16.6    | 318<br>15.2     | 293<br>14.0     | 232<br>11.1     | 213<br>10.2     | 195<br>9.3      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 379<br>18.1    | 346<br>16.6    | 318<br>15.2     | 293<br>14.0     | 264<br>12.6     | 236<br>11.3     | 195<br>9.3      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 376<br>18.0    | 344<br>16.5    | 316<br>15.1     | 291<br>13.9     | 230<br>11.0     | 210<br>10.1     | 193<br>9.2      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 376<br>18.0    | 344<br>16.5    | 316<br>15.1     | 291<br>13.9     | 269<br>12.9     | 250<br>12.0     | 233<br>11.2     |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 376<br>18.0    | 344<br>16.5    | 316<br>15.1     | 291<br>13.9     | 269<br>12.9     | 250<br>12.0     | 233<br>11.2     |

Shoring required in shaded areas to right of heavy line

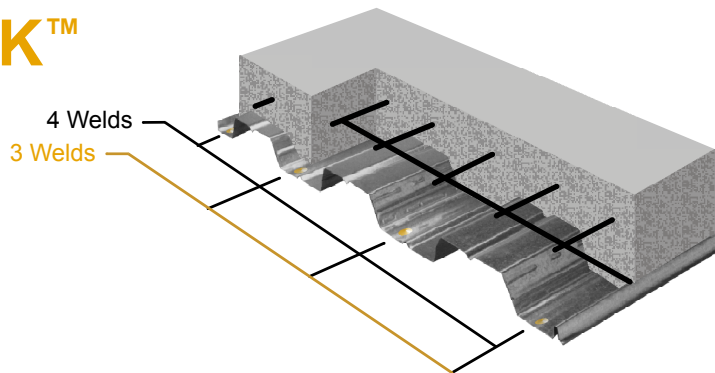
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | q3    | 1775<br>25.90     | 1750<br>25.54  | 1725<br>25.17  | 1710<br>24.96  | 1690<br>24.66  | 1675<br>24.44  | 1660<br>24.23   | 1650<br>24.08   | 1640<br>23.93   | 1630<br>23.79   | 1620<br>23.64   |
|           | q4    | 1970<br>28.75     | 1930<br>28.17  | 1890<br>27.58  | 1860<br>27.14  | 1830<br>26.71  | 1800<br>26.27  | 1780<br>25.98   | 1760<br>25.69   | 1740<br>25.39   | 1720<br>25.10   | 1710<br>24.96   |
| <b>18</b> | q3    | 1795<br>26.20     | 1770<br>25.83  | 1745<br>25.47  | 1725<br>25.17  | 1705<br>24.88  | 1690<br>24.66  | 1670<br>24.37   | 1660<br>24.23   | 1645<br>24.01   | 1635<br>23.86   | 1625<br>23.72   |
|           | q4    | 2030<br>29.63     | 1980<br>28.90  | 1940<br>28.31  | 1900<br>27.73  | 1870<br>27.29  | 1840<br>26.85  | 1820<br>26.56   | 1790<br>26.12   | 1770<br>25.83   | 1750<br>25.54   | 1730<br>25.25   |
| <b>16</b> | q3    | 1865<br>27.22     | 1830<br>26.71  | 1800<br>26.27  | 1770<br>25.83  | 1750<br>25.54  | 1725<br>25.17  | 1710<br>24.96   | 1690<br>24.66   | 1675<br>24.44   | 1660<br>24.23   | 1645<br>24.01   |
|           | q4    | 2180<br>31.81     | 2120<br>30.94  | 2070<br>30.21  | 2020<br>29.48  | 1980<br>28.90  | 1940<br>28.31  | 1910<br>27.87   | 1880<br>27.44   | 1850<br>27.00   | 1830<br>26.71   | 1810<br>26.41   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW2™ and W2 FORMLOK™

- 6¼ in. (159 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
48.1 psf (2,303 N/m²)
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2         | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                    | 263<br>3,838 | 306<br>4,466 | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8         | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                    | 307<br>4,480 | 356<br>5,195 | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 301<br>4,393                                    | 355<br>5,181 | 409<br>5,969 | 972<br>14,185    | 1123<br>16,389 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |             |             |             |             |             |             |             |            |            |            |
|-----------|-------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|------------|------------|
|           |       | 7'-0"             | 7'-6"       | 8'-0"       | 8'-6"       | 9'-0"       | 9'-6"       | 10'-0"      | 10'-6"      | 11'-0"     | 11'-6"     | 12'-0"     |
|           |       | 2,130             | 2,290       | 2,440       | 2,590       | 2,740       | 2,900       | 3,050       | 3,200       | 3,350      | 3,510      | 3,660      |
| <b>22</b> | 1     | 368<br>17.6       | 323<br>15.5 | 285<br>13.6 | 254<br>12.2 | 226<br>10.8 | 203<br>9.7  | 182<br>8.7  | 164<br>7.9  | 149<br>7.1 | 135<br>6.5 | 122<br>5.8 |
|           | 2     | 400<br>19.2       | 370<br>17.7 | 285<br>13.6 | 254<br>12.2 | 226<br>10.8 | 203<br>9.7  | 182<br>8.7  | 164<br>7.9  | 149<br>7.1 | 135<br>6.5 | 122<br>5.8 |
|           | 3     | 400<br>19.2       | 370<br>17.7 | 332<br>15.9 | 254<br>12.2 | 226<br>10.8 | 203<br>9.7  | 182<br>8.7  | 164<br>7.9  | 149<br>7.1 | 135<br>6.5 | 122<br>5.8 |
| <b>21</b> | 1     | 400<br>19.2       | 366<br>17.5 | 324<br>15.5 | 289<br>13.8 | 258<br>12.4 | 232<br>11.1 | 209<br>10.0 | 189<br>9.0  | 171<br>8.2 | 156<br>7.5 | 142<br>6.8 |
|           | 2     | 400<br>19.2       | 400<br>19.2 | 371<br>17.8 | 289<br>13.8 | 258<br>12.4 | 232<br>11.1 | 209<br>10.0 | 189<br>9.0  | 171<br>8.2 | 156<br>7.5 | 142<br>6.8 |
|           | 3     | 400<br>19.2       | 400<br>19.2 | 371<br>17.8 | 335<br>16.0 | 258<br>12.4 | 232<br>11.1 | 209<br>10.0 | 189<br>9.0  | 171<br>8.2 | 156<br>7.5 | 142<br>6.8 |
| <b>20</b> | 1     | 400<br>19.2       | 400<br>19.2 | 364<br>17.4 | 324<br>15.5 | 291<br>13.9 | 261<br>12.5 | 236<br>11.3 | 214<br>10.2 | 195<br>9.3 | 177<br>8.5 | 162<br>7.8 |
|           | 2     | 400<br>19.2       | 400<br>19.2 | 400<br>19.2 | 371<br>17.8 | 291<br>13.9 | 261<br>12.5 | 236<br>11.3 | 214<br>10.2 | 195<br>9.3 | 177<br>8.5 | 162<br>7.8 |
|           | 3     | 400<br>19.2       | 400<br>19.2 | 400<br>19.2 | 371<br>17.8 | 337<br>16.1 | 261<br>12.5 | 236<br>11.3 | 214<br>10.2 | 195<br>9.3 | 177<br>8.5 | 162<br>7.8 |

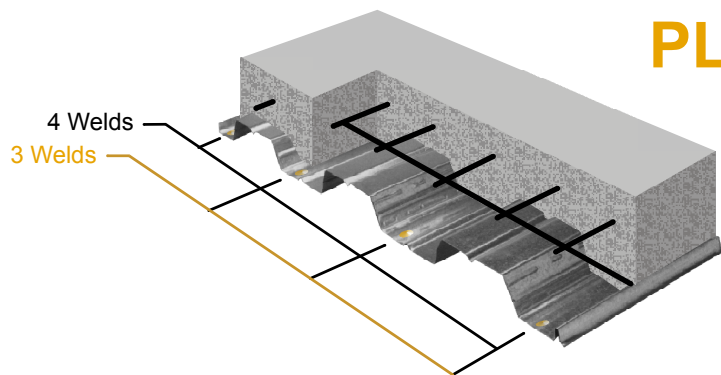
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |               |               |               |               |               |               |               |               |               |               |
|-----------|-------|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|           |       | 7'-0"             | 7'-6"         | 8'-0"         | 8'-6"         | 9'-0"         | 9'-6"         | 10'-0"        | 10'-6"        | 11'-0"        | 11'-6"        | 12'-0"        |
|           |       | 2,130             | 2,290         | 2,440         | 2,590         | 2,740         | 2,900         | 3,050         | 3,200         | 3,350         | 3,510         | 3,660         |
| <b>22</b> | q3    | 2055<br>29.99     | 2035<br>29.70 | 2020<br>29.48 | 2005<br>29.26 | 1995<br>29.11 | 1985<br>28.97 | 1975<br>28.82 | 1965<br>28.68 | 1955<br>28.53 | 1950<br>28.46 | 1945<br>28.39 |
|           | q4    | 2160<br>31.52     | 2130<br>31.09 | 2110<br>30.79 | 2080<br>30.36 | 2060<br>30.06 | 2040<br>29.77 | 2030<br>29.63 | 2010<br>29.33 | 2000<br>29.19 | 1990<br>29.04 | 1980<br>28.90 |
| <b>21</b> | q3    | 2060<br>30.06     | 2040<br>29.77 | 2020<br>29.48 | 2005<br>29.26 | 1995<br>29.11 | 1980<br>28.90 | 1970<br>28.75 | 1960<br>28.60 | 1955<br>28.53 | 1945<br>28.39 | 1940<br>28.31 |
|           | q4    | 2190<br>31.96     | 2160<br>31.52 | 2130<br>31.09 | 2100<br>30.65 | 2080<br>30.36 | 2060<br>30.06 | 2040<br>29.77 | 2020<br>29.48 | 2010<br>29.33 | 1990<br>29.04 | 1980<br>28.90 |
| <b>20</b> | q3    | 2065<br>30.14     | 2045<br>29.84 | 2025<br>29.55 | 2010<br>29.33 | 1995<br>29.11 | 1985<br>28.97 | 1970<br>28.75 | 1960<br>28.60 | 1950<br>28.46 | 1945<br>28.39 | 1935<br>28.24 |
|           | q4    | 2220<br>32.40     | 2180<br>31.81 | 2150<br>31.38 | 2120<br>30.94 | 2100<br>30.65 | 2080<br>30.36 | 2060<br>30.06 | 2040<br>29.77 | 2020<br>29.48 | 2010<br>29.33 | 2000<br>29.19 |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW2™ and W2 FORMLOK™



- 6¼ in. (159 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m³)
- 48.1 psf (2,303 N/m²)
- Galvanized or Phosphatized/Painted ■
- 3 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.4<br>114.9        | 2.3<br>110.1     | 0.508<br>693,719                         | 0.442<br>23,763                           | 0.453<br>24,355                           | 396<br>5,779                                    | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3        | 2.5<br>119.7     | 0.555<br>757,901                         | 0.510<br>27,419                           | 0.511<br>27,473                           | 533<br>7,779                                    | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0        | 3.1<br>148.4     | 0.694<br>947,718                         | 0.639<br>34,355                           | 0.639<br>34,355                           | 981<br>14,317                                   | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 397<br>19.0    | 357<br>17.1    | 322<br>15.4    | 292<br>14.0     | 265<br>12.7     | 242<br>11.6     | 221<br>10.6     | 203<br>9.7      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 322<br>15.4    | 292<br>14.0     | 265<br>12.7     | 242<br>11.6     | 221<br>10.6     | 203<br>9.7      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 369<br>17.7    | 339<br>16.2     | 265<br>12.7     | 242<br>11.6     | 221<br>10.6     | 203<br>9.7      |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 373<br>17.9    | 339<br>16.2     | 308<br>14.7     | 282<br>13.5     | 258<br>12.4     | 237<br>11.3     |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 386<br>18.5     | 308<br>14.7     | 282<br>13.5     | 258<br>12.4     | 237<br>11.3     |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 386<br>18.5     | 356<br>17.0     | 317<br>15.2     | 258<br>12.4     | 237<br>11.3     |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 383<br>18.3     | 305<br>14.6     | 278<br>13.3     | 255<br>12.2     | 234<br>11.2     |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 383<br>18.3     | 353<br>16.9     | 326<br>15.6     | 255<br>12.2     | 234<br>11.2     |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 383<br>18.3     | 353<br>16.9     | 326<br>15.6     | 303<br>14.5     | 282<br>13.5     |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

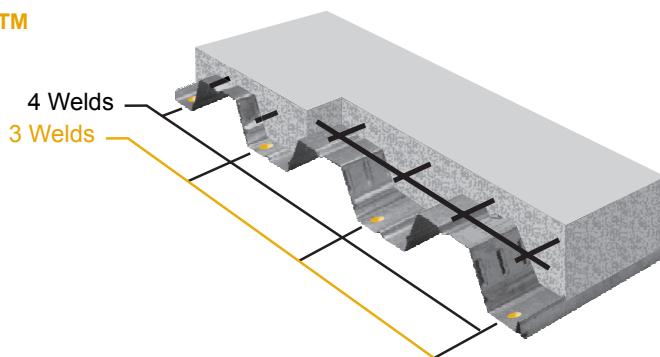
| Gage      | Welds | Span (ft-in., mm) |                |                |                |                |                |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 7'-0"<br>2,130    | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 |
| <b>19</b> | q3    | 2090<br>30.50     | 2065<br>30.14  | 2045<br>29.84  | 2025<br>29.55  | 2005<br>29.26  | 1990<br>29.04  | 1980<br>28.90   | 1965<br>28.68   | 1955<br>28.53   | 1945<br>28.39   | 1935<br>28.24   |
|           | q4    | 2290<br>33.42     | 2250<br>32.84  | 2210<br>32.25  | 2180<br>31.81  | 2150<br>31.38  | 2120<br>30.94  | 2100<br>30.65   | 2080<br>30.36   | 2060<br>30.06   | 2040<br>29.77   | 2020<br>29.48   |
| <b>18</b> | q3    | 2110<br>30.79     | 2085<br>30.43  | 2060<br>30.06  | 2040<br>29.77  | 2020<br>29.48  | 2005<br>29.26  | 1990<br>29.04   | 1975<br>28.82   | 1960<br>28.60   | 1950<br>28.46   | 1940<br>28.31   |
|           | q4    | 2340<br>34.15     | 2300<br>33.57  | 2260<br>32.98  | 2220<br>32.40  | 2190<br>31.96  | 2160<br>31.52  | 2130<br>31.09   | 2110<br>30.79   | 2090<br>30.50   | 2070<br>30.21   | 2050<br>29.92   |
| <b>16</b> | q3    | 2180<br>31.81     | 2145<br>31.30  | 2115<br>30.87  | 2085<br>30.43  | 2065<br>30.14  | 2045<br>29.84  | 2025<br>29.55   | 2005<br>29.26   | 1990<br>29.04   | 1975<br>28.82   | 1965<br>28.68   |
|           | q4    | 2490<br>36.34     | 2430<br>35.46  | 2380<br>34.73  | 2340<br>34.15  | 2300<br>33.57  | 2260<br>32.98  | 2230<br>32.54   | 2200<br>32.11   | 2170<br>31.67   | 2140<br>31.23   | 2120<br>30.94   |

PLW2 and W2 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).



# PLW3™ and W3 FORMLOK™

- 5 in. (127 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m<sup>3</sup>)  
42.3 psf (2,025 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |                  |               |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|------------------|---------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              | Interior Bearing |               |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm     | 4"<br>102 mm  | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0                     | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327 | 267<br>3,897     | 601<br>8,771  | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5                    | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174 | 331<br>4,831     | 781<br>11,398 | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1                    | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612 | 365<br>5,327     | 877<br>12,799 | 1014<br>14,798 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 246<br>11.8       | 223<br>10.7    | 163<br>7.8     | 145<br>6.9     | 130<br>6.2      | 117<br>5.6      | 105<br>5.0      | 95<br>4.5       | 86<br>4.1       | 77<br>3.7       | 70<br>3.4       | 63<br>3.0       | 57<br>2.7       | 52<br>2.5       | 47<br>2.3       |
|           | 2     | 246<br>11.8       | 223<br>10.7    | 202<br>9.7     | 185<br>8.9     | 130<br>6.2      | 117<br>5.6      | 105<br>5.0      | 95<br>4.5       | 86<br>4.1       | 77<br>3.7       | 70<br>3.4       | 63<br>3.0       | 57<br>2.7       | 52<br>2.5       | 47<br>2.3       |
|           | 3     | 246<br>11.8       | 223<br>10.7    | 202<br>9.7     | 185<br>8.9     | 170<br>8.1      | 155<br>7.4      | 105<br>5.0      | 95<br>4.5       | 86<br>4.1       | 77<br>3.7       | 70<br>3.4       | 63<br>3.0       | 57<br>2.7       | 52<br>2.5       | 47<br>2.3       |
| <b>21</b> | 1     | 273<br>13.1       | 247<br>11.8    | 224<br>10.7    | 190<br>9.1     | 148<br>7.1      | 134<br>6.4      | 121<br>5.8      | 109<br>5.2      | 99<br>4.7       | 90<br>4.3       | 82<br>3.9       | 74<br>3.5       | 68<br>3.3       | 62<br>3.0       | 56<br>2.7       |
|           | 2     | 273<br>13.1       | 247<br>11.8    | 224<br>10.7    | 205<br>9.8     | 188<br>9.0      | 174<br>8.3      | 121<br>5.8      | 109<br>5.2      | 99<br>4.7       | 90<br>4.3       | 82<br>3.9       | 74<br>3.5       | 68<br>3.3       | 62<br>3.0       | 56<br>2.7       |
|           | 3     | 273<br>13.1       | 247<br>11.8    | 224<br>10.7    | 205<br>9.8     | 188<br>9.0      | 174<br>8.3      | 161<br>7.7      | 140<br>6.7      | 99<br>4.7       | 90<br>4.3       | 82<br>3.9       | 74<br>3.5       | 68<br>3.3       | 62<br>3.0       | 56<br>2.7       |
| <b>20</b> | 1     | 286<br>13.7       | 259<br>12.4    | 235<br>11.3    | 209<br>10.0    | 174<br>8.3      | 142<br>6.8      | 128<br>6.1      | 116<br>5.6      | 106<br>5.1      | 96<br>4.6       | 87<br>4.2       | 80<br>3.8       | 73<br>3.5       | 66<br>3.2       | 60<br>2.9       |
|           | 2     | 286<br>13.7       | 259<br>12.4    | 235<br>11.3    | 215<br>10.3    | 197<br>9.4      | 182<br>8.7      | 168<br>8.0      | 116<br>5.6      | 106<br>5.1      | 96<br>4.6       | 87<br>4.2       | 80<br>3.8       | 73<br>3.5       | 66<br>3.2       | 60<br>2.9       |
|           | 3     | 286<br>13.7       | 259<br>12.4    | 235<br>11.3    | 215<br>10.3    | 197<br>9.4      | 182<br>8.7      | 168<br>8.0      | 153<br>7.3      | 133<br>6.4      | 96<br>4.6       | 87<br>4.2       | 80<br>3.8       | 73<br>3.5       | 66<br>3.2       | 60<br>2.9       |

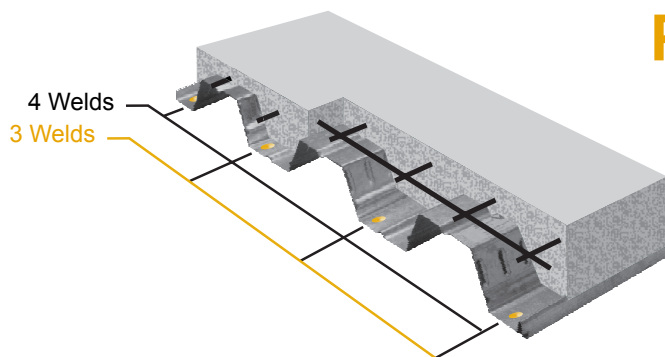
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q3    | 1635<br>23.86     | 1620<br>23.64  | 1610<br>23.50  | 1600<br>23.35  | 1590<br>23.20   | 1580<br>23.06   | 1575<br>22.99   | 1565<br>22.84   | 1560<br>22.77   | 1555<br>22.69   | 1550<br>22.62   | 1545<br>22.55   | 1540<br>22.47   | 1535<br>22.40   | 1530<br>22.33   |
|           | q4    | 1710<br>24.96     | 1690<br>24.66  | 1670<br>24.37  | 1655<br>24.15  | 1640<br>23.93   | 1625<br>23.72   | 1610<br>23.50   | 1600<br>23.35   | 1590<br>23.20   | 1580<br>23.06   | 1570<br>22.91   | 1560<br>22.77   | 1550<br>22.62   | 1545<br>22.55   | 1540<br>22.47   |
| <b>21</b> | q3    | 1635<br>23.86     | 1620<br>23.64  | 1610<br>23.50  | 1595<br>23.28  | 1585<br>23.13   | 1575<br>22.99   | 1565<br>22.84   | 1560<br>22.77   | 1550<br>22.62   | 1545<br>22.55   | 1540<br>22.47   | 1535<br>22.40   | 1525<br>22.26   | 1520<br>22.18   | 1520<br>22.18   |
|           | q4    | 1740<br>25.39     | 1715<br>25.03  | 1690<br>24.66  | 1675<br>24.44  | 1660<br>24.23   | 1640<br>23.93   | 1620<br>23.64   | 1610<br>23.50   | 1600<br>23.35   | 1590<br>23.20   | 1580<br>23.06   | 1570<br>22.91   | 1560<br>22.77   | 1550<br>22.62   | 1540<br>22.47   |
| <b>20</b> | q3    | 1640<br>23.93     | 1625<br>23.72  | 1610<br>23.50  | 1595<br>23.28  | 1585<br>23.13   | 1575<br>22.99   | 1565<br>22.84   | 1555<br>22.69   | 1550<br>22.62   | 1540<br>22.47   | 1535<br>22.40   | 1530<br>22.33   | 1525<br>22.26   | 1520<br>22.18   | 1515<br>22.11   |
|           | q4    | 1760<br>25.69     | 1735<br>25.32  | 1710<br>24.96  | 1690<br>24.66  | 1670<br>24.37   | 1650<br>24.08   | 1630<br>23.79   | 1620<br>23.64   | 1610<br>23.50   | 1595<br>23.28   | 1580<br>23.06   | 1570<br>22.91   | 1560<br>22.77   | 1550<br>22.62   | 1540<br>22.47   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW3™ and W3 FORMLOK™



- 5 in. (127 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m<sup>3</sup>)
- 42.3 psf (2,025 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.7<br>129.3                    | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9                    | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6                    | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | 1     | 331<br>15.8       | 299<br>14.3    | 272<br>13.0    | 249<br>11.9    | 228<br>10.9     | 197<br>9.4      | 166<br>7.9      | 141<br>6.8      | 128<br>6.1      | 117<br>5.6      | 107<br>5.1      | 98<br>4.7       | 90<br>4.3       | 83<br>4.0       | 76<br>3.6       |
|           | 2     | 331<br>15.8       | 299<br>14.3    | 272<br>13.0    | 249<br>11.9    | 228<br>10.9     | 211<br>10.1     | 195<br>9.3      | 181<br>8.7      | 169<br>8.1      | 117<br>5.6      | 107<br>5.1      | 98<br>4.7       | 90<br>4.3       | 83<br>4.0       | 76<br>3.6       |
|           | 3     | 331<br>15.8       | 299<br>14.3    | 272<br>13.0    | 249<br>11.9    | 228<br>10.9     | 211<br>10.1     | 195<br>9.3      | 181<br>8.7      | 169<br>8.1      | 153<br>7.3      | 134<br>6.4      | 98<br>4.7       | 90<br>4.3       | 83<br>4.0       | 76<br>3.6       |
| <b>18</b> | 1     | 363<br>17.4       | 328<br>15.7    | 298<br>14.3    | 273<br>13.1    | 250<br>12.0     | 231<br>11.1     | 199<br>9.5      | 169<br>8.1      | 142<br>6.8      | 132<br>6.3      | 121<br>5.8      | 111<br>5.3      | 102<br>4.9      | 94<br>4.5       | 87<br>4.2       |
|           | 2     | 363<br>17.4       | 328<br>15.7    | 298<br>14.3    | 273<br>13.1    | 250<br>12.0     | 231<br>11.1     | 213<br>10.2     | 198<br>9.5      | 185<br>8.9      | 173<br>8.3      | 121<br>5.8      | 111<br>5.3      | 102<br>4.9      | 94<br>4.5       | 87<br>4.2       |
|           | 3     | 363<br>17.4       | 328<br>15.7    | 298<br>14.3    | 273<br>13.1    | 250<br>12.0     | 231<br>11.1     | 213<br>10.2     | 198<br>9.5      | 185<br>8.9      | 173<br>8.3      | 157<br>7.5      | 140<br>6.7      | 123<br>5.9      | 94<br>4.5       | 87<br>4.2       |
| <b>16</b> | 1     | 400<br>19.2       | 395<br>18.9    | 359<br>17.2    | 320<br>15.3    | 285<br>13.6     | 255<br>12.2     | 228<br>10.9     | 206<br>9.9      | 186<br>8.9      | 168<br>8.0      | 152<br>7.3      | 138<br>6.6      | 126<br>6.0      | 115<br>5.5      | 105<br>5.0      |
|           | 2     | 400<br>19.2       | 395<br>18.9    | 359<br>17.2    | 320<br>15.3    | 285<br>13.6     | 255<br>12.2     | 228<br>10.9     | 206<br>9.9      | 186<br>8.9      | 168<br>8.0      | 152<br>7.3      | 138<br>6.6      | 126<br>6.0      | 115<br>5.5      | 105<br>5.0      |
|           | 3     | 400<br>19.2       | 395<br>18.9    | 359<br>17.2    | 320<br>15.3    | 285<br>13.6     | 255<br>12.2     | 228<br>10.9     | 206<br>9.9      | 186<br>8.9      | 168<br>8.0      | 152<br>7.3      | 138<br>6.6      | 126<br>6.0      | 115<br>5.5      | 105<br>5.0      |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

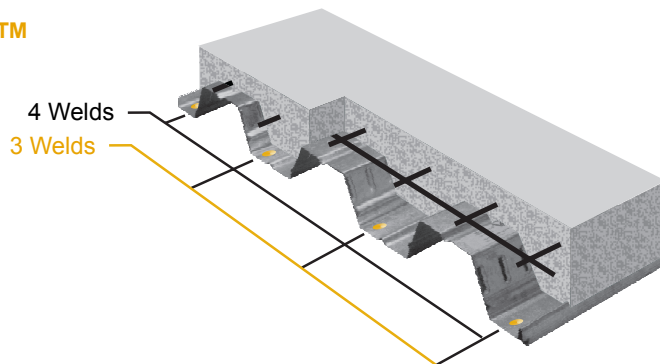
| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | q3    | 1655<br>24.15     | 1635<br>23.86  | 1620<br>23.64  | 1605<br>23.42  | 1590<br>23.20   | 1580<br>23.06   | 1570<br>22.91   | 1560<br>22.77   | 1550<br>22.62   | 1540<br>22.47   | 1530<br>22.33   | 1525<br>22.26   | 1520<br>22.18   | 1510<br>22.04   | 1505<br>21.96   |
|           | q4    | 1820<br>26.56     | 1790<br>26.12  | 1760<br>25.69  | 1735<br>25.32  | 1710<br>24.96   | 1690<br>24.66   | 1670<br>24.37   | 1655<br>24.15   | 1640<br>23.93   | 1625<br>23.72   | 1610<br>23.50   | 1595<br>23.28   | 1580<br>23.06   | 1570<br>22.91   | 1560<br>22.77   |
| <b>18</b> | q3    | 1675<br>24.44     | 1655<br>24.15  | 1635<br>23.86  | 1615<br>23.57  | 1600<br>23.35   | 1590<br>23.20   | 1575<br>22.99   | 1565<br>22.84   | 1555<br>22.69   | 1545<br>22.55   | 1535<br>22.40   | 1525<br>22.26   | 1520<br>22.18   | 1510<br>22.04   | 1505<br>21.96   |
|           | q4    | 1870<br>27.29     | 1835<br>26.78  | 1800<br>26.27  | 1775<br>25.90  | 1750<br>25.54   | 1725<br>25.17   | 1700<br>24.81   | 1680<br>24.52   | 1660<br>24.23   | 1645<br>24.01   | 1630<br>23.79   | 1620<br>23.64   | 1610<br>23.50   | 1595<br>23.28   | 1580<br>23.06   |
| <b>16</b> | q3    | 1730<br>25.25     | 1700<br>24.81  | 1675<br>24.44  | 1655<br>24.15  | 1635<br>23.86   | 1620<br>23.64   | 1605<br>23.42   | 1590<br>23.20   | 1575<br>22.99   | 1565<br>22.84   | 1555<br>22.69   | 1545<br>22.55   | 1535<br>22.40   | 1525<br>22.26   | 1515<br>22.11   |
|           | q4    | 2000<br>29.19     | 1955<br>28.53  | 1910<br>27.87  | 1875<br>27.36  | 1840<br>26.85   | 1810<br>26.41   | 1780<br>25.98   | 1760<br>25.69   | 1740<br>25.39   | 1720<br>25.10   | 1700<br>24.81   | 1680<br>24.52   | 1660<br>24.23   | 1645<br>24.01   | 1630<br>23.79   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).



# PLW3™ and W3 FORMLOK™

- 5½ in. (140 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
48.3 psf (2,313 N/m²)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |                  |               |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|------------------|---------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              | Interior Bearing |               |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm     | 4"<br>102 mm  | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327 | 267<br>3,897     | 601<br>8,771  | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174 | 331<br>4,831     | 781<br>11,398 | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612 | 365<br>5,327     | 877<br>12,799 | 1014<br>14,798 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 270<br>12.9       | 199<br>9.5     | 177<br>8.5     | 158<br>7.6     | 141<br>6.8      | 127<br>6.1      | 114<br>5.5      | 102<br>4.9      | 92<br>4.4       | 83<br>4.0       | 75<br>3.6       | 68<br>3.3       | 61<br>2.9       | 55<br>2.6       | 50<br>2.4       |
|           | 2     | 270<br>12.9       | 244<br>11.7    | 222<br>10.6    | 203<br>9.7     | 141<br>6.8      | 127<br>6.1      | 114<br>5.5      | 102<br>4.9      | 92<br>4.4       | 83<br>4.0       | 75<br>3.6       | 68<br>3.3       | 61<br>2.9       | 55<br>2.6       | 50<br>2.4       |
|           | 3     | 270<br>12.9       | 244<br>11.7    | 222<br>10.6    | 203<br>9.7     | 186<br>8.9      | 127<br>6.1      | 114<br>5.5      | 102<br>4.9      | 92<br>4.4       | 83<br>4.0       | 75<br>3.6       | 68<br>3.3       | 61<br>2.9       | 55<br>2.6       | 50<br>2.4       |
| <b>21</b> | 1     | 299<br>14.3       | 270<br>12.9    | 245<br>11.7    | 179<br>8.6     | 161<br>7.7      | 145<br>6.9      | 131<br>6.3      | 118<br>5.6      | 107<br>5.1      | 97<br>4.6       | 88<br>4.2       | 80<br>3.8       | 72<br>3.4       | 66<br>3.2       | 60<br>2.9       |
|           | 2     | 299<br>14.3       | 270<br>12.9    | 246<br>11.8    | 225<br>10.8    | 206<br>9.9      | 145<br>6.9      | 131<br>6.3      | 118<br>5.6      | 107<br>5.1      | 97<br>4.6       | 88<br>4.2       | 80<br>3.8       | 72<br>3.4       | 66<br>3.2       | 60<br>2.9       |
|           | 3     | 299<br>14.3       | 270<br>12.9    | 246<br>11.8    | 225<br>10.8    | 206<br>9.9      | 190<br>9.1      | 175<br>8.4      | 118<br>5.6      | 107<br>5.1      | 97<br>4.6       | 88<br>4.2       | 80<br>3.8       | 72<br>3.4       | 66<br>3.2       | 60<br>2.9       |
| <b>20</b> | 1     | 313<br>15.0       | 283<br>13.6    | 257<br>12.3    | 222<br>10.6    | 170<br>8.1      | 154<br>7.4      | 139<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 78<br>3.7       | 71<br>3.4       | 64<br>3.1       |
|           | 2     | 313<br>15.0       | 283<br>13.6    | 257<br>12.3    | 235<br>11.3    | 216<br>10.3     | 199<br>9.5      | 139<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 78<br>3.7       | 71<br>3.4       | 64<br>3.1       |
|           | 3     | 313<br>15.0       | 283<br>13.6    | 257<br>12.3    | 235<br>11.3    | 216<br>10.3     | 199<br>9.5      | 184<br>8.8      | 166<br>7.9      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 78<br>3.7       | 71<br>3.4       | 64<br>3.1       |

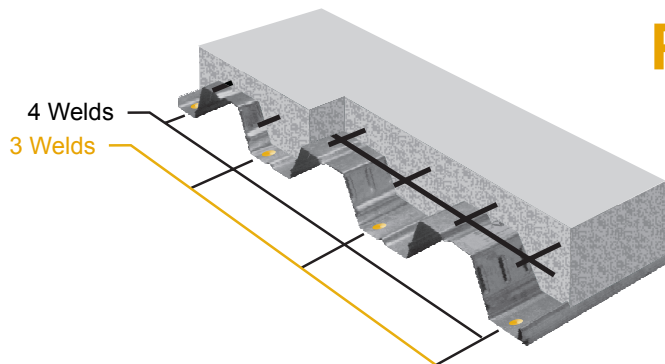
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q3    | 1875<br>27.36     | 1860<br>27.14  | 1850<br>27.00  | 1840<br>26.85  | 1830<br>26.71   | 1820<br>26.56   | 1810<br>26.41   | 1805<br>26.34   | 1800<br>26.27   | 1795<br>26.20   | 1785<br>26.05   | 1780<br>25.98   | 1775<br>25.90   | 1775<br>25.90   | 1770<br>25.83   |
|           | q4    | 1950<br>28.46     | 1930<br>28.17  | 1910<br>27.87  | 1895<br>27.66  | 1880<br>27.44   | 1865<br>27.22   | 1850<br>27.00   | 1840<br>26.85   | 1830<br>26.71   | 1820<br>26.56   | 1810<br>26.41   | 1800<br>26.27   | 1790<br>26.12   | 1785<br>26.05   | 1780<br>25.98   |
| <b>21</b> | q3    | 1875<br>27.36     | 1860<br>27.14  | 1845<br>26.93  | 1835<br>26.78  | 1825<br>26.63   | 1815<br>26.49   | 1805<br>26.34   | 1800<br>26.27   | 1790<br>26.12   | 1785<br>26.05   | 1780<br>25.98   | 1770<br>25.83   | 1765<br>25.76   | 1760<br>25.69   | 1755<br>25.61   |
|           | q4    | 1980<br>28.90     | 1955<br>28.53  | 1930<br>28.17  | 1915<br>27.95  | 1900<br>27.73   | 1880<br>27.44   | 1860<br>27.14   | 1850<br>27.00   | 1840<br>26.85   | 1830<br>26.71   | 1820<br>26.56   | 1810<br>26.41   | 1800<br>26.27   | 1790<br>26.12   | 1780<br>25.98   |
| <b>20</b> | q3    | 1880<br>27.44     | 1860<br>27.14  | 1850<br>27.00  | 1835<br>26.78  | 1825<br>26.63   | 1815<br>26.49   | 1805<br>26.34   | 1795<br>26.20   | 1790<br>26.12   | 1780<br>25.98   | 1775<br>25.90   | 1770<br>25.83   | 1765<br>25.76   | 1760<br>25.69   | 1755<br>25.61   |
|           | q4    | 2000<br>29.19     | 1975<br>28.82  | 1950<br>28.46  | 1930<br>28.17  | 1910<br>27.87   | 1890<br>27.58   | 1870<br>27.29   | 1855<br>27.07   | 1840<br>26.85   | 1830<br>26.71   | 1820<br>26.56   | 1810<br>26.41   | 1800<br>26.27   | 1790<br>26.12   | 1780<br>25.98   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW3™ and W3 FORMLOK™



- 5½ in. (140 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 48.3 psf (2,313 N/m²)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.7<br>129.3        | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9        | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6        | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | 1     | 362<br>17.3       | 327<br>15.7    | 297<br>14.2    | 272<br>13.0    | 249<br>11.9     | 208<br>10.0     | 167<br>8.0      | 152<br>7.3      | 138<br>6.6      | 126<br>6.0      | 115<br>5.5      | 105<br>5.0      | 97<br>4.6       | 88<br>4.2       | 81<br>3.9       |
|           | 2     | 362<br>17.3       | 327<br>15.7    | 297<br>14.2    | 272<br>13.0    | 249<br>11.9     | 230<br>11.0     | 213<br>10.2     | 197<br>9.4      | 138<br>6.6      | 126<br>6.0      | 115<br>5.5      | 105<br>5.0      | 97<br>4.6       | 88<br>4.2       | 81<br>3.9       |
|           | 3     | 362<br>17.3       | 327<br>15.7    | 297<br>14.2    | 272<br>13.0    | 249<br>11.9     | 230<br>11.0     | 213<br>10.2     | 197<br>9.4      | 184<br>8.8      | 166<br>7.9      | 115<br>5.5      | 105<br>5.0      | 97<br>4.6       | 88<br>4.2       | 81<br>3.9       |
| <b>18</b> | 1     | 395<br>18.9       | 357<br>17.1    | 325<br>15.6    | 297<br>14.2    | 273<br>13.1     | 251<br>12.0     | 211<br>10.1     | 176<br>8.4      | 155<br>7.4      | 142<br>6.8      | 130<br>6.2      | 119<br>5.7      | 110<br>5.3      | 101<br>4.8      | 93<br>4.5       |
|           | 2     | 395<br>18.9       | 357<br>17.1    | 325<br>15.6    | 297<br>14.2    | 273<br>13.1     | 251<br>12.0     | 233<br>11.2     | 216<br>10.3     | 201<br>9.6      | 142<br>6.8      | 130<br>6.2      | 119<br>5.7      | 110<br>5.3      | 101<br>4.8      | 93<br>4.5       |
|           | 3     | 395<br>18.9       | 357<br>17.1    | 325<br>15.6    | 297<br>14.2    | 273<br>13.1     | 251<br>12.0     | 233<br>11.2     | 216<br>10.3     | 201<br>9.6      | 188<br>9.0      | 172<br>8.2      | 151<br>7.2      | 110<br>5.3      | 101<br>4.8      | 93<br>4.5       |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 389<br>18.6    | 356<br>17.0    | 327<br>15.7     | 301<br>14.4     | 279<br>13.4     | 259<br>12.4     | 222<br>10.6     | 188<br>9.0      | 164<br>7.9      | 152<br>7.3      | 140<br>6.7      | 129<br>6.2      | 120<br>5.7      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 389<br>18.6    | 356<br>17.0    | 327<br>15.7     | 301<br>14.4     | 279<br>13.4     | 259<br>12.4     | 241<br>11.5     | 225<br>10.8     | 211<br>10.1     | 198<br>9.5      | 140<br>6.7      | 129<br>6.2      | 120<br>5.7      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 389<br>18.6    | 356<br>17.0    | 327<br>15.7     | 301<br>14.4     | 279<br>13.4     | 259<br>12.4     | 241<br>11.5     | 225<br>10.8     | 211<br>10.1     | 198<br>9.5      | 186<br>8.9      | 166<br>7.9      | 120<br>5.7      |

Shoring required in shaded areas to right of heavy line

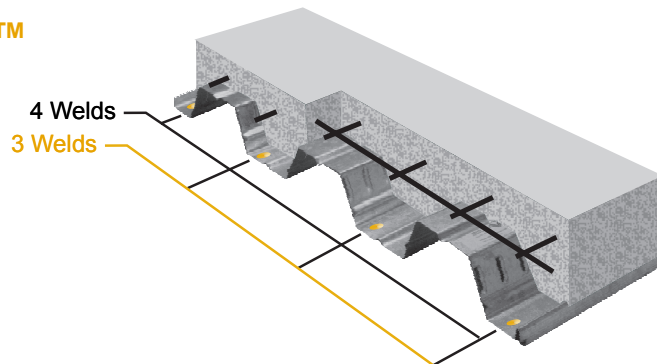
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | q3    | 1895<br>27.66     | 1875<br>27.36  | 1860<br>27.14  | 1845<br>26.93  | 1830<br>26.71   | 1820<br>26.56   | 1810<br>26.41   | 1795<br>26.20   | 1790<br>26.12   | 1780<br>25.98   | 1770<br>25.83   | 1765<br>25.76   | 1755<br>25.61   | 1750<br>25.54   | 1745<br>25.47   |
|           | q4    | 2060<br>30.06     | 2030<br>29.63  | 2000<br>29.19  | 1975<br>28.82  | 1950<br>28.46   | 1930<br>28.17   | 1910<br>27.87   | 1895<br>27.66   | 1880<br>27.44   | 1865<br>27.22   | 1850<br>27.00   | 1835<br>26.78   | 1820<br>26.56   | 1810<br>26.41   | 1800<br>26.27   |
| <b>18</b> | q3    | 1915<br>27.95     | 1890<br>27.58  | 1875<br>27.36  | 1855<br>27.07  | 1840<br>26.85   | 1825<br>26.63   | 1815<br>26.49   | 1805<br>26.34   | 1795<br>26.20   | 1785<br>26.05   | 1775<br>25.90   | 1765<br>25.76   | 1760<br>25.69   | 1750<br>25.54   | 1745<br>25.47   |
|           | q4    | 2110<br>30.79     | 2075<br>30.28  | 2040<br>29.77  | 2015<br>29.41  | 1990<br>29.04   | 1965<br>28.68   | 1940<br>28.31   | 1920<br>28.02   | 1900<br>27.73   | 1885<br>27.51   | 1870<br>27.29   | 1855<br>27.07   | 1840<br>26.85   | 1830<br>26.71   | 1820<br>26.56   |
| <b>16</b> | q3    | 1965<br>28.68     | 1940<br>28.31  | 1915<br>27.95  | 1895<br>27.66  | 1875<br>27.36   | 1860<br>27.14   | 1845<br>26.93   | 1830<br>26.71   | 1815<br>26.49   | 1805<br>26.34   | 1795<br>26.20   | 1780<br>25.98   | 1775<br>25.90   | 1765<br>25.76   | 1755<br>25.61   |
|           | q4    | 2240<br>32.69     | 2195<br>32.03  | 2150<br>31.38  | 2115<br>30.87  | 2080<br>30.36   | 2050<br>29.92   | 2020<br>29.48   | 2000<br>29.19   | 1980<br>28.90   | 1960<br>28.60   | 1940<br>28.31   | 1920<br>28.02   | 1900<br>27.73   | 1885<br>27.51   | 1870<br>27.29   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW3™ and W3 FORMLOK™

- 6 in. (152 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m<sup>3</sup>)  
54.4 psf (2,605 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |                  |               |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|------------------|---------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              | Interior Bearing |               |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm     | 4"<br>102 mm  | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0                     | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327 | 267<br>3,897     | 601<br>8,771  | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5                    | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174 | 331<br>4,831     | 781<br>11,398 | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1                    | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612 | 365<br>5,327     | 877<br>12,799 | 1014<br>14,798 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 296<br>14.2       | 217<br>10.4    | 192<br>9.2     | 171<br>8.2     | 153<br>7.3      | 137<br>6.6      | 123<br>5.9      | 111<br>5.3      | 100<br>4.8      | 90<br>4.3       | 81<br>3.9       | 73<br>3.5       |                 |                 |                 |
|           | 2     | 296<br>14.2       | 267<br>12.8    | 243<br>11.6    | 171<br>8.2     | 153<br>7.3      | 137<br>6.6      | 123<br>5.9      | 111<br>5.3      | 100<br>4.8      | 90<br>4.3       | 81<br>3.9       | 73<br>3.5       |                 |                 |                 |
|           | 3     | 296<br>14.2       | 267<br>12.8    | 243<br>11.6    | 222<br>10.6    | 204<br>9.8      | 137<br>6.6      | 123<br>5.9      | 111<br>5.3      | 100<br>4.8      | 90<br>4.3       | 81<br>3.9       | 73<br>3.5       |                 |                 |                 |
| <b>21</b> | 1     | 327<br>15.7       | 295<br>14.1    | 218<br>10.4    | 195<br>9.3     | 175<br>8.4      | 157<br>7.5      | 141<br>6.8      | 128<br>6.1      | 116<br>5.6      | 105<br>5.0      | 95<br>4.5       | 86<br>4.1       |                 |                 |                 |
|           | 2     | 327<br>15.7       | 295<br>14.1    | 269<br>12.9    | 245<br>11.7    | 175<br>8.4      | 157<br>7.5      | 141<br>6.8      | 128<br>6.1      | 116<br>5.6      | 105<br>5.0      | 95<br>4.5       | 86<br>4.1       |                 |                 |                 |
|           | 3     | 327<br>15.7       | 295<br>14.1    | 269<br>12.9    | 245<br>11.7    | 225<br>10.8     | 208<br>10.0     | 141<br>6.8      | 128<br>6.1      | 116<br>5.6      | 105<br>5.0      | 95<br>4.5       | 86<br>4.1       |                 |                 |                 |
| <b>20</b> | 1     | 342<br>16.4       | 309<br>14.8    | 281<br>13.5    | 206<br>9.9     | 185<br>8.9      | 167<br>8.0      | 150<br>7.2      | 136<br>6.5      | 123<br>5.9      | 112<br>5.4      | 101<br>4.8      | 92<br>4.4       | 84<br>4.0       | 76<br>3.6       | 69<br>3.3       |
|           | 2     | 342<br>16.4       | 309<br>14.8    | 281<br>13.5    | 257<br>12.3    | 236<br>11.3     | 167<br>8.0      | 150<br>7.2      | 136<br>6.5      | 123<br>5.9      | 112<br>5.4      | 101<br>4.8      | 92<br>4.4       | 84<br>4.0       | 76<br>3.6       | 69<br>3.3       |
|           | 3     | 342<br>16.4       | 309<br>14.8    | 281<br>13.5    | 257<br>12.3    | 236<br>11.3     | 217<br>10.4     | 201<br>9.6      | 136<br>6.5      | 123<br>5.9      | 112<br>5.4      | 101<br>4.8      | 92<br>4.4       | 84<br>4.0       | 76<br>3.6       | 69<br>3.3       |

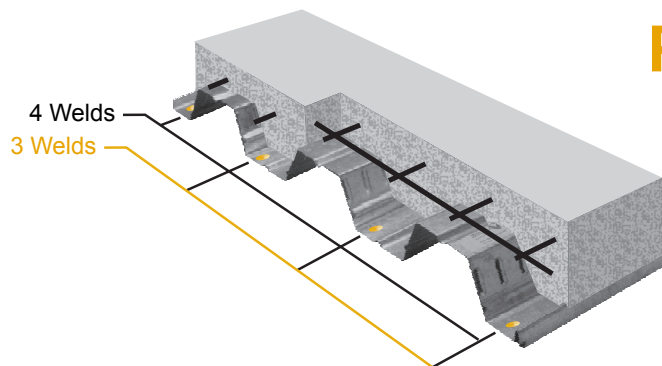
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q3    | 2110<br>30.79     | 2100<br>30.65  | 2085<br>30.43  | 2075<br>30.28  | 2065<br>30.14   | 2060<br>30.06   | 2050<br>29.92   | 2045<br>29.84   | 2040<br>29.77   | 2030<br>29.63   | 2025<br>29.55   | 2020<br>29.48   |                 |                 |                 |
|           | q4    | 2190<br>31.96     | 2170<br>31.67  | 2150<br>31.38  | 2130<br>31.09  | 2115<br>30.87   | 2100<br>30.65   | 2085<br>30.43   | 2075<br>30.28   | 2065<br>30.14   | 2055<br>29.99   | 2045<br>29.84   | 2035<br>29.70   |                 |                 |                 |
| <b>21</b> | q3    | 2115<br>30.87     | 2100<br>30.65  | 2085<br>30.43  | 2075<br>30.28  | 2065<br>30.14   | 2055<br>29.99   | 2045<br>29.84   | 2035<br>29.70   | 2030<br>29.63   | 2025<br>29.55   | 2015<br>29.41   | 2010<br>29.33   |                 |                 |                 |
|           | q4    | 2220<br>32.40     | 2195<br>32.03  | 2170<br>31.67  | 2150<br>31.38  | 2130<br>31.09   | 2115<br>30.87   | 2100<br>30.65   | 2085<br>30.43   | 2075<br>30.28   | 2065<br>30.14   | 2050<br>29.92   | 2045<br>29.84   |                 |                 |                 |
| <b>20</b> | q3    | 2115<br>30.87     | 2100<br>30.65  | 2085<br>30.43  | 2075<br>30.28  | 2065<br>30.14   | 2055<br>29.99   | 2045<br>29.84   | 2035<br>29.70   | 2025<br>29.55   | 2020<br>29.48   | 2015<br>29.41   | 2010<br>29.33   | 2000<br>29.19   | 1995<br>29.11   | 1990<br>29.04   |
|           | q4    | 2235<br>32.62     | 2210<br>32.25  | 2185<br>31.89  | 2160<br>31.52  | 2145<br>31.30   | 2125<br>31.01   | 2110<br>30.79   | 2095<br>30.57   | 2080<br>30.36   | 2070<br>30.21   | 2060<br>30.06   | 2050<br>29.92   | 2040<br>29.77   | 2030<br>29.63   | 2020<br>29.48   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW3™ and W3 FORMLOK™



- 6 in. (152 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m<sup>3</sup>)
- 54.4 psf (2,605 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.7<br>129.3                    | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9                    | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6                    | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | 1     | 394<br>18.9       | 357<br>17.1    | 324<br>15.5    | 296<br>14.2    | 264<br>12.6     | 216<br>10.3     | 181<br>8.7      | 164<br>7.9      | 149<br>7.1      | 136<br>6.5      | 124<br>5.9      | 114<br>5.5      | 104<br>5.0      | 95<br>4.5       | 87<br>4.2       |
|           | 2     | 394<br>18.9       | 357<br>17.1    | 324<br>15.5    | 296<br>14.2    | 272<br>13.0     | 251<br>12.0     | 232<br>11.1     | 164<br>7.9      | 149<br>7.1      | 136<br>6.5      | 124<br>5.9      | 114<br>5.5      | 104<br>5.0      | 95<br>4.5       | 87<br>4.2       |
|           | 3     | 394<br>18.9       | 357<br>17.1    | 324<br>15.5    | 296<br>14.2    | 272<br>13.0     | 251<br>12.0     | 232<br>11.1     | 215<br>10.3     | 201<br>9.6      | 136<br>6.5      | 124<br>5.9      | 114<br>5.5      | 104<br>5.0      | 95<br>4.5       | 87<br>4.2       |
| <b>18</b> | 1     | 400<br>19.2       | 390<br>18.7    | 354<br>16.9    | 324<br>15.5    | 297<br>14.2     | 266<br>12.7     | 219<br>10.5     | 184<br>8.8      | 168<br>8.0      | 153<br>7.3      | 140<br>6.7      | 129<br>6.2      | 118<br>5.6      | 108<br>5.2      | 100<br>4.8      |
|           | 2     | 400<br>19.2       | 390<br>18.7    | 354<br>16.9    | 324<br>15.5    | 297<br>14.2     | 274<br>13.1     | 253<br>12.1     | 235<br>11.3     | 168<br>8.0      | 153<br>7.3      | 140<br>6.7      | 129<br>6.2      | 118<br>5.6      | 108<br>5.2      | 100<br>4.8      |
|           | 3     | 400<br>19.2       | 390<br>18.7    | 354<br>16.9    | 324<br>15.5    | 297<br>14.2     | 274<br>13.1     | 253<br>12.1     | 235<br>11.3     | 219<br>10.5     | 205<br>9.8      | 183<br>8.8      | 129<br>6.2      | 118<br>5.6      | 108<br>5.2      | 100<br>4.8      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 387<br>18.5    | 355<br>17.0     | 327<br>15.7     | 303<br>14.5     | 275<br>13.2     | 232<br>11.1     | 193<br>9.2      | 177<br>8.5      | 163<br>7.8      | 151<br>7.2      | 139<br>6.7      | 129<br>6.2      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 387<br>18.5    | 355<br>17.0     | 327<br>15.7     | 303<br>14.5     | 281<br>13.5     | 262<br>12.5     | 245<br>11.7     | 229<br>11.0     | 163<br>7.8      | 151<br>7.2      | 139<br>6.7      | 129<br>6.2      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 387<br>18.5    | 355<br>17.0     | 327<br>15.7     | 303<br>14.5     | 281<br>13.5     | 262<br>12.5     | 245<br>11.7     | 229<br>11.0     | 215<br>10.3     | 201<br>9.6      | 139<br>6.7      | 129<br>6.2      |

Shoring required in shaded areas to right of heavy line

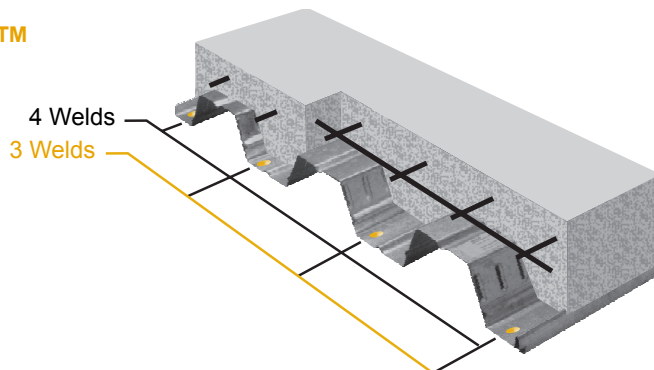
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | q3    | 2135<br>31.16     | 2115<br>30.87  | 2100<br>30.65  | 2085<br>30.43  | 2070<br>30.21   | 2060<br>30.06   | 2045<br>29.84   | 2035<br>29.70   | 2025<br>29.55   | 2020<br>29.48   | 2010<br>29.33   | 2005<br>29.26   | 1995<br>29.11   | 1990<br>29.04   | 1985<br>28.97   |
|           | q4    | 2295<br>33.49     | 2265<br>33.06  | 2235<br>32.62  | 2210<br>32.25  | 2185<br>31.89   | 2165<br>31.60   | 2145<br>31.30   | 2130<br>31.09   | 2115<br>30.87   | 2100<br>30.65   | 2085<br>30.43   | 2070<br>30.21   | 2060<br>30.06   | 2050<br>29.92   | 2040<br>29.77   |
| <b>18</b> | q3    | 2150<br>31.38     | 2130<br>31.09  | 2110<br>30.79  | 2095<br>30.57  | 2080<br>30.36   | 2065<br>30.14   | 2055<br>29.99   | 2040<br>29.77   | 2030<br>29.63   | 2020<br>29.48   | 2015<br>29.41   | 2005<br>29.26   | 2000<br>29.19   | 1990<br>29.04   | 1985<br>28.97   |
|           | q4    | 2345<br>34.22     | 2310<br>33.71  | 2275<br>33.20  | 2250<br>32.84  | 2220<br>32.40   | 2200<br>32.11   | 2175<br>31.74   | 2155<br>31.45   | 2140<br>31.23   | 2125<br>31.01   | 2110<br>30.79   | 2095<br>30.57   | 2080<br>30.36   | 2070<br>30.21   | 2055<br>29.99   |
| <b>16</b> | q3    | 2205<br>32.18     | 2180<br>31.81  | 2155<br>31.45  | 2135<br>31.16  | 2115<br>30.87   | 2100<br>30.65   | 2080<br>30.36   | 2070<br>30.21   | 2055<br>29.99   | 2045<br>29.84   | 2030<br>29.63   | 2020<br>29.48   | 2010<br>29.33   | 2005<br>29.26   | 1995<br>29.11   |
|           | q4    | 2470<br>36.05     | 2425<br>35.39  | 2385<br>34.81  | 2345<br>34.22  | 2315<br>33.78   | 2285<br>33.35   | 2260<br>32.98   | 2235<br>32.62   | 2210<br>32.25   | 2190<br>31.96   | 2175<br>31.74   | 2155<br>31.45   | 2140<br>31.23   | 2125<br>31.01   | 2110<br>30.79   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW3™ and W3 FORMLOK™

- 6½ in. (165 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
60.4 psf (2,892 N/m²)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |                  |               |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|------------------|---------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              | Interior Bearing |               |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm     | 4"<br>102 mm  | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327 | 267<br>3,897     | 601<br>8,771  | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174 | 331<br>4,831     | 781<br>11,398 | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612 | 365<br>5,327     | 877<br>12,799 | 1014<br>14,798 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 266<br>12.7       | 235<br>11.3    | 209<br>10.0    | 186<br>8.9     | 166<br>7.9      | 149<br>7.1      | 134<br>6.4      | 120<br>5.7      | 108<br>5.2      | 97<br>4.6       | 87<br>4.2       | 79<br>3.8       | 71<br>3.4       | 64<br>3.1       | 57<br>2.7       |
|           | 2     | 322<br>15.4       | 291<br>13.9    | 209<br>10.0    | 186<br>8.9     | 166<br>7.9      | 149<br>7.1      | 134<br>6.4      | 120<br>5.7      | 108<br>5.2      | 97<br>4.6       | 87<br>4.2       | 79<br>3.8       | 71<br>3.4       | 64<br>3.1       | 57<br>2.7       |
|           | 3     | 322<br>15.4       | 291<br>13.9    | 265<br>12.7    | 242<br>11.6    | 166<br>7.9      | 149<br>7.1      | 134<br>6.4      | 120<br>5.7      | 108<br>5.2      | 97<br>4.6       | 87<br>4.2       | 79<br>3.8       | 71<br>3.4       | 64<br>3.1       | 57<br>2.7       |
| <b>21</b> | 1     | 356<br>17.0       | 322<br>15.4    | 236<br>11.3    | 211<br>10.1    | 189<br>9.0      | 170<br>8.1      | 153<br>7.3      | 138<br>6.6      | 125<br>6.0      | 113<br>5.4      | 102<br>4.9      | 93<br>4.5       | 84<br>4.0       | 76<br>3.6       | 69<br>3.3       |
|           | 2     | 356<br>17.0       | 322<br>15.4    | 293<br>14.0    | 267<br>12.8    | 189<br>9.0      | 170<br>8.1      | 153<br>7.3      | 138<br>6.6      | 125<br>6.0      | 113<br>5.4      | 102<br>4.9      | 93<br>4.5       | 84<br>4.0       | 76<br>3.6       | 69<br>3.3       |
|           | 3     | 356<br>17.0       | 322<br>15.4    | 293<br>14.0    | 267<br>12.8    | 246<br>11.8     | 226<br>10.8     | 153<br>7.3      | 138<br>6.6      | 125<br>6.0      | 113<br>5.4      | 102<br>4.9      | 93<br>4.5       | 84<br>4.0       | 76<br>3.6       | 69<br>3.3       |
| <b>20</b> | 1     | 373<br>17.9       | 337<br>16.1    | 250<br>12.0    | 224<br>10.7    | 201<br>9.6      | 181<br>8.7      | 163<br>7.8      | 147<br>7.0      | 133<br>6.4      | 121<br>5.8      | 110<br>5.3      | 100<br>4.8      | 90<br>4.3       | 82<br>3.9       | 74<br>3.5       |
|           | 2     | 373<br>17.9       | 337<br>16.1    | 306<br>14.7    | 280<br>13.4    | 201<br>9.6      | 181<br>8.7      | 163<br>7.8      | 147<br>7.0      | 133<br>6.4      | 121<br>5.8      | 110<br>5.3      | 100<br>4.8      | 90<br>4.3       | 82<br>3.9       | 74<br>3.5       |
|           | 3     | 373<br>17.9       | 337<br>16.1    | 306<br>14.7    | 280<br>13.4    | 257<br>12.3     | 237<br>11.3     | 163<br>7.8      | 147<br>7.0      | 133<br>6.4      | 121<br>5.8      | 110<br>5.3      | 100<br>4.8      | 90<br>4.3       | 82<br>3.9       | 74<br>3.5       |

Shoring required in shaded areas to right of heavy line

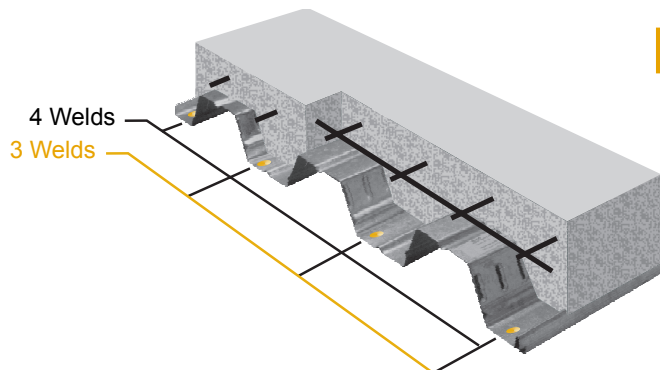
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q3    | 2350<br>34.30     | 2340<br>34.15  | 2325<br>33.93  | 2315<br>33.78  | 2305<br>33.64   | 2300<br>33.57   | 2290<br>33.42   | 2285<br>33.35   | 2275<br>33.20   | 2270<br>33.13   | 2265<br>33.06   | 2260<br>32.98   | 2255<br>32.91   | 2250<br>32.84   | 2245<br>32.76   |
|           | q4    | 2430<br>35.46     | 2410<br>35.17  | 2390<br>34.88  | 2375<br>34.66  | 2360<br>34.44   | 2345<br>34.22   | 2330<br>34.00   | 2315<br>33.78   | 2300<br>33.57   | 2290<br>33.42   | 2280<br>33.27   | 2270<br>33.13   | 2265<br>33.06   | 2260<br>32.98   | 2250<br>32.84   |
| <b>21</b> | q3    | 2355<br>34.37     | 2340<br>34.15  | 2325<br>33.93  | 2315<br>33.78  | 2300<br>33.57   | 2295<br>33.49   | 2285<br>33.35   | 2275<br>33.20   | 2270<br>33.13   | 2260<br>32.98   | 2255<br>32.91   | 2250<br>32.84   | 2245<br>32.76   | 2240<br>32.69   | 2235<br>32.62   |
|           | q4    | 2460<br>35.90     | 2435<br>35.54  | 2410<br>35.17  | 2390<br>34.88  | 2370<br>34.59   | 2355<br>34.37   | 2340<br>34.15   | 2330<br>34.00   | 2320<br>33.86   | 2305<br>33.64   | 2290<br>33.42   | 2280<br>33.27   | 2270<br>33.13   | 2265<br>33.06   | 2260<br>32.98   |
| <b>20</b> | q3    | 2355<br>34.37     | 2340<br>34.15  | 2325<br>33.93  | 2315<br>33.78  | 2300<br>33.57   | 2290<br>33.42   | 2285<br>33.35   | 2275<br>33.20   | 2265<br>33.06   | 2260<br>32.98   | 2255<br>32.91   | 2245<br>32.76   | 2240<br>32.69   | 2235<br>32.62   | 2230<br>32.54   |
|           | q4    | 2480<br>36.19     | 2455<br>35.83  | 2430<br>35.46  | 2405<br>35.10  | 2380<br>34.73   | 2365<br>34.51   | 2350<br>34.30   | 2335<br>34.08   | 2320<br>33.86   | 2310<br>33.71   | 2300<br>33.57   | 2290<br>33.42   | 2280<br>33.27   | 2270<br>33.13   | 2260<br>32.98   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).



# PLW3™ and W3 FORMLOK™



- 6½ in. (165 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 60.4 psf (2,892 N/m²)
- Galvanized or Phosphatized/Painted ■
- 1 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.7<br>129.3        | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9        | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6        | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | 1     | 400<br>19.2       | 388<br>18.6    | 353<br>16.9    | 322<br>15.4    | 272<br>13.0     | 216<br>10.3     | 196<br>9.4      | 178<br>8.5      | 162<br>7.8      | 147<br>7.0      | 134<br>6.4      | 123<br>5.9      | 112<br>5.4      | 103<br>4.9      | 94<br>4.5       |
|           | 2     | 400<br>19.2       | 388<br>18.6    | 353<br>16.9    | 322<br>15.4    | 296<br>14.2     | 273<br>13.1     | 196<br>9.4      | 178<br>8.5      | 162<br>7.8      | 147<br>7.0      | 134<br>6.4      | 123<br>5.9      | 112<br>5.4      | 103<br>4.9      | 94<br>4.5       |
|           | 3     | 400<br>19.2       | 388<br>18.6    | 353<br>16.9    | 322<br>15.4    | 296<br>14.2     | 273<br>13.1     | 252<br>12.1     | 234<br>11.2     | 162<br>7.8      | 147<br>7.0      | 134<br>6.4      | 123<br>5.9      | 112<br>5.4      | 103<br>4.9      | 94<br>4.5       |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 385<br>18.4    | 352<br>16.9    | 323<br>15.5     | 275<br>13.2     | 219<br>10.5     | 199<br>9.5      | 181<br>8.7      | 166<br>7.9      | 152<br>7.3      | 139<br>6.7      | 127<br>6.1      | 117<br>5.6      | 107<br>5.1      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 385<br>18.4    | 352<br>16.9    | 323<br>15.5     | 298<br>14.3     | 276<br>13.2     | 199<br>9.5      | 181<br>8.7      | 166<br>7.9      | 152<br>7.3      | 139<br>6.7      | 127<br>6.1      | 117<br>5.6      | 107<br>5.1      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 385<br>18.4    | 352<br>16.9    | 323<br>15.5     | 298<br>14.3     | 276<br>13.2     | 256<br>12.3     | 238<br>11.4     | 223<br>10.7     | 152<br>7.3      | 139<br>6.7      | 127<br>6.1      | 117<br>5.6      | 107<br>5.1      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 385<br>18.4     | 355<br>17.0     | 329<br>15.8     | 286<br>13.7     | 227<br>10.9     | 208<br>10.0     | 191<br>9.1      | 176<br>8.4      | 162<br>7.8      | 150<br>7.2      | 139<br>6.7      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 385<br>18.4     | 355<br>17.0     | 329<br>15.8     | 305<br>14.6     | 284<br>13.6     | 266<br>12.7     | 191<br>9.1      | 176<br>8.4      | 162<br>7.8      | 150<br>7.2      | 139<br>6.7      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 385<br>18.4     | 355<br>17.0     | 329<br>15.8     | 305<br>14.6     | 284<br>13.6     | 266<br>12.7     | 249<br>11.9     | 234<br>11.2     | 213<br>10.2     | 150<br>7.2      | 139<br>6.7      |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

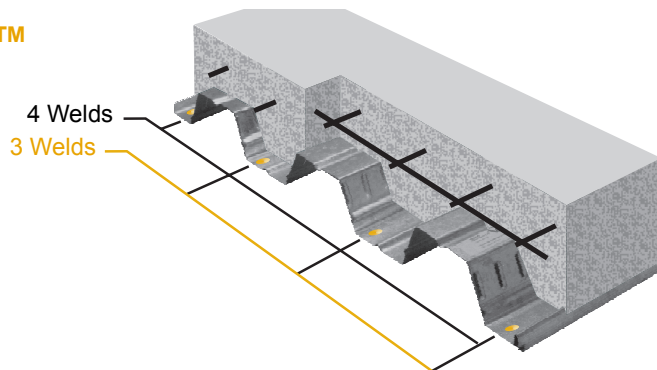
| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | q3    | 2375<br>34.66     | 2355<br>34.37  | 2340<br>34.15  | 2325<br>33.93  | 2310<br>33.71   | 2295<br>33.49   | 2285<br>33.35   | 2275<br>33.20   | 2265<br>33.06   | 2260<br>32.98   | 2250<br>32.84   | 2240<br>32.69   | 2235<br>32.62   | 2230<br>32.54   | 2225<br>32.47   |
|           | q4    | 2540<br>37.07     | 2510<br>36.63  | 2480<br>36.19  | 2455<br>35.83  | 2430<br>35.46   | 2410<br>35.17   | 2390<br>34.88   | 2370<br>34.59   | 2350<br>34.30   | 2340<br>34.15   | 2330<br>34.00   | 2315<br>33.78   | 2300<br>33.57   | 2290<br>33.42   | 2280<br>33.27   |
| <b>18</b> | q3    | 2390<br>34.88     | 2370<br>34.59  | 2350<br>34.30  | 2335<br>34.08  | 2320<br>33.86   | 2305<br>33.64   | 2295<br>33.49   | 2280<br>33.27   | 2270<br>33.13   | 2260<br>32.98   | 2255<br>32.91   | 2245<br>32.76   | 2235<br>32.62   | 2230<br>32.54   | 2225<br>32.47   |
|           | q4    | 2590<br>37.80     | 2555<br>37.29  | 2520<br>36.78  | 2490<br>36.34  | 2460<br>35.90   | 2440<br>35.61   | 2420<br>35.32   | 2400<br>35.03   | 2380<br>34.73   | 2365<br>34.51   | 2350<br>34.30   | 2335<br>34.08   | 2320<br>33.86   | 2310<br>33.71   | 2300<br>33.57   |
| <b>16</b> | q3    | 2445<br>35.68     | 2420<br>35.32  | 2395<br>34.95  | 2375<br>34.66  | 2355<br>34.37   | 2335<br>34.08   | 2320<br>33.86   | 2305<br>33.64   | 2295<br>33.49   | 2280<br>33.27   | 2270<br>33.13   | 2260<br>32.98   | 2250<br>32.84   | 2240<br>32.69   | 2235<br>32.62   |
|           | q4    | 2710<br>39.55     | 2670<br>38.97  | 2630<br>38.38  | 2595<br>37.87  | 2560<br>37.36   | 2530<br>36.92   | 2500<br>36.48   | 2475<br>36.12   | 2450<br>35.76   | 2430<br>35.46   | 2410<br>35.17   | 2395<br>34.95   | 2380<br>34.73   | 2365<br>34.51   | 2350<br>34.30   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).



# PLW3™ and W3 FORMLOK™

- 7½ in. (191 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
72.5 psf (3,471 N/m²)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |                  |               |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|------------------|---------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              | Interior Bearing |               |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm     | 4"<br>102 mm  | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327 | 267<br>3,897     | 601<br>8,771  | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174 | 331<br>4,831     | 781<br>11,398 | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612 | 365<br>5,327     | 877<br>12,799 | 1014<br>14,798 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 311<br>14.9       | 275<br>13.2    | 244<br>11.7    | 217<br>10.4    | 194<br>9.3      | 173<br>8.3      | 155<br>7.4      | 140<br>6.7      | 125<br>6.0      | 113<br>5.4      | 101<br>4.8      | 91<br>4.4       | 82<br>3.9       | 73<br>3.5       | 66<br>3.2       |
|           | 2     | 378<br>18.1       | 275<br>13.2    | 244<br>11.7    | 217<br>10.4    | 194<br>9.3      | 173<br>8.3      | 155<br>7.4      | 140<br>6.7      | 125<br>6.0      | 113<br>5.4      | 101<br>4.8      | 91<br>4.4       | 82<br>3.9       | 73<br>3.5       | 66<br>3.2       |
|           | 3     | 378<br>18.1       | 342<br>16.4    | 311<br>14.9    | 217<br>10.4    | 194<br>9.3      | 173<br>8.3      | 155<br>7.4      | 140<br>6.7      | 125<br>6.0      | 113<br>5.4      | 101<br>4.8      | 91<br>4.4       | 82<br>3.9       | 73<br>3.5       | 66<br>3.2       |
| <b>21</b> | 1     | 350<br>16.8       | 310<br>14.8    | 276<br>13.2    | 246<br>11.8    | 221<br>10.6     | 198<br>9.5      | 178<br>8.5      | 161<br>7.7      | 145<br>6.9      | 131<br>6.3      | 119<br>5.7      | 107<br>5.1      | 97<br>4.6       | 88<br>4.2       | 79<br>3.8       |
|           | 2     | 400<br>19.2       | 377<br>18.1    | 276<br>13.2    | 246<br>11.8    | 221<br>10.6     | 198<br>9.5      | 178<br>8.5      | 161<br>7.7      | 145<br>6.9      | 131<br>6.3      | 119<br>5.7      | 107<br>5.1      | 97<br>4.6       | 88<br>4.2       | 79<br>3.8       |
|           | 3     | 400<br>19.2       | 377<br>18.1    | 343<br>16.4    | 313<br>15.0    | 221<br>10.6     | 198<br>9.5      | 178<br>8.5      | 161<br>7.7      | 145<br>6.9      | 131<br>6.3      | 119<br>5.7      | 107<br>5.1      | 97<br>4.6       | 88<br>4.2       | 79<br>3.8       |
| <b>20</b> | 1     | 400<br>19.2       | 328<br>15.7    | 292<br>14.0    | 261<br>12.5    | 234<br>11.2     | 210<br>10.1     | 190<br>9.1      | 171<br>8.2      | 155<br>7.4      | 140<br>6.7      | 127<br>6.1      | 115<br>5.5      | 105<br>5.0      | 95<br>4.5       | 86<br>4.1       |
|           | 2     | 400<br>19.2       | 395<br>18.9    | 359<br>17.2    | 261<br>12.5    | 234<br>11.2     | 210<br>10.1     | 190<br>9.1      | 171<br>8.2      | 155<br>7.4      | 140<br>6.7      | 127<br>6.1      | 115<br>5.5      | 105<br>5.0      | 95<br>4.5       | 86<br>4.1       |
|           | 3     | 400<br>19.2       | 395<br>18.9    | 359<br>17.2    | 328<br>15.7    | 301<br>14.4     | 210<br>10.1     | 190<br>9.1      | 171<br>8.2      | 155<br>7.4      | 140<br>6.7      | 127<br>6.1      | 115<br>5.5      | 105<br>5.0      | 95<br>4.5       | 86<br>4.1       |

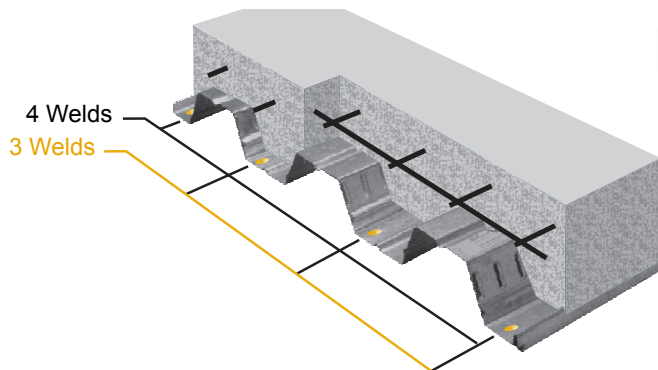
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q3    | 2830<br>41.30     | 2815<br>41.08  | 2805<br>40.94  | 2795<br>40.79  | 2785<br>40.64   | 2775<br>40.50   | 2770<br>40.43   | 2760<br>40.28   | 2755<br>40.21   | 2750<br>40.13   | 2745<br>40.06   | 2740<br>39.99   | 2735<br>39.91   | 2730<br>39.84   | 2725<br>39.77   |
|           | q4    | 2910<br>42.47     | 2890<br>42.18  | 2870<br>41.88  | 2850<br>41.59  | 2830<br>41.30   | 2820<br>41.15   | 2810<br>41.01   | 2795<br>40.79   | 2780<br>40.57   | 2770<br>40.43   | 2760<br>40.28   | 2755<br>40.21   | 2750<br>40.13   | 2740<br>40.06   | 2730<br>39.99   |
| <b>21</b> | q3    | 2830<br>41.30     | 2815<br>41.08  | 2805<br>40.94  | 2790<br>40.72  | 2780<br>40.57   | 2770<br>40.43   | 2760<br>40.28   | 2755<br>40.21   | 2745<br>40.06   | 2740<br>39.99   | 2735<br>39.91   | 2730<br>39.84   | 2725<br>39.77   | 2720<br>39.70   | 2715<br>39.62   |
|           | q4    | 2940<br>42.91     | 2915<br>42.54  | 2890<br>42.18  | 2870<br>41.88  | 2850<br>41.59   | 2835<br>41.37   | 2820<br>41.15   | 2805<br>40.94   | 2790<br>40.72   | 2780<br>40.57   | 2770<br>40.43   | 2760<br>40.28   | 2750<br>40.13   | 2745<br>40.06   | 2740<br>39.99   |
| <b>20</b> | q3    | 2835<br>41.37     | 2820<br>41.15  | 2805<br>40.94  | 2790<br>40.72  | 2780<br>40.57   | 2770<br>40.43   | 2760<br>40.28   | 2750<br>40.13   | 2745<br>40.06   | 2740<br>39.99   | 2730<br>39.84   | 2725<br>39.77   | 2720<br>39.70   | 2715<br>39.62   | 2710<br>39.55   |
|           | q4    | 2950<br>43.05     | 2925<br>42.69  | 2900<br>42.32  | 2880<br>42.03  | 2860<br>41.74   | 2845<br>41.52   | 2830<br>41.30   | 2815<br>41.08   | 2800<br>40.86   | 2790<br>40.72   | 2780<br>40.57   | 2770<br>40.43   | 2760<br>40.28   | 2750<br>40.13   | 2740<br>39.99   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW3™ and W3 FORMLOK™



- 7½ in. (191 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 72.5 psf (3,471 N/m²)
- Galvanized or Phosphatized/Painted ■
- 2 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.7<br>129.3        | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9        | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6        | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 310<br>14.8    | 279<br>13.4     | 252<br>12.1     | 228<br>10.9     | 207<br>9.9      | 188<br>9.0      | 171<br>8.2      | 156<br>7.5      | 142<br>6.8      | 130<br>6.2      | 119<br>5.7      | 109<br>5.2      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 377<br>18.1    | 346<br>16.6     | 252<br>12.1     | 228<br>10.9     | 207<br>9.9      | 188<br>9.0      | 171<br>8.2      | 156<br>7.5      | 142<br>6.8      | 130<br>6.2      | 119<br>5.7      | 109<br>5.2      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 377<br>18.1    | 346<br>16.6     | 319<br>15.3     | 295<br>14.1     | 207<br>9.9      | 188<br>9.0      | 171<br>8.2      | 156<br>7.5      | 142<br>6.8      | 130<br>6.2      | 119<br>5.7      | 109<br>5.2      |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 352<br>16.9     | 280<br>13.4     | 254<br>12.2     | 231<br>11.1     | 211<br>10.1     | 193<br>9.2      | 176<br>8.4      | 161<br>7.7      | 148<br>7.1      | 135<br>6.5      | 124<br>5.9      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 378<br>18.1     | 348<br>16.7     | 254<br>12.2     | 231<br>11.1     | 211<br>10.1     | 193<br>9.2      | 176<br>8.4      | 161<br>7.7      | 148<br>7.1      | 135<br>6.5      | 124<br>5.9      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 378<br>18.1     | 348<br>16.7     | 322<br>15.4     | 299<br>14.3     | 211<br>10.1     | 193<br>9.2      | 176<br>8.4      | 161<br>7.7      | 148<br>7.1      | 135<br>6.5      | 124<br>5.9      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2     | 363<br>17.4     | 288<br>13.8     | 263<br>12.6     | 242<br>11.6     | 222<br>10.6     | 204<br>9.8      | 188<br>9.0      | 174<br>8.3      | 160<br>7.7      |                 |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2     | 384<br>18.4     | 356<br>17.0     | 263<br>12.6     | 242<br>11.6     | 222<br>10.6     | 204<br>9.8      | 188<br>9.0      | 174<br>8.3      | 160<br>7.7      |                 |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2     | 384<br>18.4     | 356<br>17.0     | 332<br>15.9     | 310<br>14.8     | 290<br>13.9     | 204<br>9.8      | 188<br>9.0      | 174<br>8.3      | 160<br>7.7      |                 |

Shoring required in shaded areas to right of heavy line

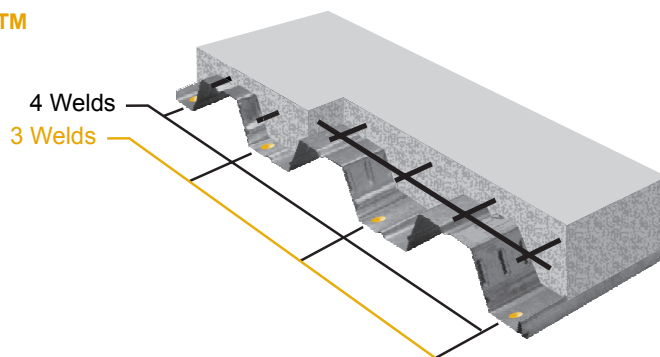
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | q3    | 2850<br>41.59     | 2835<br>41.37  | 2815<br>41.08  | 2800<br>40.86  | 2785<br>40.64   | 2775<br>40.50   | 2765<br>40.35   | 2755<br>40.21   | 2745<br>40.06   | 2735<br>39.91   | 2730<br>39.84   | 2720<br>39.70   | 2715<br>39.62   | 2705<br>39.48   | 2700<br>39.40   |
|           | q4    | 3020<br>44.07     | 2990<br>43.64  | 2960<br>43.20  | 2935<br>42.83  | 2910<br>42.47   | 2890<br>42.18   | 2870<br>41.88   | 2850<br>41.59   | 2830<br>41.30   | 2815<br>41.08   | 2800<br>40.86   | 2790<br>40.72   | 2780<br>40.57   | 2770<br>40.43   | 2760<br>40.28   |
| <b>18</b> | q3    | 2870<br>41.88     | 2850<br>41.59  | 2830<br>41.30  | 2810<br>41.01  | 2795<br>40.79   | 2785<br>40.64   | 2770<br>40.43   | 2760<br>40.28   | 2750<br>40.13   | 2740<br>39.99   | 2730<br>39.84   | 2725<br>39.77   | 2715<br>39.62   | 2710<br>39.55   | 2700<br>39.40   |
|           | q4    | 3070<br>44.80     | 3035<br>44.29  | 3000<br>43.78  | 2970<br>43.34  | 2940<br>42.91   | 2920<br>42.61   | 2900<br>42.32   | 2880<br>42.03   | 2860<br>41.74   | 2845<br>41.52   | 2830<br>41.30   | 2815<br>41.08   | 2800<br>40.86   | 2790<br>40.72   | 2780<br>40.57   |
| <b>16</b> | q3    | 2925<br>42.69     | 2895<br>42.25  | 2875<br>41.96  | 2850<br>41.59  | 2835<br>41.37   | 2815<br>41.08   | 2800<br>40.86   | 2785<br>40.64   | 2770<br>40.43   | 2760<br>40.28   | 2750<br>40.13   | 2740<br>39.99   | 2730<br>39.84   | 2720<br>39.70   | 2710<br>39.55   |
|           | q4    | 3190<br>46.55     | 3150<br>45.97  | 3110<br>45.39  | 3075<br>44.88  | 3040<br>44.37   | 3010<br>43.93   | 2980<br>43.49   | 2955<br>43.12   | 2930<br>42.76   | 2910<br>42.47   | 2890<br>42.18   | 2875<br>41.96   | 2860<br>41.74   | 2845<br>41.52   | 2830<br>41.30   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW3™ and W3 FORMLOK™

- 5 in. (127 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m<sup>3</sup>)  
32.1 psf (1,537 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |                  |               |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|------------------|---------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              | Interior Bearing |               |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm     | 4"<br>102 mm  | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0                     | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327 | 267<br>3,897     | 601<br>8,771  | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5                    | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174 | 331<br>4,831     | 781<br>11,398 | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1                    | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612 | 365<br>5,327     | 877<br>12,799 | 1014<br>14,798 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 246<br>11.8       | 223<br>10.7    | 202<br>9.7     | 185<br>8.9     | 139<br>6.7      | 126<br>6.0      | 114<br>5.5      | 104<br>5.0      | 95<br>4.5       | 87<br>4.2       | 79<br>3.8       | 73<br>3.5       | 66<br>3.2       | 61<br>2.9       | 56<br>2.7       |
|           | 2     | 246<br>11.8       | 223<br>10.7    | 202<br>9.7     | 185<br>8.9     | 170<br>8.1      | 157<br>7.5      | 114<br>5.5      | 104<br>5.0      | 95<br>4.5       | 87<br>4.2       | 79<br>3.8       | 73<br>3.5       | 66<br>3.2       | 61<br>2.9       | 56<br>2.7       |
|           | 3     | 246<br>11.8       | 223<br>10.7    | 202<br>9.7     | 185<br>8.9     | 170<br>8.1      | 157<br>7.5      | 145<br>6.9      | 131<br>6.3      | 95<br>4.5       | 87<br>4.2       | 79<br>3.8       | 73<br>3.5       | 66<br>3.2       | 61<br>2.9       | 56<br>2.7       |
| <b>21</b> | 1     | 273<br>13.1       | 247<br>11.8    | 224<br>10.7    | 205<br>9.8     | 188<br>9.0      | 161<br>7.7      | 130<br>6.2      | 119<br>5.7      | 108<br>5.2      | 99<br>4.7       | 91<br>4.4       | 84<br>4.0       | 77<br>3.7       | 71<br>3.4       | 65<br>3.1       |
|           | 2     | 273<br>13.1       | 247<br>11.8    | 224<br>10.7    | 205<br>9.8     | 188<br>9.0      | 174<br>8.3      | 161<br>7.7      | 149<br>7.1      | 108<br>5.2      | 99<br>4.7       | 91<br>4.4       | 84<br>4.0       | 77<br>3.7       | 71<br>3.4       | 65<br>3.1       |
|           | 3     | 273<br>13.1       | 247<br>11.8    | 224<br>10.7    | 205<br>9.8     | 188<br>9.0      | 174<br>8.3      | 161<br>7.7      | 149<br>7.1      | 136<br>6.5      | 123<br>5.9      | 91<br>4.4       | 84<br>4.0       | 77<br>3.7       | 71<br>3.4       | 65<br>3.1       |
| <b>20</b> | 1     | 286<br>13.7       | 259<br>12.4    | 235<br>11.3    | 215<br>10.3    | 197<br>9.4      | 177<br>8.5      | 150<br>7.2      | 126<br>6.0      | 115<br>5.5      | 105<br>5.0      | 97<br>4.6       | 89<br>4.3       | 82<br>3.9       | 75<br>3.6       | 70<br>3.4       |
|           | 2     | 286<br>13.7       | 259<br>12.4    | 235<br>11.3    | 215<br>10.3    | 197<br>9.4      | 182<br>8.7      | 168<br>8.0      | 156<br>7.5      | 146<br>7.0      | 105<br>5.0      | 97<br>4.6       | 89<br>4.3       | 82<br>3.9       | 75<br>3.6       | 70<br>3.4       |
|           | 3     | 286<br>13.7       | 259<br>12.4    | 235<br>11.3    | 215<br>10.3    | 197<br>9.4      | 182<br>8.7      | 168<br>8.0      | 156<br>7.5      | 146<br>7.0      | 132<br>6.3      | 120<br>5.7      | 89<br>4.3       | 82<br>3.9       | 75<br>3.6       | 70<br>3.4       |

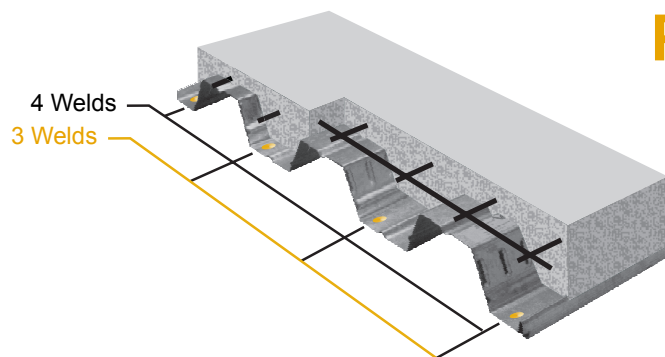
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q3    | 1310<br>19.12     | 1295<br>18.90  | 1285<br>18.75  | 1275<br>18.61  | 1265<br>18.46   | 1255<br>18.32   | 1250<br>18.24   | 1240<br>18.10   | 1235<br>18.02   | 1230<br>17.95   | 1225<br>17.88   | 1220<br>17.80   | 1215<br>17.73   | 1210<br>17.66   | 1205<br>17.59   |
|           | q4    | 1390<br>20.29     | 1370<br>19.99  | 1350<br>19.70  | 1330<br>19.41  | 1310<br>19.12   | 1300<br>18.97   | 1290<br>18.83   | 1275<br>18.61   | 1260<br>18.39   | 1250<br>18.24   | 1240<br>18.10   | 1235<br>18.02   | 1230<br>17.95   | 1220<br>17.80   | 1210<br>17.66   |
| <b>21</b> | q3    | 1310<br>19.12     | 1295<br>18.90  | 1285<br>18.75  | 1270<br>18.53  | 1260<br>18.39   | 1250<br>18.24   | 1240<br>18.10   | 1235<br>18.02   | 1225<br>17.88   | 1220<br>17.80   | 1215<br>17.73   | 1210<br>17.66   | 1205<br>17.59   | 1200<br>17.51   | 1195<br>17.44   |
|           | q4    | 1420<br>20.72     | 1395<br>20.36  | 1370<br>19.99  | 1350<br>19.70  | 1330<br>19.41   | 1315<br>19.19   | 1300<br>18.97   | 1285<br>18.75   | 1270<br>18.53   | 1260<br>18.39   | 1250<br>18.24   | 1240<br>18.10   | 1230<br>17.95   | 1225<br>17.88   | 1220<br>17.80   |
| <b>20</b> | q3    | 1315<br>19.19     | 1300<br>18.97  | 1285<br>18.75  | 1270<br>18.53  | 1260<br>18.39   | 1250<br>18.24   | 1240<br>18.10   | 1235<br>18.02   | 1225<br>17.88   | 1220<br>17.80   | 1210<br>17.66   | 1205<br>17.59   | 1200<br>17.51   | 1195<br>17.44   | 1190<br>17.37   |
|           | q4    | 1430<br>20.87     | 1405<br>20.50  | 1380<br>20.14  | 1360<br>19.85  | 1340<br>19.56   | 1325<br>19.34   | 1310<br>19.12   | 1295<br>18.90   | 1280<br>18.68   | 1270<br>18.53   | 1260<br>18.39   | 1250<br>18.24   | 1240<br>18.10   | 1230<br>17.95   | 1220<br>17.80   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW3™ and W3 FORMLOK™



- 5 in. (127 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m<sup>3</sup>)
- 32.1 psf (1,537 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.7<br>129.3                    | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9                    | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6                    | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | 1     | 331<br>15.8       | 299<br>14.3    | 272<br>13.0    | 249<br>11.9    | 228<br>10.9     | 211<br>10.1     | 195<br>9.3      | 172<br>8.2      | 148<br>7.1      | 126<br>6.0      | 116<br>5.6      | 107<br>5.1      | 99<br>4.7       | 92<br>4.4       | 85<br>4.1       |
|           | 2     | 331<br>15.8       | 299<br>14.3    | 272<br>13.0    | 249<br>11.9    | 228<br>10.9     | 211<br>10.1     | 195<br>9.3      | 181<br>8.7      | 169<br>8.1      | 152<br>7.3      | 135<br>6.5      | 107<br>5.1      | 99<br>4.7       | 92<br>4.4       | 85<br>4.1       |
|           | 3     | 331<br>15.8       | 299<br>14.3    | 272<br>13.0    | 249<br>11.9    | 228<br>10.9     | 211<br>10.1     | 195<br>9.3      | 181<br>8.7      | 169<br>8.1      | 152<br>7.3      | 135<br>6.5      | 120<br>5.7      | 108<br>5.2      | 97<br>4.6       | 85<br>4.1       |
| <b>18</b> | 1     | 363<br>17.4       | 328<br>15.7    | 298<br>14.3    | 273<br>13.1    | 250<br>12.0     | 231<br>11.1     | 213<br>10.2     | 198<br>9.5      | 176<br>8.4      | 152<br>7.3      | 131<br>6.3      | 120<br>5.7      | 111<br>5.3      | 102<br>4.9      | 92<br>4.4       |
|           | 2     | 363<br>17.4       | 328<br>15.7    | 298<br>14.3    | 273<br>13.1    | 250<br>12.0     | 231<br>11.1     | 213<br>10.2     | 198<br>9.5      | 180<br>8.6      | 159<br>7.6      | 141<br>6.8      | 126<br>6.0      | 113<br>5.4      | 102<br>4.9      | 92<br>4.4       |
|           | 3     | 363<br>17.4       | 328<br>15.7    | 298<br>14.3    | 273<br>13.1    | 250<br>12.0     | 231<br>11.1     | 213<br>10.2     | 198<br>9.5      | 180<br>8.6      | 159<br>7.6      | 141<br>6.8      | 126<br>6.0      | 113<br>5.4      | 102<br>4.9      | 92<br>4.4       |
| <b>16</b> | 1     | 400<br>19.2       | 395<br>18.9    | 353<br>16.9    | 314<br>15.0    | 280<br>13.4     | 251<br>12.0     | 226<br>10.8     | 204<br>9.8      | 185<br>8.9      | 168<br>8.0      | 153<br>7.3      | 140<br>6.7      | 125<br>6.0      | 113<br>5.4      | 102<br>4.9      |
|           | 2     | 400<br>19.2       | 395<br>18.9    | 353<br>16.9    | 314<br>15.0    | 280<br>13.4     | 251<br>12.0     | 226<br>10.8     | 204<br>9.8      | 185<br>8.9      | 168<br>8.0      | 153<br>7.3      | 140<br>6.7      | 125<br>6.0      | 113<br>5.4      | 102<br>4.9      |
|           | 3     | 400<br>19.2       | 395<br>18.9    | 353<br>16.9    | 314<br>15.0    | 280<br>13.4     | 251<br>12.0     | 226<br>10.8     | 204<br>9.8      | 185<br>8.9      | 168<br>8.0      | 153<br>7.3      | 140<br>6.7      | 125<br>6.0      | 113<br>5.4      | 102<br>4.9      |

Shoring required in shaded areas to right of heavy line

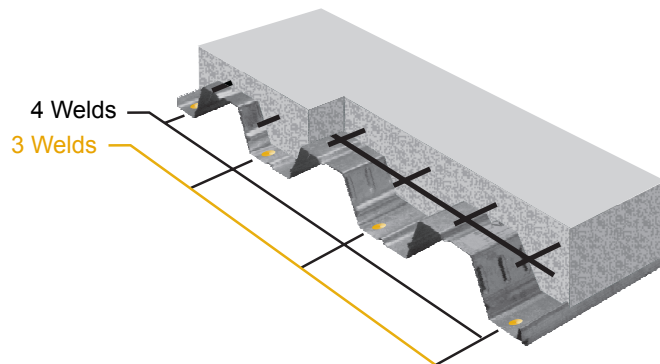
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | q3    | 1330<br>19.41     | 1315<br>19.19  | 1295<br>18.90  | 1280<br>18.68  | 1265<br>18.46   | 1255<br>18.32   | 1245<br>18.17   | 1235<br>18.02   | 1225<br>17.88   | 1215<br>17.73   | 1210<br>17.66   | 1200<br>17.51   | 1195<br>17.44   | 1190<br>17.37   | 1180<br>17.22   |
|           | q4    | 1500<br>21.89     | 1470<br>21.45  | 1440<br>21.02  | 1415<br>20.65  | 1390<br>20.29   | 1370<br>19.99   | 1350<br>19.70   | 1330<br>19.41   | 1310<br>19.12   | 1295<br>18.90   | 1280<br>18.68   | 1270<br>18.53   | 1260<br>18.39   | 1250<br>18.24   | 1240<br>18.10   |
| <b>18</b> | q3    | 1350<br>19.70     | 1330<br>19.41  | 1310<br>19.12  | 1295<br>18.90  | 1275<br>18.61   | 1265<br>18.46   | 1250<br>18.24   | 1240<br>18.10   | 1230<br>17.95   | 1220<br>17.80   | 1210<br>17.66   | 1205<br>17.59   | 1195<br>17.44   | 1190<br>17.37   | 1180<br>17.22   |
|           | q4    | 1550<br>22.62     | 1515<br>22.11  | 1480<br>21.60  | 1450<br>21.16  | 1420<br>20.72   | 1400<br>20.43   | 1380<br>20.14   | 1360<br>19.85   | 1340<br>19.56   | 1325<br>19.34   | 1310<br>19.12   | 1295<br>18.90   | 1280<br>18.68   | 1270<br>18.53   | 1260<br>18.39   |
| <b>16</b> | q3    | 1405<br>20.50     | 1375<br>20.07  | 1355<br>19.77  | 1330<br>19.41  | 1315<br>19.19   | 1295<br>18.90   | 1280<br>18.68   | 1265<br>18.46   | 1250<br>18.24   | 1240<br>18.10   | 1230<br>17.95   | 1220<br>17.80   | 1210<br>17.66   | 1200<br>17.51   | 1190<br>17.37   |
|           | q4    | 1670<br>24.37     | 1630<br>23.79  | 1590<br>23.20  | 1555<br>22.69  | 1520<br>22.18   | 1490<br>21.74   | 1460<br>21.31   | 1435<br>20.94   | 1410<br>20.58   | 1390<br>20.29   | 1370<br>19.99   | 1355<br>19.77   | 1340<br>19.56   | 1325<br>19.34   | 1310<br>19.12   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW3™ and W3 FORMLOK

- 5½ in. (140 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
36.7 psf (1,757 N/m²)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |                  |               |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|------------------|---------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              | Interior Bearing |               |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm     | 4"<br>102 mm  | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327 | 267<br>3,897     | 601<br>8,771  | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174 | 331<br>4,831     | 781<br>11,398 | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612 | 365<br>5,327     | 877<br>12,799 | 1014<br>14,798 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 270<br>12.9       | 244<br>11.7    | 222<br>10.6    | 168<br>8.0     | 152<br>7.3      | 137<br>6.6      | 124<br>5.9      | 113<br>5.4      | 103<br>4.9      | 94<br>4.5       | 86<br>4.1       | 78<br>3.7       | 72<br>3.4       | 66<br>3.2       | 60<br>2.9       |
|           | 2     | 270<br>12.9       | 244<br>11.7    | 222<br>10.6    | 203<br>9.7     | 186<br>8.9      | 137<br>6.6      | 124<br>5.9      | 113<br>5.4      | 103<br>4.9      | 94<br>4.5       | 86<br>4.1       | 78<br>3.7       | 72<br>3.4       | 66<br>3.2       | 60<br>2.9       |
|           | 3     | 270<br>12.9       | 244<br>11.7    | 222<br>10.6    | 203<br>9.7     | 186<br>8.9      | 172<br>8.2      | 159<br>7.6      | 113<br>5.4      | 103<br>4.9      | 94<br>4.5       | 86<br>4.1       | 78<br>3.7       | 72<br>3.4       | 66<br>3.2       | 60<br>2.9       |
| <b>21</b> | 1     | 299<br>14.3       | 270<br>12.9    | 246<br>11.8    | 225<br>10.8    | 205<br>9.8      | 155<br>7.4      | 141<br>6.8      | 129<br>6.2      | 117<br>5.6      | 107<br>5.1      | 98<br>4.7       | 90<br>4.3       | 83<br>4.0       | 76<br>3.6       | 70<br>3.4       |
|           | 2     | 299<br>14.3       | 270<br>12.9    | 246<br>11.8    | 225<br>10.8    | 206<br>9.9      | 190<br>9.1      | 176<br>8.4      | 129<br>6.2      | 117<br>5.6      | 107<br>5.1      | 98<br>4.7       | 90<br>4.3       | 83<br>4.0       | 76<br>3.6       | 70<br>3.4       |
|           | 3     | 299<br>14.3       | 270<br>12.9    | 246<br>11.8    | 225<br>10.8    | 206<br>9.9      | 190<br>9.1      | 176<br>8.4      | 163<br>7.8      | 152<br>7.3      | 107<br>5.1      | 98<br>4.7       | 90<br>4.3       | 83<br>4.0       | 76<br>3.6       | 70<br>3.4       |
| <b>20</b> | 1     | 313<br>15.0       | 283<br>13.6    | 257<br>12.3    | 235<br>11.3    | 216<br>10.3     | 190<br>9.1      | 149<br>7.1      | 136<br>6.5      | 124<br>5.9      | 114<br>5.5      | 105<br>5.0      | 96<br>4.6       | 88<br>4.2       | 81<br>3.9       | 75<br>3.6       |
|           | 2     | 313<br>15.0       | 283<br>13.6    | 257<br>12.3    | 235<br>11.3    | 216<br>10.3     | 199<br>9.5      | 184<br>8.8      | 171<br>8.2      | 124<br>5.9      | 114<br>5.5      | 105<br>5.0      | 96<br>4.6       | 88<br>4.2       | 81<br>3.9       | 75<br>3.6       |
|           | 3     | 313<br>15.0       | 283<br>13.6    | 257<br>12.3    | 235<br>11.3    | 216<br>10.3     | 199<br>9.5      | 184<br>8.8      | 171<br>8.2      | 159<br>7.6      | 148<br>7.1      | 105<br>5.0      | 96<br>4.6       | 88<br>4.2       | 81<br>3.9       | 75<br>3.6       |

Shoring required in shaded areas to right of heavy line

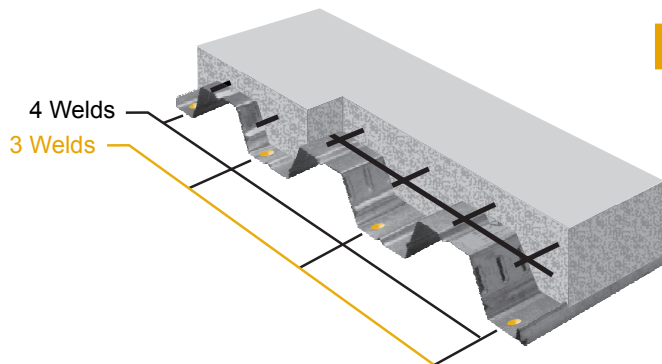
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q3    | 1465<br>21.38     | 1455<br>21.23  | 1440<br>21.02  | 1430<br>20.87  | 1425<br>20.80   | 1415<br>20.65   | 1405<br>20.50   | 1400<br>20.43   | 1395<br>20.36   | 1385<br>20.21   | 1380<br>20.14   | 1375<br>20.07   | 1370<br>19.99   | 1365<br>19.92   | 1365<br>19.92   |
|           | q4    | 1550<br>22.62     | 1530<br>22.33  | 1510<br>22.04  | 1490<br>21.74  | 1470<br>21.45   | 1455<br>21.23   | 1440<br>21.02   | 1430<br>20.87   | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1390<br>20.29   | 1380<br>20.14   | 1375<br>20.07   | 1370<br>19.99   |
| <b>21</b> | q3    | 1470<br>21.45     | 1455<br>21.23  | 1440<br>21.02  | 1430<br>20.87  | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1390<br>20.29   | 1385<br>20.21   | 1380<br>20.14   | 1370<br>19.99   | 1365<br>19.92   | 1360<br>19.85   | 1355<br>19.77   | 1350<br>19.70   |
|           | q4    | 1580<br>23.06     | 1555<br>22.69  | 1530<br>22.33  | 1510<br>22.04  | 1490<br>21.74   | 1475<br>21.53   | 1460<br>21.31   | 1445<br>21.09   | 1430<br>20.87   | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1390<br>20.29   | 1380<br>20.14   | 1370<br>19.99   |
| <b>20</b> | q3    | 1470<br>21.45     | 1455<br>21.23  | 1440<br>21.02  | 1430<br>20.87  | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1390<br>20.29   | 1385<br>20.21   | 1375<br>20.07   | 1370<br>19.99   | 1365<br>19.92   | 1355<br>19.77   | 1350<br>19.70   | 1345<br>19.63   |
|           | q4    | 1590<br>23.20     | 1565<br>22.84  | 1540<br>22.47  | 1520<br>22.18  | 1500<br>21.89   | 1485<br>21.67   | 1470<br>21.45   | 1455<br>21.23   | 1440<br>21.02   | 1430<br>20.87   | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1390<br>20.29   | 1380<br>20.14   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).



# PLW3™ and W3 FORMLOK™



- 5½ in. (140 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m³)
- 36.7 psf (1,757 N/m²)
- Galvanized or Phosphatized/Painted ■
- 1 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.7<br>129.3        | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9        | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6        | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | 1     | 362<br>17.3       | 327<br>15.7    | 297<br>14.2    | 272<br>13.0    | 249<br>11.9     | 230<br>11.0     | 213<br>10.2     | 184<br>8.8      | 156<br>7.5      | 137<br>6.6      | 126<br>6.0      | 116<br>5.6      | 107<br>5.1      | 99<br>4.7       | 92<br>4.4       |
|           | 2     | 362<br>17.3       | 327<br>15.7    | 297<br>14.2    | 272<br>13.0    | 249<br>11.9     | 230<br>11.0     | 213<br>10.2     | 197<br>9.4      | 184<br>8.8      | 172<br>8.2      | 126<br>6.0      | 116<br>5.6      | 107<br>5.1      | 99<br>4.7       | 92<br>4.4       |
|           | 3     | 362<br>17.3       | 327<br>15.7    | 297<br>14.2    | 272<br>13.0    | 249<br>11.9     | 230<br>11.0     | 213<br>10.2     | 197<br>9.4      | 184<br>8.8      | 172<br>8.2      | 161<br>7.7      | 151<br>7.2      | 134<br>6.4      | 99<br>4.7       | 92<br>4.4       |
| <b>18</b> | 1     | 395<br>18.9       | 357<br>17.1    | 325<br>15.6    | 297<br>14.2    | 273<br>13.1     | 251<br>12.0     | 233<br>11.2     | 216<br>10.3     | 189<br>9.0      | 162<br>7.8      | 141<br>6.8      | 130<br>6.2      | 120<br>5.7      | 111<br>5.3      | 103<br>4.9      |
|           | 2     | 395<br>18.9       | 357<br>17.1    | 325<br>15.6    | 297<br>14.2    | 273<br>13.1     | 251<br>12.0     | 233<br>11.2     | 216<br>10.3     | 201<br>9.6      | 188<br>9.0      | 176<br>8.4      | 164<br>7.9      | 120<br>5.7      | 111<br>5.3      | 103<br>4.9      |
|           | 3     | 395<br>18.9       | 357<br>17.1    | 325<br>15.6    | 297<br>14.2    | 273<br>13.1     | 251<br>12.0     | 233<br>11.2     | 216<br>10.3     | 201<br>9.6      | 188<br>9.0      | 176<br>8.4      | 164<br>7.9      | 147<br>7.0      | 132<br>6.3      | 103<br>4.9      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 389<br>18.6    | 356<br>17.0    | 327<br>15.7     | 301<br>14.4     | 279<br>13.4     | 259<br>12.4     | 241<br>11.5     | 225<br>10.8     | 203<br>9.7      | 162<br>7.8      | 150<br>7.2      | 140<br>6.7      | 130<br>6.2      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 389<br>18.6    | 356<br>17.0    | 327<br>15.7     | 301<br>14.4     | 279<br>13.4     | 259<br>12.4     | 241<br>11.5     | 225<br>10.8     | 203<br>9.7      | 181<br>8.7      | 162<br>7.8      | 146<br>7.0      | 130<br>6.2      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 389<br>18.6    | 356<br>17.0    | 327<br>15.7     | 301<br>14.4     | 279<br>13.4     | 259<br>12.4     | 241<br>11.5     | 225<br>10.8     | 203<br>9.7      | 181<br>8.7      | 162<br>7.8      | 146<br>7.0      | 132<br>6.3      |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

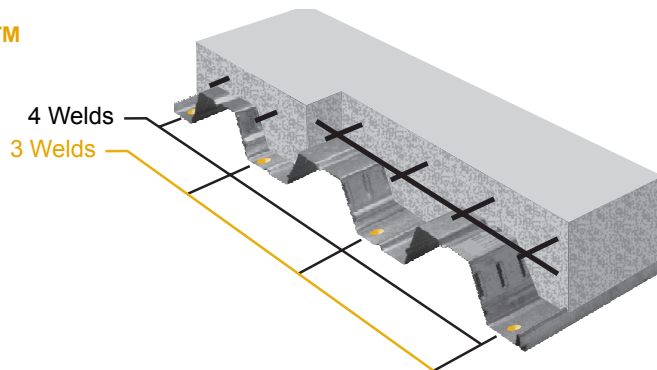
| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | q3    | 1490<br>21.74     | 1470<br>21.45  | 1455<br>21.23  | 1440<br>21.02  | 1425<br>20.80   | 1415<br>20.65   | 1400<br>20.43   | 1390<br>20.29   | 1385<br>20.21   | 1375<br>20.07   | 1365<br>19.92   | 1360<br>19.85   | 1350<br>19.70   | 1345<br>19.63   | 1340<br>19.56   |
|           | q4    | 1650<br>24.08     | 1620<br>23.64  | 1590<br>23.20  | 1565<br>22.84  | 1540<br>22.47   | 1520<br>22.18   | 1500<br>21.89   | 1485<br>21.67   | 1470<br>21.45   | 1455<br>21.23   | 1440<br>21.02   | 1430<br>20.87   | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   |
| <b>18</b> | q3    | 1510<br>22.04     | 1485<br>21.67  | 1465<br>21.38  | 1450<br>21.16  | 1435<br>20.94   | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1385<br>20.21   | 1380<br>20.14   | 1370<br>19.99   | 1360<br>19.85   | 1355<br>19.77   | 1345<br>19.63   | 1340<br>19.56   |
|           | q4    | 1700<br>24.81     | 1665<br>24.30  | 1630<br>23.79  | 1605<br>23.42  | 1580<br>23.06   | 1560<br>22.77   | 1540<br>22.47   | 1520<br>22.18   | 1500<br>21.89   | 1485<br>21.67   | 1470<br>21.45   | 1455<br>21.23   | 1440<br>21.02   | 1430<br>20.87   | 1420<br>20.72   |
| <b>16</b> | q3    | 1560<br>22.77     | 1535<br>22.40  | 1510<br>22.04  | 1490<br>21.74  | 1470<br>21.45   | 1455<br>21.23   | 1440<br>21.02   | 1425<br>20.80   | 1410<br>20.58   | 1400<br>20.43   | 1385<br>20.21   | 1375<br>20.07   | 1365<br>19.92   | 1360<br>19.85   | 1350<br>19.70   |
|           | q4    | 1830<br>26.71     | 1785<br>26.05  | 1740<br>25.39  | 1705<br>24.88  | 1670<br>24.37   | 1645<br>24.01   | 1620<br>23.64   | 1595<br>23.28   | 1570<br>22.91   | 1550<br>22.62   | 1530<br>22.33   | 1515<br>22.11   | 1500<br>21.89   | 1485<br>21.67   | 1470<br>21.45   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).



# PLW3™ and W3 FORMLOK™

- 6¼ in. (159 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
43.5 psf (2,083 N/m²)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |                  |               |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|------------------|---------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              | Interior Bearing |               |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm     | 4"<br>102 mm  | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327 | 267<br>3,897     | 601<br>8,771  | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174 | 331<br>4,831     | 781<br>11,398 | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612 | 365<br>5,327     | 877<br>12,799 | 1014<br>14,798 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 309<br>14.8       | 279<br>13.4    | 213<br>10.2    | 191<br>9.1     | 172<br>8.2      | 155<br>7.4      | 141<br>6.8      | 128<br>6.1      | 116<br>5.6      | 106<br>5.1      | 97<br>4.6       | 88<br>4.2       | 81<br>3.9       | 74<br>3.5       | 68<br>3.3       |
|           | 2     | 309<br>14.8       | 279<br>13.4    | 254<br>12.2    | 232<br>11.1    | 172<br>8.2      | 155<br>7.4      | 141<br>6.8      | 128<br>6.1      | 116<br>5.6      | 106<br>5.1      | 97<br>4.6       | 88<br>4.2       | 81<br>3.9       | 74<br>3.5       | 68<br>3.3       |
|           | 3     | 309<br>14.8       | 279<br>13.4    | 254<br>12.2    | 232<br>11.1    | 213<br>10.2     | 196<br>9.4      | 141<br>6.8      | 128<br>6.1      | 116<br>5.6      | 106<br>5.1      | 97<br>4.6       | 88<br>4.2       | 81<br>3.9       | 74<br>3.5       | 68<br>3.3       |
| <b>21</b> | 1     | 341<br>16.3       | 309<br>14.8    | 281<br>13.5    | 256<br>12.3    | 194<br>9.3      | 176<br>8.4      | 160<br>7.7      | 145<br>6.9      | 133<br>6.4      | 121<br>5.8      | 111<br>5.3      | 102<br>4.9      | 93<br>4.5       | 86<br>4.1       | 79<br>3.8       |
|           | 2     | 341<br>16.3       | 309<br>14.8    | 281<br>13.5    | 256<br>12.3    | 235<br>11.3     | 217<br>10.4     | 160<br>7.7      | 145<br>6.9      | 133<br>6.4      | 121<br>5.8      | 111<br>5.3      | 102<br>4.9      | 93<br>4.5       | 86<br>4.1       | 79<br>3.8       |
|           | 3     | 341<br>16.3       | 309<br>14.8    | 281<br>13.5    | 256<br>12.3    | 235<br>11.3     | 217<br>10.4     | 201<br>9.6      | 186<br>8.9      | 133<br>6.4      | 121<br>5.8      | 111<br>5.3      | 102<br>4.9      | 93<br>4.5       | 86<br>4.1       | 79<br>3.8       |
| <b>20</b> | 1     | 357<br>17.1       | 323<br>15.5    | 294<br>14.1    | 268<br>12.8    | 246<br>11.8     | 186<br>8.9      | 169<br>8.1      | 154<br>7.4      | 141<br>6.8      | 129<br>6.2      | 118<br>5.6      | 108<br>5.2      | 100<br>4.8      | 92<br>4.4       | 84<br>4.0       |
|           | 2     | 357<br>17.1       | 323<br>15.5    | 294<br>14.1    | 268<br>12.8    | 246<br>11.8     | 227<br>10.9     | 210<br>10.1     | 154<br>7.4      | 141<br>6.8      | 129<br>6.2      | 118<br>5.6      | 108<br>5.2      | 100<br>4.8      | 92<br>4.4       | 84<br>4.0       |
|           | 3     | 357<br>17.1       | 323<br>15.5    | 294<br>14.1    | 268<br>12.8    | 246<br>11.8     | 227<br>10.9     | 210<br>10.1     | 195<br>9.3      | 182<br>8.7      | 129<br>6.2      | 118<br>5.6      | 108<br>5.2      | 100<br>4.8      | 92<br>4.4       | 84<br>4.0       |

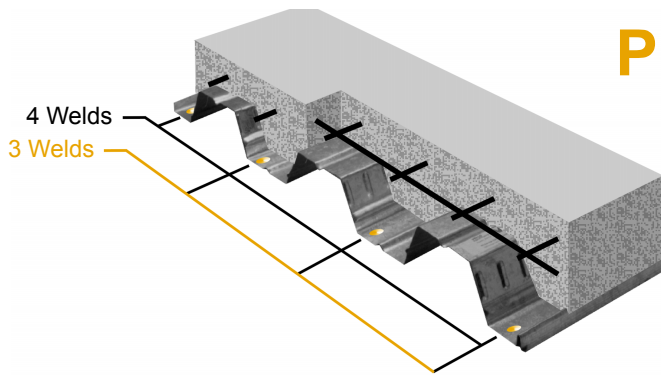
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q3    | 1705<br>24.88     | 1690<br>24.66  | 1680<br>24.52  | 1670<br>24.37  | 1660<br>24.23   | 1650<br>24.08   | 1645<br>24.01   | 1635<br>23.86   | 1630<br>23.79   | 1625<br>23.72   | 1620<br>23.64   | 1615<br>23.57   | 1610<br>23.50   | 1605<br>23.42   | 1600<br>23.35   |
|           | q4    | 1780<br>25.98     | 1760<br>25.69  | 1740<br>25.39  | 1725<br>25.17  | 1710<br>24.96   | 1695<br>24.74   | 1680<br>24.52   | 1670<br>24.37   | 1660<br>24.23   | 1650<br>24.08   | 1640<br>23.93   | 1630<br>23.79   | 1620<br>23.64   | 1615<br>23.57   | 1610<br>23.50   |
| <b>21</b> | q3    | 1705<br>24.88     | 1690<br>24.66  | 1680<br>24.52  | 1665<br>24.30  | 1655<br>24.15   | 1645<br>24.01   | 1635<br>23.86   | 1630<br>23.79   | 1620<br>23.64   | 1615<br>23.57   | 1610<br>23.50   | 1605<br>23.42   | 1600<br>23.35   | 1595<br>23.28   | 1590<br>23.20   |
|           | q4    | 1810<br>26.41     | 1790<br>26.12  | 1770<br>25.83  | 1750<br>25.54  | 1730<br>25.25   | 1715<br>25.03   | 1700<br>24.81   | 1685<br>24.59   | 1670<br>24.37   | 1660<br>24.23   | 1650<br>24.08   | 1640<br>23.93   | 1630<br>23.79   | 1620<br>23.64   | 1610<br>23.50   |
| <b>20</b> | q3    | 1710<br>24.96     | 1695<br>24.74  | 1680<br>24.52  | 1665<br>24.30  | 1655<br>24.15   | 1645<br>24.01   | 1635<br>23.86   | 1630<br>23.79   | 1620<br>23.64   | 1615<br>23.57   | 1605<br>23.42   | 1600<br>23.35   | 1595<br>23.28   | 1590<br>23.20   | 1585<br>23.13   |
|           | q4    | 1830<br>26.71     | 1805<br>26.34  | 1780<br>25.98  | 1760<br>25.69  | 1740<br>25.39   | 1720<br>25.10   | 1700<br>24.81   | 1690<br>24.66   | 1680<br>24.52   | 1665<br>24.30   | 1650<br>24.08   | 1640<br>23.93   | 1630<br>23.79   | 1620<br>23.64   | 1610<br>23.50   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with F < 1 (5.7).

# PLW3™ and W3 FORMLOK™



- 6¼ in. (159 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m<sup>3</sup>)
- 43.5 psf (2,083 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted ■
- 2 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.7<br>129.3                    | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9                    | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6                    | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | 1     | 400<br>19.2       | 372<br>17.8    | 338<br>16.2    | 309<br>14.8    | 284<br>13.6     | 262<br>12.5     | 235<br>11.3     | 183<br>8.8      | 168<br>8.0      | 154<br>7.4      | 142<br>6.8      | 131<br>6.3      | 121<br>5.8      | 111<br>5.3      | 103<br>4.9      |
|           | 2     | 400<br>19.2       | 372<br>17.8    | 338<br>16.2    | 309<br>14.8    | 284<br>13.6     | 262<br>12.5     | 242<br>11.6     | 225<br>10.8     | 209<br>10.0     | 154<br>7.4      | 142<br>6.8      | 131<br>6.3      | 121<br>5.8      | 111<br>5.3      | 103<br>4.9      |
|           | 3     | 400<br>19.2       | 372<br>17.8    | 338<br>16.2    | 309<br>14.8    | 284<br>13.6     | 262<br>12.5     | 242<br>11.6     | 225<br>10.8     | 209<br>10.0     | 196<br>9.4      | 183<br>8.8      | 131<br>6.3      | 121<br>5.8      | 111<br>5.3      | 103<br>4.9      |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 369<br>17.7    | 338<br>16.2    | 310<br>14.8     | 286<br>13.7     | 264<br>12.6     | 241<br>11.5     | 203<br>9.7      | 172<br>8.2      | 158<br>7.6      | 146<br>7.0      | 135<br>6.5      | 125<br>6.0      | 116<br>5.6      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 369<br>17.7    | 338<br>16.2    | 310<br>14.8     | 286<br>13.7     | 264<br>12.6     | 246<br>11.8     | 229<br>11.0     | 214<br>10.2     | 158<br>7.6      | 146<br>7.0      | 135<br>6.5      | 125<br>6.0      | 116<br>5.6      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 369<br>17.7    | 338<br>16.2    | 310<br>14.8     | 286<br>13.7     | 264<br>12.6     | 246<br>11.8     | 229<br>11.0     | 214<br>10.2     | 200<br>9.6      | 188<br>9.0      | 176<br>8.4      | 125<br>6.0      | 116<br>5.6      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 370<br>17.7     | 341<br>16.3     | 316<br>15.1     | 293<br>14.0     | 273<br>13.1     | 255<br>12.2     | 197<br>9.4      | 182<br>8.7      | 169<br>8.1      | 157<br>7.5      | 146<br>7.0      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 370<br>17.7     | 341<br>16.3     | 316<br>15.1     | 293<br>14.0     | 273<br>13.1     | 255<br>12.2     | 239<br>11.4     | 224<br>10.7     | 211<br>10.1     | 157<br>7.5      | 146<br>7.0      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 370<br>17.7     | 341<br>16.3     | 316<br>15.1     | 293<br>14.0     | 273<br>13.1     | 255<br>12.2     | 239<br>11.4     | 224<br>10.7     | 211<br>10.1     | 199<br>9.5      | 188<br>9.0      |

Shoring required in shaded areas to right of heavy line

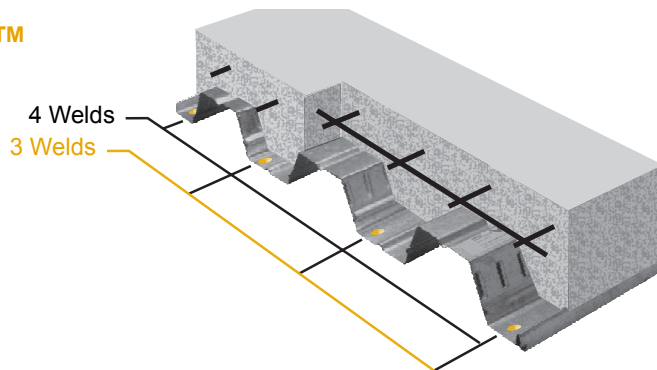
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | q3    | 1725<br>25.17     | 1710<br>24.96  | 1690<br>24.66  | 1675<br>24.44  | 1660<br>24.23   | 1650<br>24.08   | 1640<br>23.93   | 1630<br>23.79   | 1620<br>23.64   | 1610<br>23.50   | 1605<br>23.42   | 1595<br>23.28   | 1590<br>23.20   | 1580<br>23.06   | 1575<br>22.99   |
|           | q4    | 1890<br>27.58     | 1860<br>27.14  | 1830<br>26.71  | 1805<br>26.34  | 1780<br>25.98   | 1760<br>25.69   | 1740<br>25.39   | 1725<br>25.17   | 1710<br>24.96   | 1695<br>24.74   | 1680<br>24.52   | 1670<br>24.37   | 1660<br>24.23   | 1645<br>24.01   | 1630<br>23.79   |
| <b>18</b> | q3    | 1745<br>25.47     | 1725<br>25.17  | 1705<br>24.88  | 1690<br>24.66  | 1670<br>24.37   | 1660<br>24.23   | 1645<br>24.01   | 1635<br>23.86   | 1625<br>23.72   | 1615<br>23.57   | 1605<br>23.42   | 1600<br>23.35   | 1590<br>23.20   | 1585<br>23.13   | 1575<br>22.99   |
|           | q4    | 1940<br>28.31     | 1905<br>27.80  | 1870<br>27.29  | 1845<br>26.93  | 1820<br>26.56   | 1795<br>26.20   | 1770<br>25.83   | 1750<br>25.54   | 1730<br>25.25   | 1715<br>25.03   | 1700<br>24.81   | 1690<br>24.66   | 1680<br>24.52   | 1665<br>24.30   | 1650<br>24.08   |
| <b>16</b> | q3    | 1800<br>26.27     | 1770<br>25.83  | 1750<br>25.54  | 1725<br>25.17  | 1710<br>24.96   | 1690<br>24.66   | 1675<br>24.44   | 1660<br>24.23   | 1645<br>24.01   | 1635<br>23.86   | 1625<br>23.72   | 1615<br>23.57   | 1605<br>23.42   | 1595<br>23.28   | 1585<br>23.13   |
|           | q4    | 2070<br>30.21     | 2025<br>29.55  | 1980<br>28.90  | 1945<br>28.39  | 1910<br>27.87   | 1880<br>27.44   | 1850<br>27.00   | 1830<br>26.71   | 1810<br>26.41   | 1790<br>26.12   | 1770<br>25.83   | 1750<br>25.54   | 1730<br>25.25   | 1715<br>25.03   | 1700<br>24.81   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW3™ and W3 FORMLOK™

- 7¼ in. (184 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
52.7 psf (2,523 N/m²)
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |                  |               |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|------------------|---------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              | Interior Bearing |               |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm     | 4"<br>102 mm  | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0         | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327 | 267<br>3,897     | 601<br>8,771  | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5        | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174 | 331<br>4,831     | 781<br>11,398 | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1        | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612 | 365<br>5,327     | 877<br>12,799 | 1014<br>14,798 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 364<br>17.4       | 280<br>13.4    | 250<br>12.0    | 224<br>10.7    | 202<br>9.7      | 182<br>8.7      | 165<br>7.9      | 150<br>7.2      | 136<br>6.5      | 124<br>5.9      | 113<br>5.4      | 103<br>4.9      | 94<br>4.5       | 86<br>4.1       | 79<br>3.8       |
|           | 2     | 364<br>17.4       | 329<br>15.8    | 299<br>14.3    | 224<br>10.7    | 202<br>9.7      | 182<br>8.7      | 165<br>7.9      | 150<br>7.2      | 136<br>6.5      | 124<br>5.9      | 113<br>5.4      | 103<br>4.9      | 94<br>4.5       | 86<br>4.1       | 79<br>3.8       |
|           | 3     | 364<br>17.4       | 329<br>15.8    | 299<br>14.3    | 273<br>13.1    | 251<br>12.0     | 182<br>8.7      | 165<br>7.9      | 150<br>7.2      | 136<br>6.5      | 124<br>5.9      | 113<br>5.4      | 103<br>4.9      | 94<br>4.5       | 86<br>4.1       | 79<br>3.8       |
| <b>21</b> | 1     | 400<br>19.2       | 363<br>17.4    | 281<br>13.5    | 253<br>12.1    | 228<br>10.9     | 206<br>9.9      | 187<br>9.0      | 170<br>8.1      | 155<br>7.4      | 142<br>6.8      | 130<br>6.2      | 119<br>5.7      | 109<br>5.2      | 100<br>4.8      | 92<br>4.4       |
|           | 2     | 400<br>19.2       | 363<br>17.4    | 330<br>15.8    | 302<br>14.5    | 277<br>13.3     | 206<br>9.9      | 187<br>9.0      | 170<br>8.1      | 155<br>7.4      | 142<br>6.8      | 130<br>6.2      | 119<br>5.7      | 109<br>5.2      | 100<br>4.8      | 92<br>4.4       |
|           | 3     | 400<br>19.2       | 363<br>17.4    | 330<br>15.8    | 302<br>14.5    | 277<br>13.3     | 255<br>12.2     | 236<br>11.3     | 170<br>8.1      | 155<br>7.4      | 142<br>6.8      | 130<br>6.2      | 119<br>5.7      | 109<br>5.2      | 100<br>4.8      | 92<br>4.4       |
| <b>20</b> | 1     | 400<br>19.2       | 380<br>18.2    | 345<br>16.5    | 266<br>12.7    | 240<br>11.5     | 218<br>10.4     | 198<br>9.5      | 180<br>8.6      | 165<br>7.9      | 150<br>7.2      | 138<br>6.6      | 126<br>6.0      | 116<br>5.6      | 107<br>5.1      | 98<br>4.7       |
|           | 2     | 400<br>19.2       | 380<br>18.2    | 345<br>16.5    | 316<br>15.1    | 290<br>13.9     | 218<br>10.4     | 198<br>9.5      | 180<br>8.6      | 165<br>7.9      | 150<br>7.2      | 138<br>6.6      | 126<br>6.0      | 116<br>5.6      | 107<br>5.1      | 98<br>4.7       |
|           | 3     | 400<br>19.2       | 380<br>18.2    | 345<br>16.5    | 316<br>15.1    | 290<br>13.9     | 267<br>12.8     | 247<br>11.8     | 230<br>11.0     | 165<br>7.9      | 150<br>7.2      | 138<br>6.6      | 126<br>6.0      | 116<br>5.6      | 107<br>5.1      | 98<br>4.7       |

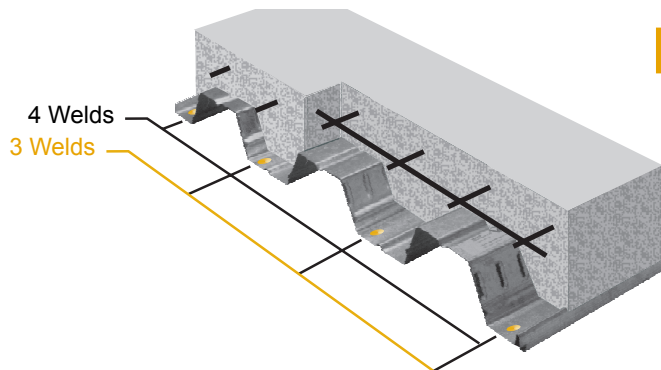
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q3    | 2020<br>29.48     | 2005<br>29.26  | 1995<br>29.11  | 1985<br>28.97  | 1975<br>28.82   | 1965<br>28.68   | 1960<br>28.60   | 1950<br>28.46   | 1945<br>28.39   | 1940<br>28.31   | 1935<br>28.24   | 1930<br>28.17   | 1925<br>28.09   | 1920<br>28.02   | 1915<br>27.95   |
|           | q4    | 2100<br>30.65     | 2080<br>30.36  | 2060<br>30.06  | 2040<br>29.77  | 2020<br>29.48   | 2010<br>29.33   | 2000<br>29.19   | 1985<br>28.97   | 1970<br>28.75   | 1960<br>28.60   | 1950<br>28.46   | 1945<br>28.39   | 1940<br>28.31   | 1930<br>28.17   | 1920<br>28.02   |
| <b>21</b> | q3    | 2020<br>29.48     | 2005<br>29.26  | 1995<br>29.11  | 1980<br>28.90  | 1970<br>28.75   | 1960<br>28.60   | 1955<br>28.53   | 1945<br>28.39   | 1940<br>28.31   | 1930<br>28.17   | 1925<br>28.09   | 1920<br>28.02   | 1915<br>27.95   | 1910<br>27.87   | 1905<br>27.80   |
|           | q4    | 2130<br>31.09     | 2125<br>31.01  | 2080<br>30.36  | 2060<br>30.06  | 2040<br>29.77   | 2025<br>29.55   | 2010<br>29.33   | 1995<br>29.11   | 1980<br>28.90   | 1970<br>28.75   | 1960<br>28.60   | 1950<br>28.46   | 1940<br>28.31   | 1935<br>28.24   | 1930<br>28.17   |
| <b>20</b> | q3    | 2025<br>29.55     | 2010<br>29.33  | 1995<br>29.11  | 1985<br>28.97  | 1970<br>28.75   | 1960<br>28.60   | 1950<br>28.46   | 1945<br>28.39   | 1935<br>28.24   | 1930<br>28.17   | 1920<br>28.02   | 1915<br>27.95   | 1910<br>27.87   | 1905<br>27.80   | 1900<br>27.73   |
|           | q4    | 2150<br>31.38     | 2120<br>30.94  | 2090<br>30.50  | 2070<br>30.21  | 2050<br>29.92   | 2035<br>29.70   | 2020<br>29.48   | 2005<br>29.26   | 1990<br>29.04   | 1980<br>28.90   | 1970<br>28.75   | 1960<br>28.60   | 1950<br>28.46   | 1940<br>28.31   | 1930<br>28.17   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLW3™ and W3 FORMLOK™



- 7¼ in. (184 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m³)
- 52.7 psf (2,523 N/m²)
- Galvanized or Phosphatized/Painted ■
- 3 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>19</b> | 2.7<br>129.3        | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9        | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6        | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | 1     | 400<br>19.2       | 400<br>19.2    | 397<br>19.0    | 363<br>17.4    | 333<br>15.9     | 304<br>14.6     | 235<br>11.3     | 214<br>10.2     | 196<br>9.4      | 180<br>8.6      | 166<br>7.9      | 153<br>7.3      | 141<br>6.8      | 130<br>6.2      | 120<br>5.7      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 397<br>19.0    | 363<br>17.4    | 333<br>15.9     | 307<br>14.7     | 285<br>13.6     | 214<br>10.2     | 196<br>9.4      | 180<br>8.6      | 166<br>7.9      | 153<br>7.3      | 141<br>6.8      | 130<br>6.2      | 120<br>5.7      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 397<br>19.0    | 363<br>17.4    | 333<br>15.9     | 307<br>14.7     | 285<br>13.6     | 264<br>12.6     | 246<br>11.8     | 230<br>11.0     | 166<br>7.9      | 153<br>7.3      | 141<br>6.8      | 130<br>6.2      | 120<br>5.7      |
| <b>18</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 396<br>19.0    | 364<br>17.4     | 335<br>16.0     | 310<br>14.8     | 238<br>11.4     | 218<br>10.4     | 201<br>9.6      | 185<br>8.9      | 171<br>8.2      | 158<br>7.6      | 146<br>7.0      | 135<br>6.5      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 396<br>19.0    | 364<br>17.4     | 335<br>16.0     | 310<br>14.8     | 288<br>13.8     | 268<br>12.8     | 201<br>9.6      | 185<br>8.9      | 171<br>8.2      | 158<br>7.6      | 146<br>7.0      | 135<br>6.5      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 396<br>19.0    | 364<br>17.4     | 335<br>16.0     | 310<br>14.8     | 288<br>13.8     | 268<br>12.8     | 251<br>12.0     | 235<br>11.3     | 171<br>8.2      | 158<br>7.6      | 146<br>7.0      | 135<br>6.5      |
| <b>16</b> | 1     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2     | 399<br>19.1     | 370<br>17.7     | 343<br>16.4     | 320<br>15.3     | 248<br>11.9     | 229<br>11.0     | 212<br>10.2     | 197<br>9.4      | 183<br>8.8      | 170<br>8.1      |
|           | 2     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2     | 399<br>19.1     | 370<br>17.7     | 343<br>16.4     | 320<br>15.3     | 299<br>14.3     | 280<br>13.4     | 212<br>10.2     | 197<br>9.4      | 183<br>8.8      | 170<br>8.1      |
|           | 3     | 400<br>19.2       | 400<br>19.2    | 400<br>19.2    | 400<br>19.2    | 400<br>19.2     | 399<br>19.1     | 370<br>17.7     | 343<br>16.4     | 320<br>15.3     | 299<br>14.3     | 280<br>13.4     | 263<br>12.6     | 247<br>11.8     | 233<br>11.2     | 170<br>8.1      |

Shoring required in shaded areas to right of heavy line

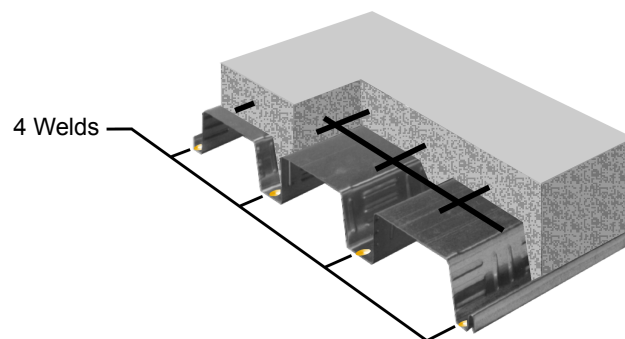
## Diaphragm Shear Values, q (plf, kN/m)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>19</b> | q3    | 2045<br>29.84     | 2025<br>29.55  | 2005<br>29.26  | 1990<br>29.04  | 1980<br>28.90   | 1965<br>28.68   | 1955<br>28.53   | 1945<br>28.39   | 1935<br>28.24   | 1925<br>28.09   | 1920<br>28.02   | 1910<br>27.87   | 1905<br>27.80   | 1900<br>27.73   | 1890<br>27.58   |
|           | q4    | 2210<br>32.25     | 2180<br>31.81  | 2150<br>31.38  | 2125<br>31.01  | 2100<br>30.65   | 2080<br>30.36   | 2060<br>30.06   | 2040<br>29.77   | 2020<br>29.48   | 2010<br>29.33   | 2000<br>29.19   | 1985<br>28.97   | 1970<br>28.75   | 1960<br>28.60   | 1950<br>28.46   |
| <b>18</b> | q3    | 2060<br>30.06     | 2040<br>29.77  | 2020<br>29.48  | 2005<br>29.26  | 1990<br>29.04   | 1975<br>28.82   | 1960<br>28.60   | 1950<br>28.46   | 1940<br>28.31   | 1930<br>28.17   | 1920<br>28.02   | 1915<br>27.95   | 1905<br>27.80   | 1900<br>27.73   | 1890<br>27.58   |
|           | q4    | 2260<br>32.98     | 2225<br>32.47  | 2190<br>31.96  | 2160<br>31.52  | 2130<br>31.09   | 2110<br>30.79   | 2090<br>30.50   | 2070<br>30.21   | 2050<br>29.92   | 2035<br>29.70   | 2020<br>29.48   | 2005<br>29.26   | 1990<br>29.04   | 1980<br>28.90   | 1970<br>28.75   |
| <b>16</b> | q3    | 2115<br>30.87     | 2085<br>30.43  | 2065<br>30.14  | 2045<br>29.84  | 2025<br>29.55   | 2005<br>29.26   | 1990<br>29.04   | 1975<br>28.82   | 1965<br>28.68   | 1950<br>28.46   | 1940<br>28.31   | 1930<br>28.17   | 1920<br>28.02   | 1910<br>27.87   | 1905<br>27.80   |
|           | q4    | 2380<br>34.73     | 2340<br>34.15  | 2300<br>33.57  | 2265<br>33.06  | 2230<br>32.54   | 2200<br>32.11   | 2170<br>31.67   | 2145<br>31.30   | 2120<br>30.94   | 2100<br>30.65   | 2080<br>30.36   | 2065<br>30.14   | 2050<br>29.92   | 2035<br>29.70   | 2020<br>29.48   |

PLW3 and W3 FORMLOK decks with structural concrete fill may be considered rigid diaphragms, with  $F < 1$  (5.7).

# PLN™ and N FORMLOK™

- 5 in. (127 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m<sup>3</sup>)  
34.4 psf (1,647 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 2.2<br>105.3                    | 2.1<br>100.5     | 0.613<br>837,105                         | 0.361<br>19,408                           | 0.446<br>23,978                           | 349<br>5,093                                    | 419<br>6,115 | 489<br>7,136 | 1104<br>16,112   | 1287<br>18,782 |
| <b>20</b> | 2.6<br>124.5                    | 2.5<br>119.7     | 0.780<br>1,065,159                       | 0.466<br>25,054                           | 0.548<br>29,462                           | 486<br>7,093                                    | 572<br>8,348 | 659<br>9,617 | 1582<br>23,088   | 1828<br>26,678 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

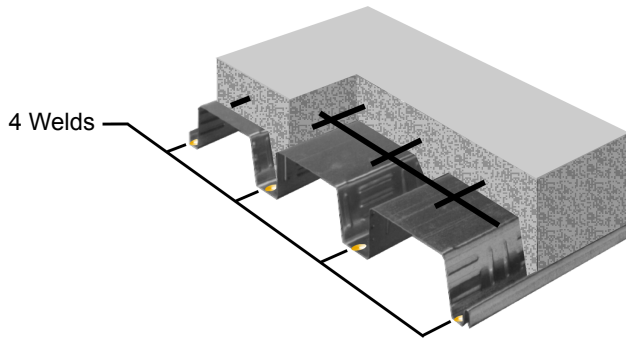
| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b> | 1     | 241<br>11.5       | 211<br>10.1    | 165<br>7.9     | 148<br>7.1     | 133<br>6.4      | 120<br>5.7      | 109<br>5.2      | 99<br>4.7       | 90<br>4.3       | 82<br>3.9       | 74<br>3.5       | 68<br>3.3       | 62<br>3.0       |                 |                 |
|           | 2     | 241<br>11.5       | 218<br>10.4    | 198<br>9.5     | 181<br>8.7     | 166<br>7.9      | 145<br>6.9      | 109<br>5.2      | 99<br>4.7       | 90<br>4.3       | 82<br>3.9       | 74<br>3.5       | 68<br>3.3       | 62<br>3.0       |                 |                 |
|           | 3     | 241<br>11.5       | 218<br>10.4    | 198<br>9.5     | 181<br>8.7     | 166<br>7.9      | 145<br>6.9      | 109<br>5.2      | 99<br>4.7       | 90<br>4.3       | 82<br>3.9       | 74<br>3.5       | 68<br>3.3       | 62<br>3.0       |                 |                 |
| <b>20</b> | 1     | 255<br>12.2       | 230<br>11.0    | 209<br>10.0    | 191<br>9.1     | 142<br>6.8      | 129<br>6.2      | 117<br>5.6      | 106<br>5.1      | 96<br>4.6       | 88<br>4.2       | 80<br>3.8       | 73<br>3.5       | 67<br>3.2       | 61<br>2.9       | 56<br>2.7       |
|           | 2     | 255<br>12.2       | 230<br>11.0    | 209<br>10.0    | 191<br>9.1     | 176<br>8.4      | 162<br>7.8      | 150<br>7.2      | 139<br>6.7      | 96<br>4.6       | 88<br>4.2       | 80<br>3.8       | 73<br>3.5       | 67<br>3.2       | 61<br>2.9       | 56<br>2.7       |
|           | 3     | 255<br>12.2       | 230<br>11.0    | 209<br>10.0    | 191<br>9.1     | 176<br>8.4      | 162<br>7.8      | 150<br>7.2      | 139<br>6.7      | 122<br>5.8      | 88<br>4.2       | 80<br>3.8       | 73<br>3.5       | 67<br>3.2       | 61<br>2.9       | 56<br>2.7       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b> | q4    | 1700<br>24.81     | 1675<br>24.44  | 1660<br>24.23  | 1640<br>23.93  | 1625<br>23.72   | 1610<br>23.50   | 1600<br>23.35   | 1585<br>23.13   | 1575<br>22.99   | 1565<br>22.84   | 1555<br>22.69   | 1550<br>22.62   | 1540<br>22.47   |                 |                 |
|           | F4    | 1.10<br>6.3       | 1.11<br>6.3    | 1.13<br>6.5    | 1.14<br>6.5    | 1.15<br>6.6     | 1.16<br>6.6     | 1.17<br>6.7     | 1.18<br>6.7     | 1.18<br>6.7     | 1.19<br>6.8     | 1.20<br>6.9     | 1.21<br>6.9     | 1.21<br>6.9     |                 |                 |
| <b>20</b> | q4    | 1740<br>25.39     | 1715<br>25.03  | 1690<br>24.66  | 1670<br>24.37  | 1650<br>24.08   | 1635<br>23.86   | 1620<br>23.64   | 1605<br>23.42   | 1590<br>23.20   | 1580<br>23.06   | 1570<br>22.91   | 1560<br>22.77   | 1550<br>22.62   | 1540<br>22.47   | 1535<br>22.40   |
|           | F4    | 0.98<br>5.6       | 0.99<br>5.7    | 1.01<br>5.8    | 1.02<br>5.8    | 1.03<br>5.9     | 1.04<br>5.9     | 1.05<br>6.0     | 1.06<br>6.1     | 1.07<br>6.1     | 1.08<br>6.2     | 1.08<br>6.2     | 1.09<br>6.2     | 1.10<br>6.3     | 1.10<br>6.3     | 1.11<br>6.3     |





- 5 in. (127 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete
- 145 pcf (2,320 kg/m<sup>3</sup>)
- 34.4 psf (1,647 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>18</b> | 3.5<br>167.6                    | 3.4<br>162.8     | 1.146<br>1,564,964                       | 0.664<br>35,699                           | 0.737<br>39,623                           | 916<br>13,368                                   | 1051<br>15,338 | 1186<br>17,308 | 2695<br>39,331   | 3066<br>44,745 |
| <b>16</b> | 4.2<br>201.1                    | 4.1<br>196.3     | 1.542<br>2,105,737                       | 0.851<br>45,752                           | 0.914<br>49,139                           | 1670<br>24,372                                  | 1879<br>27,422 | 2088<br>30,472 | 4033<br>58,857   | 4532<br>66,140 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | 1     | 257<br>12.3       | 232<br>11.1    | 211<br>10.1    | 193<br>9.2     | 177<br>8.5      | 163<br>7.8      | 151<br>7.2      | 140<br>6.7      | 128<br>6.1      | 88<br>4.2       | 80<br>3.8       | 73<br>3.5       | 67<br>3.2       | 61<br>2.9       | 56<br>2.7       |
|           | 2     | 257<br>12.3       | 232<br>11.1    | 211<br>10.1    | 193<br>9.2     | 177<br>8.5      | 163<br>7.8      | 151<br>7.2      | 140<br>6.7      | 131<br>6.3      | 122<br>5.8      | 114<br>5.5      | 73<br>3.5       | 67<br>3.2       | 61<br>2.9       | 56<br>2.7       |
|           | 3     | 257<br>12.3       | 232<br>11.1    | 211<br>10.1    | 193<br>9.2     | 177<br>8.5      | 163<br>7.8      | 151<br>7.2      | 140<br>6.7      | 131<br>6.3      | 122<br>5.8      | 114<br>5.5      | 107<br>5.1      | 101<br>4.8      | 95<br>4.5       | 56<br>2.7       |
| <b>16</b> | 1     | 259<br>12.4       | 234<br>11.2    | 213<br>10.2    | 194<br>9.3     | 178<br>8.5      | 165<br>7.9      | 152<br>7.3      | 141<br>6.8      | 132<br>6.3      | 123<br>5.9      | 115<br>5.5      | 108<br>5.2      | 67<br>3.2       | 61<br>2.9       | 56<br>2.7       |
|           | 2     | 259<br>12.4       | 234<br>11.2    | 213<br>10.2    | 194<br>9.3     | 178<br>8.5      | 165<br>7.9      | 152<br>7.3      | 141<br>6.8      | 132<br>6.3      | 123<br>5.9      | 115<br>5.5      | 108<br>5.2      | 102<br>4.9      | 96<br>4.6       | 56<br>2.7       |
|           | 3     | 259<br>12.4       | 234<br>11.2    | 213<br>10.2    | 194<br>9.3     | 178<br>8.5      | 165<br>7.9      | 152<br>7.3      | 141<br>6.8      | 132<br>6.3      | 123<br>5.9      | 115<br>5.5      | 108<br>5.2      | 102<br>4.9      | 96<br>4.6       | 91<br>4.4       |

Shoring required in shaded areas to right of heavy line

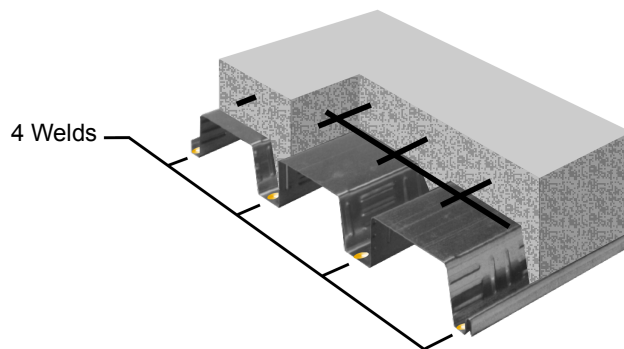
## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | q4    | 1840<br>26.85     | 1805<br>26.34  | 1775<br>25.90  | 1750<br>25.54  | 1725<br>25.17   | 1700<br>24.81   | 1680<br>24.52   | 1660<br>24.23   | 1645<br>24.01   | 1630<br>23.79   | 1615<br>23.57   | 1600<br>23.35   | 1590<br>23.20   | 1575<br>22.99   | 1565<br>22.84   |
|           | F4    | 0.80<br>4.6       | 0.82<br>4.7    | 0.83<br>4.7    | 0.84<br>4.8    | 0.86<br>4.9     | 0.87<br>5.0     | 0.88<br>5.0     | 0.89<br>5.1     | 0.90<br>5.1     | 0.91<br>5.2     | 0.91<br>5.2     | 0.92<br>5.3     | 0.93<br>5.3     | 0.94<br>5.4     | 0.94<br>5.4     |
| <b>16</b> | q4    | 1960<br>28.60     | 1915<br>27.95  | 1875<br>27.36  | 1840<br>26.85  | 1810<br>26.41   | 1785<br>26.05   | 1760<br>25.69   | 1735<br>25.32   | 1715<br>25.03   | 1695<br>24.74   | 1675<br>24.44   | 1660<br>24.23   | 1640<br>23.93   | 1630<br>23.79   | 1615<br>23.57   |
|           | F4    | 0.67<br>3.8       | 0.69<br>3.9    | 0.70<br>4.0    | 0.72<br>4.1    | 0.73<br>4.2     | 0.74<br>4.2     | 0.75<br>4.3     | 0.76<br>4.3     | 0.77<br>4.4     | 0.78<br>4.5     | 0.79<br>4.5     | 0.80<br>4.6     | 0.80<br>4.6     | 0.81<br>4.6     | 0.82<br>4.7     |



# PLN™ and N FORMLOK™

- 5½ in. (140 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
40.4 psf (1,934 N/m²)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

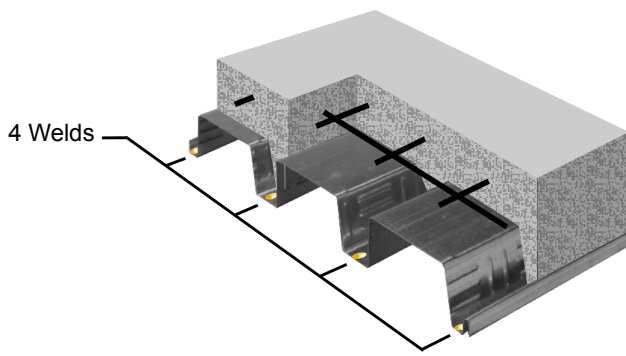
| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 2.2<br>105.3        | 2.1<br>100.5     | 0.613<br>837,105                         | 0.361<br>19,408                           | 0.446<br>23,978                           | 349<br>5,093                                    | 419<br>6,115 | 489<br>7,136 | 1104<br>16,112   | 1287<br>18,782 |
| <b>20</b> | 2.6<br>124.5        | 2.5<br>119.7     | 0.780<br>1,065,159                       | 0.466<br>25,054                           | 0.548<br>29,462                           | 486<br>7,093                                    | 572<br>8,348 | 659<br>9,617 | 1582<br>23,088   | 1828<br>26,678 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage                                                    | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---------------------------------------------------------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                                         |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|                                                         |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b>                                               | 1     | 263<br>12.6       | 200<br>9.6     | 178<br>8.5     | 160<br>7.7     | 143<br>6.8      | 129<br>6.2      | 117<br>5.6      | 106<br>5.1      | 96<br>4.6       | 87<br>4.2       | 79<br>3.8       | 72<br>3.4       | 65<br>3.1       |                 |                 |
|                                                         | 2     | 263<br>12.6       | 238<br>11.4    | 217<br>10.4    | 198<br>9.5     | 182<br>8.7      | 129<br>6.2      | 117<br>5.6      | 106<br>5.1      | 96<br>4.6       | 87<br>4.2       | 79<br>3.8       | 72<br>3.4       | 65<br>3.1       |                 |                 |
|                                                         | 3     | 263<br>12.6       | 238<br>11.4    | 217<br>10.4    | 198<br>9.5     | 182<br>8.7      | 129<br>6.2      | 117<br>5.6      | 106<br>5.1      | 96<br>4.6       | 87<br>4.2       | 79<br>3.8       | 72<br>3.4       | 65<br>3.1       |                 |                 |
| <b>20</b>                                               | 1     | 278<br>13.3       | 251<br>12.0    | 229<br>11.0    | 170<br>8.1     | 153<br>7.3      | 138<br>6.6      | 125<br>6.0      | 113<br>5.4      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 78<br>3.7       | 71<br>3.4       | 65<br>3.1       | 59<br>2.8       |
|                                                         | 2     | 278<br>13.3       | 251<br>12.0    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 113<br>5.4      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 78<br>3.7       | 71<br>3.4       | 65<br>3.1       | 59<br>2.8       |
|                                                         | 3     | 278<br>13.3       | 251<br>12.0    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 78<br>3.7       | 71<br>3.4       | 65<br>3.1       | 59<br>2.8       |
| Shoring required in shaded areas to right of heavy line |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b> | q4    | 1940<br>28.31     | 1915<br>27.95  | 1895<br>27.66  | 1880<br>27.44  | 1865<br>27.22   | 1850<br>27.00   | 1835<br>26.78   | 1825<br>26.63   | 1815<br>26.49   | 1805<br>26.34   | 1795<br>26.20   | 1785<br>26.05   | 1780<br>25.98   |                 |                 |
|           | F4    | 0.96<br>5.5       | 0.97<br>5.5    | 0.98<br>5.6    | 0.99<br>5.7    | 1.00<br>5.7     | 1.01<br>5.8     | 1.02<br>5.8     | 1.02<br>5.8     | 1.03<br>5.9     | 1.03<br>5.9     | 1.04<br>5.9     | 1.04<br>5.9     | 1.05<br>6.0     |                 |                 |
| <b>20</b> | q4    | 1980<br>28.90     | 1955<br>28.53  | 1930<br>28.17  | 1910<br>27.87  | 1890<br>27.58   | 1870<br>27.29   | 1860<br>27.14   | 1845<br>26.93   | 1830<br>26.71   | 1820<br>26.56   | 1810<br>26.41   | 1800<br>26.27   | 1790<br>26.12   | 1780<br>25.98   | 1770<br>25.83   |
|           | F4    | 0.86<br>4.9       | 0.87<br>5.0    | 0.88<br>5.0    | 0.89<br>5.1    | 0.90<br>5.1     | 0.91<br>5.2     | 0.92<br>5.3     | 0.92<br>5.3     | 0.93<br>5.3     | 0.94<br>5.4     | 0.94<br>5.4     | 0.95<br>5.4     | 0.95<br>5.4     | 0.96<br>5.5     | 0.96<br>5.5     |



- 5½ in. (140 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 40.4 psf (1,934 N/m²)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>18</b> | 3.5<br>167.6        | 3.4<br>162.8     | 1.146<br>1,564,964                       | 0.664<br>35,699                           | 0.737<br>39,623                           | 916<br>13,368                                   | 1051<br>15,338 | 1186<br>17,308 | 2695<br>39,331   | 3066<br>44,745 |
| <b>16</b> | 4.2<br>201.1        | 4.1<br>196.3     | 1.542<br>2,105,737                       | 0.851<br>45,752                           | 0.914<br>49,139                           | 1670<br>24,372                                  | 1879<br>27,422 | 2088<br>30,472 | 4033<br>58,857   | 4532<br>66,140 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | 1     | 278<br>13.3       | 252<br>12.1    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 102<br>4.9      | 93<br>4.5       | 85<br>4.1       | 77<br>3.7       | 70<br>3.4       | 64<br>3.1       | 58<br>2.8       |
|           | 2     | 278<br>13.3       | 252<br>12.1    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 132<br>6.3      | 85<br>4.1       | 77<br>3.7       | 70<br>3.4       | 64<br>3.1       | 58<br>2.8       |
|           | 3     | 278<br>13.3       | 252<br>12.1    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 132<br>6.3      | 124<br>5.9      | 116<br>5.6      | 110<br>5.3      | 64<br>3.1       | 58<br>2.8       |
| <b>16</b> | 1     | 279<br>13.4       | 252<br>12.1    | 229<br>11.0    | 210<br>10.1    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 133<br>6.4      | 124<br>5.9      | 77<br>3.7       | 70<br>3.4       | 63<br>3.0       | 58<br>2.8       |
|           | 2     | 279<br>13.4       | 252<br>12.1    | 229<br>11.0    | 210<br>10.1    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 133<br>6.4      | 124<br>5.9      | 117<br>5.6      | 110<br>5.3      | 63<br>3.0       | 58<br>2.8       |
|           | 3     | 279<br>13.4       | 252<br>12.1    | 229<br>11.0    | 210<br>10.1    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 133<br>6.4      | 124<br>5.9      | 117<br>5.6      | 110<br>5.3      | 104<br>5.0      | 98<br>4.7       |

Shoring required in shaded areas to right of heavy line

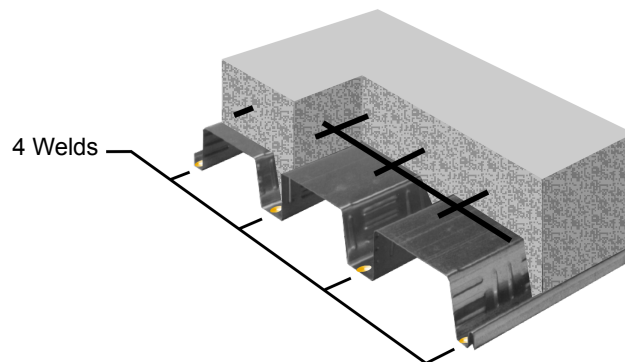
## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | q4    | 2080<br>30.36     | 2045<br>29.84  | 2015<br>29.41  | 1990<br>29.04  | 1965<br>28.68   | 1940<br>28.31   | 1920<br>28.02   | 1900<br>27.73   | 1885<br>27.51   | 1870<br>27.29   | 1855<br>27.07   | 1840<br>26.85   | 1830<br>26.71   | 1815<br>26.49   | 1805<br>26.34   |
|           | F4    | 0.71<br>4.1       | 0.72<br>4.1    | 0.73<br>4.2    | 0.74<br>4.2    | 0.75<br>4.3     | 0.76<br>4.3     | 0.77<br>4.4     | 0.78<br>4.5     | 0.78<br>4.5     | 0.79<br>4.5     | 0.80<br>4.6     | 0.80<br>4.6     | 0.81<br>4.6     | 0.81<br>4.6     | 0.82<br>4.7     |
| <b>16</b> | q4    | 2200<br>32.11     | 2155<br>31.45  | 2115<br>30.87  | 2080<br>30.36  | 2050<br>29.92   | 2020<br>29.48   | 1995<br>29.11   | 1975<br>28.82   | 1950<br>28.46   | 1930<br>28.17   | 1915<br>27.95   | 1895<br>27.66   | 1880<br>27.44   | 1865<br>27.22   | 1855<br>27.07   |
|           | F4    | 0.60<br>3.4       | 0.61<br>3.5    | 0.62<br>3.5    | 0.63<br>3.6    | 0.64<br>3.7     | 0.65<br>3.7     | 0.66<br>3.8     | 0.67<br>3.8     | 0.68<br>3.9     | 0.68<br>3.9     | 0.69<br>3.9     | 0.70<br>4.0     | 0.70<br>4.0     | 0.71<br>4.1     | 0.71<br>4.1     |

N  
NW  
5½"

# PLN™ and N FORMLOK™

- 6 in. (152 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m<sup>3</sup>)  
46.4 psf (2,222 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

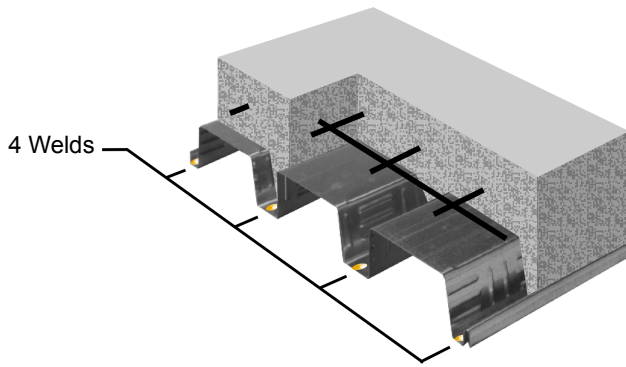
| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 2.2<br>105.3                    | 2.1<br>100.5     | 0.613<br>837,105                         | 0.361<br>19,408                           | 0.446<br>23,978                           | 349<br>5,093                                    | 419<br>6,115 | 489<br>7,136 | 1104<br>16,112   | 1287<br>18,782 |
| <b>20</b> | 2.6<br>124.5                    | 2.5<br>119.7     | 0.780<br>1,065,159                       | 0.466<br>25,054                           | 0.548<br>29,462                           | 486<br>7,093                                    | 572<br>8,348 | 659<br>9,617 | 1582<br>23,088   | 1828<br>26,678 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage                                                    | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---------------------------------------------------------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                                         |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|                                                         |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b>                                               | 1     | 245<br>11.7       | 217<br>10.4    | 194<br>9.3     | 173<br>8.3     | 155<br>7.4      | 140<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 77<br>3.7       |                 |                 |                 |
|                                                         | 2     | 289<br>13.8       | 261<br>12.5    | 237<br>11.3    | 217<br>10.4    | 155<br>7.4      | 140<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 77<br>3.7       |                 |                 |                 |
|                                                         | 3     | 289<br>13.8       | 261<br>12.5    | 237<br>11.3    | 217<br>10.4    | 155<br>7.4      | 140<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 77<br>3.7       |                 |                 |                 |
| <b>20</b>                                               | 1     | 300<br>14.4       | 275<br>13.2    | 250<br>12.0    | 184<br>8.8     | 166<br>7.9      | 149<br>7.1      | 135<br>6.5      | 122<br>5.8      | 111<br>5.3      | 101<br>4.8      | 91<br>4.4       | 83<br>4.0       | 76<br>3.6       | 69<br>3.3       | 63<br>3.0       |
|                                                         | 2     | 300<br>14.4       | 275<br>13.2    | 250<br>12.0    | 229<br>11.0    | 210<br>10.1     | 193<br>9.2      | 135<br>6.5      | 122<br>5.8      | 111<br>5.3      | 101<br>4.8      | 91<br>4.4       | 83<br>4.0       | 76<br>3.6       | 69<br>3.3       | 63<br>3.0       |
|                                                         | 3     | 300<br>14.4       | 275<br>13.2    | 250<br>12.0    | 229<br>11.0    | 210<br>10.1     | 193<br>9.2      | 179<br>8.6      | 122<br>5.8      | 111<br>5.3      | 101<br>4.8      | 91<br>4.4       | 83<br>4.0       | 76<br>3.6       | 69<br>3.3       | 63<br>3.0       |
| Shoring required in shaded areas to right of heavy line |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b> | q4    | 2175<br>31.74     | 2155<br>31.45  | 2135<br>31.16  | 2120<br>30.94  | 2105<br>30.72   | 2090<br>30.50   | 2075<br>30.28   | 2065<br>30.14   | 2055<br>29.99   | 2045<br>29.84   | 2035<br>29.70   | 2025<br>29.55   |                 |                 |                 |
|           | F4    | 0.86<br>4.9       | 0.87<br>5.0    | 0.87<br>5.0    | 0.88<br>5.0    | 0.89<br>5.1     | 0.89<br>5.1     | 0.90<br>5.1     | 0.90<br>5.1     | 0.91<br>5.2     | 0.91<br>5.2     | 0.92<br>5.3     | 0.92<br>5.3     |                 |                 |                 |
| <b>20</b> | q4    | 2220<br>32.40     | 2190<br>31.96  | 2170<br>31.67  | 2150<br>31.38  | 2130<br>31.09   | 2115<br>30.87   | 2095<br>30.57   | 2085<br>30.43   | 2070<br>30.21   | 2060<br>30.06   | 2050<br>29.92   | 2040<br>29.77   | 2030<br>29.63   | 2020<br>29.48   | 2010<br>29.33   |
|           | F4    | 0.77<br>4.4       | 0.78<br>4.5    | 0.79<br>4.5    | 0.79<br>4.5    | 0.80<br>4.6     | 0.81<br>4.6     | 0.81<br>4.6     | 0.82<br>4.7     | 0.82<br>4.7     | 0.83<br>4.7     | 0.83<br>4.7     | 0.84<br>4.8     | 0.84<br>4.8     | 0.84<br>4.8     | 0.85<br>4.9     |



- 6 in. (152 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m<sup>3</sup>)
- 46.4 psf (2,222 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>18</b> | 3.5<br>167.6                    | 3.4<br>162.8     | 1.146<br>1,564,964                       | 0.664<br>35,699                           | 0.737<br>39,623                           | 916<br>13,368                                   | 1051<br>15,338 | 1186<br>17,308 | 2695<br>39,331   | 3066<br>44,745 |
| <b>16</b> | 4.2<br>201.1                    | 4.1<br>196.3     | 1.542<br>2,105,737                       | 0.851<br>45,752                           | 0.914<br>49,139                           | 1670<br>24,372                                  | 1879<br>27,422 | 2088<br>30,472 | 4033<br>58,857   | 4532<br>66,140 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | 1     | 300<br>14.4       | 274<br>13.1    | 249<br>11.9    | 228<br>10.9    | 209<br>10.0     | 193<br>9.2      | 134<br>6.4      | 121<br>5.8      | 110<br>5.3      | 99<br>4.7       | 90<br>4.3       | 82<br>3.9       | 75<br>3.6       | 68<br>3.3       | 62<br>3.0       |
|           | 2     | 300<br>14.4       | 274<br>13.1    | 249<br>11.9    | 228<br>10.9    | 209<br>10.0     | 193<br>9.2      | 178<br>8.5      | 166<br>7.9      | 154<br>7.4      | 99<br>4.7       | 90<br>4.3       | 82<br>3.9       | 75<br>3.6       | 68<br>3.3       | 62<br>3.0       |
|           | 3     | 300<br>14.4       | 274<br>13.1    | 249<br>11.9    | 228<br>10.9    | 209<br>10.0     | 193<br>9.2      | 178<br>8.5      | 166<br>7.9      | 154<br>7.4      | 144<br>6.9      | 135<br>6.5      | 127<br>6.1      | 75<br>3.6       | 68<br>3.3       | 62<br>3.0       |
| <b>16</b> | 1     | 300<br>14.4       | 274<br>13.1    | 249<br>11.9    | 228<br>10.9    | 209<br>10.0     | 193<br>9.2      | 178<br>8.5      | 165<br>7.9      | 154<br>7.4      | 144<br>6.9      | 89<br>4.3       | 81<br>3.9       | 74<br>3.5       | 67<br>3.2       | 61<br>2.9       |
|           | 2     | 300<br>14.4       | 274<br>13.1    | 249<br>11.9    | 228<br>10.9    | 209<br>10.0     | 193<br>9.2      | 178<br>8.5      | 165<br>7.9      | 154<br>7.4      | 144<br>6.9      | 135<br>6.5      | 127<br>6.1      | 74<br>3.5       | 67<br>3.2       | 61<br>2.9       |
|           | 3     | 300<br>14.4       | 274<br>13.1    | 249<br>11.9    | 228<br>10.9    | 209<br>10.0     | 193<br>9.2      | 178<br>8.5      | 165<br>7.9      | 154<br>7.4      | 144<br>6.9      | 135<br>6.5      | 127<br>6.1      | 119<br>5.7      | 112<br>5.4      | 61<br>2.9       |

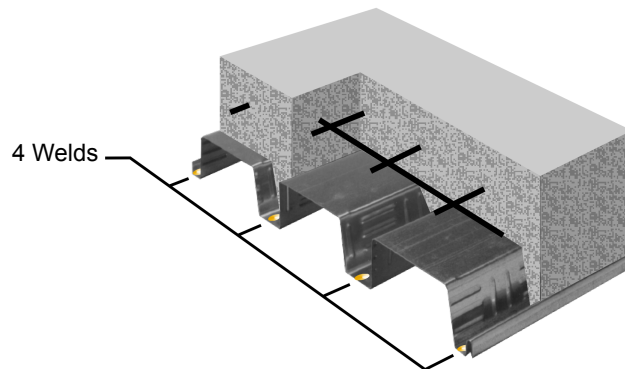
Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | q4    | 2320<br>33.86     | 2285<br>33.35  | 2255<br>32.91  | 2230<br>32.54  | 2200<br>32.11   | 2180<br>31.81   | 2160<br>31.52   | 2140<br>31.23   | 2125<br>31.01   | 2105<br>30.72   | 2095<br>30.57   | 2080<br>30.36   | 2065<br>30.14   | 2055<br>29.99   | 2045<br>29.84   |
|           | F4    | 0.64<br>3.7       | 0.65<br>3.7    | 0.65<br>3.7    | 0.66<br>3.8    | 0.67<br>3.8     | 0.68<br>3.9     | 0.68<br>3.9     | 0.69<br>3.9     | 0.70<br>4.0     | 0.70<br>4.0     | 0.71<br>4.1     | 0.71<br>4.1     | 0.71<br>4.1     | 0.72<br>4.1     | 0.72<br>4.1     |
| <b>16</b> | q4    | 2435<br>35.54     | 2395<br>34.95  | 2355<br>34.37  | 2320<br>33.86  | 2290<br>33.42   | 2260<br>32.98   | 2235<br>32.62   | 2210<br>32.25   | 2190<br>31.96   | 2170<br>31.67   | 2155<br>31.45   | 2135<br>31.16   | 2120<br>30.94   | 2105<br>30.72   | 2090<br>30.50   |
|           | F4    | 0.54<br>3.1       | 0.55<br>3.1    | 0.56<br>3.2    | 0.57<br>3.3    | 0.58<br>3.3     | 0.58<br>3.3     | 0.59<br>3.4     | 0.60<br>3.4     | 0.60<br>3.4     | 0.61<br>3.5     | 0.61<br>3.5     | 0.62<br>3.5     | 0.62<br>3.5     | 0.63<br>3.6     | 0.63<br>3.6     |

# PLN™ and N FORMLOK™

- 6½ in. (165 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
52.5 psf (2,514 N/m²)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 2.2<br>105.3        | 2.1<br>100.5     | 0.613<br>837,105                         | 0.361<br>19,408                           | 0.446<br>23,978                           | 349<br>5,093                                    | 419<br>6,115 | 489<br>7,136 | 1104<br>16,112   | 1287<br>18,782 |
| <b>20</b> | 2.6<br>124.5        | 2.5<br>119.7     | 0.780<br>1,065,159                       | 0.466<br>25,054                           | 0.548<br>29,462                           | 486<br>7,093                                    | 572<br>8,348 | 659<br>9,617 | 1582<br>23,088   | 1828<br>26,678 |

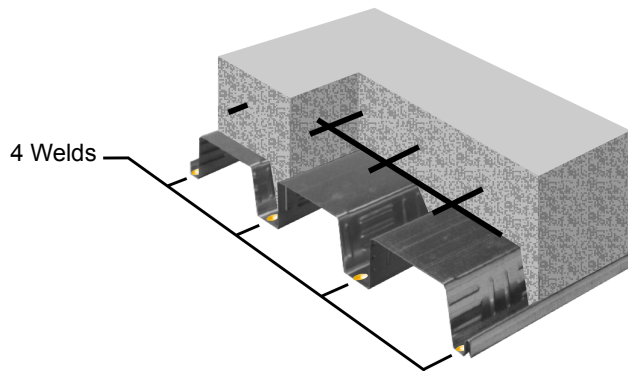
## Allowable Superimposed Loads (psf, kN/m²)

| Gage                                                    | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---------------------------------------------------------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                                         |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|                                                         |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b>                                               | 1     | 267<br>12.8       | 236<br>11.3    | 210<br>10.1    | 188<br>9.0     | 169<br>8.1      | 152<br>7.3      | 137<br>6.6      | 123<br>5.9      | 112<br>5.4      | 101<br>4.8      | 91<br>4.4       | 83<br>4.0       |                 |                 |                 |
|                                                         | 2     | 300<br>14.4       | 286<br>13.7    | 260<br>12.4    | 188<br>9.0     | 169<br>8.1      | 152<br>7.3      | 137<br>6.6      | 123<br>5.9      | 112<br>5.4      | 101<br>4.8      | 91<br>4.4       | 83<br>4.0       |                 |                 |                 |
|                                                         | 3     | 300<br>14.4       | 286<br>13.7    | 260<br>12.4    | 188<br>9.0     | 169<br>8.1      | 152<br>7.3      | 137<br>6.6      | 123<br>5.9      | 112<br>5.4      | 101<br>4.8      | 91<br>4.4       | 83<br>4.0       |                 |                 |                 |
| <b>20</b>                                               | 1     | 300<br>14.4       | 300<br>14.4    | 224<br>10.7    | 200<br>9.6     | 180<br>8.6      | 162<br>7.8      | 146<br>7.0      | 132<br>6.3      | 120<br>5.7      | 108<br>5.2      | 98<br>4.7       | 89<br>4.3       | 81<br>3.9       | 74<br>3.5       | 67<br>3.2       |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 273<br>13.1    | 250<br>12.0    | 229<br>11.0     | 162<br>7.8      | 146<br>7.0      | 132<br>6.3      | 120<br>5.7      | 108<br>5.2      | 98<br>4.7       | 89<br>4.3       | 81<br>3.9       | 74<br>3.5       | 67<br>3.2       |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 273<br>13.1    | 250<br>12.0    | 229<br>11.0     | 211<br>10.1     | 146<br>7.0      | 132<br>6.3      | 120<br>5.7      | 108<br>5.2      | 98<br>4.7       | 89<br>4.3       | 81<br>3.9       | 74<br>3.5       | 67<br>3.2       |
| Shoring required in shaded areas to right of heavy line |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b> | q4    | 2415<br>35.24     | 2395<br>34.95  | 2375<br>34.66  | 2360<br>34.44  | 2340<br>34.15   | 2330<br>34.00   | 2315<br>33.78   | 2305<br>33.64   | 2295<br>33.49   | 2285<br>33.35   | 2275<br>33.20   | 2265<br>33.06   |                 |                 |                 |
|           | F4    | 0.77<br>4.4       | 0.78<br>4.5    | 0.79<br>4.5    | 0.79<br>4.5    | 0.80<br>4.6     | 0.80<br>4.6     | 0.81<br>4.6     | 0.81<br>4.6     | 0.81<br>4.6     | 0.82<br>4.7     | 0.82<br>4.7     | 0.82<br>4.7     |                 |                 |                 |
| <b>20</b> | q4    | 2460<br>35.90     | 2430<br>35.46  | 2410<br>35.17  | 2390<br>34.88  | 2370<br>34.59   | 2350<br>34.30   | 2335<br>34.08   | 2325<br>33.93   | 2310<br>33.71   | 2300<br>33.57   | 2285<br>33.35   | 2275<br>33.20   | 2265<br>33.06   | 2260<br>32.98   | 2250<br>32.84   |
|           | F4    | 0.69<br>3.9       | 0.70<br>4.0    | 0.71<br>4.1    | 0.71<br>4.1    | 0.72<br>4.1     | 0.72<br>4.1     | 0.73<br>4.2     | 0.73<br>4.2     | 0.74<br>4.2     | 0.74<br>4.2     | 0.74<br>4.2     | 0.75<br>4.3     | 0.75<br>4.3     | 0.75<br>4.3     | 0.76<br>4.3     |

# PLN™ and N FORMLOK™



- 6½ in. (165 mm) TOTAL SLAB DEPTH ■
- Normal Weight Concrete ■
- 145 pcf (2,320 kg/m³)
- 52.5 psf (2,514 N/m²)
- Galvanized or Phosphatized/Painted ■
- 1 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>18</b> | 3.5<br>167.6        | 3.4<br>162.8     | 1.146<br>1,564,964                       | 0.664<br>35,699                           | 0.737<br>39,623                           | 916<br>13,368                                   | 1051<br>15,338 | 1186<br>17,308 | 2695<br>39,331   | 3066<br>44,745 |
| <b>16</b> | 4.2<br>201.1        | 4.1<br>196.3     | 1.542<br>2,105,737                       | 0.851<br>45,752                           | 0.914<br>49,139                           | 1670<br>24,372                                  | 1879<br>27,422 | 2088<br>30,472 | 4033<br>58,857   | 4532<br>66,140 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>18</b> | 1     | 300<br>14.4       | 299<br>14.3    | 272<br>13.0    | 248<br>11.9    | 228<br>10.9     | 210<br>10.1     | 144<br>6.9      | 130<br>6.2      | 118<br>5.6      | 107<br>5.1      | 97<br>4.6       | 88<br>4.2       | 80<br>3.8       | 72<br>3.4       | 66<br>3.2       |
|           | 2     | 300<br>14.4       | 299<br>14.3    | 272<br>13.0    | 248<br>11.9    | 228<br>10.9     | 210<br>10.1     | 194<br>9.3      | 181<br>8.7      | 118<br>5.6      | 107<br>5.1      | 97<br>4.6       | 88<br>4.2       | 80<br>3.8       | 72<br>3.4       | 66<br>3.2       |
|           | 3     | 300<br>14.4       | 299<br>14.3    | 272<br>13.0    | 248<br>11.9    | 228<br>10.9     | 210<br>10.1     | 194<br>9.3      | 181<br>8.7      | 168<br>8.0      | 157<br>7.5      | 97<br>4.6       | 88<br>4.2       | 80<br>3.8       | 72<br>3.4       | 66<br>3.2       |
| <b>16</b> | 1     | 300<br>14.4       | 298<br>14.3    | 271<br>13.0    | 247<br>11.8    | 227<br>10.9     | 209<br>10.0     | 194<br>9.3      | 180<br>8.6      | 167<br>8.0      | 105<br>5.0      | 96<br>4.6       | 87<br>4.2       | 79<br>3.8       | 71<br>3.4       | 64<br>3.1       |
|           | 2     | 300<br>14.4       | 298<br>14.3    | 271<br>13.0    | 247<br>11.8    | 227<br>10.9     | 209<br>10.0     | 194<br>9.3      | 180<br>8.6      | 167<br>8.0      | 156<br>7.5      | 96<br>4.6       | 87<br>4.2       | 79<br>3.8       | 71<br>3.4       | 64<br>3.1       |
|           | 3     | 300<br>14.4       | 298<br>14.3    | 271<br>13.0    | 247<br>11.8    | 227<br>10.9     | 209<br>10.0     | 194<br>9.3      | 180<br>8.6      | 167<br>8.0      | 156<br>7.5      | 147<br>7.0      | 138<br>6.6      | 130<br>6.2      | 71<br>3.4       | 64<br>3.1       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

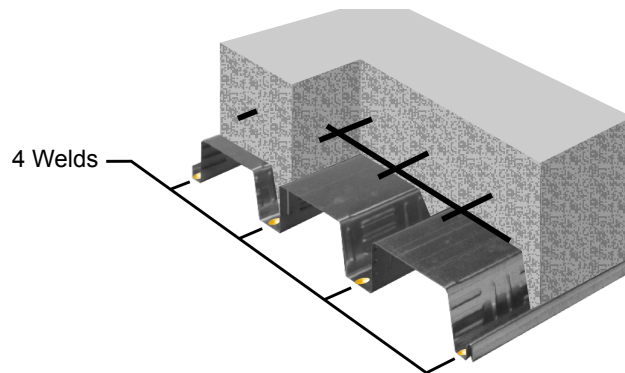
| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>18</b> | q4    | 2560<br>37.36     | 2525<br>36.85  | 2495<br>36.41  | 2465<br>35.97  | 2440<br>35.61   | 2420<br>35.32   | 2400<br>35.03   | 2380<br>34.73   | 2360<br>34.44   | 2345<br>34.22   | 2330<br>34.00   | 2320<br>33.86   | 2305<br>33.64   | 2295<br>33.49   | 2285<br>33.35   |
|           | F4    | 0.58<br>3.3       | 0.58<br>3.3    | 0.59<br>3.4    | 0.60<br>3.4    | 0.60<br>3.4     | 0.61<br>3.5     | 0.62<br>3.5     | 0.62<br>3.5     | 0.62<br>3.5     | 0.63<br>3.6     | 0.63<br>3.6     | 0.64<br>3.7     | 0.64<br>3.7     | 0.64<br>3.7     | 0.65<br>3.7     |
| <b>16</b> | q4    | 2675<br>39.04     | 2635<br>38.45  | 2595<br>37.87  | 2560<br>37.36  | 2530<br>36.92   | 2500<br>36.48   | 2475<br>36.12   | 2450<br>35.76   | 2430<br>35.46   | 2410<br>35.17   | 2390<br>34.88   | 2375<br>34.66   | 2360<br>34.44   | 2345<br>34.22   | 2330<br>34.00   |
|           | F4    | 0.49<br>2.8       | 0.50<br>2.9    | 0.51<br>2.9    | 0.52<br>3.0    | 0.52<br>3.0     | 0.53<br>3.0     | 0.53<br>3.0     | 0.54<br>3.1     | 0.54<br>3.1     | 0.55<br>3.1     | 0.55<br>3.1     | 0.56<br>3.2     | 0.56<br>3.2     | 0.56<br>3.2     | 0.57<br>3.3     |

N  
6½"  
NW



# PLN™ and N FORMLOK™

- 7½ in. (191 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete  
145 pcf (2,320 kg/m³)  
64.6 psf (3,093 N/m²)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 2.2<br>105.3        | 2.1<br>100.5     | 0.613<br>837,105                         | 0.361<br>19,408                           | 0.446<br>23,978                           | 349<br>5,093                                    | 419<br>6,115 | 489<br>7,136 | 1104<br>16,112   | 1287<br>18,782 |
| <b>20</b> | 2.6<br>124.5        | 2.5<br>119.7     | 0.780<br>1,065,159                       | 0.466<br>25,054                           | 0.548<br>29,462                           | 486<br>7,093                                    | 572<br>8,348 | 659<br>9,617 | 1582<br>23,088   | 1828<br>26,678 |

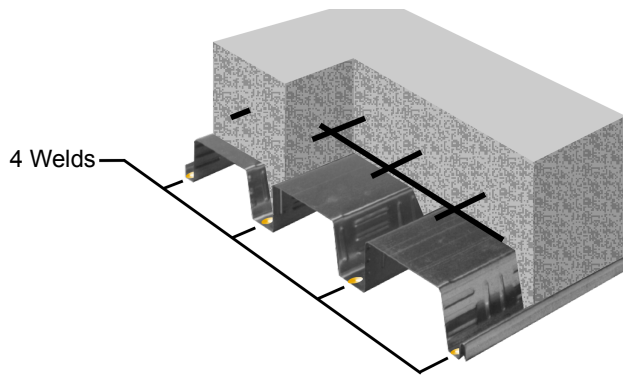
## Allowable Superimposed Loads (psf, kN/m²)

| Gage                                                    | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---------------------------------------------------------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                                         |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|                                                         |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b>                                               | 1     | 300<br>14.4       | 277<br>13.3    | 247<br>11.8    | 220<br>10.5    | 197<br>9.4      | 177<br>8.5      | 159<br>7.6      | 144<br>6.9      | 130<br>6.2      | 117<br>5.6      | 106<br>5.1      | 96<br>4.6       | 87<br>4.2       |                 |                 |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 247<br>11.8    | 220<br>10.5    | 197<br>9.4      | 177<br>8.5      | 159<br>7.6      | 144<br>6.9      | 130<br>6.2      | 117<br>5.6      | 106<br>5.1      | 96<br>4.6       | 87<br>4.2       |                 |                 |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 247<br>11.8    | 220<br>10.5    | 197<br>9.4      | 177<br>8.5      | 159<br>7.6      | 144<br>6.9      | 130<br>6.2      | 117<br>5.6      | 106<br>5.1      | 96<br>4.6       | 87<br>4.2       |                 |                 |
| <b>20</b>                                               | 1     | 300<br>14.4       | 294<br>14.1    | 262<br>12.5    | 234<br>11.2    | 210<br>10.1     | 189<br>9.0      | 170<br>8.1      | 154<br>7.4      | 139<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 77<br>3.7       |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 295<br>14.1    | 210<br>10.1     | 189<br>9.0      | 170<br>8.1      | 154<br>7.4      | 139<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 77<br>3.7       |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 295<br>14.1    | 270<br>12.9     | 189<br>9.0      | 170<br>8.1      | 154<br>7.4      | 139<br>6.7      | 126<br>6.0      | 114<br>5.5      | 103<br>4.9      | 94<br>4.5       | 85<br>4.1       | 77<br>3.7       |
| Shoring required in shaded areas to right of heavy line |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b> | q4    | 2895<br>42.25     | 2870<br>41.88  | 2855<br>41.67  | 2835<br>41.37  | 2820<br>41.15   | 2805<br>40.94   | 2795<br>40.79   | 2780<br>40.57   | 2770<br>40.43   | 2760<br>40.28   | 2750<br>40.13   | 2745<br>40.06   | 2735<br>39.91   |                 |                 |
|           | F4    | 0.64<br>3.7       | 0.65<br>3.7    | 0.65<br>3.7    | 0.66<br>3.8    | 0.66<br>3.8     | 0.67<br>3.8     | 0.67<br>3.8     | 0.67<br>3.8     | 0.67<br>3.8     | 0.68<br>3.9     | 0.68<br>3.9     | 0.68<br>3.9     | 0.68<br>3.9     |                 |                 |
| <b>20</b> | q4    | 2935<br>42.83     | 2910<br>42.47  | 2885<br>42.10  | 2865<br>41.81  | 2845<br>41.52   | 2830<br>41.30   | 2815<br>41.08   | 2800<br>40.86   | 2790<br>40.72   | 2775<br>40.50   | 2765<br>40.35   | 2755<br>40.21   | 2745<br>40.06   | 2735<br>39.91   | 2730<br>39.84   |
|           | F4    | 0.58<br>3.3       | 0.59<br>3.4    | 0.59<br>3.4    | 0.59<br>3.4    | 0.60<br>3.4     | 0.60<br>3.4     | 0.61<br>3.5     | 0.61<br>3.5     | 0.61<br>3.5     | 0.61<br>3.5     | 0.62<br>3.5     | 0.62<br>3.5     | 0.62<br>3.5     | 0.62<br>3.5     | 0.62<br>3.5     |

# PLN™ and N FORMLOK™



- 7½ in. (191 mm) TOTAL SLAB DEPTH
- Normal Weight Concrete
- 145 pcf (2,320 kg/m³)
- 64.6 psf (3,093 N/m²)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>18</b> | 3.5<br>167.6        | 3.4<br>162.8     | 1.146<br>1,564,964                       | 0.664<br>35,699                           | 0.737<br>39,623                           | 916<br>13,368                                   | 1051<br>15,338 | 1186<br>17,308 | 2695<br>39,331   | 3066<br>44,745 |
| <b>16</b> | 4.2<br>201.1        | 4.1<br>196.3     | 1.542<br>2,105,737                       | 0.851<br>45,752                           | 0.914<br>49,139                           | 1670<br>24,372                                  | 1879<br>27,422 | 2088<br>30,472 | 4033<br>58,857   | 4532<br>66,140 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 292<br>14.0    | 207<br>9.9      | 186<br>8.9      | 168<br>8.0      | 151<br>7.2      | 137<br>6.6      | 124<br>5.9      | 112<br>5.4      | 101<br>4.8      | 92<br>4.4       | 83<br>4.0       | 75<br>3.6       |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 292<br>14.0    | 268<br>12.8     | 247<br>11.8     | 168<br>8.0      | 151<br>7.2      | 137<br>6.6      | 124<br>5.9      | 112<br>5.4      | 101<br>4.8      | 92<br>4.4       | 83<br>4.0       | 75<br>3.6       |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 292<br>14.0    | 268<br>12.8     | 247<br>11.8     | 229<br>11.0     | 212<br>10.2     | 198<br>9.5      | 124<br>5.9      | 112<br>5.4      | 101<br>4.8      | 92<br>4.4       | 83<br>4.0       | 75<br>3.6       |
| <b>16</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 290<br>13.9    | 266<br>12.7     | 245<br>11.7     | 227<br>10.9     | 149<br>7.1      | 135<br>6.5      | 122<br>5.8      | 110<br>5.3      | 100<br>4.8      | 90<br>4.3       | 81<br>3.9       | 74<br>3.5       |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 290<br>13.9    | 266<br>12.7     | 245<br>11.7     | 227<br>10.9     | 211<br>10.1     | 196<br>9.4      | 122<br>5.8      | 110<br>5.3      | 100<br>4.8      | 90<br>4.3       | 81<br>3.9       | 74<br>3.5       |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 290<br>13.9    | 266<br>12.7     | 245<br>11.7     | 227<br>10.9     | 211<br>10.1     | 196<br>9.4      | 184<br>8.8      | 172<br>8.2      | 100<br>4.8      | 90<br>4.3       | 81<br>3.9       | 74<br>3.5       |

Shoring required in shaded areas to right of heavy line

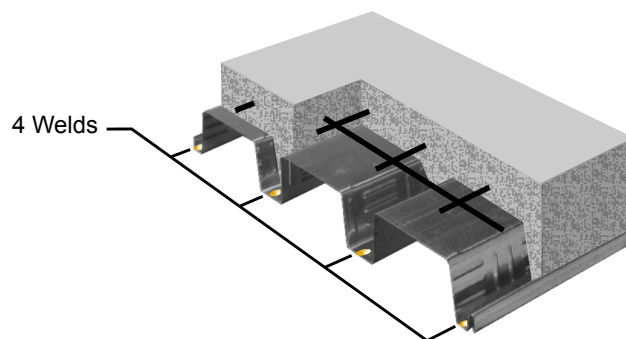
## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | q4    | 3035<br>44.29     | 3005<br>43.85  | 2970<br>43.34  | 2945<br>42.98  | 2920<br>42.61   | 2895<br>42.25   | 2875<br>41.96   | 2860<br>41.74   | 2840<br>41.45   | 2825<br>41.23   | 2810<br>41.01   | 2795<br>40.79   | 2785<br>40.64   | 2775<br>40.50   | 2760<br>40.28   |
|           | F4    | 0.49<br>2.8       | 0.49<br>2.8    | 0.50<br>2.9    | 0.50<br>2.9    | 0.51<br>2.9     | 0.51<br>2.9     | 0.51<br>2.9     | 0.52<br>3.0     | 0.52<br>3.0     | 0.52<br>3.0     | 0.53<br>3.0     | 0.53<br>3.0     | 0.53<br>3.0     | 0.53<br>3.0     | 0.53<br>3.0     |
| <b>16</b> | q4    | 3155<br>46.04     | 3110<br>45.39  | 3070<br>44.80  | 3040<br>44.37  | 3005<br>43.85   | 2980<br>43.49   | 2955<br>43.12   | 2930<br>42.76   | 2910<br>42.47   | 2890<br>42.18   | 2870<br>41.88   | 2855<br>41.67   | 2840<br>41.45   | 2825<br>41.23   | 2810<br>41.01   |
|           | F4    | 0.42<br>2.4       | 0.42<br>2.4    | 0.43<br>2.5    | 0.43<br>2.5    | 0.44<br>2.5     | 0.44<br>2.5     | 0.45<br>2.6     | 0.45<br>2.6     | 0.45<br>2.6     | 0.46<br>2.6     | 0.46<br>2.6     | 0.46<br>2.6     | 0.47<br>2.7     | 0.47<br>2.7     | 0.47<br>2.7     |

N  
7½"

# PLN™ and N FORMLOK™

- 5 in. (127 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m<sup>3</sup>)  
26.1 psf (1,250 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 2.2<br>105.3                    | 2.1<br>100.5     | 0.613<br>837,105                         | 0.361<br>19,408                           | 0.446<br>23,978                           | 349<br>5,093                                    | 419<br>6,115 | 489<br>7,136 | 1104<br>16,112   | 1287<br>18,782 |
| <b>20</b> | 2.6<br>124.5                    | 2.5<br>119.7     | 0.780<br>1,065,159                       | 0.466<br>25,054                           | 0.548<br>29,462                           | 486<br>7,093                                    | 572<br>8,348 | 659<br>9,617 | 1582<br>23,088   | 1828<br>26,678 |

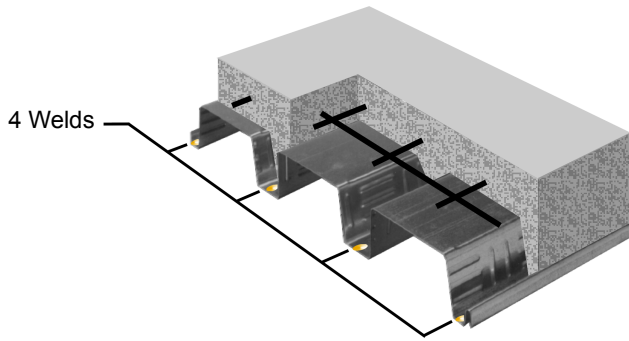
## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b> | 1     | 241<br>11.5       | 218<br>10.4    | 198<br>9.5     | 155<br>7.4     | 141<br>6.8      | 128<br>6.1      | 116<br>5.6      | 106<br>5.1      | 97<br>4.6       | 89<br>4.3       | 82<br>3.9       | 75<br>3.6       | 69<br>3.3       | 64<br>3.1       | 59<br>2.8       |
|           | 2     | 241<br>11.5       | 218<br>10.4    | 198<br>9.5     | 181<br>8.7     | 166<br>7.9      | 153<br>7.3      | 142<br>6.8      | 125<br>6.0      | 97<br>4.6       | 89<br>4.3       | 82<br>3.9       | 75<br>3.6       | 69<br>3.3       | 64<br>3.1       | 59<br>2.8       |
|           | 3     | 241<br>11.5       | 218<br>10.4    | 198<br>9.5     | 181<br>8.7     | 166<br>7.9      | 153<br>7.3      | 142<br>6.8      | 125<br>6.0      | 97<br>4.6       | 89<br>4.3       | 82<br>3.9       | 75<br>3.6       | 69<br>3.3       | 64<br>3.1       | 59<br>2.8       |
| <b>20</b> | 1     | 255<br>12.2       | 230<br>11.0    | 209<br>10.0    | 191<br>9.1     | 176<br>8.4      | 162<br>7.8      | 124<br>5.9      | 113<br>5.4      | 104<br>5.0      | 95<br>4.5       | 88<br>4.2       | 81<br>3.9       | 75<br>3.6       | 69<br>3.3       | 64<br>3.1       |
|           | 2     | 255<br>12.2       | 230<br>11.0    | 209<br>10.0    | 191<br>9.1     | 176<br>8.4      | 162<br>7.8      | 150<br>7.2      | 139<br>6.7      | 130<br>6.2      | 119<br>5.7      | 88<br>4.2       | 81<br>3.9       | 75<br>3.6       | 69<br>3.3       | 64<br>3.1       |
|           | 3     | 255<br>12.2       | 230<br>11.0    | 209<br>10.0    | 191<br>9.1     | 176<br>8.4      | 162<br>7.8      | 150<br>7.2      | 139<br>6.7      | 130<br>6.2      | 119<br>5.7      | 105<br>5.0      | 94<br>4.5       | 75<br>3.6       | 69<br>3.3       | 64<br>3.1       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b> | q4    | 1375<br>20.07     | 1355<br>19.77  | 1335<br>19.48  | 1315<br>19.19  | 1300<br>18.97   | 1285<br>18.75   | 1275<br>18.61   | 1260<br>18.39   | 1250<br>18.24   | 1240<br>18.10   | 1230<br>17.95   | 1225<br>17.88   | 1215<br>17.73   | 1210<br>17.66   | 1200<br>17.51   |
|           | F4    | 1.36<br>7.8       | 1.38<br>7.9    | 1.40<br>8.0    | 1.42<br>8.1    | 1.43<br>8.2     | 1.45<br>8.3     | 1.47<br>8.4     | 1.48<br>8.5     | 1.49<br>8.5     | 1.50<br>8.6     | 1.51<br>8.6     | 1.52<br>8.7     | 1.53<br>8.7     | 1.54<br>8.8     | 1.55<br>8.9     |
| <b>20</b> | q4    | 1415<br>20.65     | 1390<br>20.29  | 1365<br>19.92  | 1345<br>19.63  | 1325<br>19.34   | 1310<br>19.12   | 1295<br>18.90   | 1280<br>18.68   | 1270<br>18.53   | 1255<br>18.32   | 1245<br>18.17   | 1235<br>18.02   | 1225<br>17.88   | 1215<br>17.73   | 1210<br>17.66   |
|           | F4    | 1.20<br>6.9       | 1.23<br>7.0    | 1.25<br>7.1    | 1.27<br>7.3    | 1.28<br>7.3     | 1.30<br>7.4     | 1.32<br>7.5     | 1.33<br>7.6     | 1.34<br>7.7     | 1.36<br>7.8     | 1.37<br>7.8     | 1.38<br>7.9     | 1.39<br>7.9     | 1.40<br>8.0     | 1.41<br>8.1     |



- 5 in. (127 mm) TOTAL SLAB DEPTH
- Light Weight Concrete
- 110 pcf (1,760 kg/m<sup>3</sup>)
- 26.1 psf (1,250 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>18</b> | 3.5<br>167.6                    | 3.4<br>162.8     | 1.146<br>1,564,964                       | 0.664<br>35,699                           | 0.737<br>39,623                           | 916<br>13,368                                   | 1051<br>15,338 | 1186<br>17,308 | 2695<br>39,331   | 3066<br>44,745 |
| <b>16</b> | 4.2<br>201.1                    | 4.1<br>196.3     | 1.542<br>2,105,737                       | 0.851<br>45,752                           | 0.914<br>49,139                           | 1670<br>24,372                                  | 1879<br>27,422 | 2088<br>30,472 | 4033<br>58,857   | 4532<br>66,140 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | 1     | 257<br>12.3       | 232<br>11.1    | 211<br>10.1    | 193<br>9.2     | 177<br>8.5      | 163<br>7.8      | 151<br>7.2      | 140<br>6.7      | 131<br>6.3      | 122<br>5.8      | 114<br>5.5      | 81<br>3.9       | 75<br>3.6       | 69<br>3.3       | 64<br>3.1       |
|           | 2     | 257<br>12.3       | 232<br>11.1    | 211<br>10.1    | 193<br>9.2     | 177<br>8.5      | 163<br>7.8      | 151<br>7.2      | 140<br>6.7      | 131<br>6.3      | 122<br>5.8      | 114<br>5.5      | 107<br>5.1      | 97<br>4.6       | 87<br>4.2       | 64<br>3.1       |
|           | 3     | 257<br>12.3       | 232<br>11.1    | 211<br>10.1    | 193<br>9.2     | 177<br>8.5      | 163<br>7.8      | 151<br>7.2      | 140<br>6.7      | 131<br>6.3      | 122<br>5.8      | 114<br>5.5      | 107<br>5.1      | 97<br>4.6       | 87<br>4.2       | 78<br>3.7       |
| <b>16</b> | 1     | 259<br>12.4       | 234<br>11.2    | 213<br>10.2    | 194<br>9.3     | 178<br>8.5      | 165<br>7.9      | 152<br>7.3      | 141<br>6.8      | 132<br>6.3      | 123<br>5.9      | 115<br>5.5      | 108<br>5.2      | 102<br>4.9      | 96<br>4.6       | 64<br>3.1       |
|           | 2     | 259<br>12.4       | 234<br>11.2    | 213<br>10.2    | 194<br>9.3     | 178<br>8.5      | 165<br>7.9      | 152<br>7.3      | 141<br>6.8      | 132<br>6.3      | 123<br>5.9      | 115<br>5.5      | 108<br>5.2      | 102<br>4.9      | 96<br>4.6       | 87<br>4.2       |
|           | 3     | 259<br>12.4       | 234<br>11.2    | 213<br>10.2    | 194<br>9.3     | 178<br>8.5      | 165<br>7.9      | 152<br>7.3      | 141<br>6.8      | 132<br>6.3      | 123<br>5.9      | 115<br>5.5      | 108<br>5.2      | 102<br>4.9      | 96<br>4.6       | 87<br>4.2       |

Shoring required in shaded areas to right of heavy line

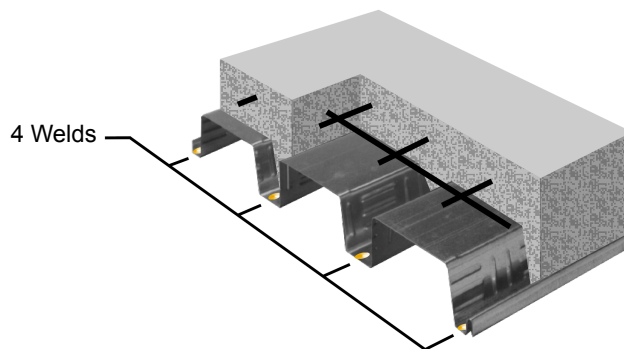
## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | q4    | 1520<br>22.18     | 1485<br>21.67  | 1450<br>21.16  | 1425<br>20.80  | 1400<br>20.43   | 1375<br>20.07   | 1355<br>19.77   | 1340<br>19.56   | 1320<br>19.26   | 1305<br>19.05   | 1290<br>18.83   | 1275<br>18.61   | 1265<br>18.46   | 1255<br>18.32   | 1240<br>18.10   |
|           | F4    | 0.97<br>5.5       | 1.00<br>5.7    | 1.02<br>5.8    | 1.04<br>5.9    | 1.05<br>6.0     | 1.07<br>6.1     | 1.09<br>6.2     | 1.10<br>6.3     | 1.12<br>6.4     | 1.13<br>6.5     | 1.14<br>6.5     | 1.16<br>6.6     | 1.17<br>6.7     | 1.18<br>6.7     | 1.19<br>6.8     |
| <b>16</b> | q4    | 1635<br>23.86     | 1590<br>23.20  | 1555<br>22.69  | 1520<br>22.18  | 1485<br>21.67   | 1460<br>21.31   | 1435<br>20.94   | 1410<br>20.58   | 1390<br>20.29   | 1370<br>19.99   | 1350<br>19.70   | 1335<br>19.48   | 1320<br>19.26   | 1305<br>19.05   | 1290<br>18.83   |
|           | F4    | 0.81<br>4.6       | 0.83<br>4.7    | 0.85<br>4.9    | 0.87<br>5.0    | 0.89<br>5.1     | 0.90<br>5.1     | 0.92<br>5.3     | 0.94<br>5.4     | 0.95<br>5.4     | 0.96<br>5.5     | 0.98<br>5.6     | 0.99<br>5.7     | 1.00<br>5.7     | 1.01<br>5.8     | 1.02<br>5.8     |

N  
5"  
LW

# PLN™ and N FORMLOK™

- 5½ in. (140 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
30.7 psf (1,470 N/m²)
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 2.2<br>105.3        | 2.1<br>100.5     | 0.613<br>837,105                         | 0.361<br>19,408                           | 0.446<br>23,978                           | 349<br>5,093                                    | 419<br>6,115 | 489<br>7,136 | 1104<br>16,112   | 1287<br>18,782 |
| <b>20</b> | 2.6<br>124.5        | 2.5<br>119.7     | 0.780<br>1,065,159                       | 0.466<br>25,054                           | 0.548<br>29,462                           | 486<br>7,093                                    | 572<br>8,348 | 659<br>9,617 | 1582<br>23,088   | 1828<br>26,678 |

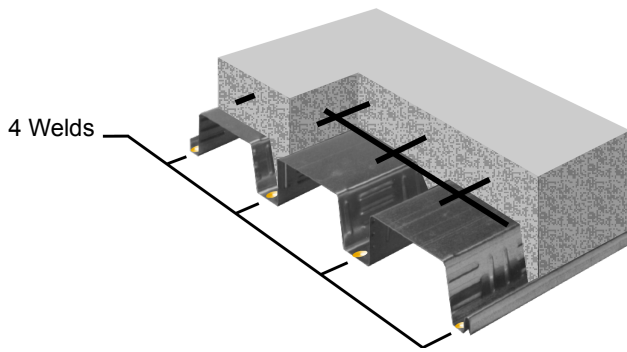
## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | 1     | 263<br>12.6       | 238<br>11.4    | 187<br>9.0     | 168<br>8.0     | 152<br>7.3      | 138<br>6.6      | 125<br>6.0      | 114<br>5.5      | 105<br>5.0      | 96<br>4.6       | 88<br>4.2       | 81<br>3.9       | 74<br>3.5       | 68<br>3.3       | 63<br>3.0       |
|           | 2     | 263<br>12.6       | 238<br>11.4    | 217<br>10.4    | 198<br>9.5     | 182<br>8.7      | 167<br>8.0      | 155<br>7.4      | 114<br>5.5      | 105<br>5.0      | 96<br>4.6       | 88<br>4.2       | 81<br>3.9       | 74<br>3.5       | 68<br>3.3       | 63<br>3.0       |
|           | 3     | 263<br>12.6       | 238<br>11.4    | 217<br>10.4    | 198<br>9.5     | 182<br>8.7      | 167<br>8.0      | 155<br>7.4      | 114<br>5.5      | 105<br>5.0      | 96<br>4.6       | 88<br>4.2       | 81<br>3.9       | 74<br>3.5       | 68<br>3.3       | 63<br>3.0       |
| <b>20</b> | 1     | 278<br>13.3       | 251<br>12.0    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 147<br>7.0      | 134<br>6.4      | 122<br>5.8      | 112<br>5.4      | 102<br>4.9      | 94<br>4.5       | 86<br>4.1       | 80<br>3.8       | 73<br>3.5       | 68<br>3.3       |
|           | 2     | 278<br>13.3       | 251<br>12.0    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 102<br>4.9      | 94<br>4.5       | 86<br>4.1       | 80<br>3.8       | 73<br>3.5       | 68<br>3.3       |
|           | 3     | 278<br>13.3       | 251<br>12.0    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 132<br>6.3      | 94<br>4.5       | 86<br>4.1       | 80<br>3.8       | 73<br>3.5       | 68<br>3.3       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>22</b> | q4    | 1530<br>22.33     | 1510<br>22.04  | 1490<br>21.74  | 1475<br>21.53  | 1460<br>21.31   | 1445<br>21.09   | 1430<br>20.87   | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   | 1390<br>20.29   | 1380<br>20.14   | 1375<br>20.07   | 1365<br>19.92   | 1360<br>19.85   |
|           | F4    | 1.22<br>7.0       | 1.24<br>7.1    | 1.25<br>7.1    | 1.27<br>7.3    | 1.28<br>7.3     | 1.29<br>7.4     | 1.30<br>7.4     | 1.31<br>7.5     | 1.32<br>7.5     | 1.33<br>7.6     | 1.34<br>7.7     | 1.35<br>7.7     | 1.36<br>7.8     | 1.37<br>7.8     | 1.37<br>7.8     |
| <b>20</b> | q4    | 1575<br>22.99     | 1550<br>22.62  | 1525<br>22.26  | 1505<br>21.96  | 1485<br>21.67   | 1470<br>21.45   | 1455<br>21.23   | 1440<br>21.02   | 1425<br>20.80   | 1415<br>20.65   | 1405<br>20.50   | 1395<br>20.36   | 1385<br>20.21   | 1375<br>20.07   | 1365<br>19.92   |
|           | F4    | 1.08<br>6.2       | 1.10<br>6.3    | 1.12<br>6.4    | 1.13<br>6.5    | 1.15<br>6.6     | 1.16<br>6.6     | 1.17<br>6.7     | 1.18<br>6.7     | 1.19<br>6.8     | 1.20<br>6.9     | 1.21<br>6.9     | 1.22<br>7.0     | 1.23<br>7.0     | 1.24<br>7.1     | 1.25<br>7.1     |



- 5½ in. (140 mm) TOTAL SLAB DEPTH ■
- Light Weight Concrete ■
- 110 pcf (1,760 kg/m³)
- 30.7 psf (1,470 N/m²)
- Galvanized or Phosphatized/Painted ■
- 1 Hour Fire Rating ■

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>18</b> | 3.5<br>167.6        | 3.4<br>162.8     | 1.146<br>1,564,964                       | 0.664<br>35,699                           | 0.737<br>39,623                           | 916<br>13,368                                   | 1051<br>15,338 | 1186<br>17,308 | 2695<br>39,331   | 3066<br>44,745 |
| <b>16</b> | 4.2<br>201.1        | 4.1<br>196.3     | 1.542<br>2,105,737                       | 0.851<br>45,752                           | 0.914<br>49,139                           | 1670<br>24,372                                  | 1879<br>27,422 | 2088<br>30,472 | 4033<br>58,857   | 4532<br>66,140 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | 1     | 278<br>13.3       | 252<br>12.1    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 132<br>6.3      | 93<br>4.5       | 86<br>4.1       | 79<br>3.8       | 73<br>3.5       | 67<br>3.2       |
|           | 2     | 278<br>13.3       | 252<br>12.1    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 132<br>6.3      | 124<br>5.9      | 116<br>5.6      | 79<br>3.8       | 73<br>3.5       | 67<br>3.2       |
|           | 3     | 278<br>13.3       | 252<br>12.1    | 229<br>11.0    | 209<br>10.0    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 132<br>6.3      | 124<br>5.9      | 116<br>5.6      | 110<br>5.3      | 103<br>4.9      | 98<br>4.7       |
| <b>16</b> | 1     | 279<br>13.4       | 252<br>12.1    | 229<br>11.0    | 210<br>10.1    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 133<br>6.4      | 124<br>5.9      | 117<br>5.6      | 110<br>5.3      | 72<br>3.4       | 67<br>3.2       |
|           | 2     | 279<br>13.4       | 252<br>12.1    | 229<br>11.0    | 210<br>10.1    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 133<br>6.4      | 124<br>5.9      | 117<br>5.6      | 110<br>5.3      | 104<br>5.0      | 98<br>4.7       |
|           | 3     | 279<br>13.4       | 252<br>12.1    | 229<br>11.0    | 210<br>10.1    | 192<br>9.2      | 177<br>8.5      | 164<br>7.9      | 152<br>7.3      | 142<br>6.8      | 133<br>6.4      | 124<br>5.9      | 117<br>5.6      | 110<br>5.3      | 104<br>5.0      | 98<br>4.7       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

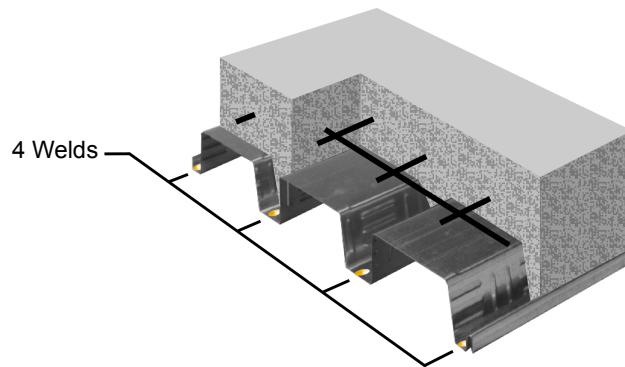
| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | q4    | 1675<br>24.44     | 1640<br>23.93  | 1610<br>23.50  | 1580<br>23.06  | 1555<br>22.69   | 1535<br>22.40   | 1515<br>22.11   | 1495<br>21.82   | 1480<br>21.60   | 1465<br>21.38   | 1450<br>21.16   | 1435<br>20.94   | 1420<br>20.72   | 1410<br>20.58   | 1400<br>20.43   |
|           | F4    | 0.88<br>5.0       | 0.90<br>5.1    | 0.92<br>5.3    | 0.93<br>5.3    | 0.95<br>5.4     | 0.96<br>5.5     | 0.97<br>5.5     | 0.99<br>5.7     | 1.00<br>5.7     | 1.01<br>5.8     | 1.02<br>5.8     | 1.03<br>5.9     | 1.04<br>5.9     | 1.05<br>6.0     | 1.05<br>6.0     |
| <b>16</b> | q4    | 1795<br>26.20     | 1750<br>25.54  | 1710<br>24.96  | 1675<br>24.44  | 1645<br>24.01   | 1615<br>23.57   | 1590<br>23.20   | 1570<br>22.91   | 1545<br>22.55   | 1525<br>22.26   | 1510<br>22.04   | 1490<br>21.74   | 1475<br>21.53   | 1460<br>21.31   | 1450<br>21.16   |
|           | F4    | 0.74<br>4.2       | 0.75<br>4.3    | 0.77<br>4.4    | 0.79<br>4.5    | 0.80<br>4.6     | 0.82<br>4.7     | 0.83<br>4.7     | 0.84<br>4.8     | 0.85<br>4.9     | 0.86<br>4.9     | 0.87<br>5.0     | 0.88<br>5.0     | 0.89<br>5.1     | 0.90<br>5.1     | 0.91<br>5.2     |

N  
5½"  
LW



# PLN™ and N FORMLOK™

- 6¼ in. (159 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
37.5 psf (1,796 N/m²)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |             |              |                  |              |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|-------------|--------------|------------------|--------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |             |              | Interior Bearing |              |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm |
| <b>22</b> | 2.2                 | 2.1              | 0.613                                    | 0.361                                     | 0.446                                     | 349                                             | 419         | 489          | 1104             | 1287         |
|           | 105.3               | 100.5            | 837,105                                  | 19,408                                    | 23,978                                    | 5,093                                           | 6,115       | 7,136        | 16,112           | 18,782       |
| <b>20</b> | 2.6                 | 2.5              | 0.780                                    | 0.466                                     | 0.548                                     | 486                                             | 572         | 659          | 1582             | 1828         |
|           | 124.5               | 119.7            | 1,065,159                                | 25,054                                    | 29,462                                    | 7,093                                           | 8,348       | 9,617        | 23,088           | 26,678       |

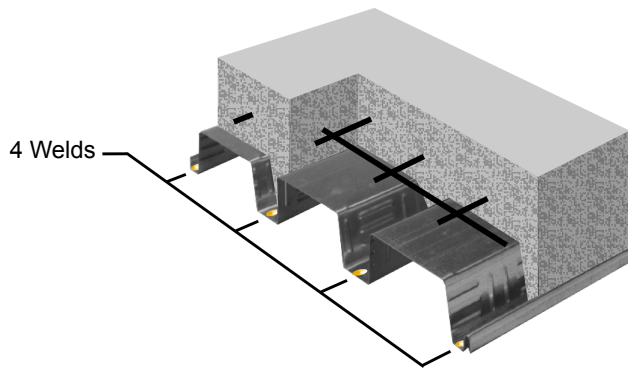
## Allowable Superimposed Loads (psf, kN/m²)

| Gage | Spans | Span (ft-in., <i>mm</i> ) |             |             |             |             |            |            |            |            |            |            |           |           |           |           |
|------|-------|---------------------------|-------------|-------------|-------------|-------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|
|      |       | 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"    |
|      |       | 2,440                     | 2,590       | 2,740       | 2,900       | 3,050       | 3,200      | 3,350      | 3,510      | 3,660      | 3,810      | 3,960      | 4,110     | 4,270     | 4,420     | 4,570     |
| 22   | 1     | 300<br>14.4               | 238<br>11.4 | 213<br>10.2 | 191<br>9.1  | 173<br>8.3  | 156<br>7.5 | 142<br>6.8 | 129<br>6.2 | 118<br>5.6 | 108<br>5.2 | 99<br>4.7  | 91<br>4.4 | 83<br>4.0 | 76<br>3.6 | 70<br>3.4 |
|      | 2     | 300<br>14.4               | 273<br>13.1 | 248<br>11.9 | 227<br>10.9 | 208<br>10.0 | 156<br>7.5 | 142<br>6.8 | 129<br>6.2 | 118<br>5.6 | 108<br>5.2 | 99<br>4.7  | 91<br>4.4 | 83<br>4.0 | 76<br>3.6 | 70<br>3.4 |
|      | 3     | 300<br>14.4               | 273<br>13.1 | 248<br>11.9 | 227<br>10.9 | 208<br>10.0 | 156<br>7.5 | 142<br>6.8 | 129<br>6.2 | 118<br>5.6 | 108<br>5.2 | 99<br>4.7  | 91<br>4.4 | 83<br>4.0 | 76<br>3.6 | 70<br>3.4 |
| 20   | 1     | 300<br>14.4               | 288<br>13.8 | 261<br>12.5 | 239<br>11.4 | 183<br>8.8  | 166<br>7.9 | 151<br>7.2 | 138<br>6.6 | 126<br>6.0 | 115<br>5.5 | 106<br>5.1 | 97<br>4.6 | 89<br>4.3 | 82<br>3.9 | 76<br>3.6 |
|      | 2     | 300<br>14.4               | 288<br>13.8 | 261<br>12.5 | 239<br>11.4 | 219<br>10.5 | 202<br>9.7 | 187<br>9.0 | 138<br>6.6 | 126<br>6.0 | 115<br>5.5 | 106<br>5.1 | 97<br>4.6 | 89<br>4.3 | 82<br>3.9 | 76<br>3.6 |
|      | 3     | 300<br>14.4               | 288<br>13.8 | 261<br>12.5 | 239<br>11.4 | 219<br>10.5 | 202<br>9.7 | 187<br>9.0 | 174<br>8.3 | 162<br>7.8 | 115<br>5.5 | 106<br>5.1 | 97<br>4.6 | 89<br>4.3 | 82<br>3.9 | 76<br>3.6 |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage | Welds | Span (ft-in., <i>mm</i> ) |       |       |       |        |        |        |        |        |        |        |        |        |        |        |
|------|-------|---------------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|      |       | 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" |
|      |       | 2,440                     | 2,590 | 2,740 | 2,900 | 3,050  | 3,200  | 3,350  | 3,510  | 3,660  | 3,810  | 3,960  | 4,110  | 4,270  | 4,420  | 4,570  |
| 22   | q4    | 1770                      | 1750  | 1730  | 1710  | 1695   | 1680   | 1670   | 1655   | 1645   | 1635   | 1625   | 1620   | 1610   | 1605   | 1595   |
|      |       | 25.83                     | 25.54 | 25.25 | 24.96 | 24.74  | 24.52  | 24.37  | 24.15  | 24.01  | 23.86  | 23.72  | 23.64  | 23.50  | 23.42  | 23.28  |
|      | F4    | 1.05                      | 1.07  | 1.08  | 1.09  | 1.10   | 1.11   | 1.12   | 1.13   | 1.13   | 1.14   | 1.15   | 1.15   | 1.16   | 1.16   | 1.17   |
|      |       | 6.0                       | 6.1   | 6.2   | 6.2   | 6.3    | 6.3    | 6.4    | 6.5    | 6.5    | 6.5    | 6.6    | 6.6    | 6.6    | 6.6    | 6.7    |
| 20   | q4    | 1810                      | 1785  | 1760  | 1740  | 1720   | 1705   | 1690   | 1675   | 1665   | 1650   | 1640   | 1630   | 1620   | 1610   | 1605   |
|      |       | 26.41                     | 26.05 | 25.69 | 25.39 | 25.10  | 24.88  | 24.66  | 24.44  | 24.30  | 24.08  | 23.93  | 23.79  | 23.64  | 23.50  | 23.42  |
|      | F4    | 0.94                      | 0.95  | 0.97  | 0.98  | 0.99   | 1.00   | 1.01   | 1.02   | 1.02   | 1.03   | 1.04   | 1.04   | 1.05   | 1.06   | 1.06   |
|      |       | 5.4                       | 5.4   | 5.5   | 5.6   | 5.7    | 5.7    | 5.8    | 5.8    | 5.8    | 5.9    | 5.9    | 5.9    | 6.0    | 6.1    | 6.1    |



- 6¼ in. (159 mm) TOTAL SLAB DEPTH
- Light Weight Concrete
- 110 pcf (1,760 kg/m³)
- 37.5 psf (1,796 N/m²)
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>18</b> | 3.5<br>167.6        | 3.4<br>162.8     | 1.146<br>1,564,964                       | 0.664<br>35,699                           | 0.737<br>39,623                           | 916<br>13,368                                   | 1051<br>15,338 | 1186<br>17,308 | 2695<br>39,331   | 3066<br>44,745 |
| <b>16</b> | 4.2<br>201.1        | 4.1<br>196.3     | 1.542<br>2,105,737                       | 0.851<br>45,752                           | 0.914<br>49,139                           | 1670<br>24,372                                  | 1879<br>27,422 | 2088<br>30,472 | 4033<br>58,857   | 4532<br>66,140 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | 1     | 300<br>14.4       | 286<br>13.7    | 260<br>12.4    | 238<br>11.4    | 218<br>10.4     | 201<br>9.6      | 186<br>8.9      | 173<br>8.3      | 124<br>5.9      | 114<br>5.5      | 104<br>5.0      | 96<br>4.6       | 88<br>4.2       | 81<br>3.9       | 74<br>3.5       |
|           | 2     | 300<br>14.4       | 286<br>13.7    | 260<br>12.4    | 238<br>11.4    | 218<br>10.4     | 201<br>9.6      | 186<br>8.9      | 173<br>8.3      | 161<br>7.7      | 151<br>7.2      | 141<br>6.8      | 96<br>4.6       | 88<br>4.2       | 81<br>3.9       | 74<br>3.5       |
|           | 3     | 300<br>14.4       | 286<br>13.7    | 260<br>12.4    | 238<br>11.4    | 218<br>10.4     | 201<br>9.6      | 186<br>8.9      | 173<br>8.3      | 161<br>7.7      | 151<br>7.2      | 141<br>6.8      | 132<br>6.3      | 125<br>6.0      | 118<br>5.6      | 74<br>3.5       |
| <b>16</b> | 1     | 300<br>14.4       | 285<br>13.6    | 260<br>12.4    | 237<br>11.3    | 218<br>10.4     | 201<br>9.6      | 186<br>8.9      | 172<br>8.2      | 161<br>7.7      | 150<br>7.2      | 141<br>6.8      | 95<br>4.5       | 87<br>4.2       | 80<br>3.8       | 73<br>3.5       |
|           | 2     | 300<br>14.4       | 285<br>13.6    | 260<br>12.4    | 237<br>11.3    | 218<br>10.4     | 201<br>9.6      | 186<br>8.9      | 172<br>8.2      | 161<br>7.7      | 150<br>7.2      | 141<br>6.8      | 132<br>6.3      | 124<br>5.9      | 80<br>3.8       | 73<br>3.5       |
|           | 3     | 300<br>14.4       | 285<br>13.6    | 260<br>12.4    | 237<br>11.3    | 218<br>10.4     | 201<br>9.6      | 186<br>8.9      | 172<br>8.2      | 161<br>7.7      | 150<br>7.2      | 141<br>6.8      | 132<br>6.3      | 124<br>5.9      | 117<br>5.6      | 111<br>5.3      |

Shoring required in shaded areas to right of heavy line

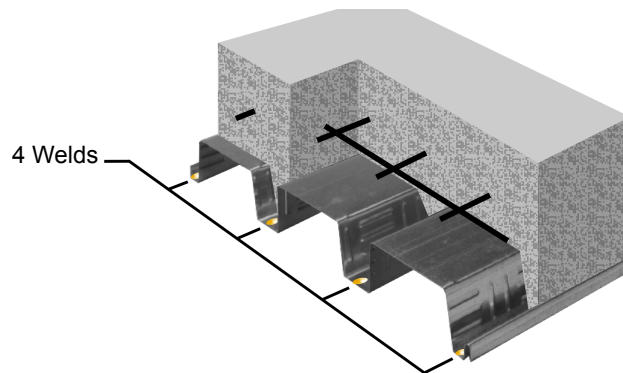
## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>18</b> | q4    | 1915<br>27.95     | 1880<br>27.44  | 1845<br>26.93  | 1820<br>26.56  | 1795<br>26.20   | 1770<br>25.83   | 1750<br>25.54   | 1735<br>25.32   | 1715<br>25.03   | 1700<br>24.81   | 1685<br>24.59   | 1670<br>24.37   | 1660<br>24.23   | 1650<br>24.08   | 1635<br>23.86   |
|           | F4    | 0.77<br>4.4       | 0.79<br>4.5    | 0.80<br>4.6    | 0.81<br>4.6    | 0.82<br>4.7     | 0.83<br>4.7     | 0.84<br>4.8     | 0.85<br>4.9     | 0.86<br>4.9     | 0.87<br>5.0     | 0.88<br>5.0     | 0.88<br>5.0     | 0.89<br>5.1     | 0.90<br>5.1     | 0.90<br>5.1     |
| <b>16</b> | q4    | 2030<br>29.63     | 1985<br>28.97  | 1945<br>28.39  | 1915<br>27.95  | 1880<br>27.44   | 1855<br>27.07   | 1830<br>26.71   | 1805<br>26.34   | 1785<br>26.05   | 1765<br>25.76   | 1745<br>25.47   | 1730<br>25.25   | 1715<br>25.03   | 1700<br>24.81   | 1685<br>24.59   |
|           | F4    | 0.65<br>3.7       | 0.66<br>3.8    | 0.68<br>3.9    | 0.69<br>3.9    | 0.70<br>4.0     | 0.71<br>4.1     | 0.72<br>4.1     | 0.73<br>4.2     | 0.74<br>4.2     | 0.75<br>4.3     | 0.76<br>4.3     | 0.76<br>4.3     | 0.77<br>4.4     | 0.78<br>4.5     | 0.78<br>4.5     |

N  
6¼"

# PLN™ and N FORMLOK™

- 7¼ in. (184 mm) TOTAL SLAB DEPTH
- Light Weight Concrete  
110 pcf (1,760 kg/m³)  
46.7 psf (2,236 N/m²)
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating



## Deck Weight and Section Properties

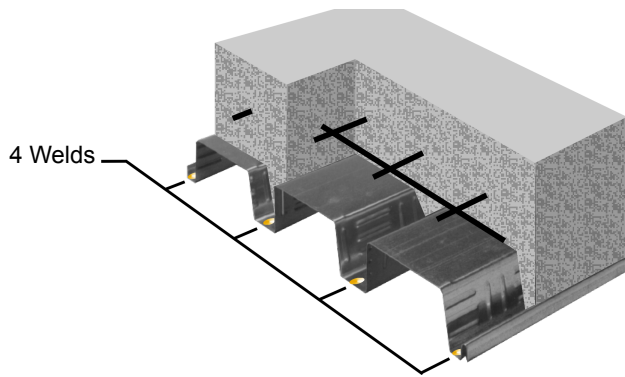
| Gage      | Weight (psf, N/m²)  |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |              |              |                  |                |
|-----------|---------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|--------------|--------------|------------------|----------------|
|           | Galv<br>G60<br>Z180 | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |              |              | Interior Bearing |                |
|           |                     |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm  | 4"<br>102 mm | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 2.2<br>105.3        | 2.1<br>100.5     | 0.613<br>837,105                         | 0.361<br>19,408                           | 0.446<br>23,978                           | 349<br>5,093                                    | 419<br>6,115 | 489<br>7,136 | 1104<br>16,112   | 1287<br>18,782 |
| <b>20</b> | 2.6<br>124.5        | 2.5<br>119.7     | 0.780<br>1,065,159                       | 0.466<br>25,054                           | 0.548<br>29,462                           | 486<br>7,093                                    | 572<br>8,348 | 659<br>9,617 | 1582<br>23,088   | 1828<br>26,678 |

## Allowable Superimposed Loads (psf, kN/m²)

| Gage                                                    | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---------------------------------------------------------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                                         |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|                                                         |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b>                                               | 1     | 300<br>14.4       | 280<br>13.4    | 251<br>12.0    | 225<br>10.8    | 203<br>9.7      | 184<br>8.8      | 167<br>8.0      | 152<br>7.3      | 139<br>6.7      | 127<br>6.1      | 116<br>5.6      | 106<br>5.1      | 97<br>4.6       | 89<br>4.3       | 82<br>3.9       |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 295<br>14.1    | 269<br>12.9    | 203<br>9.7      | 184<br>8.8      | 167<br>8.0      | 152<br>7.3      | 139<br>6.7      | 127<br>6.1      | 116<br>5.6      | 106<br>5.1      | 97<br>4.6       | 89<br>4.3       | 82<br>3.9       |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 295<br>14.1    | 269<br>12.9    | 203<br>9.7      | 184<br>8.8      | 167<br>8.0      | 152<br>7.3      | 139<br>6.7      | 127<br>6.1      | 116<br>5.6      | 106<br>5.1      | 97<br>4.6       | 89<br>4.3       | 82<br>3.9       |
| <b>20</b>                                               | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 239<br>11.4    | 215<br>10.3     | 195<br>9.3      | 177<br>8.5      | 161<br>7.7      | 147<br>7.0      | 135<br>6.5      | 123<br>5.9      | 113<br>5.4      | 104<br>5.0      | 96<br>4.6       | 88<br>4.2       |
|                                                         | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 283<br>13.6    | 260<br>12.4     | 240<br>11.5     | 177<br>8.5      | 161<br>7.7      | 147<br>7.0      | 135<br>6.5      | 123<br>5.9      | 113<br>5.4      | 104<br>5.0      | 96<br>4.6       | 88<br>4.2       |
|                                                         | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 283<br>13.6    | 260<br>12.4     | 240<br>11.5     | 222<br>10.6     | 161<br>7.7      | 147<br>7.0      | 135<br>6.5      | 123<br>5.9      | 113<br>5.4      | 104<br>5.0      | 96<br>4.6       | 88<br>4.2       |
| Shoring required in shaded areas to right of heavy line |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
|           |       |                   |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>22</b> | q4    | 2085<br>30.43     | 2065<br>30.14  | 2045<br>29.84  | 2025<br>29.55  | 2010<br>29.33   | 1995<br>29.11   | 1985<br>28.97   | 1975<br>28.82   | 1960<br>28.60   | 1950<br>28.46   | 1945<br>28.39   | 1935<br>28.24   | 1930<br>28.17   | 1920<br>28.02   | 1915<br>27.95   |
|           | F4    | 0.89<br>5.1       | 0.90<br>5.1    | 0.91<br>5.2    | 0.92<br>5.3    | 0.93<br>5.3     | 0.93<br>5.3     | 0.94<br>5.4     | 0.95<br>5.4     | 0.95<br>5.4     | 0.96<br>5.5     | 0.96<br>5.5     | 0.96<br>5.5     | 0.97<br>5.5     | 0.97<br>5.5     | 0.98<br>5.6     |
| <b>20</b> | q4    | 2125<br>31.01     | 2100<br>30.65  | 2075<br>30.28  | 2055<br>29.99  | 2040<br>29.77   | 2020<br>29.48   | 2005<br>29.26   | 1990<br>29.04   | 1980<br>28.90   | 1965<br>28.68   | 1955<br>28.53   | 1945<br>28.39   | 1935<br>28.24   | 1930<br>28.17   | 1920<br>28.02   |
|           | F4    | 0.80<br>4.6       | 0.81<br>4.6    | 0.82<br>4.7    | 0.83<br>4.7    | 0.84<br>4.8     | 0.84<br>4.8     | 0.85<br>4.9     | 0.86<br>4.9     | 0.86<br>4.9     | 0.87<br>5.0     | 0.87<br>5.0     | 0.88<br>5.0     | 0.88<br>5.0     | 0.88<br>5.0     | 0.89<br>5.1     |



# PLN™ and N FORMLOK™

- 7 1/4 in. (184 mm) TOTAL SLAB DEPTH
- Light Weight Concrete
- 110 pcf (1,760 kg/m<sup>3</sup>)
- 46.7 psf (2,236 N/m<sup>2</sup>)
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating

## Deck Weight and Section Properties

| Gage      | Weight (psf, N/m <sup>2</sup> ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|---------------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180             | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                                 |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>18</b> | 3.5<br>167.6                    | 3.4<br>162.8     | 1.146<br>1,564,964                       | 0.664<br>35,699                           | 0.737<br>39,623                           | 916<br>13,368                                   | 1051<br>15,338 | 1186<br>17,308 | 2695<br>39,331   | 3066<br>44,745 |
| <b>16</b> | 4.2<br>201.1                    | 4.1<br>196.3     | 1.542<br>2,105,737                       | 0.851<br>45,752                           | 0.914<br>49,139                           | 1670<br>24,372                                  | 1879<br>27,422 | 2088<br>30,472 | 4033<br>58,857   | 4532<br>66,140 |

## Allowable Superimposed Loads (psf, kN/m<sup>2</sup>)

| Gage      | Spans | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>18</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 281<br>13.5    | 258<br>12.4     | 238<br>11.4     | 220<br>10.5     | 159<br>7.6      | 145<br>6.9      | 133<br>6.4      | 121<br>5.8      | 111<br>5.3      | 102<br>4.9      | 94<br>4.5       | 86<br>4.1       |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 281<br>13.5    | 258<br>12.4     | 238<br>11.4     | 220<br>10.5     | 204<br>9.8      | 190<br>9.1      | 133<br>6.4      | 121<br>5.8      | 111<br>5.3      | 102<br>4.9      | 94<br>4.5       | 86<br>4.1       |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 281<br>13.5    | 258<br>12.4     | 238<br>11.4     | 220<br>10.5     | 204<br>9.8      | 190<br>9.1      | 178<br>8.5      | 166<br>7.9      | 156<br>7.5      | 102<br>4.9      | 94<br>4.5       | 86<br>4.1       |
| <b>16</b> | 1     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 279<br>13.4    | 256<br>12.3     | 236<br>11.3     | 219<br>10.5     | 203<br>9.7      | 189<br>9.0      | 177<br>8.5      | 120<br>5.7      | 110<br>5.3      | 100<br>4.8      | 92<br>4.4       | 85<br>4.1       |
|           | 2     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 279<br>13.4    | 256<br>12.3     | 236<br>11.3     | 219<br>10.5     | 203<br>9.7      | 189<br>9.0      | 177<br>8.5      | 165<br>7.9      | 155<br>7.4      | 100<br>4.8      | 92<br>4.4       | 85<br>4.1       |
|           | 3     | 300<br>14.4       | 300<br>14.4    | 300<br>14.4    | 279<br>13.4    | 256<br>12.3     | 236<br>11.3     | 219<br>10.5     | 203<br>9.7      | 189<br>9.0      | 177<br>8.5      | 165<br>7.9      | 155<br>7.4      | 146<br>7.0      | 138<br>6.6      | 85<br>4.1       |

Shoring required in shaded areas to right of heavy line

## Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| Gage      | Welds | Span (ft-in., mm) |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------|-------|-------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|           |       | 8'-0"<br>2,440    | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 | 10'-6"<br>3,200 | 11'-0"<br>3,350 | 11'-6"<br>3,510 | 12'-0"<br>3,660 | 12'-6"<br>3,810 | 13'-0"<br>3,960 | 13'-6"<br>4,110 | 14'-0"<br>4,270 | 14'-6"<br>4,420 | 15'-0"<br>4,570 |
| <b>18</b> | q4    | 2230<br>32.54     | 2195<br>32.03  | 2165<br>31.60  | 2135<br>31.16  | 2110<br>30.79   | 2090<br>30.50   | 2065<br>30.14   | 2050<br>29.92   | 2030<br>29.63   | 2015<br>29.41   | 2000<br>29.19   | 1990<br>29.04   | 1975<br>28.82   | 1965<br>28.68   | 1955<br>28.53   |
|           | F4    | 0.66<br>3.8       | 0.67<br>3.8    | 0.68<br>3.9    | 0.69<br>3.9    | 0.70<br>4.0     | 0.71<br>4.1     | 0.71<br>4.1     | 0.72<br>4.1     | 0.73<br>4.2     | 0.73<br>4.2     | 0.74<br>4.2     | 0.74<br>4.2     | 0.75<br>4.3     | 0.75<br>4.3     | 0.76<br>4.3     |
| <b>16</b> | q4    | 2345<br>34.22     | 2300<br>33.57  | 2265<br>33.06  | 2230<br>32.54  | 2200<br>32.11   | 2170<br>31.67   | 2145<br>31.30   | 2120<br>30.94   | 2100<br>30.65   | 2080<br>30.36   | 2060<br>30.06   | 2045<br>29.84   | 2030<br>29.63   | 2015<br>29.41   | 2000<br>29.19   |
|           | F4    | 0.56<br>3.2       | 0.57<br>3.3    | 0.58<br>3.3    | 0.59<br>3.4    | 0.60<br>3.4     | 0.61<br>3.5     | 0.62<br>3.5     | 0.62<br>3.5     | 0.63<br>3.6     | 0.63<br>3.6     | 0.64<br>3.7     | 0.65<br>3.7     | 0.65<br>3.7     | 0.66<br>3.8     | 0.66<br>3.8     |

N  
7 1/4"  
LW

# FORMLOK™ DECK WITHOUT FILL - TECHNICAL DATA

This section presents vertical load and diaphragm load design information for PLW2™, W2, PLW3™, and W3 FORMLOK™ decks used without structural concrete fill. PLW2™ and PLW3™ FORMLOK™ decks utilize the revolutionary PunchLok® system for sidelap connections.

## Uniform Load Tables

The tables on pages 111–113 and 119–121 list allowable uniform loads. These are total uniform loads which can be applied to the FORMLOK deck. Values are based on the allowable bending stress and limiting deflection to either  $L/360$  or  $L/180$ . The symbol ♦♦♦ indicates that the allowable uniform load based on deflection exceeds the allowable load based on stress. Stress is limited to 22,800 psi ( $157,200 \text{ kN/m}^2$ ) based on  $F_y = 38,000 \text{ psi}$  ( $262,000 \text{ kN/m}^2$ ) minimum. See page 126 for the formulas used to determine the allowable uniform loads due to stress and deflection.

## Bearing

Verco recommends 2 in. (51 mm) minimum bearing on perpendicular supports for Verco FORMLOK deck. The required bearing should be verified based on specific span conditions. Adequate bearing is required to prevent web crippling of the deck and to allow proper attachment of the deck. The allowable reactions for uniform loads are shown in the section properties tables.

Web crippling due to concentrated loads located directly over supports should also be evaluated. Contact the Verco Engineering department for additional information.

Adequate bearing at parallel supports should be provided to make the specified connections.

## Concentrated Loads

Concentrated loads should be evaluated based on the deck section properties and material strength.

## FORMLOK DECK DIAPHRAGMS

The diaphragm shear values for FORMLOK deck used without concrete fill are based on attaching the deck to the supports with puddle welds. The attachment patterns for each profile are shown in the illustrations included with the tables.

## Diaphragm Load Tables

Designers should observe the following notes when working with these tables:

- Diaphragm shear strengths ( $q$ ) are the allowable strengths and are not to be increased one-third.
- The flexibility factor ( $F$ ) is the number of microinches a diaphragm web will deflect in a span of 1 ft (305 mm) under a shear load of 1 pound per ft (14.6 N/m).
- $R$  is the vertical load span (spacing between supports) ( $L_v$ ) of the deck units divided by the length ( $L_s$ ) of the deck sheet:  $R = L_v / L_s$ .
- The flexibility limitations of ICBO ES Report ER-2078P may be used as a guide instead of a rational analysis of the anticipated deflections.

- VSC = Vercor Sidelap Connection made with the Vercor PunchLok tool on PLW2 and PLW3 FORMLOK deck.
- BP = Button punched sidelap connection.
- TSW = 1½" (38 mm) long top seam weld sidelap connection.
- Refer to "Sidelap Connections" on page 109 for information regarding connection spacing.
- Interpolation of diaphragm strength between adjacent spans is permissible. For interpolated span lengths, use the diaphragm flexibility of the closest span length.

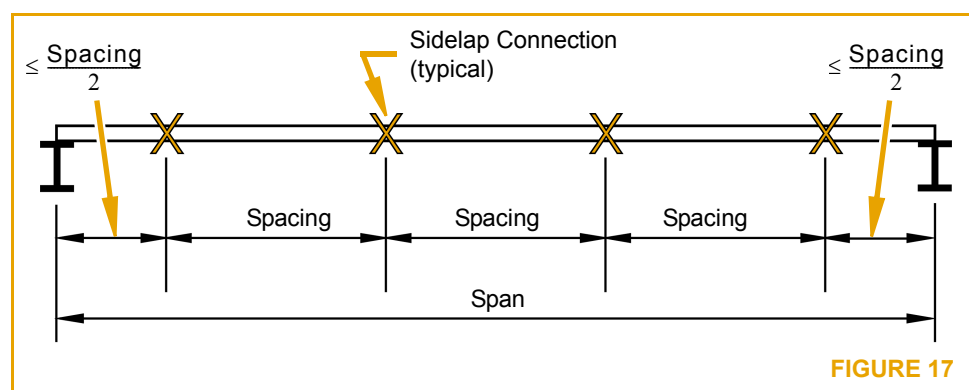
## ATTACHMENT OF FORMLOK DECK

### Support Fastening

The diaphragm shear tables for FORMLOK deck used without concrete fill are based on attaching deck to the supports with arc spot (puddle) welds. Refer to "Support Fastening" on page 10 for more information.

### Sidelap Connections

Vercor FORMLOK decks used without concrete fill are to be fastened at the sidelap with either the PunchLok tool, button punches, or 1½" (38 mm) long top seam welds. Refer to "Sidelap Connections" on page 11 for information on specific connections. Spacing of sidelap connections shall be as specified.



The dimension from the centerline of the supports to the first and last sidelap connection within each span is to be no more than one half the specified spacing as shown in Figure 17. The number of connections per span based on spacing are noted in Table 10.

**Table 10: Number of Sidelap Connections per Span Based on Spacing**

| SPACING<br>in. (mm) | SPAN (ft-in., mm) |       |       |       |        |        |        |        |        |        |        |
|---------------------|-------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
|                     | 6'-0"             | 7'-0" | 8'-0" | 9'-0" | 10'-0" | 11'-0" | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" |
|                     | 1,830             | 2,130 | 2,440 | 2,740 | 3,050  | 3,350  | 3,660  | 3,960  | 4,270  | 4,570  | 4,880  |
| 24 (610)            | 3                 | 4     | 4     | 5     | 5      | 6      | 6      | 7      | 7      | 8      | 8      |
| 12 (305)            | 6                 | 7     | 8     | 9     | 10     | 11     | 12     | 13     | 14     | 15     | 16     |
| 8 (203)             | 9                 | 11    | 12    | 14    | 15     | 17     | 18     | 20     | 21     | 23     | 24     |
| 4 (102)             | 18                | 21    | 24    | 27    | 30     | 33     | 36     | 39     | 42     | 45     | 48     |

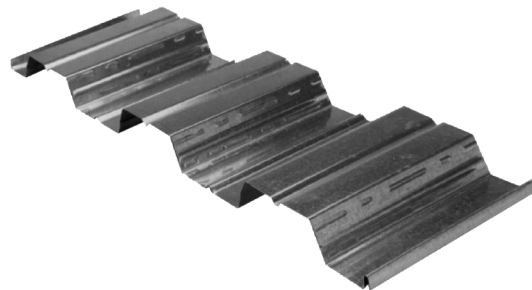
### Parallel Collectors

Spacing of the attachments at collectors parallel to the deck ribs should be based on the shear to be transferred. Table 2 on page 12 lists allowable shear strengths for arc spot (puddle) welds. Allowable shear strength of fillet welds is determined in accordance with AWS D1.3. The maximum spacing of attachments at parallel collectors is 3 ft (914 mm).

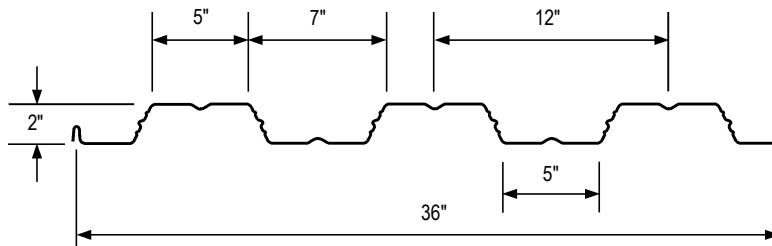


# PLW2™ and W2 FORMLOK™

- 2" (51 mm) Deep Deck
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



## Dimensions



## Deck Weight and Section Properties

| Gage      | Weight (psf, $N/m^2$ ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, $N$ ) |                |                |                  |                |
|-----------|------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180    | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                        |                |                | Interior Bearing |                |
|           |                        |                  |                                          |                                           |                                           | 2"<br>51 mm                                        | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.8<br>86.2            | 1.7<br>81.4      | 0.340<br>464,300                         | 0.283<br>15,215                           | 0.287<br>15,430                           | 219<br>3,196                                       | 263<br>3,838   | 306<br>4,466   | 684<br>9,982     | 797<br>11,631  |
| <b>21</b> | 2.0<br>95.8            | 1.9<br>91.0      | 0.382<br>521,655                         | 0.321<br>17,258                           | 0.328<br>17,634                           | 259<br>3,780                                       | 307<br>4,480   | 356<br>5,195   | 824<br>12,025    | 956<br>13,952  |
| <b>20</b> | 2.1<br>100.5           | 2.0<br>95.8      | 0.423<br>577,644                         | 0.361<br>19,408                           | 0.370<br>19,892                           | 301<br>4,393                                       | 355<br>5,181   | 409<br>5,969   | 972<br>14,185    | 1123<br>16,389 |
| <b>19</b> | 2.4<br>114.9           | 2.3<br>110.1     | 0.508<br>693,719                         | 0.442<br>23,763                           | 0.453<br>24,355                           | 396<br>5,779                                       | 460<br>6,713   | 523<br>7,633   | 1294<br>18,885   | 1482<br>21,628 |
| <b>18</b> | 2.7<br>129.3           | 2.5<br>119.7     | 0.555<br>757,901                         | 0.510<br>27,419                           | 0.511<br>27,473                           | 533<br>7,779                                       | 613<br>8,946   | 693<br>10,114  | 1587<br>23,161   | 1807<br>26,371 |
| <b>16</b> | 3.3<br>158.0           | 3.1<br>148.4     | 0.694<br>947,718                         | 0.639<br>34,355                           | 0.639<br>34,355                           | 981<br>14,317                                      | 1105<br>16,126 | 1229<br>17,936 | 2380<br>34,733   | 2677<br>39,068 |

NOTE: Bending strength limited to 22,800 psi (157,200 kPa ).

W2 NO  
FILL

## Attachment Pattern to Supports



### Metric Conversions

| in. | mm  |
|-----|-----|
| 2   | 51  |
| 5   | 127 |
| 7   | 178 |
| 12  | 305 |
| 36  | 914 |



# PLW2™ and W2 FORMLOK™

2" (51 mm) Deep Deck ■  
Without Concrete Fill ■  
Galvanized or Phosphatized/Painted ■

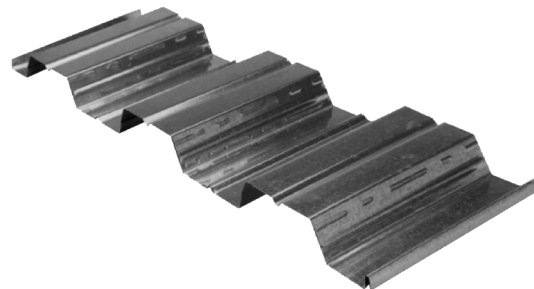
Allowable Uniform Loads (psf,  $N/m^2$ )

|             |        | SPAN (ft-in., mm) |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |
|-------------|--------|-------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| GAGE        |        | 6'-0"             | 6'-6"         | 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"      | 13'-6"      | 14'-0"      |
|             |        | 1,830             | 1,980         | 2,130        | 2,290        | 2,440        | 2,590        | 2,740        | 2,900        | 3,050       | 3,200       | 3,350       | 3,500       | 3,660       | 3,810       | 3,960       | 4,110       | 4,270       |
| SINGLE SPAN |        |                   |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |
| 22          | STRESS | 119<br>5,698      | 102<br>4,884  | 88<br>4,213  | 76<br>3,639  | 67<br>3,208  | 60<br>2,873  | 53<br>2,538  | 48<br>2,298  | 43<br>2,059 | 39<br>1,867 | 36<br>1,724 | 33<br>1,580 | 30<br>1,436 | 28<br>1,341 | 25<br>1,197 | 24<br>1,149 | 22<br>1,053 |
|             | L/360  | 69<br>3,304       | 54<br>2,586   | 43<br>2,059  | 35<br>1,676  | 29<br>1,389  | 24<br>1,149  | 20<br>958    | 17<br>814    | 15<br>718   | 13<br>622   | 11<br>527   | 10<br>479   | 9<br>431    | 8<br>383    | 7<br>335    | 6<br>287    | 5<br>239    |
|             | L/180  | ◆◆◆               | ◆◆◆           | 87<br>4,166  | 71<br>3,399  | 58<br>2,777  | 48<br>2,298  | 41<br>1,963  | 35<br>1,676  | 30<br>1,436 | 26<br>1,245 | 22<br>1,053 | 20<br>958   | 17<br>814   | 15<br>718   | 14<br>670   | 12<br>575   | 11<br>527   |
|             | STRESS | 136<br>6,512      | 115<br>5,506  | 100<br>4,788 | 87<br>4,166  | 76<br>3,639  | 68<br>3,256  | 60<br>2,873  | 54<br>2,586  | 49<br>2,346 | 44<br>2,107 | 40<br>1,915 | 37<br>1,772 | 34<br>1,628 | 31<br>1,484 | 29<br>1,389 | 27<br>1,293 | 25<br>1,197 |
| 21          | L/360  | 77<br>3,687       | 61<br>2,921   | 49<br>2,346  | 40<br>1,915  | 33<br>1,580  | 27<br>1,293  | 23<br>1,101  | 20<br>958    | 17<br>814   | 14<br>670   | 13<br>622   | 11<br>527   | 10<br>479   | 9<br>431    | 8<br>383    | 7<br>335    | 6<br>287    |
|             | L/180  | ◆◆◆               | ◆◆◆           | 98<br>4,692  | 79<br>3,783  | 65<br>3,112  | 54<br>2,586  | 46<br>2,202  | 39<br>1,867  | 33<br>1,580 | 29<br>1,389 | 25<br>1,197 | 22<br>1,053 | 19<br>910   | 17<br>814   | 15<br>718   | 14<br>670   | 12<br>575   |
|             | STRESS | 152<br>7,278      | 130<br>6,224  | 112<br>5,363 | 98<br>4,692  | 86<br>4,118  | 76<br>3,639  | 68<br>3,256  | 61<br>2,921  | 55<br>2,633 | 50<br>2,394 | 45<br>2,155 | 41<br>1,963 | 38<br>1,819 | 35<br>1,676 | 32<br>1,532 | 30<br>1,436 | 28<br>1,341 |
| 20          | L/360  | 86<br>4,118       | 67<br>3,208   | 54<br>2,586  | 44<br>2,107  | 36<br>1,724  | 30<br>1,436  | 25<br>1,197  | 22<br>1,053  | 19<br>910   | 16<br>766   | 14<br>670   | 12<br>575   | 11<br>527   | 9<br>431    | 8<br>383    | 8<br>383    | 7<br>335    |
|             | L/180  | ◆◆◆               | ◆◆◆           | 108<br>5,171 | 88<br>4,213  | 72<br>3,447  | 60<br>2,873  | 51<br>2,442  | 43<br>2,059  | 37<br>1,772 | 32<br>1,532 | 28<br>1,341 | 24<br>1,149 | 21<br>1,005 | 19<br>910   | 17<br>814   | 15<br>718   | 13<br>622   |
|             | STRESS | 187<br>8,954      | 159<br>7,613  | 137<br>6,560 | 119<br>5,698 | 105<br>5,027 | 93<br>4,453  | 83<br>3,974  | 74<br>3,543  | 67<br>3,208 | 61<br>2,921 | 56<br>2,681 | 51<br>2,442 | 47<br>2,250 | 43<br>2,059 | 40<br>1,915 | 37<br>1,772 | 34<br>1,628 |
| 19          | L/360  | 103<br>4,932      | 81<br>3,878   | 65<br>3,112  | 53<br>2,538  | 43<br>2,059  | 36<br>1,724  | 31<br>1,484  | 26<br>1,245  | 22<br>1,053 | 19<br>910   | 17<br>814   | 15<br>718   | 13<br>622   | 11<br>527   | 10<br>479   | 9<br>431    | 8<br>383    |
|             | L/180  | ◆◆◆               | ◆◆◆           | 130<br>6,224 | 105<br>5,027 | 87<br>4,166  | 72<br>3,447  | 61<br>2,921  | 52<br>2,490  | 44<br>2,107 | 38<br>1,819 | 33<br>1,580 | 29<br>1,389 | 26<br>1,245 | 23<br>1,101 | 20<br>958   | 18<br>862   | 16<br>766   |
|             | STRESS | 215<br>10,294     | 183<br>8,762  | 158<br>7,565 | 138<br>6,607 | 121<br>5,794 | 107<br>5,123 | 96<br>4,597  | 86<br>4,118  | 78<br>3,735 | 70<br>3,352 | 64<br>3,064 | 59<br>2,825 | 54<br>2,586 | 50<br>2,394 | 46<br>2,202 | 43<br>2,059 | 40<br>1,915 |
| 18          | L/360  | 112<br>5,363      | 88<br>4,213   | 71<br>3,399  | 58<br>2,777  | 47<br>2,250  | 40<br>1,915  | 33<br>1,580  | 28<br>1,341  | 24<br>1,149 | 21<br>1,005 | 18<br>862   | 16<br>766   | 14<br>670   | 12<br>575   | 11<br>527   | 10<br>479   | 9<br>431    |
|             | L/180  | ◆◆◆               | 177<br>8,475  | 142<br>6,799 | 115<br>5,506 | 95<br>4,549  | 79<br>3,783  | 67<br>3,208  | 57<br>2,729  | 49<br>2,346 | 42<br>2,011 | 37<br>1,772 | 32<br>1,532 | 28<br>1,341 | 25<br>1,197 | 22<br>1,053 | 20<br>958   | 18<br>862   |
|             | STRESS | 270<br>12,928     | 230<br>11,012 | 198<br>9,480 | 173<br>8,283 | 152<br>7,278 | 134<br>6,416 | 120<br>5,746 | 108<br>5,171 | 97<br>4,644 | 88<br>4,213 | 80<br>3,830 | 73<br>3,495 | 67<br>3,208 | 62<br>2,969 | 57<br>2,729 | 53<br>2,538 | 50<br>2,394 |
| 16          | L/360  | 141<br>6,751      | 111<br>5,315  | 89<br>4,261  | 72<br>3,447  | 59<br>2,825  | 49<br>2,346  | 42<br>2,011  | 35<br>1,676  | 30<br>1,436 | 26<br>1,245 | 23<br>1,101 | 20<br>958   | 18<br>862   | 16<br>766   | 14<br>670   | 12<br>575   | 11<br>527   |
|             | L/180  | ◆◆◆               | 221<br>10,582 | 177<br>8,475 | 144<br>6,895 | 119<br>5,698 | 99<br>4,740  | 83<br>3,974  | 71<br>3,399  | 61<br>2,921 | 52<br>2,490 | 46<br>2,202 | 40<br>1,915 | 35<br>1,676 | 31<br>1,484 | 28<br>1,341 | 25<br>1,197 | 22<br>1,053 |

W2 NO  
FILL

# PLW2™ and W2 FORMLOK™

- 2" (51 mm) Deep Deck
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



## Allowable Uniform Loads (psf, N/m<sup>2</sup>)

|      |        | SPAN (ft-in., mm) |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |
|------|--------|-------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| GAGE |        | 6'-0"             | 6'-6"         | 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"      | 13'-6"      | 14'-0"      |
|      |        | 1,830             | 1,980         | 2,130        | 2,290        | 2,440        | 2,590        | 2,740        | 2,900        | 3,050       | 3,200       | 3,350       | 3,500       | 3,660       | 3,810       | 3,960       | 4,110       | 4,270       |
|      |        | DOUBLE SPAN       |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |
| 22   | STRESS | 121<br>5,794      | 103<br>4,932  | 89<br>4,261  | 78<br>3,735  | 68<br>3,256  | 60<br>2,873  | 54<br>2,586  | 48<br>2,298  | 44<br>2,107 | 40<br>1,915 | 36<br>1,724 | 33<br>1,580 | 30<br>1,436 | 28<br>1,341 | 26<br>1,245 | 24<br>1,149 | 22<br>1,053 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | 58<br>2,777  | 49<br>2,346  | 42<br>2,011  | 36<br>1,724 | 31<br>1,484 | 27<br>1,293 | 24<br>1,149 | 21<br>1,005 | 18<br>862   | 16<br>766   | 15<br>718   | 13<br>622   |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
|      |        |                   |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |
| 21   | STRESS | 138<br>6,607      | 118<br>5,650  | 102<br>4,884 | 89<br>4,261  | 78<br>3,735  | 69<br>3,304  | 62<br>2,969  | 55<br>2,633  | 50<br>2,394 | 45<br>2,155 | 41<br>1,963 | 38<br>1,819 | 35<br>1,676 | 32<br>1,532 | 30<br>1,436 | 27<br>1,293 | 25<br>1,197 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | 66<br>3,160  | 55<br>2,633  | 47<br>2,250  | 40<br>1,915 | 35<br>1,676 | 30<br>1,436 | 26<br>1,245 | 23<br>1,101 | 21<br>1,005 | 18<br>862   | 16<br>766   | 15<br>718   |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
|      |        |                   |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |
| 20   | STRESS | 156<br>7,469      | 133<br>6,368  | 115<br>5,506 | 100<br>4,788 | 88<br>4,213  | 78<br>3,735  | 69<br>3,304  | 62<br>2,969  | 56<br>2,681 | 51<br>2,442 | 46<br>2,202 | 43<br>2,059 | 39<br>1,867 | 36<br>1,724 | 33<br>1,580 | 31<br>1,484 | 29<br>1,389 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | 87<br>4,166  | 73<br>3,495  | 61<br>2,921  | 52<br>2,490  | 45<br>2,155 | 39<br>1,867 | 33<br>1,580 | 29<br>1,389 | 26<br>1,245 | 23<br>1,101 | 20<br>958   | 18<br>862   | 16<br>766   |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
|      |        |                   |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |
| 19   | STRESS | 191<br>9,145      | 163<br>7,804  | 141<br>6,751 | 122<br>5,841 | 108<br>5,171 | 95<br>4,549  | 85<br>4,070  | 76<br>3,639  | 69<br>3,304 | 62<br>2,969 | 57<br>2,729 | 52<br>2,490 | 48<br>2,298 | 44<br>2,107 | 41<br>1,963 | 38<br>1,819 | 35<br>1,676 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | 105<br>5,027 | 87<br>4,166  | 73<br>3,495  | 62<br>2,969  | 54<br>2,586 | 46<br>2,202 | 40<br>1,915 | 35<br>1,676 | 31<br>1,484 | 27<br>1,293 | 24<br>1,149 | 22<br>1,053 | 20<br>958   |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
|      |        |                   |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |
| 18   | STRESS | 216<br>10,342     | 184<br>8,810  | 159<br>7,613 | 138<br>6,607 | 121<br>5,794 | 108<br>5,171 | 96<br>4,597  | 86<br>4,118  | 78<br>3,735 | 70<br>3,352 | 64<br>3,064 | 59<br>2,825 | 54<br>2,586 | 50<br>2,394 | 46<br>2,202 | 43<br>2,059 | 40<br>1,915 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | 114<br>5,458 | 95<br>4,549  | 80<br>3,830  | 68<br>3,256  | 58<br>2,777 | 51<br>2,442 | 44<br>2,107 | 38<br>1,819 | 34<br>1,628 | 30<br>1,436 | 27<br>1,293 | 24<br>1,149 | 21<br>1,005 |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
|      |        |                   |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |
| 16   | STRESS | 270<br>12,928     | 230<br>11,012 | 198<br>9,480 | 173<br>8,283 | 152<br>7,278 | 134<br>6,416 | 120<br>5,746 | 108<br>5,171 | 97<br>4,644 | 88<br>4,213 | 80<br>3,830 | 73<br>3,495 | 67<br>3,208 | 62<br>2,969 | 57<br>2,729 | 53<br>2,538 | 50<br>2,394 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | 173<br>8,283 | 143<br>6,847 | 119<br>5,698 | 100<br>4,788 | 85<br>4,070  | 73<br>3,495 | 63<br>3,016 | 55<br>2,633 | 48<br>2,298 | 42<br>2,011 | 37<br>1,772 | 33<br>1,580 | 30<br>1,436 | 27<br>1,293 |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
|      |        |                   |               |              |              |              |              |              |              |             |             |             |             |             |             |             |             |             |

W2 NO FILL



# PLW2™ and W2 FORMLOK™

2" (51 mm) Deep Deck ■  
Without Concrete Fill ■  
Galvanized or Phosphatized/Painted ■

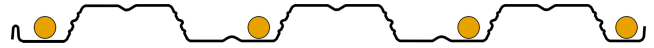
Allowable Uniform Loads (psf, N/m<sup>2</sup>)

| GAGE        | SPAN (ft-in., mm) |        |        |        |        |       |       |       |        |        |        |        |        |        |        |        |        |
|-------------|-------------------|--------|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|             | 6'-0"             | 6'-6"  | 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" | 13'-6" | 14'-0" |
|             | 1,830             | 1,980  | 2,130  | 2,290  | 2,440  | 2,590 | 2,740 | 2,900 | 3,050  | 3,200  | 3,350  | 3,500  | 3,660  | 3,810  | 3,960  | 4,110  | 4,270  |
| TRIPLE SPAN |                   |        |        |        |        |       |       |       |        |        |        |        |        |        |        |        |        |
| 22          | STRESS            | 151    | 129    | 111    | 97     | 85    | 75    | 67    | 60     | 55     | 49     | 45     | 41     | 38     | 35     | 32     | 28     |
|             |                   | 7,230  | 6,177  | 5,315  | 4,644  | 4,070 | 3,591 | 3,208 | 2,873  | 2,633  | 2,346  | 2,155  | 1,963  | 1,819  | 1,676  | 1,532  | 1,341  |
|             | L/360             | 130    | 102    | 82     | 66     | 55    | 46    | 38    | 33     | 28     | 24     | 21     | 18     | 16     | 14     | 13     | 10     |
|             |                   | 6,224  | 4,884  | 3,926  | 3,160  | 2,633 | 2,202 | 1,819 | 1,580  | 1,341  | 1,149  | 1,005  | 862    | 766    | 670    | 622    | 479    |
|             | L/180             | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆   | ◆◆◆   | ◆◆◆   | ◆◆◆    | ◆◆◆    | 48     | 42     | 37     | 32     | 29     | 26     | 20     |
|             |                   |        |        |        |        |       |       |       |        |        | 2,298  | 2,011  | 1,772  | 1,532  | 1,389  | 1,245  | 958    |
| 21          | STRESS            | 173    | 148    | 127    | 111    | 97    | 86    | 77    | 69     | 62     | 57     | 52     | 47     | 43     | 40     | 37     | 32     |
|             |                   | 8,263  | 6,081  | 6,081  | 5,315  | 4,644 | 4,118 | 3,687 | 3,304  | 2,969  | 2,729  | 2,490  | 2,250  | 2,059  | 1,915  | 1,772  | 1,532  |
|             | L/360             | 146    | 115    | 92     | 75     | 62    | 51    | 43    | 37     | 32     | 27     | 24     | 21     | 18     | 16     | 14     | 11     |
|             |                   | 6,991  | 5,506  | 4,405  | 3,591  | 2,969 | 2,442 | 2,059 | 1,772  | 1,532  | 1,293  | 1,149  | 1,005  | 862    | 766    | 670    | 527    |
|             | L/180             | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆   | ◆◆◆   | ◆◆◆   | ◆◆◆    | ◆◆◆    | 54     | 47     | 41     | 36     | 32     | 29     | 23     |
|             |                   |        |        |        |        |       |       |       |        |        | 2,586  | 2,250  | 1,963  | 1,724  | 1,532  | 1,389  | 1,101  |
| 20          | STRESS            | 195    | 166    | 143    | 125    | 110   | 97    | 87    | 78     | 70     | 64     | 58     | 53     | 49     | 45     | 42     | 36     |
|             |                   | 9,337  | 7,948  | 6,847  | 5,985  | 5,267 | 4,644 | 4,166 | 3,735  | 3,352  | 3,064  | 2,777  | 2,538  | 2,346  | 2,155  | 2,011  | 1,724  |
|             | L/360             | 162    | 127    | 102    | 83     | 68    | 57    | 48    | 41     | 35     | 30     | 26     | 23     | 20     | 18     | 16     | 13     |
|             |                   | 7,757  | 6,081  | 4,884  | 3,974  | 3,256 | 2,729 | 2,298 | 1,963  | 1,676  | 1,436  | 1,245  | 1,101  | 958    | 862    | 766    | 622    |
|             | L/180             | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆   | ◆◆◆   | ◆◆◆   | ◆◆◆    | 70     | 60     | 52     | 46     | 40     | 36     | 32     | 25     |
|             |                   |        |        |        |        |       |       |       |        | 3,352  | 2,873  | 2,490  | 2,202  | 1,915  | 1,724  | 1,532  | 1,197  |
| 19          | STRESS            | 239    | 204    | 176    | 153    | 134   | 119   | 106   | 95     | 86     | 78     | 71     | 65     | 60     | 55     | 51     | 44     |
|             |                   | 11,443 | 9,768  | 8,427  | 7,326  | 6,416 | 5,698 | 5,075 | 4,549  | 4,118  | 3,735  | 3,399  | 3,112  | 2,873  | 2,633  | 2,442  | 2,107  |
|             | L/360             | 194    | 153    | 122    | 99     | 82    | 68    | 57    | 49     | 42     | 36     | 31     | 28     | 24     | 21     | 19     | 15     |
|             |                   | 9,289  | 7,326  | 5,841  | 4,740  | 3,926 | 3,256 | 2,729 | 2,346  | 2,011  | 1,724  | 1,484  | 1,341  | 1,149  | 1,005  | 910    | 718    |
|             | L/180             | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆   | ◆◆◆   | ◆◆◆   | ◆◆◆    | 84     | 72     | 63     | 55     | 48     | 43     | 38     | 31     |
|             |                   |        |        |        |        |       |       |       |        | 4,022  | 3,447  | 3,016  | 2,633  | 2,298  | 2,059  | 1,819  | 1,484  |
| 18          | STRESS            | 270    | 230    | 198    | 173    | 152   | 134   | 120   | 108    | 97     | 88     | 80     | 73     | 67     | 62     | 57     | 50     |
|             |                   | 12,928 | 11,012 | 9,480  | 8,283  | 7,278 | 6,416 | 5,746 | 5,171  | 4,644  | 4,213  | 3,830  | 3,495  | 3,208  | 2,969  | 2,729  | 2,394  |
|             | L/360             | 212    | 167    | 133    | 108    | 89    | 75    | 63    | 53     | 46     | 40     | 34     | 30     | 26     | 23     | 21     | 17     |
|             |                   | 10,151 | 7,996  | 6,368  | 5,171  | 4,261 | 3,591 | 3,016 | 2,538  | 2,202  | 1,915  | 1,628  | 1,436  | 1,245  | 1,101  | 1,005  | 814    |
|             | L/180             | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆   | ◆◆◆   | ◆◆◆   | 107    | 92     | 79     | 69     | 60     | 53     | 47     | 42     | 33     |
|             |                   |        |        |        |        |       |       |       | 5,123  | 4,405  | 3,783  | 3,304  | 2,873  | 2,538  | 2,250  | 2,011  | 1,580  |
| 16          | STRESS            | 300    | 287    | 248    | 216    | 190   | 168   | 150   | 135    | 121    | 110    | 100    | 92     | 84     | 78     | 72     | 62     |
|             |                   | 14,364 | 13,742 | 11,874 | 10,342 | 9,097 | 8,044 | 7,182 | 6,464  | 5,794  | 5,267  | 4,788  | 4,405  | 4,022  | 3,735  | 3,447  | 2,969  |
|             | L/360             | 265    | 208    | 167    | 136    | 112   | 93    | 79    | 67     | 57     | 49     | 43     | 38     | 33     | 29     | 26     | 21     |
|             |                   | 12,688 | 9,959  | 7,996  | 6,512  | 5,363 | 4,453 | 3,783 | 3,208  | 2,729  | 2,346  | 2,059  | 1,819  | 1,580  | 1,389  | 1,245  | 1,005  |
|             | L/180             | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆    | ◆◆◆   | ◆◆◆   | ◆◆◆   | 134    | 114    | 99     | 86     | 75     | 66     | 59     | 52     | 42     |
|             |                   |        |        |        |        |       |       |       | 6,416  | 5,458  | 4,740  | 4,118  | 3,591  | 3,160  | 2,825  | 2,490  | 2,011  |

W2 NO  
FILL

# PLW2™ FORMLOK™

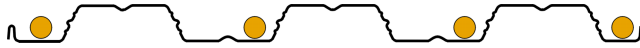
- 4 Weld Pattern at Supports
- Sidelaps Connected with PunchLok® Tool
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



Allowable Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| GAGE     | SIDELAP<br>ATTACH-<br>MENT | SPAN (ft-in., mm) |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|----------|----------------------------|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|          |                            | 6'-0"<br>1,830    | 7'-0"<br>2,130        | 8'-0"<br>2,440        | 9'-0"<br>2,740        | 10'-0"<br>3,050       | 11'-0"<br>3,350       | 12'-0"<br>3,660       | 13'-0"<br>3,960       | 14'-0"<br>4,270       |                       |                       |
| 22       | VSC @ 24"                  | q                 | 443<br>6.47           | 429<br>6.26           | 386<br>5.63           | 380<br>5.55           | 351<br>5.12           | 348<br>5.08           | 327<br>4.77           | 326<br>4.76           | 309<br>4.51           |                       |
|          |                            | F                 | 11.6+54R<br>66.2+308R | 10.9+46R<br>62.2+263R | 13.3+41R<br>75.9+234R | 12.6+36R<br>71.9+206R | 14.8+32R<br>84.5+183R | 14.1+29R<br>80.5+166R | 16.1+27R<br>91.9+154R | 15.4+25R<br>87.9+143R | 17.4+23R<br>99.4+131R |                       |
|          | VSC @ 12"                  | q                 | 554<br>8.09           | 519<br>7.57           | 492<br>7.18           | 470<br>6.86           | 453<br>6.61           | 438<br>6.39           | 426<br>6.22           | 415<br>6.06           | 393<br>5.74           |                       |
|          |                            | F                 | 6.3+54R<br>36.0+308R  | 6.6+46R<br>37.7+263R  | 6.9+41R<br>39.4+234R  | 7.2+36R<br>41.1+206R  | 7.4+32R<br>42.3+183R  | 7.7+29R<br>44.0+166R  | 7.9+27R<br>45.1+154R  | 8.1+25R<br>46.3+143R  | 8.3+23R<br>47.4+131R  |                       |
|          | VSC @ 8"                   | q                 | 640<br>9.34           | 613<br>8.95           | 573<br>8.36           | 547<br>7.98           | 506<br>7.38           | 471<br>6.87           | 441<br>6.44           | 415<br>6.06           | 393<br>5.74           |                       |
|          |                            | F                 | 4.8+54R<br>27.4+308R  | 4.8+46R<br>27.4+263R  | 5.1+41R<br>29.1+234R  | 5.2+36R<br>29.7+206R  | 5.4+32R<br>30.8+183R  | 5.4+29R<br>30.8+166R  | 5.7+27R<br>32.5+154R  | 5.7+25R<br>32.5+143R  | 5.9+23R<br>33.7+131R  |                       |
|          | VSC @ 4"                   | q                 | 742<br>10.83          | 661<br>9.65           | 598<br>8.73           | 547<br>7.98           | 506<br>7.38           | 471<br>6.87           | 441<br>6.44           | 415<br>6.06           | 393<br>5.74           |                       |
|          |                            | F                 | 3.6+54R<br>20.6+308R  | 3.6+46R<br>20.6+263R  | 3.7+41R<br>21.1+234R  | 3.7+36R<br>21.1+206R  | 3.8+32R<br>21.7+183R  | 3.8+29R<br>21.7+166R  | 3.9+27R<br>22.3+154R  | 3.9+25R<br>22.3+143R  | 3.9+23R<br>22.3+131R  |                       |
|          | 21                         | VSC @ 24"         | q                     | 542<br>7.91           | 523<br>7.63           | 471<br>6.87           | 463<br>6.76           | 427<br>6.23           | 424<br>6.19           | 397<br>5.79           | 397<br>5.79           | 376<br>5.49           |
|          |                            |                   | F                     | 9.5+44R<br>54.2+251R  | 9.0+37R<br>51.4+211R  | 10.9+33R<br>62.2+188R | 10.3+29R<br>58.8+166R | 12.1+26R<br>69.1+148R | 11.6+24R<br>66.2+137R | 13.3+22R<br>75.9+126R | 12.7+20R<br>72.5+114R | 14.3+19R<br>81.7+108R |
|          |                            | VSC @ 12"         | q                     | 674<br>9.84           | 630<br>9.19           | 597<br>8.71           | 570<br>8.32           | 549<br>8.01           | 531<br>7.75           | 516<br>7.53           | 503<br>7.34           | 476<br>6.95           |
|          |                            |                   | F                     | 5.3+44R<br>30.3+251R  | 5.6+37R<br>32.0+211R  | 5.8+33R<br>33.1+188R  | 6.0+29R<br>34.3+166R  | 6.3+26R<br>36.0+148R  | 6.5+24R<br>37.1+137R  | 6.7+22R<br>38.3+126R  | 6.8+20R<br>38.8+114R  | 7.0+19R<br>40.0+108R  |
| VSC @ 8" |                            | q                 | 776<br>11.32          | 742<br>10.83          | 694<br>10.13          | 662<br>9.66           | 612<br>8.93           | 570<br>8.32           | 534<br>7.79           | 503<br>7.34           | 476<br>6.95           |                       |
|          |                            | F                 | 4.1+44R<br>23.4+251R  | 4.2+37R<br>24.0+211R  | 4.4+33R<br>25.1+188R  | 4.4+29R<br>25.1+166R  | 4.7+26R<br>26.8+148R  | 4.7+24R<br>26.8+137R  | 4.9+22R<br>28.0+126R  | 4.9+20R<br>28.0+114R  | 5.1+19R<br>29.1+108R  |                       |
| VSC @ 4" |                            | q                 | 898<br>13.11          | 800<br>11.68          | 724<br>10.57          | 662<br>9.66           | 612<br>8.93           | 570<br>8.32           | 534<br>7.79           | 503<br>7.34           | 476<br>6.95           |                       |
|          |                            | F                 | 3.1+44R<br>17.7+251R  | 3.2+37R<br>18.3+211R  | 3.2+33R<br>18.3+188R  | 3.3+29R<br>18.8+166R  | 3.3+26R<br>18.8+148R  | 3.4+24R<br>19.4+137R  | 3.4+22R<br>19.4+126R  | 3.4+20R<br>19.4+114R  | 3.5+19R<br>20.0+108R  |                       |
| 20       |                            | VSC @ 24"         | q                     | 646<br>9.43           | 622<br>9.08           | 560<br>8.17           | 550<br>8.03           | 508<br>7.41           | 503<br>7.34           | 472<br>6.89           | 471<br>6.87           | 447<br>6.52           |
|          |                            |                   | F                     | 7.9+36R<br>45.1+206R  | 7.5+31R<br>42.8+177R  | 9.1+27R<br>52.0+154R  | 8.7+24R<br>49.7+137R  | 10.1+22R<br>57.7+126R | 9.7+20R<br>55.4+114R  | 11.1+18R<br>63.4+103R | 10.6+17R<br>60.5+97R  | 11.9+15R<br>68.0+86R  |
|          |                            | VSC @ 12"         | q                     | 801<br>11.69          | 748<br>10.92          | 708<br>10.33          | 676<br>9.87           | 650<br>9.49           | 629<br>9.18           | 611<br>8.92           | 596<br>8.70           | 566<br>8.26           |
|          |                            |                   | F                     | 4.6+36R<br>26.3+206R  | 4.8+31R<br>27.4+177R  | 5.0+27R<br>28.6+154R  | 5.2+24R<br>29.7+137R  | 5.4+22R<br>30.8+126R  | 5.5+20R<br>31.4+114R  | 5.7+18R<br>32.5+103R  | 5.9+17R<br>33.7+97R   | 6.0+15R<br>34.3+86R   |
|          | VSC @ 8"                   | q                 | 919<br>13.41          | 878<br>12.81          | 821<br>11.98          | 788<br>11.50          | 728<br>10.62          | 678<br>9.89           | 635<br>9.27           | 598<br>8.73           | 566<br>8.26           |                       |
|          |                            | F                 | 3.6+36R<br>20.6+206R  | 3.7+31R<br>21.1+177R  | 3.9+27R<br>22.3+154R  | 3.9+24R<br>22.3+137R  | 4.1+22R<br>23.4+126R  | 4.1+20R<br>23.4+114R  | 4.2+18R<br>24.0+103R  | 4.2+17R<br>24.0+97R   | 4.4+15R<br>25.1+86R   |                       |
|          | VSC @ 4"                   | q                 | 1068<br>15.59         | 952<br>13.89          | 861<br>12.57          | 788<br>11.50          | 728<br>10.62          | 678<br>9.89           | 635<br>9.27           | 598<br>8.73           | 566<br>8.26           |                       |
|          |                            | F                 | 2.8+36R<br>16.0+206R  | 2.9+31R<br>16.6+177R  | 2.9+27R<br>16.6+154R  | 2.9+24R<br>16.6+137R  | 3.0+22R<br>17.1+126R  | 3.0+20R<br>17.1+114R  | 3.0+18R<br>17.1+103R  | 3.1+17R<br>17.7+97R   | 3.1+15R<br>17.7+86R   |                       |

VSC = Verco Sidelap Connection



- 4 Weld Pattern at Supports
- Sidelaps Connected with PunchLok® Tool
- Without Concrete Fill
- Galvanized or Phosphatized/Painted

Allowable Diaphragm Shear Values,  $q$  (plf,  $kN/m$ ) and Flexibility Factors,  $F$  ((in./lb) $\times 10^6$ , (mm/N) $\times 10^6$ )

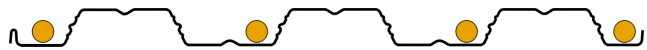
| GAGE | SIDELAP<br>ATTACH-<br>MENT | SPAN (ft-in., mm) |                      |                      |                      |                     |                     |                     |                     |                     |                     |
|------|----------------------------|-------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|      |                            | 6'-0"<br>1,830    | 7'-0"<br>2,130       | 8'-0"<br>2,440       | 9'-0"<br>2,740       | 10'-0"<br>3,050     | 11'-0"<br>3,350     | 12'-0"<br>3,660     | 13'-0"<br>3,960     | 14'-0"<br>4,270     |                     |
| 19   | VSC @ 24"                  | q                 | 863<br>12.59         | 829<br>12.10         | 746<br>10.89         | 732<br>10.68        | 675<br>9.85         | 669<br>9.76         | 628<br>9.16         | 626<br>9.14         | 594<br>8.67         |
|      |                            | F                 | 5.8+25R<br>33.1+143R | 5.5+22R<br>31.4+126R | 6.6+19R<br>37.7+108R | 6.3+17R<br>36.0+97R | 7.3+15R<br>41.7+86R | 7.0+14R<br>40.0+80R | 8.0+13R<br>45.7+74R | 7.7+12R<br>44.0+69R | 8.7+11R<br>49.7+63R |
|      | VSC @ 12"                  | q                 | 1063<br>15.51        | 992<br>14.48         | 937<br>13.67         | 895<br>13.06        | 861<br>12.57        | 833<br>12.16        | 809<br>11.81        | 789<br>11.51        | 770<br>11.24        |
|      |                            | F                 | 3.5+25R<br>20.0+143R | 3.7+22R<br>21.1+126R | 3.8+19R<br>21.7+108R | 4.0+17R<br>22.8+97R | 4.1+15R<br>23.4+86R | 4.2+14R<br>24.0+80R | 4.3+13R<br>24.6+74R | 4.4+12R<br>25.1+69R | 4.5+11R<br>25.7+63R |
|      | VSC @ 8"                   | q                 | 1216<br>17.75        | 1160<br>16.93        | 1084<br>15.82        | 1054<br>15.38       | 991<br>14.46        | 923<br>13.47        | 865<br>12.62        | 814<br>11.88        | 770<br>11.24        |
|      |                            | F                 | 2.9+25R<br>16.6+143R | 2.9+22R<br>16.6+126R | 3.0+19R<br>17.1+108R | 3.1+17R<br>17.7+97R | 3.2+15R<br>18.3+86R | 3.2+14R<br>18.3+80R | 3.3+13R<br>18.8+74R | 3.3+12R<br>18.8+69R | 3.4+11R<br>19.4+63R |
|      | VSC @ 4"                   | q                 | 1454<br>21.22        | 1295<br>18.90        | 1172<br>17.10        | 1073<br>15.66       | 991<br>14.46        | 923<br>13.47        | 865<br>12.62        | 814<br>11.88        | 770<br>11.24        |
|      |                            | F                 | 2.3+25R<br>13.1+143R | 2.4+22R<br>13.7+126R | 2.4+19R<br>13.7+108R | 2.4+17R<br>13.7+97R | 2.4+15R<br>13.7+86R | 2.5+14R<br>14.3+80R | 2.5+13R<br>14.3+74R | 2.5+12R<br>14.3+69R | 2.5+11R<br>14.3+63R |
| 18   | VSC @ 24"                  | q                 | 984<br>14.36         | 1003<br>14.64        | 888<br>12.96         | 885<br>12.92        | 817<br>11.92        | 809<br>11.81        | 760<br>11.09        | 757<br>11.05        | 719<br>10.49        |
|      |                            | F                 | 4.6+20R<br>26.3+114R | 4.4+17R<br>25.1+97R  | 5.2+15R<br>29.7+86R  | 5.0+13R<br>28.6+74R | 5.8+12R<br>33.1+69R | 5.6+11R<br>32.0+63R | 6.3+10R<br>36.0+57R | 6.1+9R<br>34.8+51R  | 6.8+8R<br>38.8+46R  |
|      | VSC @ 12"                  | q                 | 1283<br>18.72        | 1196<br>17.45        | 1131<br>16.51        | 1080<br>15.76       | 1038<br>15.15       | 1005<br>14.67       | 977<br>14.26        | 953<br>13.91        | 933<br>13.62        |
|      |                            | F                 | 2.9+20R<br>16.6+114R | 3.0+17R<br>17.1+97R  | 3.1+15R<br>17.7+86R  | 3.3+13R<br>18.8+74R | 3.4+12R<br>19.4+69R | 3.5+11R<br>20.0+63R | 3.5+10R<br>20.0+57R | 3.6+9R<br>20.6+51R  | 3.7+8R<br>21.1+46R  |
|      | VSC @ 8"                   | q                 | 1465<br>21.38        | 1397<br>20.39        | 1306<br>19.06        | 1269<br>18.52       | 1208<br>17.63       | 1156<br>16.87       | 1083<br>15.81       | 1020<br>14.89       | 965<br>14.08        |
|      |                            | F                 | 2.4+20R<br>13.7+114R | 2.5+17R<br>14.3+97R  | 2.6+15R<br>14.8+86R  | 2.6+13R<br>14.8+74R | 2.7+12R<br>15.4+69R | 2.7+11R<br>15.4+63R | 2.8+10R<br>16.0+57R | 2.8+9R<br>16.0+51R  | 2.9+8R<br>16.6+46R  |
|      | VSC @ 4"                   | q                 | 1821<br>26.58        | 1622<br>23.67        | 1468<br>21.42        | 1344<br>19.61       | 1241<br>18.11       | 1156<br>16.87       | 1083<br>15.81       | 1020<br>14.89       | 965<br>14.08        |
|      |                            | F                 | 2.0+20R<br>11.4+114R | 2.1+17R<br>12.0+97R  | 2.1+15R<br>12.0+86R  | 2.1+13R<br>12.0+74R | 2.1+12R<br>12.0+69R | 2.1+11R<br>12.0+63R | 2.2+10R<br>12.6+57R | 2.2+9R<br>12.6+51R  | 2.2+8R<br>12.6+46R  |
| 16   | VSC @ 24"                  | q                 | 1261<br>18.40        | 1320<br>19.26        | 1132<br>16.52        | 1184<br>17.28       | 1050<br>15.32       | 1096<br>15.99       | 993<br>14.49        | 1033<br>15.08       | 950<br>13.86        |
|      |                            | F                 | 2.9+12R<br>16.6+69R  | 2.8+10R<br>16.0+57R  | 3.3+9R<br>18.8+51R   | 3.2+8R<br>18.3+46R  | 3.6+7R<br>20.6+40R  | 3.5+6R<br>20.0+34R  | 3.9+6R<br>22.3+34R  | 3.8+5R<br>21.7+29R  | 4.2+5R<br>24.0+29R  |
|      | VSC @ 12"                  | q                 | 1792<br>26.15        | 1672<br>24.40        | 1582<br>23.09        | 1512<br>22.07       | 1455<br>21.23       | 1410<br>20.58       | 1372<br>20.02       | 1340<br>19.56       | 1313<br>19.16       |
|      |                            | F                 | 2.0+12R<br>11.4+69R  | 2.1+10R<br>12.0+57R  | 2.2+9R<br>12.6+51R   | 2.2+8R<br>12.6+46R  | 2.3+7R<br>13.1+40R  | 2.3+6R<br>13.1+34R  | 2.4+6R<br>13.7+34R  | 2.5+5R<br>14.3+29R  | 2.5+5R<br>14.3+29R  |
|      | VSC @ 8"                   | q                 | 2043<br>29.82        | 1949<br>28.44        | 1823<br>26.60        | 1774<br>25.89       | 1691<br>24.68       | 1663<br>24.27       | 1604<br>23.41       | 1587<br>23.16       | 1520<br>22.18       |
|      |                            | F                 | 1.8+12R<br>10.3+69R  | 1.8+10R<br>10.3+57R  | 1.8+9R<br>10.3+51R   | 1.9+8R<br>10.8+46R  | 1.9+7R<br>10.8+40R  | 1.9+6R<br>10.8+34R  | 2.0+6R<br>11.4+34R  | 2.0+5R<br>11.4+29R  | 2.0+5R<br>11.4+29R  |
|      | VSC @ 4"                   | q                 | 2608<br>38.06        | 2472<br>36.08        | 2313<br>33.76        | 2117<br>30.90       | 1956<br>28.55       | 1821<br>26.58       | 1706<br>24.90       | 1607<br>23.45       | 1520<br>22.18       |
|      |                            | F                 | 1.6+12R<br>9.1+69R   | 1.6+10R<br>9.1+57R   | 1.6+9R<br>9.1+51R    | 1.6+8R<br>9.1+46R   | 1.6+7R<br>9.1+40R   | 1.6+6R<br>9.1+34R   | 1.6+6R<br>9.1+34R   | 1.6+5R<br>9.1+29R   | 1.6+5R<br>9.1+29R   |

VSC = Verco Sidelap Connection

W2 NO  
FILL



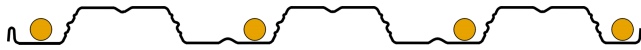
- 4 Weld Pattern at Supports
- Button Punch or 1½" (38 mm) Top Seam Weld
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



Allowable Diaphragm Shear Values,  $q$  (plf,  $kN/m$ ) and Flexibility Factors,  $F$  ((in./lb) $\times 10^6$ , (mm/N) $\times 10^6$ )

| GAGE | SIDELAP<br>ATTACH-<br>MENT | SPAN (ft-in., mm) |                         |                         |                          |                         |                         |                         |                         |                         |                         |
|------|----------------------------|-------------------|-------------------------|-------------------------|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|      |                            | 6'-0"<br>1,830    | 7'-0"<br>2,130          | 8'-0"<br>2,440          | 9'-0"<br>2,740           | 10'-0"<br>3,050         | 11'-0"<br>3,350         | 12'-0"<br>3,660         | 13'-0"<br>3,960         | 14'-0"<br>4,270         |                         |
| 22   | BP @ 24"                   | q                 | 195<br>2.85             | 181<br>2.64             | 159<br>2.32              | 152<br>2.22             | 138<br>2.01             | 134<br>1.96             | 124<br>1.81             | 122<br>1.78             | 114<br>1.66             |
|      |                            | F                 | 15.1+255R<br>86.2+1456R | 16.4+218R<br>93.6+1245R | 18.6+191R<br>106.2+1091R | 19.6+170R<br>111.9+971R | 21.7+153R<br>123.9+874R | 22.5+139R<br>128.5+794R | 24.7+127R<br>141.0+725R | 25.3+118R<br>144.5+674R | 27.4+109R<br>156.5+622R |
|      | BP @ 12"                   | q                 | 242<br>3.53             | 222<br>3.24             | 207<br>3.02              | 195<br>2.85             | 186<br>2.71             | 179<br>2.61             | 173<br>2.52             | 168<br>2.45             | 164<br>2.39             |
|      |                            | F                 | 12.8+255R<br>73.1+1456R | 13.9+218R<br>79.4+1245R | 14.9+191R<br>85.1+1091R  | 15.9+170R<br>90.8+971R  | 16.8+153R<br>95.9+874R  | 17.6+139R<br>100.5+794R | 18.4+127R<br>105.1+725R | 19.2+118R<br>109.6+674R | 19.9+109R<br>113.6+622R |
|      | TSW @ 24"                  | q                 | 221<br>3.23             | 220<br>3.21             | 192<br>2.80              | 194<br>2.83             | 174<br>2.54             | 177<br>2.58             | 162<br>2.36             | 166<br>2.42             | 154<br>2.25             |
|      |                            | F                 | 11.0+255R<br>62.8+1456R | 9.9+218R<br>56.5+1245R  | 10.0+191R<br>57.1+1091R  | 9.2+170R<br>52.5+971R   | 9.3+153R<br>53.1+874R   | 8.6+139R<br>49.1+794R   | 8.7+127R<br>49.7+725R   | 8.2+118R<br>46.8+674R   | 8.2+109R<br>46.8+622R   |
|      | TSW @ 12"                  | q                 | 331<br>4.83             | 314<br>4.58             | 301<br>4.39              | 291<br>4.25             | 283<br>4.13             | 277<br>4.04             | 272<br>3.97             | 267<br>3.90             | 263<br>3.84             |
|      |                            | F                 | 8.3+255R<br>47.4+1456R  | 7.8+218R<br>44.5+1245R  | 7.4+191R<br>42.3+1091R   | 7.1+170R<br>40.5+971R   | 6.8+153R<br>38.8+874R   | 6.5+139R<br>37.1+794R   | 6.3+127R<br>36.0+725R   | 6.1+118R<br>34.8+674R   | 6.0+109R<br>34.3+622R   |
| 21   | BP @ 24"                   | q                 | 245<br>3.58             | 225<br>3.28             | 197<br>2.87              | 188<br>2.74             | 169<br>2.47             | 164<br>2.39             | 151<br>2.20             | 148<br>2.16             | 138<br>2.01             |
|      |                            | F                 | 13.3+191R<br>75.9+1091R | 14.5+164R<br>82.8+936R  | 16.4+143R<br>93.6+817R   | 17.5+128R<br>99.9+731R  | 19.4+115R<br>110.8+657R | 20.3+104R<br>115.9+594R | 22.2+96R<br>126.8+548R  | 23.0+88R<br>131.3+502R  | 24.9+82R<br>142.2+468R  |
|      | BP @ 12"                   | q                 | 296<br>4.32             | 269<br>3.93             | 249<br>3.63              | 234<br>3.41             | 223<br>3.25             | 213<br>3.11             | 205<br>2.99             | 199<br>2.90             | 194<br>2.83             |
|      |                            | F                 | 11.4+191R<br>65.1+1091R | 12.5+164R<br>71.4+936R  | 13.5+143R<br>77.1+817R   | 14.5+128R<br>82.8+731R  | 15.4+115R<br>87.9+657R  | 16.2+104R<br>92.5+594R  | 17.0+96R<br>97.1+548R   | 17.8+88R<br>101.6+502R  | 18.5+82R<br>105.6+468R  |
|      | TSW @ 24"                  | q                 | 286<br>4.17             | 281<br>4.10             | 245<br>3.58              | 246<br>3.59             | 221<br>3.23             | 224<br>3.27             | 204<br>2.98             | 208<br>3.04             | 193<br>2.82             |
|      |                            | F                 | 9.8+191R<br>56.0+1091R  | 8.9+164R<br>50.8+936R   | 9.0+143R<br>51.4+817R    | 8.4+128R<br>48.0+731R   | 8.4+115R<br>48.0+657R   | 7.9+104R<br>45.1+594R   | 8.0+96R<br>45.7+548R    | 7.5+88R<br>42.8+502R    | 7.5+82R<br>42.8+468R    |
|      | TSW @ 12"                  | q                 | 418<br>6.10             | 395<br>5.76             | 377<br>5.50              | 364<br>5.31             | 353<br>5.15             | 344<br>5.02             | 337<br>4.92             | 331<br>4.83             | 325<br>4.74             |
|      |                            | F                 | 7.5+191R<br>42.8+1091R  | 7.1+164R<br>40.5+936R   | 6.8+143R<br>38.8+817R    | 6.5+128R<br>37.1+731R   | 6.2+115R<br>35.4+657R   | 6.0+104R<br>34.3+594R   | 5.8+96R<br>33.1+548R    | 5.7+88R<br>32.5+502R    | 5.5+82R<br>31.4+468R    |
| 20   | BP @ 24"                   | q                 | 300<br>4.38             | 273<br>3.98             | 240<br>3.50              | 226<br>3.30             | 204<br>2.98             | 197<br>2.87             | 181<br>2.64             | 177<br>2.58             | 165<br>2.41             |
|      |                            | F                 | 11.7+147R<br>66.8+839R  | 12.9+126R<br>73.7+719R  | 14.6+111R<br>83.4+634R   | 15.7+98R<br>89.6+560R   | 17.4+88R<br>99.4+502R   | 18.3+80R<br>104.5+457R  | 20.1+74R<br>114.8+423R  | 20.9+68R<br>119.3+388R  | 22.7+63R<br>129.6+360R  |
|      | BP @ 12"                   | q                 | 355<br>5.18             | 321<br>4.68             | 296<br>4.32              | 277<br>4.04             | 262<br>3.82             | 250<br>3.65             | 240<br>3.50             | 232<br>3.39             | 225<br>3.28             |
|      |                            | F                 | 10.3+147R<br>58.8+839R  | 11.3+126R<br>64.5+719R  | 12.3+111R<br>70.2+634R   | 13.2+98R<br>75.4+560R   | 14.1+88R<br>80.5+502R   | 14.9+80R<br>85.1+457R   | 15.7+74R<br>89.6+423R   | 16.5+68R<br>94.2+388R   | 17.2+63R<br>98.2+360R   |
|      | TSW @ 24"                  | q                 | 362<br>5.28             | 353<br>5.15             | 307<br>4.48              | 306<br>4.47             | 274<br>4.00             | 277<br>4.04             | 253<br>3.69             | 257<br>3.75             | 238<br>3.47             |
|      |                            | F                 | 8.8+147R<br>50.2+839R   | 8.1+126R<br>46.3+719R   | 8.2+111R<br>46.8+634R    | 7.6+98R<br>43.4+560R    | 7.7+88R<br>44.0+502R    | 7.2+80R<br>41.1+457R    | 7.3+74R<br>41.7+423R    | 6.9+68R<br>39.4+388R    | 7.0+63R<br>40.0+360R    |
|      | TSW @ 12"                  | q                 | 519<br>7.57             | 488<br>7.12             | 464<br>6.77              | 446<br>6.51             | 432<br>6.30             | 420<br>6.13             | 410<br>5.98             | 402<br>5.87             | 395<br>5.76             |
|      |                            | F                 | 6.9+147R<br>39.4+839R   | 6.5+126R<br>37.1+719R   | 6.2+111R<br>35.4+634R    | 6.0+98R<br>34.3+560R    | 5.7+88R<br>32.5+502R    | 5.6+80R<br>32.0+457R    | 5.4+74R<br>30.8+423R    | 5.2+68R<br>29.7+388R    | 5.1+63R<br>29.1+360R    |

BP = Button Punch; TSW = Top Seam Weld



- 4 Weld Pattern at Supports
- Button Punch or 1½" (38 mm) Top Seam Weld
- Without Concrete Fill
- Galvanized or Phosphatized/Painted

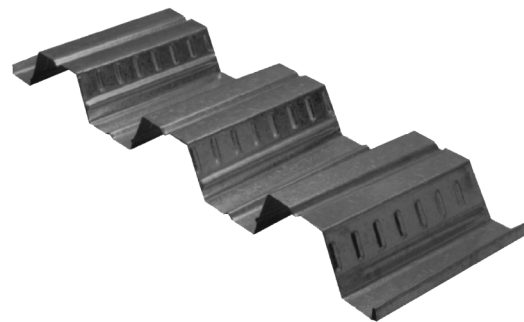
Allowable Diaphragm Shear Values,  $q$  (plf,  $kN/m$ ) and Flexibility Factors,  $F$  ((in./lb) $\times 10^6$ , (mm/N) $\times 10^6$ )

| GAGE | SIDELAP<br>ATTACH-<br>MENT | SPAN (ft-in., mm) |                      |                       |                       |                       |                       |                       |                       |                       |                        |
|------|----------------------------|-------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
|      |                            | 6'-0"<br>1,830    | 7'-0"<br>2,130       | 8'-0"<br>2,440        | 9'-0"<br>2,740        | 10'-0"<br>3,050       | 11'-0"<br>3,350       | 12'-0"<br>3,660       | 13'-0"<br>3,960       | 14'-0"<br>4,270       |                        |
| 19   | BP @ 24"                   | q                 | 424<br>6.19          | 382<br>5.57           | 335<br>4.89           | 313<br>4.57           | 283<br>4.13           | 270<br>3.94           | 248<br>3.62           | 240<br>3.50           | 224<br>3.27            |
|      |                            | F                 | 9.4+93R<br>53.7+531R | 10.4+80R<br>59.4+457R | 11.8+70R<br>67.4+400R | 12.8+62R<br>73.1+354R | 14.3+56R<br>81.7+320R | 15.2+51R<br>86.8+291R | 16.7+46R<br>95.4+263R | 17.5+43R<br>99.9+246R | 19.0+40R<br>108.5+228R |
|      | BP @ 12"                   | q                 | 486<br>7.09          | 437<br>6.38           | 400<br>5.84           | 371<br>5.41           | 349<br>5.09           | 331<br>4.83           | 316<br>4.61           | 304<br>4.44           | 293<br>4.28            |
|      |                            | F                 | 8.4+93R<br>48.0+531R | 9.4+80R<br>53.7+457R  | 10.3+70R<br>58.8+400R | 11.1+62R<br>63.4+354R | 11.9+56R<br>68.0+320R | 12.7+51R<br>72.5+291R | 13.5+46R<br>77.1+263R | 14.3+43R<br>81.7+246R | 15.0+40R<br>85.7+228R  |
|      | TSW @ 24"                  | q                 | 548<br>8.00          | 527<br>7.69           | 458<br>6.68           | 452<br>6.60           | 404<br>5.90           | 405<br>5.91           | 369<br>5.39           | 372<br>5.43           | 344<br>5.02            |
|      |                            | F                 | 7.3+93R<br>41.7+531R | 6.8+80R<br>38.8+457R  | 6.9+70R<br>39.4+400R  | 6.4+62R<br>36.5+354R  | 6.5+56R<br>37.1+320R  | 6.1+51R<br>34.8+291R  | 6.2+46R<br>35.4+263R  | 5.9+43R<br>33.7+246R  | 6.0+40R<br>34.3+228R   |
|      | TSW @ 12"                  | q                 | 762<br>11.12         | 711<br>10.38          | 672<br>9.81           | 642<br>9.37           | 619<br>9.03           | 599<br>8.74           | 583<br>8.51           | 570<br>8.32           | 558<br>8.14            |
|      |                            | F                 | 5.8+93R<br>33.1+531R | 5.5+80R<br>31.4+457R  | 5.3+70R<br>30.3+400R  | 5.1+62R<br>29.1+354R  | 4.9+56R<br>28.0+320R  | 4.8+51R<br>27.4+291R  | 4.7+46R<br>26.8+263R  | 4.5+43R<br>25.7+246R  | 4.4+40R<br>25.1+228R   |
| 18   | BP @ 24"                   | q                 | 536<br>7.82          | 480<br>7.01           | 421<br>6.14           | 391<br>5.71           | 353<br>5.15           | 335<br>4.89           | 308<br>4.49           | 297<br>4.33           | 276<br>4.03            |
|      |                            | F                 | 7.9+66R<br>45.1+377R | 8.9+57R<br>50.8+325R  | 10.1+50R<br>57.7+286R | 11.0+44R<br>62.8+251R | 12.3+40R<br>70.2+228R | 13.1+36R<br>74.8+206R | 14.4+33R<br>82.2+188R | 15.2+31R<br>86.8+177R | 16.6+28R<br>94.8+160R  |
|      | BP @ 12"                   | q                 | 604<br>8.81          | 539<br>7.87           | 491<br>7.17           | 454<br>6.63           | 425<br>6.20           | 402<br>5.87           | 382<br>5.57           | 366<br>5.34           | 352<br>5.14            |
|      |                            | F                 | 7.2+66R<br>41.1+377R | 8.1+57R<br>46.3+325R  | 8.9+50R<br>50.8+286R  | 9.7+44R<br>55.4+251R  | 10.5+40R<br>60.0+228R | 11.2+36R<br>64.0+206R | 12.0+33R<br>68.5+188R | 12.7+31R<br>72.5+177R | 13.4+28R<br>76.5+160R  |
|      | TSW @ 24"                  | q                 | 734<br>10.71         | 705<br>10.29          | 612<br>8.93           | 599<br>8.74           | 536<br>7.82           | 533<br>7.78           | 485<br>7.08           | 487<br>7.11           | 450<br>6.57            |
|      |                            | F                 | 6.3+66R<br>36.0+377R | 5.9+57R<br>33.7+325R  | 6.0+50R<br>34.3+286R  | 5.6+44R<br>32.0+251R  | 5.7+40R<br>32.5+228R  | 5.4+36R<br>30.8+206R  | 5.5+33R<br>31.4+188R  | 5.2+31R<br>29.7+177R  | 5.3+28R<br>30.3+160R   |
|      | TSW @ 12"                  | q                 | 1001<br>14.61        | 935<br>13.65          | 880<br>12.84          | 838<br>12.23          | 804<br>11.73          | 777<br>11.34          | 754<br>11.00          | 735<br>10.73          | 718<br>10.48           |
|      |                            | F                 | 5.1+66R<br>29.1+377R | 4.9+57R<br>28.0+325R  | 4.7+50R<br>26.8+286R  | 4.5+44R<br>25.7+251R  | 4.4+40R<br>25.1+228R  | 4.3+36R<br>24.6+206R  | 4.2+33R<br>24.0+188R  | 4.1+31R<br>23.4+177R  | 4.0+28R<br>22.8+160R   |
| 16   | BP @ 24"                   | q                 | 812<br>11.85         | 720<br>10.51          | 631<br>9.21           | 581<br>8.48           | 524<br>7.65           | 493<br>7.19           | 453<br>6.61           | 433<br>6.32           | 403<br>5.88            |
|      |                            | F                 | 5.7+33R<br>32.5+188R | 6.4+29R<br>36.5+166R  | 7.3+25R<br>41.7+143R  | 8.0+22R<br>45.7+126R  | 8.9+20R<br>50.8+114R  | 9.7+18R<br>55.4+103R  | 10.6+17R<br>60.5+97R  | 11.4+15R<br>65.1+86R  | 12.4+14R<br>70.8+80R   |
|      | BP @ 12"                   | q                 | 890<br>12.99         | 788<br>11.50          | 712<br>10.39          | 654<br>9.54           | 607<br>8.86           | 570<br>8.32           | 539<br>7.87           | 513<br>7.49           | 492<br>7.18            |
|      |                            | F                 | 5.3+33R<br>30.3+188R | 5.9+29R<br>33.7+166R  | 6.6+25R<br>37.7+143R  | 7.2+22R<br>41.1+126R  | 7.9+20R<br>45.1+114R  | 8.5+18R<br>48.5+103R  | 9.2+17R<br>52.5+97R   | 9.8+15R<br>56.0+86R   | 10.4+14R<br>59.4+80R   |
|      | TSW @ 24"                  | q                 | 1075<br>15.69        | 1026<br>14.97         | 904<br>13.19          | 888<br>12.96          | 805<br>11.75          | 805<br>11.75          | 743<br>10.84          | 750<br>10.95          | 702<br>10.24           |
|      |                            | F                 | 4.6+33R<br>26.3+188R | 4.4+29R<br>25.1+166R  | 4.5+25R<br>25.7+143R  | 4.3+22R<br>24.6+126R  | 4.3+20R<br>24.6+114R  | 4.2+18R<br>24.0+103R  | 4.2+17R<br>24.0+97R   | 4.1+15R<br>23.4+86R   | 4.1+14R<br>23.4+80R    |
|      | TSW @ 12"                  | q                 | 1417<br>20.68        | 1324<br>19.32         | 1257<br>18.34         | 1208<br>17.63         | 1170<br>17.07         | 1142<br>16.67         | 1119<br>16.33         | 1102<br>16.08         | 1089<br>15.89          |
|      |                            | F                 | 3.8+33R<br>21.7+188R | 3.7+29R<br>21.1+166R  | 3.6+25R<br>20.6+143R  | 3.5+22R<br>20.0+126R  | 3.4+20R<br>19.4+114R  | 3.4+18R<br>19.4+103R  | 3.3+17R<br>18.8+97R   | 3.2+15R<br>18.3+86R   | 3.2+14R<br>18.3+80R    |

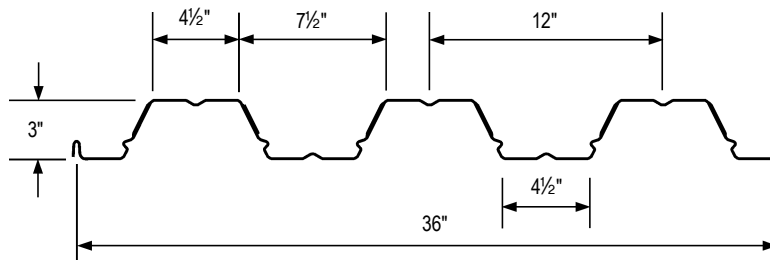
BP = Button Punch; TSW = Top Seam Weld

# PLW3™ and W3 FORMLOK™

- 3" (76 mm) Deep Deck
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



## Dimensions



## Deck Weight and Section Properties

| Gage      | Weight (psf, $N/m^2$ ) |                  | Properties per ft (m) of Width           |                                           |                                           | Allowable Reactions per ft (m) of Width (lb, N) |                |                |                  |                |
|-----------|------------------------|------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------------|----------------|----------------|------------------|----------------|
|           | Galv<br>G60<br>Z180    | Phos/<br>Painted | I<br>in. <sup>4</sup><br>mm <sup>4</sup> | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> | End Bearing                                     |                |                | Interior Bearing |                |
|           |                        |                  |                                          |                                           |                                           | 2"<br>51 mm                                     | 3"<br>76 mm    | 4"<br>102 mm   | 4"<br>102 mm     | 5"<br>127 mm   |
| <b>22</b> | 1.9<br>91.0            | 1.8<br>86.2      | 0.718<br>980,492                         | 0.418<br>22,473                           | 0.444<br>23,871                           | 190<br>2,773                                    | 228<br>3,327   | 267<br>3,897   | 601<br>8,771     | 701<br>10,230  |
| <b>21</b> | 2.1<br>100.5           | 2.0<br>95.8      | 0.837<br>1,142,997                       | 0.495<br>26,613                           | 0.531<br>28,548                           | 240<br>3,503                                    | 286<br>4,174   | 331<br>4,831   | 781<br>11,398    | 906<br>13,222  |
| <b>20</b> | 2.3<br>110.1           | 2.2<br>105.3     | 0.896<br>1,223,567                       | 0.534<br>28,709                           | 0.564<br>30,322                           | 268<br>3,911                                    | 316<br>4,612   | 365<br>5,327   | 877<br>12,799    | 1014<br>14,798 |
| <b>19</b> | 2.7<br>129.3           | 2.6<br>124.5     | 1.075<br>1,468,007                       | 0.674<br>36,236                           | 0.683<br>36,720                           | 374<br>5,458                                    | 434<br>6,334   | 495<br>7,224   | 1241<br>18,111   | 1421<br>20,738 |
| <b>18</b> | 2.9<br>138.9           | 2.7<br>129.3     | 1.203<br>1,642,802                       | 0.767<br>41,236                           | 0.767<br>41,236                           | 507<br>7,399                                    | 583<br>8,508   | 659<br>9,617   | 1528<br>22,299   | 1740<br>25,393 |
| <b>16</b> | 3.5<br>167.6           | 3.3<br>158.0     | 1.509<br>2,060,672                       | 0.960<br>51,612                           | 0.960<br>51,612                           | 942<br>13,747                                   | 1062<br>15,499 | 1181<br>17,235 | 2309<br>33,697   | 2597<br>37,900 |

NOTE: Bending strength limited to 22,800 psi (157,200 kPa).

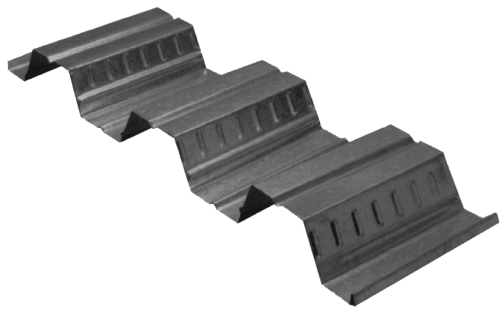
W3 NO FILL

## Attachment Pattern to Supports



### Metric Conversions

| in.   | mm  |
|-------|-----|
| 3     | 76  |
| 4 1/2 | 114 |
| 7 1/2 | 191 |
| 12    | 305 |
| 36    | 914 |



# PLW3™ and W3 FORMLOK™

3" (76 mm) Deep Deck ■  
Without Concrete Fill ■  
Galvanized or Phosphatized/Painted ■

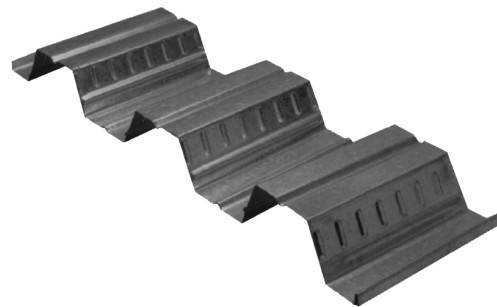
Allowable Uniform Loads (psf,  $N/m^2$ )

|      |        | SPAN (ft-in., mm) |               |               |               |               |              |              |              |              |              |              |              |             |             |             |             |
|------|--------|-------------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|
| GAGE |        | 6'-0"             | 6'-6"         | 7'-0"         | 7'-6"         | 8'-0"         | 8'-6"        | 9'-0"        | 9'-6"        | 10'-0"       | 10'-6"       | 11'-0"       | 12'-0"       | 13'-0"      | 14'-0"      | 15'-0"      | 16'-0"      |
|      |        | 1,830             | 1,980         | 2,130         | 2,290         | 2,440         | 2,590        | 2,740        | 2,900        | 3,050        | 3,200        | 3,350        | 3,660        | 3,960       | 4,270       | 4,570       | 4,880       |
|      |        | SINGLE SPAN       |               |               |               |               |              |              |              |              |              |              |              |             |             |             |             |
| 22   | STRESS | 176<br>8,427      | 150<br>7,182  | 130<br>6,224  | 113<br>5,410  | 99<br>4,740   | 88<br>4,213  | 78<br>3,735  | 70<br>3,352  | 64<br>3,064  | 58<br>2,777  | 53<br>2,538  | 44<br>2,107  | 38<br>1,819 | 32<br>1,532 | 28<br>1,341 | 25<br>1,197 |
|      | L/360  | 146<br>6,991      | 114<br>5,458  | 92<br>4,405   | 74<br>3,543   | 61<br>2,921   | 51<br>2,442  | 43<br>2,059  | 37<br>1,772  | 31<br>1,484  | 27<br>1,293  | 24<br>1,149  | 18<br>862    | 14<br>670   | 11<br>527   | 9<br>431    | 8<br>383    |
|      | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | ◆◆◆          | 63<br>3,016  | 54<br>2,586  | 47<br>2,250  | 36<br>1,724  | 29<br>1,389 | 23<br>1,101 | 19<br>910   | 15<br>718   |
| 21   | STRESS | 209<br>10,007     | 178<br>8,523  | 154<br>7,374  | 134<br>6,416  | 118<br>5,650  | 104<br>4,980 | 93<br>4,453  | 83<br>3,974  | 75<br>3,591  | 68<br>3,256  | 62<br>2,969  | 52<br>2,490  | 45<br>2,155 | 38<br>1,819 | 33<br>1,580 | 29<br>1,389 |
|      | L/360  | 170<br>8,140      | 133<br>6,368  | 107<br>5,123  | 87<br>4,166   | 72<br>3,447   | 60<br>2,873  | 50<br>2,394  | 43<br>2,059  | 37<br>1,772  | 32<br>1,532  | 28<br>1,341  | 21<br>1,005  | 17<br>814   | 13<br>622   | 11<br>527   | 9<br>431    |
|      | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | ◆◆◆          | 73<br>3,495  | 63<br>3,016  | 55<br>2,633  | 42<br>2,011  | 33<br>1,580 | 27<br>1,293 | 22<br>1,053 | 18<br>862   |
| 20   | STRESS | 225<br>10,773     | 192<br>9,193  | 166<br>7,948  | 144<br>6,895  | 127<br>6,081  | 112<br>5,363 | 100<br>4,788 | 90<br>4,309  | 81<br>3,878  | 74<br>3,543  | 67<br>3,208  | 56<br>2,681  | 48<br>2,298 | 41<br>1,963 | 36<br>1,724 | 32<br>1,532 |
|      | L/360  | 182<br>8,714      | 143<br>6,847  | 114<br>5,458  | 93<br>4,453   | 77<br>3,687   | 64<br>3,064  | 54<br>2,586  | 46<br>2,202  | 39<br>1,867  | 34<br>1,628  | 29<br>1,389  | 23<br>1,101  | 18<br>862   | 14<br>670   | 12<br>575   | 10<br>479   |
|      | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | ◆◆◆          | 78<br>3,735  | 68<br>3,256  | 59<br>2,825  | 45<br>2,155  | 36<br>1,724 | 29<br>1,389 | 23<br>1,101 | 19<br>910   |
| 19   | STRESS | 285<br>13,646     | 242<br>11,587 | 209<br>10,007 | 182<br>8,714  | 160<br>7,661  | 142<br>6,799 | 126<br>6,033 | 114<br>5,458 | 102<br>4,884 | 93<br>4,453  | 85<br>4,070  | 71<br>3,399  | 61<br>2,921 | 52<br>2,490 | 46<br>2,202 | 40<br>1,915 |
|      | L/360  | 218<br>10,438     | 171<br>8,188  | 137<br>6,560  | 112<br>5,363  | 92<br>4,405   | 77<br>3,687  | 65<br>3,112  | 55<br>2,633  | 47<br>2,250  | 41<br>1,963  | 35<br>1,676  | 27<br>1,293  | 21<br>1,005 | 17<br>814   | 14<br>670   | 11<br>527   |
|      | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | 110<br>5,267 | 94<br>4,501  | 81<br>3,878  | 71<br>3,399  | 54<br>2,586  | 43<br>2,059 | 34<br>1,628 | 28<br>1,341 | 23<br>1,101 |
| 18   | STRESS | 300<br>14,364     | 276<br>13,215 | 238<br>11,396 | 207<br>9,911  | 182<br>8,714  | 161<br>7,709 | 144<br>6,895 | 129<br>6,177 | 117<br>5,602 | 106<br>5,075 | 96<br>4,597  | 81<br>3,878  | 69<br>3,304 | 59<br>2,825 | 52<br>2,490 | 46<br>2,202 |
|      | L/360  | 244<br>11,683     | 192<br>9,193  | 154<br>7,374  | 125<br>5,985  | 103<br>4,932  | 86<br>4,118  | 72<br>3,447  | 61<br>2,921  | 53<br>2,538  | 45<br>2,155  | 40<br>1,915  | 30<br>1,436  | 24<br>1,149 | 19<br>910   | 16<br>766   | 13<br>622   |
|      | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | 144<br>6,895 | 123<br>5,889 | 105<br>5,027 | 91<br>4,357  | 79<br>3,783  | 61<br>2,921  | 48<br>2,298 | 38<br>1,819 | 31<br>1,484 | 26<br>1,245 |
| 16   | STRESS | 300<br>14,364     | 300<br>14,364 | 298<br>14,268 | 259<br>12,401 | 228<br>10,917 | 202<br>9,672 | 180<br>8,618 | 162<br>7,757 | 146<br>6,991 | 132<br>6,320 | 121<br>5,794 | 101<br>4,836 | 86<br>4,118 | 74<br>3,543 | 65<br>3,112 | 57<br>2,729 |
|      | L/360  | ◆◆◆               | 241<br>11,539 | 193<br>9,241  | 157<br>7,517  | 129<br>6,177  | 108<br>5,171 | 91<br>4,357  | 77<br>3,687  | 66<br>3,160  | 57<br>2,729  | 50<br>2,394  | 38<br>1,819  | 30<br>1,436 | 24<br>1,149 | 20<br>958   | 16<br>766   |
|      | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | 154<br>7,374 | 132<br>6,320 | 114<br>5,458 | 99<br>4,740  | 76<br>3,639  | 60<br>2,873 | 48<br>2,298 | 39<br>1,867 | 32<br>1,532 |

W3 NO  
FILL

# PLW3™ and W3 FORMLOK™

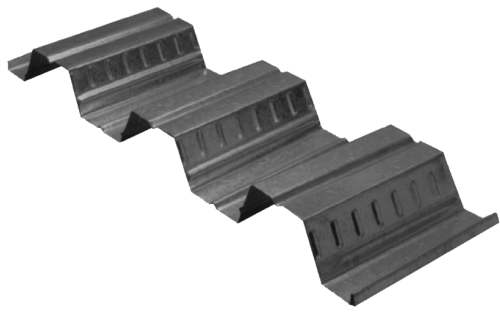
- 3" (76 mm) Deep Deck
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



## Allowable Uniform Loads (psf, N/m<sup>2</sup>)

|      |        | SPAN (ft-in., mm) |               |               |               |               |              |              |              |              |              |              |              |             |             |             |             |
|------|--------|-------------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|
| GAGE |        | 6'-0"             | 6'-6"         | 7'-0"         | 7'-6"         | 8'-0"         | 8'-6"        | 9'-0"        | 9'-6"        | 10'-0"       | 10'-6"       | 11'-0"       | 12'-0"       | 13'-0"      | 14'-0"      | 15'-0"      | 16'-0"      |
|      |        | 1,830             | 1,980         | 2,130         | 2,290         | 2,440         | 2,590        | 2,740        | 2,900        | 3,050        | 3,200        | 3,350        | 3,660        | 3,960       | 4,270       | 4,570       | 4,880       |
|      |        | DOUBLE SPAN       |               |               |               |               |              |              |              |              |              |              |              |             |             |             |             |
| 22   | STRESS | 187<br>8,954      | 160<br>7,661  | 138<br>6,607  | 120<br>5,746  | 105<br>5,027  | 93<br>4,453  | 83<br>3,974  | 75<br>3,591  | 67<br>3,208  | 61<br>2,921  | 56<br>2,681  | 47<br>2,250  | 40<br>1,915 | 34<br>1,628 | 30<br>1,436 | 26<br>1,245 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | 44<br>2,107  | 34<br>1,628 | 28<br>1,341 | 22<br>1,053 | 18<br>862   |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
| 21   | STRESS | 224<br>10,725     | 191<br>9,145  | 165<br>7,900  | 143<br>6,847  | 126<br>6,033  | 112<br>5,363 | 100<br>4,788 | 89<br>4,261  | 81<br>3,878  | 73<br>3,495  | 67<br>3,208  | 56<br>2,681  | 48<br>2,298 | 41<br>1,963 | 36<br>1,724 | 32<br>1,532 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | 66<br>3,160  | 51<br>2,442  | 40<br>1,915 | 32<br>1,532 | 26<br>1,245 | 22<br>1,053 |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
| 20   | STRESS | 238<br>11,396     | 203<br>9,720  | 175<br>8,379  | 152<br>7,278  | 134<br>6,416  | 119<br>5,698 | 106<br>5,075 | 95<br>4,549  | 86<br>4,118  | 78<br>3,735  | 71<br>3,399  | 60<br>2,873  | 51<br>2,442 | 44<br>2,107 | 38<br>1,819 | 33<br>1,580 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | 71<br>3,399  | 55<br>2,633  | 43<br>2,059 | 34<br>1,628 | 28<br>1,341 | 23<br>1,101 |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
| 19   | STRESS | 288<br>13,790     | 246<br>11,779 | 212<br>10,151 | 185<br>8,858  | 162<br>7,757  | 144<br>6,895 | 128<br>6,129 | 115<br>5,506 | 104<br>4,980 | 94<br>4,501  | 86<br>4,118  | 72<br>3,447  | 61<br>2,921 | 53<br>2,538 | 46<br>2,202 | 41<br>1,963 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | 85<br>4,070  | 66<br>3,160  | 52<br>2,490 | 41<br>1,963 | 34<br>1,628 | 28<br>1,341 |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
| 18   | STRESS | 300<br>14,364     | 276<br>13,215 | 238<br>11,396 | 207<br>9,911  | 182<br>8,714  | 161<br>7,709 | 144<br>6,895 | 129<br>6,177 | 117<br>5,602 | 106<br>5,075 | 96<br>4,597  | 81<br>3,878  | 69<br>3,304 | 59<br>2,825 | 52<br>2,490 | 46<br>2,202 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | 95<br>4,549  | 73<br>3,495  | 58<br>2,777 | 46<br>2,202 | 38<br>1,819 | 31<br>1,484 |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |
| 16   | STRESS | 300<br>14,364     | 300<br>14,364 | 298<br>14,268 | 259<br>12,401 | 228<br>10,917 | 202<br>9,672 | 180<br>8,618 | 162<br>7,757 | 146<br>6,991 | 132<br>6,320 | 121<br>5,794 | 101<br>4,836 | 86<br>4,118 | 74<br>3,543 | 65<br>3,112 | 57<br>2,729 |
|      | L/360  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | 119<br>5,698 | 92<br>4,405  | 72<br>3,447 | 58<br>2,777 | 47<br>2,250 | 39<br>1,867 |
|      | L/180  | ♦♦♦♦              | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦          | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦         | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        | ♦♦♦♦        |

W3  
NO  
FILL



# PLW3™ and W3 FORMLOK™

3" (76 mm) Deep Deck ■  
Without Concrete Fill ■  
Galvanized or Phosphatized/Painted ■

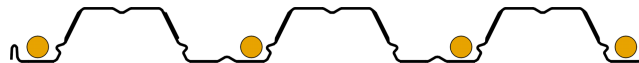
Allowable Uniform Loads (psf,  $N/m^2$ )

|             |        | SPAN (ft-in., mm) |               |               |               |               |               |               |              |              |              |              |              |              |             |             |             |
|-------------|--------|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|
| GAGE        |        | 6'-0"             | 6'-6"         | 7'-0"         | 7'-6"         | 8'-0"         | 8'-6"         | 9'-0"         | 9'-6"        | 10'-0"       | 10'-6"       | 11'-0"       | 12'-0"       | 13'-0"       | 14'-0"      | 15'-0"      | 16'-0"      |
|             |        | 1,830             | 1,980         | 2,130         | 2,290         | 2,440         | 2,590         | 2,740         | 2,900        | 3,050        | 3,200        | 3,350        | 3,660        | 3,960        | 4,270       | 4,570       | 4,880       |
| TRIPLE SPAN |        |                   |               |               |               |               |               |               |              |              |              |              |              |              |             |             |             |
| 22          | STRESS | 234<br>11,204     | 200<br>9,576  | 172<br>8,235  | 150<br>7,182  | 132<br>6,320  | 117<br>5,602  | 104<br>4,980  | 93<br>4,453  | 84<br>4,022  | 77<br>3,687  | 70<br>3,352  | 59<br>2,825  | 50<br>2,394  | 43<br>2,059 | 37<br>1,772 | 33<br>1,580 |
|             | L/360  | ◆◆◆               | ◆◆◆           | ◆◆◆           | 140<br>6,703  | 116<br>5,554  | 96<br>4,597   | 81<br>3,878   | 69<br>3,304  | 59<br>2,825  | 51<br>2,442  | 44<br>2,107  | 34<br>1,628  | 27<br>1,293  | 22<br>1,053 | 18<br>862   | 14<br>670   |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | 43<br>2,059 | 35<br>1,676 | 29<br>1,389 |
| 21          | STRESS | 280<br>13,406     | 239<br>11,443 | 206<br>9,863  | 179<br>8,571  | 158<br>7,565  | 140<br>6,703  | 125<br>5,985  | 112<br>5,363 | 101<br>4,836 | 92<br>4,405  | 83<br>3,974  | 70<br>3,352  | 60<br>2,873  | 51<br>2,442 | 45<br>2,155 | 39<br>1,867 |
|             | L/360  | ◆◆◆               | ◆◆◆           | 201<br>9,624  | 164<br>7,852  | 135<br>6,464  | 112<br>5,363  | 95<br>4,549   | 81<br>3,878  | 69<br>3,304  | 60<br>2,873  | 52<br>2,490  | 40<br>1,915  | 31<br>1,484  | 25<br>1,197 | 20<br>958   | 17<br>814   |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | 50<br>2,394 | 41<br>1,963 | 34<br>1,628 |
| 20          | STRESS | 298<br>14,268     | 254<br>12,162 | 219<br>10,486 | 191<br>9,145  | 167<br>7,996  | 148<br>7,086  | 132<br>6,320  | 119<br>5,698 | 107<br>5,123 | 97<br>4,644  | 89<br>4,261  | 74<br>3,543  | 63<br>3,016  | 55<br>2,633 | 48<br>2,298 | 42<br>2,011 |
|             | L/360  | ◆◆◆               | ◆◆◆           | 215<br>10,294 | 175<br>8,379  | 144<br>6,895  | 120<br>5,746  | 101<br>4,836  | 86<br>4,118  | 74<br>3,543  | 64<br>3,064  | 56<br>2,681  | 43<br>2,059  | 34<br>1,628  | 27<br>1,293 | 22<br>1,053 | 18<br>862   |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | 54<br>2,586 | 44<br>2,107 | 36<br>1,724 |
| 19          | STRESS | 300<br>14,364     | 307<br>14,699 | 265<br>12,688 | 231<br>11,060 | 203<br>9,720  | 180<br>8,618  | 160<br>7,661  | 144<br>6,895 | 130<br>6,224 | 118<br>5,650 | 107<br>5,123 | 90<br>4,309  | 77<br>3,687  | 66<br>3,160 | 58<br>2,777 | 51<br>2,442 |
|             | L/360  | ◆◆◆               | ◆◆◆           | 258<br>12,353 | 210<br>10,055 | 173<br>8,283  | 144<br>6,895  | 122<br>5,841  | 103<br>4,932 | 89<br>4,261  | 77<br>3,687  | 67<br>3,208  | 51<br>2,442  | 40<br>1,915  | 32<br>1,532 | 26<br>1,245 | 22<br>1,053 |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | 65<br>3,112 | 53<br>2,538 | 43<br>2,059 |
| 18          | STRESS | 300<br>14,364     | 300<br>14,364 | 297<br>14,220 | 259<br>12,401 | 228<br>10,917 | 202<br>9,672  | 180<br>8,618  | 161<br>7,709 | 146<br>6,991 | 132<br>6,320 | 120<br>5,746 | 101<br>4,836 | 86<br>4,118  | 74<br>3,543 | 65<br>3,112 | 57<br>2,729 |
|             | L/360  | ◆◆◆               | ◆◆◆           | 289<br>13,837 | 235<br>11,252 | 194<br>9,289  | 162<br>7,757  | 136<br>6,512  | 116<br>5,554 | 99<br>4,740  | 86<br>4,118  | 75<br>3,591  | 57<br>2,729  | 45<br>2,155  | 36<br>1,724 | 29<br>1,389 | 24<br>1,149 |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | 72<br>3,447 | 59<br>2,825 | 48<br>2,298 |
| 16          | STRESS | 300<br>14,364     | 300<br>14,364 | 300<br>14,364 | 300<br>14,364 | 285<br>13,646 | 252<br>12,066 | 225<br>10,773 | 202<br>9,672 | 182<br>8,714 | 165<br>7,900 | 151<br>7,230 | 127<br>6,081 | 108<br>5,171 | 93<br>4,453 | 81<br>3,878 | 71<br>3,399 |
|             | L/360  | ◆◆◆               | ◆◆◆           | ◆◆◆           | 295<br>14,125 | 243<br>11,635 | 203<br>9,720  | 171<br>8,188  | 145<br>6,943 | 124<br>5,937 | 108<br>5,171 | 94<br>4,501  | 72<br>3,447  | 57<br>2,729  | 45<br>2,155 | 37<br>1,772 | 30<br>1,436 |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆           | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | ◆◆◆          | 91<br>4,357 | 74<br>3,543 | 61<br>2,921 |

W3 NO  
FILL



- 4 Weld Pattern at Supports
- Sidelaps Connected with PunchLok® Tool
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



Allowable Diaphragm Shear Values, q (plf, kN/m) and Flexibility Factors, F ((in./lb)x10<sup>6</sup>, (mm/N)x10<sup>6</sup>)

| GAGE | SIDELAP<br>ATTACH-<br>MENT | SPAN (ft-in., mm) |                       |                       |                       |                       |                       |                       |                       |                        |
|------|----------------------------|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
|      |                            | 6'-0"             | 7'-0"                 | 8'-0"                 | 9'-0"                 | 10'-0"                | 11'-0"                | 12'-0"                | 14'-0"                | 16'-0"                 |
|      |                            | 1,830             | 2,130                 | 2,440                 | 2,740                 | 3,050                 | 3,350                 | 3,660                 | 4,270                 | 4,880                  |
| 22   | VSC @ 24"                  | q                 | 389<br>5.68           | 377<br>5.50           | 339<br>4.95           | 335<br>4.89           | 309<br>4.51           | 307<br>4.48           | 288<br>4.20           | 272<br>3.97            |
|      |                            | F                 | 12.0+85R<br>68.5+485R | 11.2+73R<br>64.0+417R | 13.7+64R<br>78.2+365R | 12.9+57R<br>73.7+325R | 15.2+51R<br>86.8+291R | 14.4+46R<br>82.2+263R | 16.5+42R<br>94.2+240R | 17.8+36R<br>101.6+206R |
|      | VSC @ 12"                  | q                 | 489<br>7.14           | 458<br>6.68           | 434<br>6.33           | 415<br>6.06           | 400<br>5.84           | 387<br>5.65           | 376<br>5.49           | 359<br>5.24            |
|      |                            | F                 | 6.5+85R<br>37.1+485R  | 6.8+73R<br>38.8+417R  | 7.1+64R<br>40.5+365R  | 7.4+57R<br>42.3+325R  | 7.6+51R<br>43.4+291R  | 7.9+46R<br>45.1+263R  | 8.1+42R<br>46.3+240R  | 8.5+36R<br>48.5+206R   |
|      | VSC @ 8"                   | q                 | 566<br>8.26           | 542<br>7.91           | 507<br>7.40           | 494<br>7.21           | 470<br>6.86           | 462<br>6.74           | 444<br>6.48           | 413<br>6.03            |
|      |                            | F                 | 5.0+85R<br>28.6+485R  | 5.0+73R<br>28.6+417R  | 5.3+64R<br>30.3+365R  | 5.3+57R<br>30.3+325R  | 5.6+51R<br>32.0+291R  | 5.6+46R<br>32.0+263R  | 5.8+42R<br>33.1+240R  | 6.1+36R<br>34.8+206R   |
|      | VSC @ 4"                   | q                 | 739<br>10.78          | 695<br>10.14          | 629<br>9.18           | 576<br>8.41           | 532<br>7.76           | 495<br>7.22           | 464<br>6.77           | 413<br>6.03            |
|      |                            | F                 | 3.7+85R<br>21.1+485R  | 3.7+73R<br>21.1+417R  | 3.8+64R<br>21.7+365R  | 3.8+57R<br>21.7+325R  | 3.9+51R<br>22.3+291R  | 3.9+46R<br>22.3+263R  | 4.0+42R<br>22.8+240R  | 4.0+36R<br>22.8+206R   |
|      | VSC @ 24"                  | q                 | 514<br>7.50           | 497<br>7.25           | 447<br>6.52           | 440<br>6.42           | 406<br>5.93           | 403<br>5.88           | 377<br>5.50           | 357<br>5.21            |
|      |                            | F                 | 9.2+63R<br>52.5+360R  | 8.7+54R<br>49.7+308R  | 10.5+48R<br>60.0+274R | 10.0+42R<br>57.1+240R | 11.7+38R<br>66.8+217R | 11.1+35R<br>63.4+200R | 12.7+32R<br>72.5+183R | 13.7+27R<br>78.2+154R  |
|      | VSC @ 12"                  | q                 | 642<br>9.37           | 600<br>8.76           | 568<br>8.29           | 543<br>7.92           | 522<br>7.62           | 505<br>7.37           | 491<br>7.17           | 468<br>6.83            |
|      |                            | F                 | 5.2+63R<br>29.7+360R  | 5.4+54R<br>30.8+308R  | 5.7+48R<br>32.5+274R  | 5.9+42R<br>33.7+240R  | 6.1+38R<br>34.8+217R  | 6.3+35R<br>36.0+200R  | 6.4+32R<br>36.5+183R  | 6.8+27R<br>38.8+154R   |
| 21   | VSC @ 8"                   | q                 | 739<br>10.78          | 707<br>10.32          | 661<br>9.65           | 643<br>9.38           | 611<br>8.92           | 600<br>8.76           | 578<br>8.44           | 535<br>7.81            |
|      |                            | F                 | 4.1+63R<br>23.4+360R  | 4.1+54R<br>23.4+308R  | 4.3+48R<br>24.6+274R  | 4.3+42R<br>24.6+240R  | 4.5+38R<br>25.7+217R  | 4.6+35R<br>26.3+200R  | 4.7+32R<br>26.8+183R  | 4.9+27R<br>28.0+154R   |
|      | VSC @ 4"                   | q                 | 960<br>14.01          | 900<br>13.13          | 814<br>11.88          | 745<br>10.87          | 689<br>10.06          | 641<br>9.35           | 601<br>8.77           | 535<br>7.81            |
|      |                            | F                 | 3.1+63R<br>17.7+360R  | 3.2+54R<br>18.3+308R  | 3.2+48R<br>18.3+274R  | 3.2+42R<br>18.3+240R  | 3.3+38R<br>18.8+217R  | 3.3+35R<br>18.8+200R  | 3.4+32R<br>19.4+183R  | 3.4+27R<br>19.4+154R   |
|      | VSC @ 24"                  | q                 | 582<br>8.49           | 561<br>8.19           | 505<br>7.37           | 496<br>7.24           | 457<br>6.67           | 454<br>6.63           | 425<br>6.20           | 402<br>5.87            |
|      |                            | F                 | 8.1+56R<br>46.3+320R  | 7.7+48R<br>44.0+274R  | 9.3+42R<br>53.1+240R  | 8.9+37R<br>50.8+211R  | 10.3+33R<br>58.8+188R | 9.9+30R<br>56.5+171R  | 11.3+28R<br>64.5+160R | 12.1+24R<br>69.1+137R  |
|      | VSC @ 12"                  | q                 | 723<br>10.55          | 676<br>9.87           | 639<br>9.33           | 611<br>8.92           | 587<br>8.57           | 568<br>8.29           | 552<br>8.06           | 526<br>7.68            |
|      |                            | F                 | 4.7+56R<br>26.8+320R  | 4.9+48R<br>28.0+274R  | 5.1+42R<br>29.1+240R  | 5.3+37R<br>30.3+211R  | 5.5+33R<br>31.4+188R  | 5.6+30R<br>32.0+171R  | 5.8+28R<br>33.1+160R  | 6.1+24R<br>34.8+137R   |
|      | VSC @ 8"                   | q                 | 832<br>12.14          | 795<br>11.60          | 743<br>10.84          | 722<br>10.54          | 687<br>10.03          | 674<br>9.84           | 649<br>9.47           | 602<br>8.79            |
|      |                            | F                 | 3.7+56R<br>21.1+320R  | 3.7+48R<br>21.1+274R  | 3.9+42R<br>22.3+240R  | 4.0+37R<br>22.8+211R  | 4.1+33R<br>23.4+188R  | 4.2+30R<br>24.0+171R  | 4.3+28R<br>24.6+160R  | 4.5+24R<br>25.7+137R   |
|      | VSC @ 4"                   | q                 | 1077<br>15.72         | 1012<br>14.77         | 916<br>13.37          | 838<br>12.23          | 775<br>11.31          | 721<br>10.52          | 676<br>9.87           | 602<br>8.79            |
|      |                            | F                 | 2.9+56R<br>16.6+320R  | 2.9+48R<br>16.6+274R  | 3.0+42R<br>17.1+240R  | 3.0+37R<br>17.1+211R  | 3.0+33R<br>17.1+188R  | 3.1+30R<br>17.7+171R  | 3.1+28R<br>17.7+160R  | 3.2+24R<br>18.3+137R   |
| 20   | VSC @ 24"                  | q                 | 1077<br>15.72         | 1012<br>14.77         | 916<br>13.37          | 838<br>12.23          | 775<br>11.31          | 721<br>10.52          | 676<br>9.87           | 602<br>8.79            |
|      |                            | F                 | 2.9+56R<br>16.6+320R  | 2.9+48R<br>16.6+274R  | 3.0+42R<br>17.1+240R  | 3.0+37R<br>17.1+211R  | 3.0+33R<br>17.1+188R  | 3.1+30R<br>17.7+171R  | 3.1+28R<br>17.7+160R  | 3.2+24R<br>18.3+137R   |
|      | VSC @ 12"                  | q                 | 1077<br>15.72         | 1012<br>14.77         | 916<br>13.37          | 838<br>12.23          | 775<br>11.31          | 721<br>10.52          | 676<br>9.87           | 602<br>8.79            |
|      |                            | F                 | 2.9+56R<br>16.6+320R  | 2.9+48R<br>16.6+274R  | 3.0+42R<br>17.1+240R  | 3.0+37R<br>17.1+211R  | 3.0+33R<br>17.1+188R  | 3.1+30R<br>17.7+171R  | 3.1+28R<br>17.7+160R  | 3.2+24R<br>18.3+137R   |
|      | VSC @ 8"                   | q                 | 1077<br>15.72         | 1012<br>14.77         | 916<br>13.37          | 838<br>12.23          | 775<br>11.31          | 721<br>10.52          | 676<br>9.87           | 602<br>8.79            |
|      |                            | F                 | 2.9+56R<br>16.6+320R  | 2.9+48R<br>16.6+274R  | 3.0+42R<br>17.1+240R  | 3.0+37R<br>17.1+211R  | 3.0+33R<br>17.1+188R  | 3.1+30R<br>17.7+171R  | 3.1+28R<br>17.7+160R  | 3.2+24R<br>18.3+137R   |
|      | VSC @ 4"                   | q                 | 1077<br>15.72         | 1012<br>14.77         | 916<br>13.37          | 838<br>12.23          | 775<br>11.31          | 721<br>10.52          | 676<br>9.87           | 602<br>8.79            |
|      |                            | F                 | 2.9+56R<br>16.6+320R  | 2.9+48R<br>16.6+274R  | 3.0+42R<br>17.1+240R  | 3.0+37R<br>17.1+211R  | 3.0+33R<br>17.1+188R  | 3.1+30R<br>17.7+171R  | 3.1+28R<br>17.7+160R  | 3.2+24R<br>18.3+137R   |
|      | VSC @ 24"                  | q                 | 1077<br>15.72         | 1012<br>14.77         | 916<br>13.37          | 838<br>12.23          | 775<br>11.31          | 721<br>10.52          | 676<br>9.87           | 602<br>8.79            |
|      |                            | F                 | 2.9+56R<br>16.6+320R  | 2.9+48R<br>16.6+274R  | 3.0+42R<br>17.1+240R  | 3.0+37R<br>17.1+211R  | 3.0+33R<br>17.1+188R  | 3.1+30R<br>17.7+171R  | 3.1+28R<br>17.7+160R  | 3.2+24R<br>18.3+137R   |
|      | VSC @ 12"                  | q                 | 1077<br>15.72         | 1012<br>14.77         | 916<br>13.37          | 838<br>12.23          | 775<br>11.31          | 721<br>10.52          | 676<br>9.87           | 602<br>8.79            |
|      |                            | F                 | 2.9+56R<br>16.6+320R  | 2.9+48R<br>16.6+274R  | 3.0+42R<br>17.1+240R  | 3.0+37R<br>17.1+211R  | 3.0+33R<br>17.1+188R  | 3.1+30R<br>17.7+171R  | 3.1+28R<br>17.7+160R  | 3.2+24R<br>18.3+137R   |

VSC = Verco Sidelap Connection



- 4 Weld Pattern at Supports ■
- Sidelaps Connected with PunchLok® Tool ■
- Without Concrete Fill ■
- Galvanized or Phosphatized/Painted ■

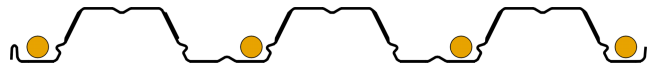
Allowable Diaphragm Shear Values,  $q$  (plf,  $kN/m$ ) and Flexibility Factors,  $F$  ((in./lb) $\times 10^6$ , (mm/N) $\times 10^6$ )

| GAGE     | SIDELAP<br>ATTACH-<br>MENT | SPAN (ft-in., mm) |                      |                      |                      |                      |                      |                      |                      |                     |                     |                     |
|----------|----------------------------|-------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|
|          |                            | 6'-0"<br>1,830    | 7'-0"<br>2,130       | 8'-0"<br>2,440       | 9'-0"<br>2,740       | 10'-0"<br>3,050      | 11'-0"<br>3,350      | 12'-0"<br>3,660      | 14'-0"<br>4,270      | 16'-0"<br>4,880     |                     |                     |
| 19       | VSC @ 24"                  | q                 | 831<br>12.13         | 798<br>11.65         | 718<br>10.48         | 704<br>10.27         | 650<br>9.49          | 643<br>9.38          | 603<br>8.80          | 570<br>8.32         | 545<br>7.95         |                     |
|          |                            | F                 | 5.6+37R<br>32.0+211R | 5.4+32R<br>30.8+183R | 6.4+28R<br>36.5+160R | 6.1+25R<br>34.8+143R | 7.1+22R<br>40.5+126R | 6.8+20R<br>38.8+114R | 7.7+18R<br>44.0+103R | 8.3+16R<br>47.4+91R | 8.9+14R<br>50.8+80R |                     |
|          | VSC @ 12"                  | q                 | 1025<br>14.96        | 955<br>13.94         | 903<br>13.18         | 862<br>12.58         | 828<br>12.08         | 801<br>11.69         | 778<br>11.35         | 742<br>10.83        | 715<br>10.43        |                     |
|          |                            | F                 | 3.5+37R<br>20.0+211R | 3.6+32R<br>20.6+183R | 3.7+28R<br>21.1+160R | 3.9+25R<br>22.3+143R | 4.0+22R<br>22.8+126R | 4.1+20R<br>23.4+114R | 4.2+18R<br>24.0+103R | 4.4+16R<br>25.1+91R | 4.6+14R<br>26.3+80R |                     |
|          | VSC @ 8"                   | q                 | 1173<br>17.12        | 1119<br>16.33        | 1045<br>15.25        | 1015<br>14.81        | 965<br>14.08         | 947<br>13.82         | 912<br>13.31         | 867<br>12.65        | 784<br>11.44        |                     |
|          |                            | F                 | 2.8+37R<br>16.0+211R | 2.9+32R<br>16.6+183R | 3.0+28R<br>17.1+160R | 3.0+25R<br>17.1+143R | 3.1+22R<br>17.7+126R | 3.1+20R<br>17.7+114R | 3.3+18R<br>18.8+103R | 3.4+16R<br>19.4+91R | 3.5+14R<br>20.0+80R |                     |
|          | VSC @ 4"                   | q                 | 1508<br>22.01        | 1427<br>20.83        | 1319<br>19.25        | 1207<br>17.61        | 1115<br>16.27        | 1039<br>15.16        | 973<br>14.20         | 867<br>12.65        | 784<br>11.44        |                     |
|          |                            | F                 | 2.3+37R<br>13.1+211R | 2.3+32R<br>13.1+183R | 2.4+28R<br>13.7+160R | 2.4+25R<br>13.7+143R | 2.4+22R<br>13.7+126R | 2.4+20R<br>13.7+114R | 2.5+18R<br>14.3+103R | 2.5+16R<br>14.3+91R | 2.5+14R<br>14.3+80R |                     |
|          | 18                         | VSC @ 24"         | q                    | 982<br>14.33         | 973<br>14.20         | 875<br>12.77         | 857<br>12.51         | 791<br>11.54         | 783<br>11.43         | 735<br>10.73        | 694<br>10.13        | 664<br>9.69         |
|          |                            |                   | F                    | 4.5+29R<br>25.7+166R | 4.3+25R<br>24.6+143R | 5.1+21R<br>29.1+120R | 4.9+19R<br>28.0+108R | 5.6+17R<br>32.0+97R  | 5.4+16R<br>30.8+91R  | 6.1+14R<br>34.8+80R | 6.6+12R<br>37.7+69R | 7.0+11R<br>40.0+63R |
|          |                            | VSC @ 12"         | q                    | 1245<br>18.17        | 1160<br>16.93        | 1096<br>15.99        | 1046<br>15.27        | 1006<br>14.68        | 972<br>14.19         | 945<br>13.79        | 901<br>13.15        | 869<br>12.68        |
|          |                            |                   | F                    | 2.9+29R<br>16.6+166R | 3.0+25R<br>17.1+143R | 3.1+21R<br>17.7+120R | 3.2+19R<br>18.3+108R | 3.3+17R<br>18.8+97R  | 3.4+16R<br>19.4+91R  | 3.5+14R<br>20.0+80R | 3.6+12R<br>20.6+69R | 3.8+11R<br>21.7+63R |
| VSC @ 8" |                            | q                 | 1422<br>20.75        | 1356<br>19.79        | 1266<br>18.48        | 1229<br>17.94        | 1170<br>17.07        | 1148<br>16.75        | 1106<br>16.14        | 1060<br>15.47       | 982<br>14.33        |                     |
|          |                            | F                 | 2.4+29R<br>13.7+166R | 2.4+25R<br>13.7+143R | 2.5+21R<br>14.3+120R | 2.6+19R<br>14.8+108R | 2.6+17R<br>14.8+97R  | 2.7+16R<br>15.4+91R  | 2.7+14R<br>15.4+80R  | 2.8+12R<br>16.0+69R | 2.9+11R<br>16.6+63R |                     |
| VSC @ 4" |                            | q                 | 1823<br>26.60        | 1724<br>25.16        | 1649<br>24.07        | 1512<br>22.07        | 1397<br>20.39        | 1301<br>18.99        | 1218<br>17.78        | 1085<br>15.83       | 982<br>14.33        |                     |
|          |                            | F                 | 2.0+29R<br>11.4+166R | 2.0+25R<br>11.4+143R | 2.1+21R<br>12.0+120R | 2.1+19R<br>12.0+108R | 2.1+17R<br>12.0+97R  | 2.1+16R<br>12.0+91R  | 2.1+14R<br>12.0+80R  | 2.2+12R<br>12.6+69R | 2.2+11R<br>12.6+63R |                     |
| 16       |                            | VSC @ 24"         | q                    | 1265<br>18.46        | 1325<br>19.34        | 1136<br>16.58        | 1189<br>17.35        | 1054<br>15.38        | 1100<br>16.05        | 997<br>14.55        | 955<br>13.94        | 922<br>13.46        |
|          |                            |                   | F                    | 2.9+17R<br>16.6+97R  | 2.8+15R<br>16.0+86R  | 3.2+13R<br>18.3+74R  | 3.1+11R<br>17.7+63R  | 3.5+10R<br>20.0+57R  | 3.4+9R<br>19.4+51R   | 3.8+9R<br>21.7+51R  | 4.1+7R<br>23.4+40R  | 4.4+6R<br>25.1+34R  |
|          |                            | VSC @ 12"         | q                    | 1761<br>25.70        | 1641<br>23.95        | 1551<br>22.64        | 1481<br>21.61        | 1425<br>20.80        | 1379<br>20.12        | 1341<br>19.57       | 1281<br>18.69       | 1238<br>18.07       |
|          |                            |                   | F                    | 2.0+17R<br>11.4+97R  | 2.1+15R<br>12.0+86R  | 2.1+13R<br>12.0+74R  | 2.2+11R<br>12.6+63R  | 2.3+10R<br>13.1+57R  | 2.3+9R<br>13.1+51R   | 2.4+9R<br>13.7+51R  | 2.5+7R<br>14.3+40R  | 2.6+6R<br>14.8+34R  |
|          | VSC @ 8"                   | q                 | 2006<br>29.28        | 1912<br>27.90        | 1787<br>26.08        | 1737<br>25.35        | 1655<br>24.15        | 1625<br>23.72        | 1567<br>22.87        | 1505<br>21.96       | 1460<br>21.31       |                     |
|          |                            | F                 | 1.8+17R<br>10.3+97R  | 1.8+15R<br>10.3+86R  | 1.8+13R<br>10.3+74R  | 1.8+11R<br>10.3+63R  | 1.9+10R<br>10.8+57R  | 1.9+9R<br>10.8+51R   | 2.0+9R<br>11.4+51R   | 2.0+7R<br>11.4+40R  | 2.1+6R<br>12.0+34R  |                     |
|          | VSC @ 4"                   | q                 | 2561<br>37.37        | 2424<br>35.38        | 2320<br>33.86        | 2239<br>32.68        | 2174<br>31.73        | 2049<br>29.90        | 1920<br>28.02        | 1710<br>24.96       | 1547<br>22.58       |                     |
|          |                            | F                 | 1.6+17R<br>9.1+97R   | 1.6+15R<br>9.1+86R   | 1.6+13R<br>9.1+74R   | 1.6+11R<br>9.1+63R   | 1.6+10R<br>9.1+57R   | 1.6+9R<br>9.1+51R    | 1.6+9R<br>9.1+51R    | 1.6+7R<br>9.1+40R   | 1.7+6R<br>9.7+34R   |                     |

VSC = Verco Sidelap Connection

# W3 FORMLOK™

- 4 Weld Pattern at Supports
- Button Punch or 1½" (38 mm) Top Seam Weld
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



if

Allowable Diaphragm Shear Values,  $q$  (plf,  $kN/m$ ) and Flexibility Factors,  $F$  ((in./lb) $\times 10^6$ , (mm/N) $\times 10^6$ )

| GAGE      | SIDELAP<br>ATTACH-<br>MENT | SPAN (ft-in., mm) |                         |                         |                          |                          |                          |                          |                          |                          |                         |                         |
|-----------|----------------------------|-------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------|-------------------------|
|           |                            | 6'-0"             | 7'-0"                   | 8'-0"                   | 9'-0"                    | 10'-0"                   | 11'-0"                   | 12'-0"                   | 14'-0"                   | 16'-0"                   |                         |                         |
| 22        | BP @ 24"                   | q                 | 155<br>2.26             | 145<br>2.12             | 127<br>1.85              | 123<br>1.80              | 111<br>1.62              | 109<br>1.59              | 100<br>1.46              | 93<br>1.36               | 87<br>1.27              |                         |
|           |                            | F                 | 15.4+410R<br>87.9+2341R | 16.5+351R<br>94.2+2004R | 18.7+308R<br>106.8+1759R | 19.6+273R<br>111.9+1559R | 21.7+246R<br>123.9+1405R | 22.3+224R<br>127.3+1279R | 24.4+205R<br>139.3+1171R | 26.9+176R<br>153.6+1005R | 29.2+154R<br>166.7+879R |                         |
|           | BP @ 12"                   | q                 | 196<br>2.86             | 180<br>2.63             | 169<br>2.47              | 160<br>2.34              | 153<br>2.23              | 148<br>2.16              | 143<br>2.09              | 137<br>2.00              | 132<br>1.93             |                         |
|           |                            | F                 | 12.8+410R<br>73.1+2341R | 13.8+351R<br>78.8+2004R | 14.8+308R<br>84.5+1759R  | 15.7+273R<br>89.6+1559R  | 16.5+246R<br>94.2+1405R  | 17.2+224R<br>98.2+1279R  | 17.9+205R<br>102.2+1171R | 19.2+176R<br>109.6+1005R | 20.3+154R<br>115.9+879R |                         |
|           | TSW @ 24"                  | q                 | 194<br>2.83             | 195<br>2.85             | 170<br>2.48              | 173<br>2.52              | 156<br>2.28              | 160<br>2.34              | 146<br>2.13              | 139<br>2.03              | 134<br>1.96             |                         |
|           |                            | F                 | 11.0+410R<br>62.8+2341R | 9.9+351R<br>56.5+2004R  | 9.9+308R<br>56.5+1759R   | 9.1+273R<br>52.0+1559R   | 9.2+246R<br>52.5+1405R   | 8.5+224R<br>48.5+1279R   | 8.6+205R<br>49.1+1171R   | 8.1+176R<br>46.3+1005R   | 7.7+154R<br>44.0+879R   |                         |
|           | TSW @ 12"                  | q                 | 296<br>4.32             | 283<br>4.13             | 272<br>3.97              | 264<br>3.85              | 258<br>3.77              | 252<br>3.68              | 248<br>3.62              | 241<br>3.52              | 236<br>3.44             |                         |
|           |                            | F                 | 8.2+410R<br>46.8+2341R  | 7.7+351R<br>44.0+2004R  | 7.3+308R<br>41.7+1759R   | 7.0+273R<br>40.0+1559R   | 6.7+246R<br>38.3+1405R   | 6.4+224R<br>36.5+1279R   | 6.2+205R<br>35.4+1171R   | 5.9+176R<br>33.7+1005R   | 5.6+154R<br>32.0+879R   |                         |
|           | 21                         | BP @ 24"          | q                       | 211<br>3.08             | 195<br>2.85              | 171<br>2.50              | 163<br>2.38              | 147<br>2.15              | 143<br>2.09              | 131<br>1.91              | 121<br>1.77             | 113<br>1.65             |
|           |                            |                   | F                       | 13.0+278R<br>74.2+1587R | 14.1+239R<br>80.5+1365R  | 15.9+209R<br>90.8+1193R  | 16.9+186R<br>96.5+1062R  | 18.7+167R<br>106.8+954R  | 19.5+152R<br>111.3+868R  | 21.3+139R<br>121.6+794R  | 23.7+119R<br>135.3+680R | 26.0+104R<br>148.5+594R |
| BP @ 12"  |                            | q                 | 257<br>3.75             | 235<br>3.43             | 218<br>3.18              | 206<br>3.01              | 195<br>2.85              | 187<br>2.73              | 181<br>2.64              | 171<br>2.50              | 164<br>2.39             |                         |
|           |                            | F                 | 11.1+278R<br>63.4+1587R | 12.1+239R<br>69.1+1365R | 13.0+209R<br>74.2+1193R  | 13.9+186R<br>79.4+1062R  | 14.7+167R<br>83.9+954R   | 15.4+152R<br>87.9+868R   | 16.2+139R<br>92.5+794R   | 17.5+119R<br>99.9+680R   | 18.7+104R<br>106.8+594R |                         |
| TSW @ 24" |                            | q                 | 275<br>4.01             | 272<br>3.97             | 237<br>3.46              | 239<br>3.49              | 214<br>3.12              | 218<br>3.18              | 199<br>2.90              | 189<br>2.76              | 181<br>2.64             |                         |
|           |                            | F                 | 9.5+278R<br>54.2+1587R  | 8.6+239R<br>49.1+1365R  | 8.7+209R<br>49.7+1193R   | 8.0+186R<br>45.7+1062R   | 8.1+167R<br>46.3+954R    | 7.5+152R<br>42.8+868R    | 7.6+139R<br>43.4+794R    | 7.2+119R<br>41.1+680R    | 6.9+104R<br>39.4+594R   |                         |
| TSW @ 12" |                            | q                 | 407<br>5.94             | 385<br>5.62             | 369<br>5.39              | 357<br>5.21              | 347<br>5.06              | 339<br>4.95              | 332<br>4.85              | 321<br>4.68              | 313<br>4.57             |                         |
|           |                            | F                 | 7.2+278R<br>41.1+1587R  | 6.8+239R<br>38.8+1365R  | 6.5+209R<br>37.1+1193R   | 6.2+186R<br>35.4+1062R   | 6.0+167R<br>34.3+954R    | 5.8+152R<br>33.1+868R    | 5.6+139R<br>32.0+794R    | 5.3+119R<br>30.3+680R    | 5.0+104R<br>28.6+594R   |                         |
| 20        |                            | BP @ 24"          | q                       | 243<br>3.55             | 223<br>3.25              | 195<br>2.85              | 185<br>2.70              | 167<br>2.44              | 162<br>2.36              | 149<br>2.17              | 136<br>1.98             | 127<br>1.85             |
|           |                            |                   | F                       | 11.9+233R<br>68.0+1330R | 13.0+200R<br>74.2+1142R  | 14.8+175R<br>84.5+999R   | 15.7+155R<br>89.6+885R   | 17.4+140R<br>99.4+799R   | 18.2+127R<br>103.9+725R  | 19.9+117R<br>113.6+668R  | 22.3+100R<br>127.3+571R | 24.6+87R<br>140.5+497R  |
|           | BP @ 12"                   | q                 | 292<br>4.26             | 265<br>3.87             | 246<br>3.59              | 231<br>3.37              | 219<br>3.20              | 209<br>3.05              | 201<br>2.93              | 190<br>2.77              | 181<br>2.64             |                         |
|           |                            | F                 | 10.3+233R<br>58.8+1330R | 11.3+200R<br>64.5+1142R | 12.2+175R<br>69.7+999R   | 13.1+155R<br>74.8+885R   | 13.9+140R<br>79.4+799R   | 14.7+127R<br>83.9+725R   | 15.4+117R<br>87.9+668R   | 16.7+100R<br>95.4+571R   | 17.9+87R<br>102.2+497R  |                         |
|           | TSW @ 24"                  | q                 | 322<br>4.70             | 317<br>4.63             | 276<br>4.03              | 277<br>4.04              | 248<br>3.62              | 252<br>3.68              | 230<br>3.36              | 217<br>3.17              | 208<br>3.04             |                         |
|           |                            | F                 | 8.8+233R<br>50.2+1330R  | 8.1+200R<br>46.3+1142R  | 8.1+175R<br>46.3+999R    | 7.5+155R<br>42.8+885R    | 7.6+140R<br>43.4+799R    | 7.1+127R<br>40.5+725R    | 7.2+117R<br>41.1+668R    | 6.8+100R<br>38.8+571R    | 6.5+87R<br>37.1+497R    |                         |
|           | TSW @ 12"                  | q                 | 471<br>6.87             | 444<br>6.48             | 425<br>6.20              | 410<br>5.98              | 397<br>5.79              | 387<br>5.65              | 379<br>5.53              | 366<br>5.34              | 357<br>5.21             |                         |
|           |                            | F                 | 6.8+233R<br>38.8+1330R  | 6.4+200R<br>36.5+1142R  | 6.1+175R<br>34.8+999R    | 5.9+155R<br>33.7+885R    | 5.6+140R<br>32.0+799R    | 5.5+127R<br>31.4+725R    | 5.3+117R<br>30.3+668R    | 5.0+100R<br>28.6+571R    | 4.8+87R<br>27.4+497R    |                         |

BP = Button Punch; TSW = Top Seam Weld



- 4 Weld Pattern at Supports
- Button Punch or 1½" (38 mm) Top Seam Weld
- Without Concrete Fill
- Galvanized or Phosphatized/Painted

Allowable Diaphragm Shear Values,  $q$  (plf,  $kN/m$ ) and Flexibility Factors,  $F$  ((in./lb) $\times 10^6$ , (mm/N) $\times 10^6$ )

| GAGE | SIDELAP<br>ATTACH-<br>MENT | SPAN (ft-in., mm) |           |           |           |           |           |           |           |            |
|------|----------------------------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
|      |                            | 6'-0"             | 7'-0"     | 8'-0"     | 9'-0"     | 10'-0"    | 11'-0"    | 12'-0"    | 14'-0"    | 16'-0"     |
|      |                            | 1,830             | 2,130     | 2,440     | 2,740     | 3,050     | 3,350     | 3,660     | 4,270     | 4,880      |
| 19   | BP @ 24"                   | q                 | 372       | 336       | 295       | 276       | 249       | 239       | 219       | 198        |
|      |                            |                   | 5.43      | 4.90      | 4.31      | 4.03      | 3.63      | 3.49      | 3.20      | 2.89       |
|      | F                          |                   | 9.2+135R  | 10.2+116R | 11.5+101R | 12.4+90R  | 13.8+81R  | 14.6+74R  | 16.1+67R  | 18.2+58R   |
|      |                            |                   | 52.5+771R | 58.2+662R | 65.7+577R | 70.8+514R | 78.8+463R | 83.4+423R | 91.9+383R | 103.9+331R |
|      | BP @ 12"                   | q                 | 430       | 387       | 355       | 330       | 310       | 295       | 282       | 262        |
|      |                            |                   | 6.28      | 5.65      | 5.18      | 4.82      | 4.52      | 4.31      | 4.12      | 3.82       |
|      | F                          |                   | 8.2+135R  | 9.1+116R  | 9.9+101R  | 10.7+90R  | 11.5+81R  | 12.2+74R  | 12.9+67R  | 14.3+58R   |
|      |                            |                   | 46.8+771R | 52.0+662R | 56.5+577R | 61.1+514R | 65.7+463R | 69.7+423R | 73.7+383R | 81.7+331R  |
|      | TSW @ 24"                  | q                 | 528       | 510       | 444       | 440       | 394       | 395       | 361       | 337        |
|      |                            |                   | 7.71      | 7.44      | 6.48      | 6.42      | 5.75      | 5.76      | 5.27      | 4.92       |
|      | F                          |                   | 7.1+135R  | 6.5+116R  | 6.6+101R  | 6.2+90R   | 6.3+81R   | 5.9+74R   | 6.0+67R   | 5.7+58R    |
|      |                            |                   | 40.5+771R | 37.1+662R | 37.7+577R | 35.4+514R | 36.0+463R | 33.7+423R | 34.3+383R | 32.5+331R  |
| 18   | TSW @ 12"                  | q                 | 742       | 694       | 658       | 630       | 608       | 590       | 575       | 551        |
|      |                            |                   | 10.83     | 10.13     | 9.60      | 9.19      | 8.87      | 8.61      | 8.39      | 8.04       |
|      | F                          |                   | 5.6+135R  | 5.3+116R  | 5.1+101R  | 4.9+90R   | 4.8+81R   | 4.6+74R   | 4.5+67R   | 4.3+58R    |
|      |                            |                   | 32.0+771R | 30.3+662R | 29.1+577R | 28.0+514R | 27.4+463R | 26.3+423R | 25.7+383R | 24.6+331R  |
|      | BP @ 24"                   | q                 | 478       | 429       | 376       | 350       | 316       | 300       | 276       | 248        |
|      |                            |                   | 6.98      | 6.26      | 5.49      | 5.11      | 4.61      | 4.38      | 4.03      | 3.62       |
|      | F                          |                   | 7.8+96R   | 8.7+83R   | 9.8+72R   | 10.7+64R  | 11.9+58R  | 12.7+53R  | 13.9+48R  | 15.9+41R   |
|      |                            |                   | 44.5+548R | 49.7+474R | 56.0+411R | 61.1+365R | 68.0+331R | 72.5+303R | 79.4+274R | 90.8+234R  |
|      | BP @ 12"                   | q                 | 542       | 484       | 442       | 409       | 383       | 362       | 345       | 318        |
|      |                            |                   | 7.91      | 7.06      | 6.45      | 5.97      | 5.59      | 5.28      | 5.03      | 4.64       |
|      | F                          |                   | 7.1+96R   | 7.9+83R   | 8.7+72R   | 9.4+64R   | 10.1+58R  | 10.8+53R  | 11.5+48R  | 12.8+41R   |
|      |                            |                   | 40.5+548R | 45.1+474R | 49.7+411R | 53.7+365R | 57.7+331R | 61.7+303R | 65.7+274R | 73.1+234R  |
| 16   | TSW @ 24"                  | q                 | 663       | 643       | 566       | 564       | 511       | 515       | 476       | 442        |
|      |                            |                   | 9.68      | 9.38      | 8.26      | 8.23      | 7.46      | 7.52      | 6.95      | 6.45       |
|      | F                          |                   | 6.1+96R   | 5.7+83R   | 5.8+72R   | 5.5+64R   | 5.5+58R   | 5.2+53R   | 5.3+48R   | 5.1+41R    |
|      |                            |                   | 34.8+548R | 32.5+474R | 33.1+411R | 31.4+365R | 31.4+331R | 29.7+303R | 30.3+274R | 29.1+234R  |
|      | TSW @ 12"                  | q                 | 912       | 859       | 822       | 794       | 773       | 756       | 744       | 710        |
|      |                            |                   | 13.31     | 12.54     | 12.00     | 11.59     | 11.28     | 11.03     | 10.86     | 10.36      |
|      | F                          |                   | 4.9+96R   | 4.7+83R   | 4.5+72R   | 4.4+64R   | 4.3+58R   | 4.1+53R   | 4.0+48R   | 3.8+41R    |
|      |                            |                   | 28.0+548R | 26.8+474R | 25.7+411R | 25.1+365R | 24.6+331R | 23.4+303R | 22.8+274R | 21.7+234R  |
|      | BP @ 24"                   | q                 | 752       | 667       | 585       | 538       | 486       | 457       | 420       | 374        |
|      |                            |                   | 10.97     | 9.73      | 8.54      | 7.85      | 7.09      | 6.67      | 6.13      | 5.46       |
|      | F                          |                   | 5.6+49R   | 6.2+42R   | 7.1+37R   | 7.8+32R   | 8.7+29R   | 9.4+27R   | 10.3+24R  | 11.9+21R   |
|      |                            |                   | 32.0+280R | 35.4+240R | 40.5+211R | 44.5+183R | 49.7+166R | 53.7+154R | 58.8+137R | 68.0+120R  |
| 16   | BP @ 12"                   | q                 | 826       | 732       | 662       | 608       | 565       | 530       | 502       | 458        |
|      |                            |                   | 12.05     | 10.68     | 9.66      | 8.87      | 8.25      | 7.73      | 7.33      | 6.68       |
|      | F                          |                   | 5.2+49R   | 5.8+42R   | 6.4+37R   | 7.0+32R   | 7.7+29R   | 8.3+27R   | 8.9+24R   | 10.0+21R   |
|      |                            |                   | 29.7+280R | 33.1+240R | 36.5+211R | 40.0+183R | 44.0+166R | 47.4+154R | 50.8+137R | 57.1+120R  |
|      | TSW @ 24"                  | q                 | 1003      | 958       | 844       | 830       | 752       | 752       | 694       | 656        |
|      |                            |                   | 14.64     | 13.98     | 12.32     | 12.11     | 10.97     | 10.97     | 10.13     | 9.57       |
|      | F                          |                   | 4.5+49R   | 4.3+42R   | 4.4+37R   | 4.2+32R   | 4.2+29R   | 4.0+27R   | 4.1+24R   | 4.0+21R    |
|      |                            |                   | 25.7+280R | 24.6+240R | 25.1+211R | 24.0+183R | 24.0+166R | 22.8+154R | 23.4+137R | 22.3+120R  |
|      | TSW @ 12"                  | q                 | 1327      | 1241      | 1179      | 1133      | 1098      | 1071      | 1050      | 1021       |
|      |                            |                   | 19.37     | 18.11     | 17.21     | 16.53     | 16.02     | 15.63     | 15.32     | 14.90      |
|      | F                          |                   | 3.8+49R   | 3.6+42R   | 3.5+37R   | 3.4+32R   | 3.3+29R   | 3.3+27R   | 3.2+24R   | 3.1+21R    |
|      |                            |                   | 21.7+280R | 20.6+240R | 20.0+211R | 19.4+183R | 18.8+166R | 18.8+154R | 18.3+137R | 17.7+120R  |

BP = Button Punch; TSW = Top Seam Weld

# VERCOR™ FORM DECK TECHNICAL DATA

## Material

VERCOR form deck is fabricated from G90 (Z275) galvanized steel conforming to ASTM A653.

| Profile | Depth                      | Material Type          | Bending Strength                    |
|---------|----------------------------|------------------------|-------------------------------------|
| Deep    | 1 $\frac{5}{16}$ " (33 mm) | ASTM A653 SS, Grade 80 | 36 ksi (248,211 KN/m <sup>2</sup> ) |
| Shallow | $\frac{9}{16}$ " (14 mm)   | ASTM A653 SS, Grade 50 | 30 ksi (206,843 KN/m <sup>2</sup> ) |

Galvanized VERCOR deck can be considered as a permanent form. Uncoated decks should not be considered permanent forms; therefore, the weight of the slab on uncoated decks should be deducted from the allowable load of the reinforced slab. Uncoated deck is available only as a special order.

## Uniform Load Tables

The tables on pages 128 and 131 list the allowable uniform load. This is the total uniform load which can be applied to the VERCOR form deck. Values are based on the allowable bending stress, and on limiting deflection to either L/240 or L/180. The symbol ♦♦♦ indicates that the allowable uniform load based on deflection exceeds the allowable load based on stress.

The formulas used to determine the allowable uniform loads due to stress and deflection are as follows:

| Span   | Bending Moment                 | Deflection                                                     |
|--------|--------------------------------|----------------------------------------------------------------|
| Single | $+M = 0.125 \cdot w \cdot L^2$ | $\Delta = \frac{0.013 \cdot w \cdot L^4 \cdot Cd}{E \cdot I}$  |
| Double | $-M = 0.125 \cdot w \cdot L^2$ | $\Delta = \frac{0.0054 \cdot w \cdot L^4 \cdot Cd}{E \cdot I}$ |
| Triple | $-M = 0.1 \cdot w \cdot L^2$   | $\Delta = \frac{0.0069 \cdot w \cdot L^4 \cdot Cd}{E \cdot I}$ |

where  $E = 29.5 \times 10^6$  psi

## Allowable Unshored Span Tables

The maximum allowable unshored spans shown on pages 130 and 133 are based on the loading criteria for deck as a form as discussed beginning on page 14 of this catalog. These spans are maximum clear spans.

The dead load for determination of the allowable unshored spans is the total of the concrete weight plus deck weight plus deflection allowance. The following allowances for VERCOR deck deflection are included:

- 3 psf (144 N/m<sup>2</sup>) for light weight concrete.
- 4 psf (192 N/m<sup>2</sup>) for normal weight concrete.

No allowance is included for deflection of structural supports.

## VERCOR Attachment to Supports

Welding VERCOR decks lighter than 22 gage requires weld washers in accordance with AWS D1.3 (see Figure 18).



FIGURE 18

Use of mechanical fasteners instead of welds should be based on information supplied by the manufacturer of the mechanical fasteners.

### Suggested Minimum Attachment Patterns for VERCOR Deck

Figure 19 shows suggested minimum attachment patterns for spans up to 3 ft (914 mm) and spans 3 ft (914 mm) to 8 ft (2,438 mm). If spans exceed 8 ft (2,438 mm), a maximum attachment spacing of 12 in. (305 mm) at the perpendicular supports is suggested.

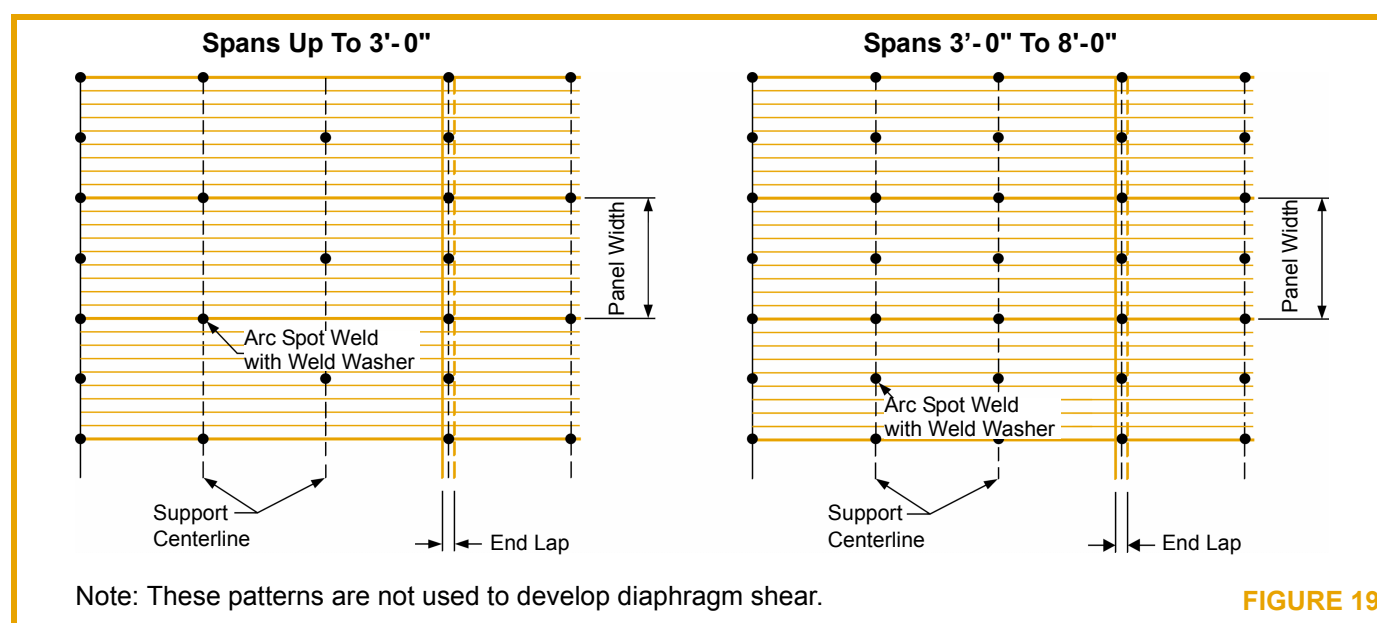


FIGURE 19

See Table 5 on page 20 of this catalog for allowable diaphragm values for Deep VERCOR deck used with concrete and shear studs. In addition, see Verco ICBO Report ER-2078P for diaphragm values for Deep VERCOR deck welded to the supports with insulating concrete fill and for Deep VERCOR deck fastened to the supports with screws, without concrete.

### VERCOR Venting

Deep and Shallow VERCOR deck is available with rolled-in sidelap vents as shown in Figure 20.

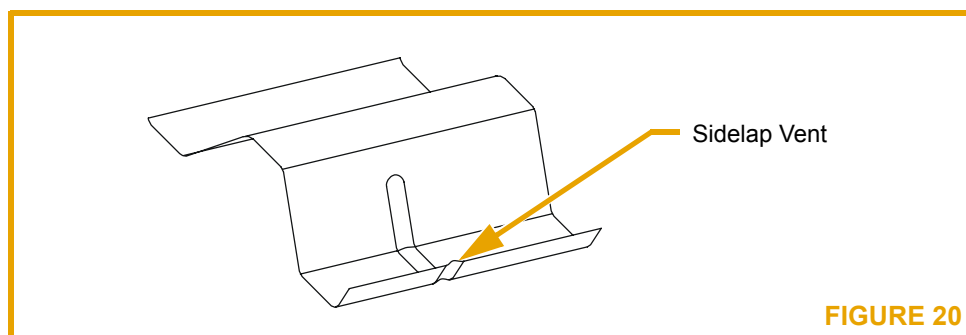
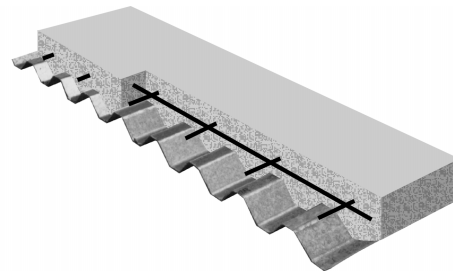


FIGURE 20



# Deep VERCOR™

- 1<sup>5</sup>/<sub>16</sub> in. (33 mm) Non-Composite Form Deck
- Galvanized



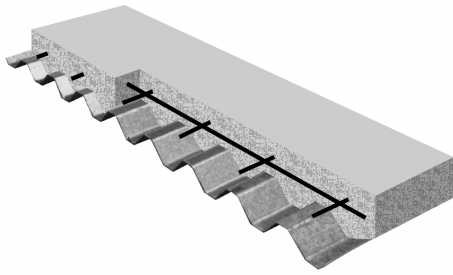
## Deck Weight and Section Properties

| Gage      | Weight<br>psf (N/m <sup>2</sup> ) |  | Section Properties<br>per ft (m) of Width |                                           |                                           | Gage      | Weight<br>psf (N/m <sup>2</sup> ) |  | Section Properties<br>per ft (m) of Width |                                           |                                           |
|-----------|-----------------------------------|--|-------------------------------------------|-------------------------------------------|-------------------------------------------|-----------|-----------------------------------|--|-------------------------------------------|-------------------------------------------|-------------------------------------------|
|           | Galvanized<br>G90<br>Z275         |  | I<br>in. <sup>4</sup><br>mm <sup>4</sup>  | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> |           | Galvanized<br>G90<br>Z275         |  | I<br>in. <sup>4</sup><br>mm <sup>4</sup>  | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> |
| <b>26</b> | 1.1<br>52.7                       |  | 0.073<br>99,688                           | 0.099<br>5,323                            | 0.103<br>5,538                            | <b>22</b> | 1.7<br>81.4                       |  | 0.123<br>167,967                          | 0.175<br>9,409                            | 0.174<br>9,355                            |
| <b>24</b> | 1.4<br>67.0                       |  | 0.098<br>133,828                          | 0.138<br>7,419                            | 0.140<br>7,527                            | <b>20</b> | 2.1<br>100.5                      |  | 0.143<br>195,279                          | 0.207<br>11,129                           | 0.206<br>11,075                           |

NOTE: Bending stress is limited to 36,000 psi (248,211 kN/m<sup>2</sup>) based on F<sub>y</sub> = 80,000 psi (551,581 kN/m<sup>2</sup>).

## Allowable Uniform Loads (psf, N/m<sup>2</sup>)

| Gage               | Span (ft-in., mm) |                |                |                |                |                |                |                |                |                |                |                |                |                |                 |
|--------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
|                    | 3'-0"<br>910      | 3'-6"<br>1,070 | 4'-0"<br>1,220 | 4'-6"<br>1,370 | 5'-0"<br>1,520 | 5'-6"<br>1,680 | 6'-0"<br>1,830 | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 |
| <b>Single Span</b> |                   |                |                |                |                |                |                |                |                |                |                |                |                |                |                 |
| <b>26</b>          | Stress            | 264<br>12,640  | 194<br>9,289   | 149<br>7,134   | 117<br>5,602   | 95<br>4,549    | 79<br>3,783    | 66<br>3,160    | 56<br>2,681    | 48<br>2,298    | 42<br>2,011    |                |                |                |                 |
|                    | L/240             | 178<br>8,523   | 112<br>5,363   | 75<br>3,591    | 53<br>2,538    | 38<br>1,819    | 29<br>1,389    | 22<br>1,053    | 17<br>814      | 14<br>670      | 11<br>527      |                |                |                |                 |
|                    | L/180             | 237<br>11,348  | 149<br>7,134   | 100<br>4,788   | 70<br>3,352    | 51<br>2,442    | 38<br>1,819    | 30<br>1,436    | 23<br>1,101    | 19<br>910      | 15<br>718      |                |                |                |                 |
| <b>24</b>          | Stress            | 300<br>14,364  | 270<br>12,928  | 207<br>9,911   | 164<br>7,852   | 132<br>6,320   | 109<br>5,219   | 92<br>4,405    | 78<br>3,735    | 68<br>3,256    | 59<br>2,825    | 52<br>2,490    |                |                |                 |
|                    | L/240             | 238<br>11,396  | 150<br>7,182   | 101<br>4,836   | 71<br>3,399    | 51<br>2,442    | 39<br>1,867    | 30<br>1,436    | 23<br>1,101    | 19<br>910      | 15<br>718      | 13<br>622      |                |                |                 |
|                    | L/180             | ♦♦♦<br>9,576   | 200<br>9,576   | 134<br>6,416   | 94<br>4,501    | 69<br>3,304    | 52<br>2,490    | 40<br>1,915    | 31<br>1,484    | 25<br>1,197    | 20<br>958      | 17<br>814      |                |                |                 |
| <b>22</b>          | Stress            | 300<br>14,364  | 300<br>14,364  | 263<br>12,593  | 207<br>9,911   | 168<br>8,044   | 139<br>6,655   | 117<br>5,602   | 99<br>4,740    | 86<br>4,118    | 75<br>3,591    | 66<br>3,160    | 58<br>2,777    | 52<br>2,490    |                 |
|                    | L/240             | 299<br>14,316  | 188<br>9,001   | 126<br>6,033   | 89<br>4,261    | 65<br>3,112    | 49<br>2,346    | 37<br>1,772    | 29<br>1,389    | 24<br>1,149    | 19<br>910      | 16<br>766      | 13<br>622      | 11<br>527      |                 |
|                    | L/180             | ♦♦♦<br>12,018  | 251<br>12,018  | 168<br>8,044   | 118<br>5,650   | 86<br>4,118    | 65<br>3,112    | 50<br>2,394    | 39<br>1,867    | 31<br>1,484    | 26<br>1,245    | 21<br>1,005    | 18<br>862      | 15<br>718      |                 |
| <b>20</b>          | Stress            | 300<br>14,364  | 300<br>14,364  | 300<br>14,364  | 245<br>11,731  | 199<br>9,528   | 164<br>7,852   | 138<br>6,607   | 118<br>5,650   | 101<br>4,836   | 88<br>4,213    | 78<br>3,735    | 69<br>3,304    | 61<br>2,921    | 55<br>2,633     |
|                    | L/240             | ♦♦♦<br>10,486  | 219<br>10,486  | 147<br>7,038   | 103<br>4,932   | 75<br>3,591    | 56<br>2,681    | 43<br>2,059    | 34<br>1,628    | 27<br>1,293    | 22<br>1,053    | 18<br>862      | 15<br>718      | 13<br>622      | 11<br>527       |
|                    | L/180             | ♦♦♦<br>13,981  | 292<br>13,981  | 196<br>9,385   | 137<br>6,560   | 100<br>4,788   | 75<br>3,591    | 58<br>2,777    | 46<br>2,202    | 36<br>1,724    | 30<br>1,436    | 24<br>1,149    | 20<br>958      | 17<br>814      | 15<br>718       |



# Deep VERCOR™

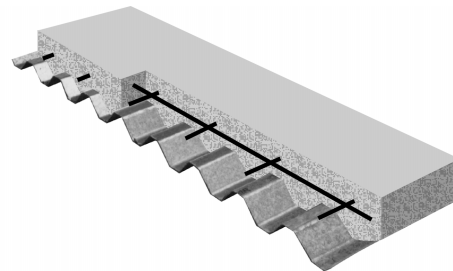
1<sup>5</sup>/<sub>16</sub> in. (33 mm) Non-Composite Form Deck ■  
Galvanized ■

## Allowable Uniform Loads (psf, N/m<sup>2</sup>)

| Gage        |        | Span (ft-in., mm) |                |                |                |                |                |                |                |                |                |                |                |                |                |                 |
|-------------|--------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
|             |        | 3'-0"<br>910      | 3'-6"<br>1,070 | 4'-0"<br>1,220 | 4'-6"<br>1,370 | 5'-0"<br>1,520 | 5'-6"<br>1,680 | 6'-0"<br>1,830 | 6'-6"<br>1,980 | 7'-0"<br>2,130 | 7'-6"<br>2,290 | 8'-0"<br>2,440 | 8'-6"<br>2,590 | 9'-0"<br>2,740 | 9'-6"<br>2,900 | 10'-0"<br>3,050 |
| Double Span |        |                   |                |                |                |                |                |                |                |                |                |                |                |                |                |                 |
| 26          | Stress | 275<br>13,167     | 202<br>9,672   | 155<br>7,421   | 122<br>5,841   | 99<br>4,740    | 82<br>3,926    | 69<br>3,304    | 59<br>2,825    | 50<br>2,394    | 44<br>2,107    | 39<br>1,867    | 34<br>1,628    | 31<br>1,484    | 27<br>1,293    |                 |
|             | L/240  | ◆◆◆               | ◆◆◆            | ◆◆◆            | ◆◆◆            | 92<br>4,405    | 69<br>3,304    | 53<br>2,538    | 42<br>2,011    | 34<br>1,628    | 27<br>1,293    | 23<br>1,101    | 19<br>910      | 16<br>766      | 13<br>622      |                 |
|             | L/180  | ◆◆◆               | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | 56<br>2,681    | 45<br>2,155    | 36<br>1,724    | 30<br>1,436    | 25<br>1,197    | 21<br>1,005    | 18<br>862      |                 |
| 24          | Stress | 300<br>14,364     | 274<br>13,119  | 210<br>10,055  | 166<br>7,948   | 134<br>6,416   | 111<br>5,315   | 93<br>4,453    | 80<br>3,830    | 69<br>3,304    | 60<br>2,873    | 53<br>2,538    | 47<br>2,250    | 41<br>1,963    | 37<br>1,772    | 34<br>1,628     |
|             | L/240  | ◆◆◆               | ◆◆◆            | ◆◆◆            | ◆◆◆            | 124<br>5,937   | 93<br>4,453    | 72<br>3,447    | 56<br>2,681    | 45<br>2,155    | 37<br>1,772    | 30<br>1,436    | 25<br>1,197    | 21<br>1,005    | 18<br>862      | 15<br>718       |
|             | L/180  | ◆◆◆               | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | 75<br>3,591    | 60<br>2,873    | 49<br>2,346    | 40<br>1,915    | 34<br>1,628    | 28<br>1,341    | 24<br>1,149    | 21<br>1,005     |
| 22          | Stress | 300<br>14,364     | 300<br>14,364  | 261<br>12,497  | 206<br>9,863   | 167<br>7,996   | 138<br>6,607   | 116<br>5,554   | 99<br>4,740    | 85<br>4,070    | 74<br>3,543    | 65<br>3,112    | 58<br>2,777    | 52<br>2,490    | 46<br>2,202    | 42<br>2,011     |
|             | L/240  | ◆◆◆               | ◆◆◆            | ◆◆◆            | ◆◆◆            | 156<br>7,469   | 117<br>5,602   | 90<br>4,309    | 71<br>3,399    | 57<br>2,729    | 46<br>2,202    | 38<br>1,819    | 32<br>1,532    | 27<br>1,293    | 23<br>1,101    | 19<br>910       |
|             | L/180  | ◆◆◆               | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | 94<br>4,501    | 76<br>3,639    | 61<br>2,921    | 51<br>2,442    | 42<br>2,011    | 36<br>1,724    | 30<br>1,436    | 26<br>1,245     |
| 20          | Stress | 300<br>14,364     | 300<br>14,364  | 300<br>14,364  | 244<br>11,683  | 198<br>9,480   | 163<br>7,804   | 137<br>6,560   | 117<br>5,602   | 101<br>4,836   | 88<br>4,213    | 77<br>3,687    | 68<br>3,256    | 61<br>2,921    | 55<br>2,633    | 49<br>2,346     |
|             | L/240  | ◆◆◆               | ◆◆◆            | ◆◆◆            | ◆◆◆            | 181<br>8,666   | 136<br>6,512   | 105<br>5,027   | 82<br>3,926    | 66<br>3,160    | 54<br>2,586    | 44<br>2,107    | 37<br>1,772    | 31<br>1,484    | 26<br>1,245    | 23<br>1,101     |
|             | L/180  | ◆◆◆               | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | ◆◆◆            | 110<br>5,267   | 88<br>4,213    | 71<br>3,399    | 59<br>2,825    | 49<br>2,346    | 41<br>1,963    | 35<br>1,676    | 30<br>1,436     |
| Triple Span |        |                   |                |                |                |                |                |                |                |                |                |                |                |                |                |                 |
| 26          | Stress | 300<br>14,364     | 252<br>12,066  | 193<br>9,241   | 153<br>7,326   | 124<br>5,937   | 102<br>4,884   | 86<br>4,118    | 73<br>3,495    | 63<br>3,016    | 55<br>2,633    | 48<br>2,298    | 43<br>2,059    | 38<br>1,819    | 34<br>1,628    | 31<br>1,484     |
|             | L/240  | ◆◆◆               | 211<br>10,103  | 141<br>6,751   | 99<br>4,740    | 72<br>3,447    | 54<br>2,586    | 42<br>2,011    | 33<br>1,580    | 26<br>1,245    | 21<br>1,005    | 18<br>862      | 15<br>718      | 12<br>575      | 11<br>527      | 9<br>431        |
|             | L/180  | ◆◆◆               | ◆◆◆            | 188<br>9,001   | 132<br>6,320   | 96<br>4,597    | 72<br>3,447    | 56<br>2,681    | 44<br>2,107    | 35<br>1,676    | 29<br>1,389    | 24<br>1,149    | 20<br>958      | 17<br>814      | 14<br>670      | 12<br>575       |
| 24          | Stress | 300<br>14,364     | 300<br>14,364  | 263<br>12,593  | 207<br>9,911   | 168<br>8,044   | 139<br>6,655   | 117<br>5,602   | 99<br>4,740    | 86<br>4,118    | 75<br>3,591    | 66<br>3,160    | 58<br>2,777    | 52<br>2,490    | 47<br>2,250    | 42<br>2,011     |
|             | L/240  | ◆◆◆               | 283<br>13,550  | 189<br>9,049   | 133<br>6,368   | 97<br>4,644    | 73<br>3,495    | 56<br>2,681    | 44<br>2,107    | 35<br>1,676    | 29<br>1,389    | 24<br>1,149    | 20<br>958      | 17<br>814      | 14<br>670      | 12<br>575       |
|             | L/180  | ◆◆◆               | ◆◆◆            | 253<br>12,114  | 177<br>8,475   | 129<br>6,177   | 97<br>4,644    | 75<br>3,591    | 59<br>2,825    | 47<br>2,250    | 38<br>1,819    | 32<br>1,532    | 26<br>1,245    | 22<br>1,053    | 19<br>910      | 16<br>766       |
| 22          | Stress | 300<br>14,364     | 300<br>14,364  | 300<br>14,364  | 258<br>12,353  | 209<br>10,007  | 173<br>8,283   | 145<br>6,943   | 124<br>5,937   | 107<br>5,123   | 93<br>4,453    | 82<br>3,926    | 72<br>3,447    | 64<br>3,064    | 58<br>2,777    | 52<br>2,490     |
|             | L/240  | ◆◆◆               | ◆◆◆            | 238<br>11,396  | 167<br>7,996   | 122<br>5,841   | 91<br>4,357    | 70<br>3,352    | 55<br>2,633    | 44<br>2,107    | 36<br>1,724    | 30<br>1,436    | 25<br>1,197    | 21<br>1,005    | 18<br>862      | 15<br>718       |
|             | L/180  | ◆◆◆               | ◆◆◆            | ◆◆◆            | 223<br>10,677  | 162<br>7,757   | 122<br>5,841   | 94<br>4,501    | 74<br>3,543    | 59<br>2,825    | 48<br>2,298    | 40<br>1,915    | 33<br>1,580    | 28<br>1,341    | 24<br>1,149    | 20<br>958       |
| 20          | Stress | 300<br>14,364     | 300<br>14,364  | 300<br>14,364  | 300<br>14,364  | 247<br>11,826  | 204<br>9,768   | 172<br>8,235   | 146<br>6,991   | 126<br>6,033   | 110<br>5,267   | 97<br>4,644    | 86<br>4,118    | 76<br>3,639    | 68<br>3,256    | 62<br>2,969     |
|             | L/240  | ◆◆◆               | ◆◆◆            | 276<br>13,215  | 194<br>9,289   | 142<br>6,799   | 106<br>5,075   | 82<br>3,926    | 64<br>3,064    | 52<br>2,490    | 42<br>2,011    | 35<br>1,676    | 29<br>1,389    | 24<br>1,149    | 21<br>1,005    | 18<br>862       |
|             | L/180  | ◆◆◆               | ◆◆◆            | ◆◆◆            | 259<br>12,401  | 189<br>9,049   | 142<br>6,799   | 109<br>5,219   | 86<br>4,118    | 69<br>3,304    | 56<br>2,681    | 46<br>2,202    | 38<br>1,819    | 32<br>1,532    | 28<br>1,341    | 24<br>1,149     |

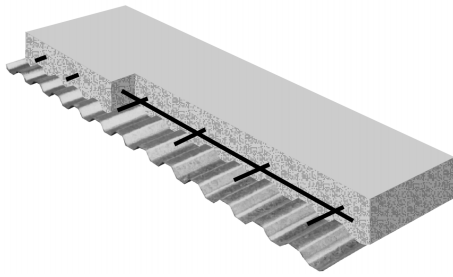
# Deep VERCOR™

- 1<sup>5</sup>/<sub>16</sub> in. (33 mm) Non-Composite Form Deck
- Galvanized



## Maximum Allowable Unshored Spans (ft-in., mm)

| Total Slab Depth       | Normal Weight Concrete - 145 pcf (2,320 kg/m <sup>3</sup> ) |      |                 |                 |                 | Light Weight Concrete - 110 pcf (1,760 kg/m <sup>3</sup> ) |      |                 |                 |                 |
|------------------------|-------------------------------------------------------------|------|-----------------|-----------------|-----------------|------------------------------------------------------------|------|-----------------|-----------------|-----------------|
|                        | Concrete Weight                                             | Gage | 1 Span          | 2 Span          | 3 Span          | Concrete Weight                                            | Gage | 1 Span          | 2 Span          | 3 Span          |
| <b>3½"</b><br>(89 mm)  | 34.4 psf<br>(1,645 N/m <sup>2</sup> )                       | 26   | 4'-10"<br>1,472 | 6'-2"<br>1,881  | 5'-11"<br>1,804 | 26.1 psf<br>(1,248 N/m <sup>2</sup> )                      | 26   | 5'-2"<br>1,576  | 6'-7"<br>2,006  | 6'-5"<br>1,957  |
|                        |                                                             | 24   | 5'-11"<br>1,804 | 7'-6"<br>2,286  | 7'-4"<br>2,234  |                                                            | 24   | 6'-6"<br>1,981  | 8'-1"<br>2,463  | 8'-1"<br>2,463  |
|                        |                                                             | 22   | 6'-5"<br>1,957  | 8'-4"<br>2,539  | 7'-11"<br>2,414 |                                                            | 22   | 7'-0"<br>2,134  | 9'-0"<br>2,743  | 8'-8"<br>2,643  |
|                        |                                                             | 20   | 6'-9"<br>2,057  | 9'-0"<br>2,743  | 8'-4"<br>2,539  |                                                            | 20   | 7'-4"<br>2,234  | 9'-10"<br>2,996 | 9'-1"<br>2,768  |
| <b>4"</b><br>(102 mm)  | 40.4 psf<br>(1,935 N/m <sup>2</sup> )                       | 26   | 4'-7"<br>1,396  | 5'-11"<br>1,804 | 5'-9"<br>1,753  | 30.7 psf<br>(1,468 N/m <sup>2</sup> )                      | 26   | 5'-0"<br>1,524  | 6'-4"<br>1,929  | 6'-2"<br>1,881  |
|                        |                                                             | 24   | 5'-8"<br>1,728  | 7'-1"<br>2,158  | 7'-0"<br>2,134  |                                                            | 24   | 6'-3"<br>1,905  | 7'-9"<br>2,362  | 7'-8"<br>2,338  |
|                        |                                                             | 22   | 6'-1"<br>1,853  | 7'-11"<br>2,414 | 7'-7"<br>2,310  |                                                            | 22   | 6'-8"<br>2,033  | 8'-8"<br>2,643  | 8'-3"<br>2,515  |
|                        |                                                             | 20   | 6'-5"<br>1,957  | 8'-7"<br>2,615  | 7'-11"<br>2,414 |                                                            | 20   | 7'-0"<br>2,134  | 9'-4"<br>2,844  | 8'-8"<br>2,643  |
| <b>4½"</b><br>(114 mm) | 46.4 psf<br>(2,224 N/m <sup>2</sup> )                       | 26   | 4'-5"<br>1,347  | 5'-9"<br>1,753  | 5'-6"<br>1,676  | 35.2 psf<br>(1,687 N/m <sup>2</sup> )                      | 26   | 4'-10"<br>1,472 | 6'-2"<br>1,881  | 6'-0"<br>1,829  |
|                        |                                                             | 24   | 5'-5"<br>1,652  | 6'-10"<br>2,082 | 6'-9"<br>2,057  |                                                            | 24   | 6'-0"<br>1,829  | 7'-6"<br>2,286  | 7'-5"<br>2,262  |
|                        |                                                             | 22   | 5'-10"<br>1,777 | 7'-7"<br>2,310  | 7'-3"<br>2,210  |                                                            | 22   | 6'-5"<br>1,957  | 8'-4"<br>2,539  | 7'-11"<br>2,414 |
|                        |                                                             | 20   | 6'-2"<br>1,881  | 8'-3"<br>2,515  | 7'-7"<br>2,310  |                                                            | 20   | 6'-9"<br>2,057  | 9'-0"<br>2,743  | 8'-4"<br>2,539  |
| <b>5"</b><br>(127 mm)  | 52.5 psf<br>(2,513 N/m <sup>2</sup> )                       | 26   | 4'-4"<br>1,320  | 5'-7"<br>1,701  | 5'-4"<br>1,625  | 39.8 psf<br>(1,906 N/m <sup>2</sup> )                      | 26   | 4'-8"<br>1,423  | 6'-0"<br>1,829  | 5'-9"<br>1,753  |
|                        |                                                             | 24   | 5'-3"<br>1,600  | 6'-6"<br>1,981  | 6'-6"<br>1,981  |                                                            | 24   | 5'-9"<br>1,753  | 7'-2"<br>2,185  | 7'-1"<br>2,158  |
|                        |                                                             | 22   | 5'-8"<br>1,728  | 7'-3"<br>2,210  | 7'-0"<br>2,134  |                                                            | 22   | 6'-2"<br>1,881  | 8'-0"<br>2,438  | 7'-8"<br>2,338  |
|                        |                                                             | 20   | 5'-11"<br>1,804 | 7'-11"<br>2,414 | 7'-4"<br>2,234  |                                                            | 20   | 6'-6"<br>1,981  | 8'-8"<br>2,643  | 8'-0"<br>2,438  |
| <b>5½"</b><br>(140 mm) | 58.5 psf<br>(2,802 N/m <sup>2</sup> )                       | 26   | 4'-2"<br>1,271  | 5'-4"<br>1,625  | 5'-2"<br>1,576  | 44.4 psf<br>(2,126 N/m <sup>2</sup> )                      | 26   | 4'-6"<br>1,372  | 5'-10"<br>1,777 | 5'-7"<br>1,701  |
|                        |                                                             | 24   | 5'-1"<br>1,548  | 6'-4"<br>1,929  | 6'-3"<br>1,905  |                                                            | 24   | 5'-7"<br>1,701  | 6'-11"<br>2,109 | 6'-11"<br>2,109 |
|                        |                                                             | 22   | 5'-6"<br>1,676  | 7'-0"<br>2,134  | 6'-9"<br>2,057  |                                                            | 22   | 6'-0"<br>1,829  | 7'-9"<br>2,362  | 7'-5"<br>2,262  |
|                        |                                                             | 20   | 5'-9"<br>1,753  | 7'-7"<br>2,310  | 7'-1"<br>2,158  |                                                            | 20   | 6'-3"<br>1,905  | 8'-5"<br>2,566  | 7'-9"<br>2,362  |
| <b>6"</b><br>(152 mm)  | 64.6 psf<br>(3,092 N/m <sup>2</sup> )                       | 26   | 4'-0"<br>1,219  | 5'-2"<br>1,576  | 5'-0"<br>1,524  | 49.0 psf<br>(2,345 N/m <sup>2</sup> )                      | 26   | 4'-5"<br>1,347  | 5'-8"<br>1,728  | 5'-6"<br>1,676  |
|                        |                                                             | 24   | 4'-1"<br>1,500  | 6'-1"<br>1,853  | 6'-1"<br>1,853  |                                                            | 24   | 5'-5"<br>1,652  | 6'-9"<br>2,057  | 6'-8"<br>2,033  |
|                        |                                                             | 22   | 5'-4"<br>1,625  | 6'-9"<br>2,057  | 6'-7"<br>2,006  |                                                            | 22   | 5'-10"<br>1,777 | 7'-6"<br>2,286  | 7'-2"<br>2,185  |
|                        |                                                             | 20   | 5'-7"<br>1,701  | 7'-4"<br>2,234  | 6'-11"<br>2,109 |                                                            | 20   | 6'-1"<br>1,853  | 8'-2"<br>2,490  | 7'-7"<br>2,310  |
| <b>6½"</b><br>(165 mm) | 70.6 psf<br>(3,381 N/m <sup>2</sup> )                       | 26   | 3'-11"<br>1,195 | 5'-0"<br>1,524  | 4'-11"<br>1,500 | 53.6 psf<br>(2,565 N/m <sup>2</sup> )                      | 26   | 4'-3"<br>1,295  | 5'-7"<br>1,701  | 5'-4"<br>1,625  |
|                        |                                                             | 24   | 4'-10"<br>1,472 | 5'-11"<br>1,804 | 5'-11"<br>1,804 |                                                            | 24   | 5'-3"<br>1,600  | 6'-6"<br>1,981  | 6'-6"<br>1,981  |
|                        |                                                             | 22   | 5'-2"<br>1,576  | 6'-7"<br>2,006  | 6'-5"<br>1,957  |                                                            | 22   | 5'-8"<br>1,728  | 7'-3"<br>2,210  | 7'-0"<br>2,134  |
|                        |                                                             | 20   | 5'-5"<br>1,652  | 7'-1"<br>2,158  | 6'-9"<br>2,057  |                                                            | 20   | 5'-11"<br>1,804 | 7'-11"<br>2,414 | 7'-4"<br>2,234  |



# Shallow VERCOR™

**9/16 in. (14 mm) Non-Composite Form Deck** ■  
**Galvanized** ■

## Deck Weight and Section Properties

| Gage      | Weight<br>psf ( $N/m^2$ ) | Section Properties<br>per ft (m) of Width |                                           |                                           | Gage      | Weight<br>psf ( $N/m^2$ ) | Section Properties<br>per ft (m) of Width |                                           |                                           |
|-----------|---------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-----------|---------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
|           | Galvanized<br>G90<br>Z275 | I<br>in. <sup>4</sup><br>mm <sup>4</sup>  | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> |           | Galvanized<br>G90<br>Z275 | I<br>in. <sup>4</sup><br>mm <sup>4</sup>  | +S<br>in. <sup>3</sup><br>mm <sup>3</sup> | -S<br>in. <sup>3</sup><br>mm <sup>3</sup> |
| <b>28</b> | 0.9<br>43.1               | 0.012<br>16,387                           | 0.037<br>1,989                            | 0.039<br>2,097                            | <b>24</b> | 1.3<br>62.2               | 0.017<br>23,215                           | 0.059<br>3,172                            | 0.059<br>3,172                            |
| <b>26</b> | 1.0<br>47.9               | 0.013<br>17,753                           | 0.042<br>2,258                            | 0.044<br>2,366                            | <b>22</b> | 1.6<br>76.6               | 0.023<br>31,409                           | 0.074<br>3,978                            | 0.074<br>3,978                            |

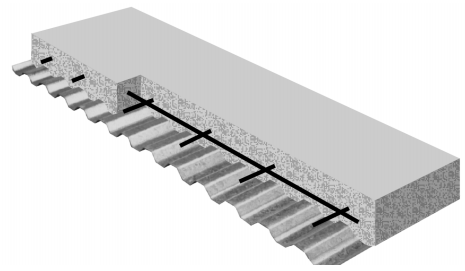
**NOTE:** Bending stress is limited to 30,000 psi (206,843 kN/m<sup>2</sup>) based on  $F_y = 50,000$  psi (344,738 kN/m<sup>2</sup>).

## Allowable Uniform Loads (psf, $N/m^2$ )

| Gage               | Span (ft-in., mm) |               |               |                |                |                |                |                |                |
|--------------------|-------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                    | 2'-0"<br>610      | 2'-6"<br>760  | 3'-0"<br>910  | 3'-6"<br>1,070 | 4'-0"<br>1,220 | 4'-6"<br>1,370 | 5'-0"<br>1,520 | 5'-6"<br>1,680 | 6'-0"<br>1,830 |
| <b>Single Span</b> |                   |               |               |                |                |                |                |                |                |
| <b>28</b>          | Stress            | 185<br>8,858  | 118<br>5,650  | 82<br>3,926    |                |                |                |                |                |
|                    | L/240             | 98<br>4,692   | 50<br>2,394   | 29<br>1,389    |                |                |                |                |                |
|                    | L/180             | 131<br>6,272  | 67<br>3,208   | 39<br>1,867    |                |                |                |                |                |
| <b>26</b>          | Stress            | 210<br>10,055 | 134<br>6,416  | 93<br>4,453    | 69<br>3,304    |                |                |                |                |
|                    | L/240             | 107<br>5,123  | 55<br>2,633   | 32<br>1,532    | 20<br>958      |                |                |                |                |
|                    | L/180             | 142<br>6,799  | 73<br>3,495   | 42<br>2,011    | 27<br>1,293    |                |                |                |                |
| <b>24</b>          | Stress            | 295<br>14,125 | 189<br>9,049  | 131<br>6,272   | 96<br>4,597    | 74<br>3,543    | 58<br>2,777    |                |                |
|                    | L/240             | 140<br>6,703  | 71<br>3,399   | 41<br>1,963    | 26<br>1,245    | 17<br>814      | 12<br>575      |                |                |
|                    | L/180             | 186<br>8,906  | 95<br>4,549   | 55<br>2,633    | 35<br>1,676    | 23<br>1,101    | 16<br>766      |                |                |
| <b>22</b>          | Stress            | 300<br>14,364 | 237<br>11,348 | 164<br>7,852   | 121<br>5,794   | 93<br>4,453    | 73<br>3,495    | 59<br>2,825    |                |
|                    | L/240             | 189<br>9,049  | 97<br>4,644   | 56<br>2,681    | 35<br>1,676    | 24<br>1,149    | 17<br>814      | 12<br>575      |                |
|                    | L/180             | 252<br>12,066 | 129<br>6,177  | 75<br>3,591    | 47<br>2,250    | 31<br>1,484    | 22<br>1,053    | 16<br>766      |                |

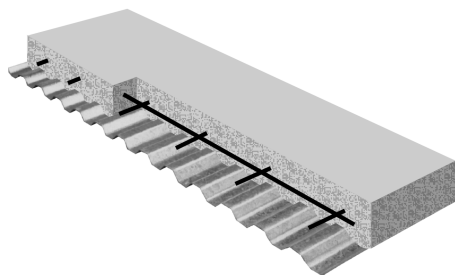
# Shallow VERCOR™

- $\frac{9}{16}$  in. (14 mm) Non-Composite Form Deck
- Galvanized



## Allowable Uniform Loads (psf, $N/m^2$ )

|             |        | Span (ft-in., mm) |               |              |                |                |                |                |                |                |
|-------------|--------|-------------------|---------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Gage        |        | 2'-0"<br>610      | 2'-6"<br>760  | 3'-0"<br>910 | 3'-6"<br>1,070 | 4'-0"<br>1,220 | 4'-6"<br>1,370 | 5'-0"<br>1,520 | 5'-6"<br>1,680 | 6'-0"<br>1,830 |
| Double Span |        |                   |               |              |                |                |                |                |                |                |
| 28          | Stress | 195<br>9,337      | 125<br>5,985  | 87<br>4,166  | 64<br>3,064    |                |                |                |                |                |
|             | L/240  | ◆◆◆               | 121<br>5,794  | 70<br>3,352  | 44<br>2,107    |                |                |                |                |                |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆          | 59<br>2,825    |                |                |                |                |                |
| 26          | Stress | 220<br>10,534     | 141<br>6,751  | 98<br>4,692  | 72<br>3,447    | 55<br>2,633    | 43<br>2,059    |                |                |                |
|             | L/240  | ◆◆◆               | 132<br>6,320  | 76<br>3,639  | 48<br>2,298    | 32<br>1,532    | 23<br>1,101    |                |                |                |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆          | 64<br>3,064    | 43<br>2,059    | 30<br>1,436    |                |                |                |
| 24          | Stress | 295<br>14,125     | 189<br>9,049  | 131<br>6,272 | 96<br>4,597    | 74<br>3,543    | 58<br>2,777    | 47<br>2,250    | 39<br>1,867    | 33<br>1,580    |
|             | L/240  | ◆◆◆               | 172<br>8,235  | 100<br>4,788 | 63<br>3,016    | 42<br>2,011    | 29<br>1,389    | 21<br>1,005    | 16<br>766      | 12<br>575      |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆          | 84<br>4,022    | 56<br>2,681    | 39<br>1,867    | 29<br>1,389    | 22<br>1,053    | 17<br>814      |
| 22          | Stress | 300<br>14,364     | 237<br>11,348 | 164<br>7,852 | 121<br>5,794   | 93<br>4,453    | 73<br>3,495    | 59<br>2,825    | 49<br>2,346    | 41<br>1,963    |
|             | L/240  | ◆◆◆               | 233<br>11,156 | 135<br>6,464 | 85<br>4,070    | 57<br>2,729    | 40<br>1,915    | 29<br>1,389    | 22<br>1,053    | 17<br>814      |
|             | L/180  | ◆◆◆               | ◆◆◆           | ◆◆◆          | 113<br>5,410   | 76<br>3,639    | 53<br>2,538    | 39<br>1,867    | 29<br>1,389    | 22<br>1,053    |
| Triple Span |        |                   |               |              |                |                |                |                |                |                |
| 28          | Stress | 244<br>11,683     | 156<br>7,469  | 108<br>5,171 | 80<br>3,830    | 61<br>2,921    |                |                |                |                |
|             | L/240  | 186<br>8,906      | 95<br>4,549   | 55<br>2,633  | 35<br>1,676    | 23<br>1,101    |                |                |                |                |
|             | L/180  | ◆◆◆               | 127<br>6,081  | 73<br>3,495  | 46<br>2,202    | 31<br>1,484    |                |                |                |                |
| 26          | Stress | 275<br>13,167     | 176<br>8,427  | 122<br>5,841 | 90<br>4,309    | 69<br>3,304    | 54<br>2,586    |                |                |                |
|             | L/240  | 201<br>9,624      | 103<br>4,932  | 60<br>2,873  | 38<br>1,819    | 25<br>1,197    | 18<br>862      |                |                |                |
|             | L/180  | 268<br>12,832     | 137<br>6,560  | 79<br>3,783  | 50<br>2,394    | 34<br>1,628    | 24<br>1,149    |                |                |                |
| 24          | Stress | 300<br>14,364     | 236<br>11,300 | 164<br>7,852 | 120<br>5,746   | 92<br>4,405    | 73<br>3,495    | 59<br>2,825    | 49<br>2,346    | 41<br>1,963    |
|             | L/240  | 263<br>12,593     | 135<br>6,464  | 78<br>3,735  | 49<br>2,346    | 33<br>1,580    | 23<br>1,101    | 17<br>814      | 13<br>622      | 10<br>479      |
|             | L/180  | ◆◆◆               | 179<br>8,571  | 104<br>4,980 | 65<br>3,112    | 44<br>2,107    | 31<br>1,484    | 22<br>1,053    | 17<br>814      | 13<br>622      |
| 22          | Stress | 300<br>14,364     | 296<br>14,173 | 206<br>9,863 | 151<br>7,230   | 116<br>5,554   | 91<br>4,357    | 74<br>3,543    | 61<br>2,921    | 51<br>2,442    |
|             | L/240  | ◆◆◆               | 182<br>8,714  | 105<br>5,027 | 66<br>3,160    | 44<br>2,107    | 31<br>1,484    | 23<br>1,101    | 17<br>814      | 13<br>622      |
|             | L/180  | ◆◆◆               | 243<br>11,635 | 141<br>6,751 | 88<br>4,213    | 59<br>2,825    | 42<br>2,011    | 30<br>1,436    | 23<br>1,101    | 18<br>862      |



# Shallow VERCOR™

**9/16 in. (14 mm) Non-Composite Form Deck** ■  
**Galvanized** ■

## Maximum Allowable Unshored Spans (ft.-in., mm)

| Total Slab Depth    | Normal Weight Concrete - 145 pcf (2,320 kg/m <sup>3</sup> ) |      |                |                 |                 | Light Weight Concrete - 110 pcf (1,760 kg/m <sup>3</sup> ) |      |                |                 |                 |
|---------------------|-------------------------------------------------------------|------|----------------|-----------------|-----------------|------------------------------------------------------------|------|----------------|-----------------|-----------------|
|                     | Concrete Weight                                             | Gage | 1 Span         | 2 Span          | 3 Span          | Concrete Weight                                            | Gage | 1 Span         | 2 Span          | 3 Span          |
| <b>2½" (64 mm)</b>  | 26.8 psf (1,284 N/m <sup>2</sup> )                          | 28   | 2'-0"<br>610   | 2'-6"<br>762    | 2'-6"<br>762    | 20.3 psf (974 N/m <sup>2</sup> )                           | 28   | 2'-1"<br>634   | 2'-7"<br>786    | 2'-7"<br>786    |
|                     |                                                             | 26   | 2'-3"<br>686   | 2'-9"<br>838    | 2'-9"<br>838    |                                                            | 26   | 2'-4"<br>710   | 2'-11"<br>890   | 2'-10"<br>863   |
|                     |                                                             | 24   | 2'-11"<br>890  | 3'-9"<br>1,143  | 3'-8"<br>1,119  |                                                            | 24   | 3'-1"<br>939   | 3'-10"<br>1,167 | 3'-10"<br>1,167 |
|                     |                                                             | 22   | 3'-6"<br>1,067 | 4'-6"<br>1,372  | 4'-4"<br>1,320  |                                                            | 22   | 3'-9"<br>1,143 | 4'-8"<br>1,423  | 4'-7"<br>1,396  |
| <b>3" (76 mm)</b>   | 32.9 psf (1,573 N/m <sup>2</sup> )                          | 28   | 1'-11"<br>585  | 2'-5"<br>738    | 2'-5"<br>738    | 24.9 psf (1,193 N/m <sup>2</sup> )                         | 28   | 2'-0"<br>610   | 2'-6"<br>762    | 2'-6"<br>762    |
|                     |                                                             | 26   | 2'-2"<br>661   | 2'-9"<br>838    | 2'-8"<br>814    |                                                            | 26   | 2'-3"<br>686   | 2'-10"<br>863   | 2'-9"<br>838    |
|                     |                                                             | 24   | 2'-10"<br>863  | 3'-7"<br>1,091  | 3'-6"<br>1,067  |                                                            | 24   | 3'-0"<br>914   | 3'-9"<br>1,143  | 3'-8"<br>1,119  |
|                     |                                                             | 22   | 3'-5"<br>1,042 | 4'-4"<br>1,320  | 4'-2"<br>1,271  |                                                            | 22   | 3'-7"<br>1,091 | 4'-7"<br>1,396  | 4'-5"<br>1,347  |
| <b>3½" (89 mm)</b>  | 38.9 psf (1,862 N/m <sup>2</sup> )                          | 28   | 1'-11"<br>585  | 2'-4"<br>710    | 2'-4"<br>710    | 29.5 psf (1,413 N/m <sup>2</sup> )                         | 28   | 2'-0"<br>610   | 2'-6"<br>762    | 2'-5"<br>738    |
|                     |                                                             | 26   | 2'-1"<br>634   | 2'-8"<br>814    | 2'-7"<br>786    |                                                            | 26   | 2'-2"<br>661   | 2'-9"<br>838    | 2'-9"<br>838    |
|                     |                                                             | 24   | 2'-9"<br>838   | 3'-6"<br>1,067  | 3'-5"<br>1,042  |                                                            | 24   | 2'-11"<br>890  | 3'-8"<br>1,119  | 3'-7"<br>1,091  |
|                     |                                                             | 22   | 3'-3"<br>991   | 4'-2"<br>1,271  | 4'-1"<br>1,244  |                                                            | 22   | 3'-6"<br>1,067 | 4'-5"<br>1,347  | 4'-4"<br>1,320  |
| <b>4" (102 mm)</b>  | 44.9 psf (2,151 N/m <sup>2</sup> )                          | 28   | 1'-10"<br>558  | 2'-4"<br>710    | 2'-3"<br>686    | 34.1 psf (1,632 N/m <sup>2</sup> )                         | 28   | 1'-11"<br>585  | 2'-5"<br>738    | 2'-5"<br>738    |
|                     |                                                             | 26   | 2'-1"<br>634   | 2'-7"<br>786    | 2'-6"<br>762    |                                                            | 26   | 2'-2"<br>661   | 2'-8"<br>814    | 2'-8"<br>814    |
|                     |                                                             | 24   | 2'-8"<br>814   | 3'-5"<br>1,042  | 3'-4"<br>1,015  |                                                            | 24   | 2'-10"<br>863  | 3'-7"<br>1,091  | 3'-6"<br>1,067  |
|                     |                                                             | 22   | 3'-2"<br>966   | 4'-1"<br>1,244  | 3'-11"<br>1,195 |                                                            | 22   | 3'-5"<br>1,042 | 4'-4"<br>1,320  | 4'-2"<br>1,271  |
| <b>4½" (114 mm)</b> | 51.0 psf (2,441 N/m <sup>2</sup> )                          | 28   | 1'-10"<br>558  | 2'-3"<br>686    | 2'-3"<br>686    | 38.7 psf (1,852 N/m <sup>2</sup> )                         | 28   | 1'-11"<br>585  | 2'-5"<br>738    | 2'-4"<br>710    |
|                     |                                                             | 26   | 2'-0"<br>610   | 2'-6"<br>762    | 2'-6"<br>762    |                                                            | 26   | 2'-1"<br>634   | 2'-8"<br>814    | 2'-7"<br>786    |
|                     |                                                             | 24   | 2'-7"<br>786   | 3'-4"<br>1,015  | 3'-3"<br>991    |                                                            | 24   | 2'-9"<br>838   | 3'-6"<br>1,067  | 3'-5"<br>1,042  |
|                     |                                                             | 22   | 3'-1"<br>939   | 3'-11"<br>1,195 | 3'-10"<br>1,167 |                                                            | 22   | 3'-4"<br>1,015 | 4'-2"<br>1,271  | 4'-1"<br>1,244  |
| <b>5" (127 mm)</b>  | 57.0 psf (2,730 N/m <sup>2</sup> )                          | 28   | 1'-9"<br>533   | 2'-3"<br>686    | 2'-2"<br>661    | 43.3 psf (2,071 N/m <sup>2</sup> )                         | 28   | 1'-10"<br>558  | 2'-4"<br>710    | 2'-4"<br>710    |
|                     |                                                             | 26   | 1'-11"<br>585  | 2'-6"<br>762    | 2'-5"<br>738    |                                                            | 26   | 2'-1"<br>634   | 2'-7"<br>786    | 2'-7"<br>786    |
|                     |                                                             | 24   | 2'-6"<br>762   | 3'-3"<br>991    | 3'-2"<br>966    |                                                            | 24   | 2'-8"<br>814   | 3'-5"<br>1,042  | 3'-4"<br>1,015  |
|                     |                                                             | 22   | 3'-0"<br>914   | 3'-10"<br>1,167 | 3'-8"<br>1,119  |                                                            | 22   | 3'-3"<br>991   | 4'-1"<br>1,244  | 4'-0"<br>1,219  |

VERCOR™

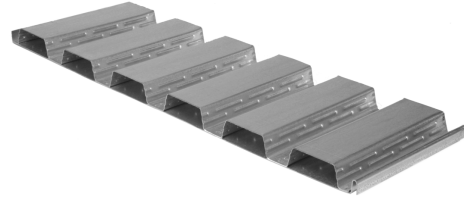


# CELLULAR FORMLOK™

Note: All values are per ft (m) of width.

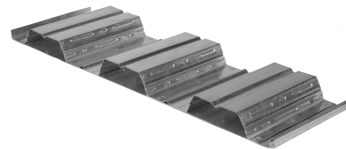
| Gage | Weight         | $I_d$ for Deflections           |                                 | Positive Moment                 |                          | Negative Moment                 |                          | Vertical Shear |           |
|------|----------------|---------------------------------|---------------------------------|---------------------------------|--------------------------|---------------------------------|--------------------------|----------------|-----------|
|      |                | Simple Span                     | Multiple Span                   | +S                              | +M                       | –S                              | –M                       | End            | Interior  |
|      | psf<br>$N/m^2$ | $\text{in.}^4$<br>$\text{mm}^4$ | $\text{in.}^4$<br>$\text{mm}^4$ | $\text{in.}^3$<br>$\text{mm}^3$ | in.-kips<br>$\text{kNm}$ | $\text{in.}^3$<br>$\text{mm}^3$ | in.-kips<br>$\text{kNm}$ | lb<br>$N$      | lb<br>$N$ |

## PLBCD and BCD FORMLOK™



|              |              |                  |                  |                 |             |                 |             |              |               |
|--------------|--------------|------------------|------------------|-----------------|-------------|-----------------|-------------|--------------|---------------|
| <b>20/20</b> | 3.6<br>172.4 | 0.392<br>535,310 | 0.392<br>535,310 | 0.284<br>15,269 | 6.5<br>2.4  | 0.393<br>21,129 | 8.9<br>3.3  | 355<br>5,181 | 538<br>7,852  |
| <b>20/18</b> | 4.1<br>196.3 | 0.428<br>584,472 | 0.430<br>587,203 | 0.292<br>15,699 | 6.6<br>2.4  | 0.413<br>22,204 | 9.4<br>3.5  | 333<br>4,860 | 410<br>5,983  |
| <b>20/16</b> | 4.5<br>215.5 | 0.458<br>625,439 | 0.477<br>651,385 | 0.298<br>16,021 | 6.8<br>2.5  | 0.431<br>23,172 | 9.8<br>3.6  | 320<br>4,670 | 352<br>5,137  |
| <b>18/20</b> | 4.1<br>196.3 | 0.510<br>696,450 | 0.510<br>696,450 | 0.430<br>23,118 | 9.8<br>3.6  | 0.472<br>25,376 | 10.7<br>4.0 | 389<br>5,677 | 637<br>9,296  |
| <b>18/18</b> | 4.6<br>220.2 | 0.559<br>763,364 | 0.559<br>763,364 | 0.441<br>23,709 | 10.0<br>3.7 | 0.539<br>28,978 | 12.3<br>4.6 | 459<br>6,699 | 609<br>8,888  |
| <b>18/16</b> | 5.1<br>244.2 | 0.600<br>819,353 | 0.600<br>819,353 | 0.450<br>24,193 | 10.3<br>3.8 | 0.562<br>30,215 | 12.8<br>4.7 | 436<br>6,363 | 504<br>7,355  |
| <b>16/18</b> | 5.3<br>253.8 | 0.677<br>924,503 | 0.677<br>924,503 | 0.610<br>32,795 | 13.9<br>5.2 | 0.665<br>35,752 | 15.1<br>5.6 | 493<br>7,195 | 697<br>10,172 |
| <b>16/16</b> | 5.8<br>277.7 | 0.729<br>995,514 | 0.729<br>995,514 | 0.622<br>33,441 | 14.2<br>5.3 | 0.693<br>37,258 | 15.8<br>5.9 | 657<br>9,588 | 794<br>11,588 |

## PLW2CD and W2CD FORMLOK™



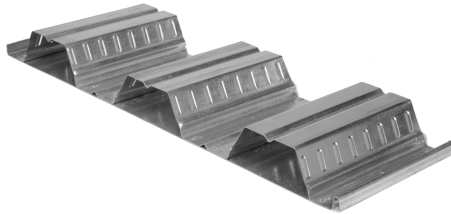
|              |              |                    |                    |                 |             |                 |             |               |               |
|--------------|--------------|--------------------|--------------------|-----------------|-------------|-----------------|-------------|---------------|---------------|
| <b>20/20</b> | 3.4<br>162.8 | 0.673<br>919,041   | 0.673<br>919,041   | 0.406<br>21,828 | 9.2<br>3.4  | 0.430<br>23,118 | 9.9<br>3.7  | 437<br>6,378  | 634<br>9,253  |
| <b>20/18</b> | 3.8<br>181.9 | 0.722<br>985,955   | 0.722<br>985,955   | 0.414<br>22,258 | 9.4<br>3.5  | 0.446<br>23,978 | 10.2<br>3.8 | 405<br>5,911  | 493<br>7,195  |
| <b>20/16</b> | 4.3<br>205.9 | 0.762<br>1,040,578 | 0.762<br>1,040,578 | 0.420<br>22,580 | 9.6<br>3.6  | 0.460<br>24,731 | 10.5<br>3.9 | 385<br>5,619  | 427<br>6,232  |
| <b>18/20</b> | 3.9<br>186.7 | 0.843<br>1,151,191 | 0.843<br>1,151,191 | 0.571<br>30,699 | 13.0<br>4.8 | 0.555<br>29,838 | 12.6<br>4.7 | 480<br>7,005  | 759<br>11,077 |
| <b>18/18</b> | 4.3<br>205.9 | 0.906<br>1,237,223 | 0.906<br>1,237,223 | 0.582<br>31,290 | 13.3<br>4.9 | 0.574<br>30,860 | 13.1<br>4.9 | 552<br>8,056  | 717<br>10,464 |
| <b>18/16</b> | 4.8<br>229.8 | 0.958<br>1,308,233 | 0.958<br>1,308,233 | 0.592<br>31,828 | 13.5<br>5.0 | 0.592<br>31,828 | 13.5<br>5.0 | 518<br>7,560  | 599<br>8,742  |
| <b>16/18</b> | 4.9<br>234.6 | 1.093<br>1,492,588 | 1.093<br>1,492,588 | 0.744<br>40,000 | 16.9<br>6.3 | 0.713<br>38,333 | 16.2<br>6.0 | 603<br>8,800  | 832<br>12,142 |
| <b>16/16</b> | 5.4<br>258.6 | 1.158<br>1,581,351 | 1.158<br>1,581,351 | 0.756<br>40,645 | 17.2<br>6.4 | 0.735<br>39,516 | 16.7<br>6.2 | 776<br>11,325 | 938<br>13,689 |

Refer to page 136 for cellular deck design information.

# CELLULAR FORMLOK™

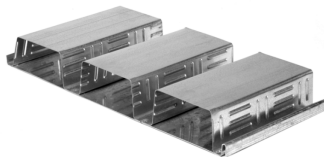
Note: All values are per ft (m) of width.

| Gage | Weight                  | I <sub>d</sub> for Deflections      |                                     | Positive Moment                     |                 | Negative Moment                     |                 | Vertical Shear |          |
|------|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------|-------------------------------------|-----------------|----------------|----------|
|      |                         | Simple Span                         | Multiple Span                       | +S                                  | +M              | –S                                  | –M              | End            | Interior |
|      | psf<br>N/m <sup>2</sup> | in. <sup>4</sup><br>mm <sup>4</sup> | in. <sup>4</sup><br>mm <sup>4</sup> | in. <sup>3</sup><br>mm <sup>3</sup> | in.-kips<br>kNm | in. <sup>3</sup><br>mm <sup>3</sup> | in.-kips<br>kNm | lb<br>N        | lb<br>N  |



## PLW3CD and W3CD FORMLOK™

|              |       |           |           |        |      |        |      |        |        |
|--------------|-------|-----------|-----------|--------|------|--------|------|--------|--------|
| <b>20/20</b> | 3.6   | 1.460     | 1.460     | 0.632  | 14.4 | 0.626  | 14.3 | 621    | 923    |
|              | 172.4 | 1,993,758 | 1,993,758 | 33,978 | 5.3  | 33,656 | 5.3  | 9,063  | 13,470 |
| <b>20/18</b> | 4.0   | 1.548     | 1.548     | 0.643  | 14.6 | 0.651  | 14.8 | 579    | 712    |
|              | 191.5 | 2,113,930 | 2,113,930 | 34,570 | 5.4  | 35,000 | 5.5  | 8,450  | 10,391 |
| <b>20/16</b> | 4.5   | 1.620     | 1.620     | 0.689  | 15.7 | 0.671  | 15.3 | 546    | 611    |
|              | 215.5 | 2,212,253 | 2,212,253 | 37,043 | 5.8  | 36,075 | 5.7  | 7,968  | 8,917  |
| <b>18/20</b> | 4.1   | 1.793     | 1.793     | 0.863  | 19.6 | 0.810  | 18.4 | 697    | 1,060  |
|              | 196.3 | 2,448,499 | 2,448,499 | 46,397 | 7.3  | 43,548 | 6.8  | 10,172 | 15,470 |
| <b>18/18</b> | 4.6   | 1.920     | 1.920     | 0.880  | 20.0 | 0.836  | 19.0 | 795    | 1,042  |
|              | 220.2 | 2,621,929 | 2,621,929 | 47,311 | 7.4  | 44,946 | 7.0  | 11,602 | 15,207 |
| <b>18/16</b> | 5.0   | 2.027     | 2.027     | 0.894  | 20.4 | 0.863  | 19.6 | 741    | 1,096  |
|              | 239.4 | 2,768,047 | 2,768,047 | 48,064 | 7.6  | 46,397 | 7.3  | 10,814 | 15,995 |
| <b>16/18</b> | 5.2   | 2.310     | 2.310     | 1.091  | 24.8 | 1.038  | 23.6 | 875    | 1,216  |
|              | 249.0 | 3,154,508 | 3,154,508 | 58,655 | 9.2  | 55,806 | 8.7  | 12,770 | 17,746 |
| <b>16/16</b> | 5.7   | 2.440     | 2.440     | 1.109  | 25.2 | 1.070  | 24.4 | 1,117  | 1,362  |
|              | 272.9 | 3,332,035 | 3,332,035 | 59,623 | 9.4  | 57,526 | 9.0  | 16,301 | 19,877 |



## PLNCD and NCD FORMLOK™

|              |       |           |           |        |      |        |      |        |        |
|--------------|-------|-----------|-----------|--------|------|--------|------|--------|--------|
| <b>20/20</b> | 4.1   | 1.694     | 1.694     | 0.565  | 12.9 | 0.801  | 18.2 | 606    | 959    |
|              | 196.3 | 2,313,306 | 2,313,306 | 30,376 | 4.8  | 43,064 | 6.7  | 8,844  | 13,996 |
| <b>20/18</b> | 5.6   | 1.855     | 1.912     | 0.562  | 12.8 | 0.985  | 22.4 | 564    | 757    |
|              | 268.1 | 2,533,166 | 2,611,004 | 30,215 | 4.7  | 52,957 | 8.3  | 8,231  | 11,048 |
| <b>20/16</b> | 5.1   | 1.967     | 2.159     | 0.597  | 13.6 | 1.027  | 23.4 | 540    | 642    |
|              | 244.2 | 2,686,112 | 2,948,304 | 32,097 | 5.0  | 55,215 | 8.7  | 7,881  | 9,369  |
| <b>18/20</b> | 4.8   | 2.209     | 2.209     | 0.847  | 19.3 | 0.969  | 22.1 | 664    | 1,155  |
|              | 229.8 | 3,016,584 | 3,016,584 | 45,537 | 7.2  | 52,096 | 8.2  | 9,690  | 16,856 |
| <b>18/18</b> | 5.3   | 2.421     | 2.421     | 0.868  | 19.8 | 1.183  | 26.9 | 780    | 1,130  |
|              | 253.8 | 3,306,089 | 3,306,089 | 46,666 | 7.3  | 63,602 | 10.0 | 11,383 | 16,491 |
| <b>18/16</b> | 5.8   | 2.599     | 2.626     | 0.885  | 20.1 | 1.335  | 30.4 | 738    | 938    |
|              | 277.7 | 3,549,163 | 3,586,034 | 47,580 | 7.5  | 71,774 | 11.3 | 10,770 | 13,689 |
| <b>16/18</b> | 6.1   | 2.965     | 2.965     | 1.194  | 27.2 | 1.345  | 30.6 | 838    | 1,279  |
|              | 292.1 | 4,048,968 | 4,048,968 | 64,193 | 10.1 | 72,311 | 11.3 | 12,230 | 18,666 |
| <b>16/16</b> | 6.6   | 3.193     | 3.193     | 1.218  | 27.6 | 1.606  | 36.5 | 1,111  | 1,492  |
|              | 316.0 | 4,360,322 | 4,360,322 | 65,483 | 10.2 | 86,343 | 13.5 | 16,214 | 21,774 |

Refer to page 136 for cellular deck design information.

# CELLULAR FORMLOK™ DECK

## DESIGN INFORMATION

### Properties

Section properties have been computed in accordance with the “Specification for the Design of Cold-Formed Steel Structural Members” published by AISI.

### Material

Cellular FORMLOK deck sections are fabricated from galvanized steel conforming to ASTM A653 SS Grade 33, with a minimum yield strength of 38 ksi ( $262,000 \text{ kN/m}^2$ ). The fluted top and flat bottom sections are factory resistance-welded together, creating a strong structural section.

**Note:** Weld marks will be visible on the flat bottom.

### Definitions

The **gage** “xx/yy” of cellular decks is defined as:

First number (xx) is the gage of the fluted top section.

Second number (yy) is the gage of the flat bottom section.

$I_d$  is the effective moment of inertia for deflection for simple or multiple span conditions.

$S$  (+ or –) is the effective section modulus.

$M$  (+ or –) is the ASD allowable moment where  $M = M_n/\Omega_b$ , with  $\Omega_b = 1.67$ .

**Vertical Shear** ( $V$ ) is the ASD allowable vertical shear strength based on the horizontal shear strength of the resistance welds connecting the top and bottom sections, where  $V = V_n/\Omega$ , with  $\Omega = 2.5$ .

“**END**” shear strength values are applicable adjacent to supports where deck is not continuous.

“**INTERIOR**” shear strength values are applicable adjacent to supports where deck is continuous.

### Cellular FORMLOK Bearing

Compare end and interior reactions to allowable reactions for fluted deck of the same gage as the fluted top section of the cellular deck. The allowable reactions for 20 gage PLW3 and W3 FORMLOK deck may be multiplied by 1.05 for PLW3CD and W3CD FORMLOK deck with a 20 gage fluted top section.

### Superimposed Load and Diaphragm Shears

Superimposed load and diaphragm shear capacities shown in the FORMLOK tables on pages 36–107 for a given concrete type and thickness may be applied to cellular FORMLOK sections with a fluted top section of the same profile and gage, with or without acoustical perforations in the flat bottom section of the cellular deck.

### Vent Tabs

Factory vent tabs are not available in cellular FORMLOK deck.

### Fire Ratings

See Table 8 on page 28 for unprotected fire rated assemblies using cellular FORMLOK deck.

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