

STEEL FLOOR DECKS

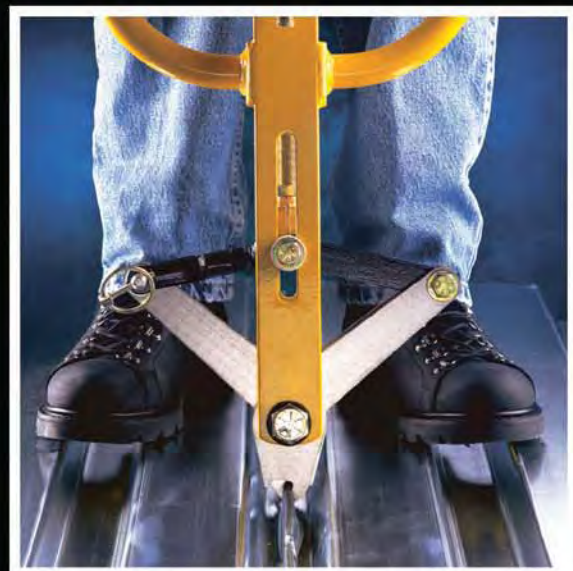
VERCO DECKING, INC.

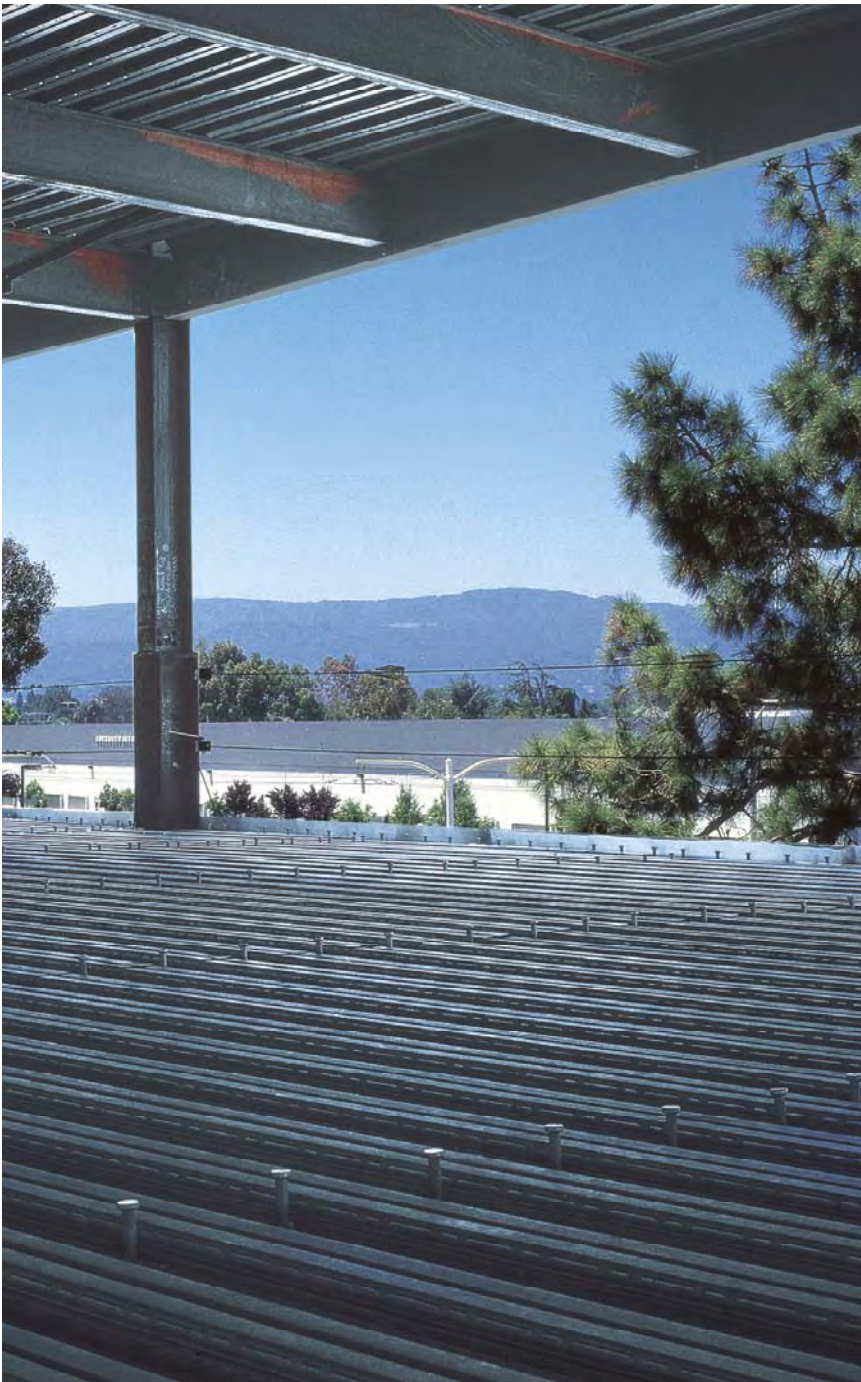
a NUCOR company



Featuring... The Innovative
PunchLok® System

VF4





Phosphatized/painted W2 FORMLOK™ deck (illustrated) offers the most economical solution for most applications.

Verco's products are listed in evaluation reports issued by IAPMO Evaluation Service, ICC Evaluation Service, and the City of Los Angeles, and in the Fire Resistance Directory issued by Underwriters Laboratory. Additional information is available from Verco's Engineering Department or from the Verco website at www.vercodeck.com.

This catalog covers Verco Decking, Inc.'s FORMLOK™ composite decks and VERCOR™ non-composite form decks. It also features the innovative PunchLok® System for floor deck applications. By significantly speeding up installation and reducing costs, Verco's PunchLok System has been proven time and again to be the most efficient deck attachment system on the market.

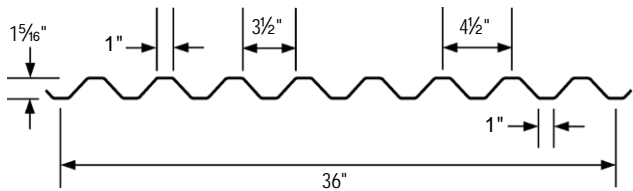
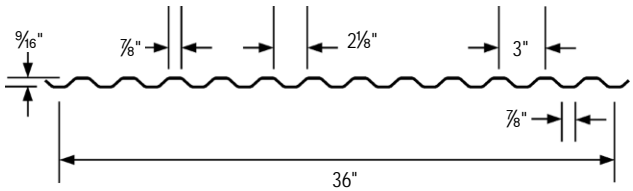
Our philosophy from the beginning has been to produce high quality products and our employees take pride in their dedication to excellence and superior service. We carefully design and test our products to ensure they meet code requirements and exceed our customers' expectations.

Verco's manufacturing facilities are located in Phoenix, Arizona, and the California cities of Fontana and Antioch.

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Type	Dimensioned Profile	Gage	Weight		I_d for Deflection		Moment	
			Galv (psf)	Phos/ Painted (psf)	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+ S_{eff} (in.3/ft)	- S_{eff} (in.3/ft)
PLB™ FORMLOK™ B FORMLOK™		22	1.9	1.8	0.177	0.192	0.176	0.188
		20	2.3	2.2	0.219	0.231	0.230	0.237
		18	2.9	2.8	0.302	0.306	0.314	0.331
		16	3.5	3.4	0.381	0.381	0.399	0.410
PLW2™ FORMLOK™ W2 FORMLOK™		22	1.8	1.7	0.340	0.340	0.246	0.256
		21	2.0	1.9	0.381	0.381	0.283	0.294
		20	2.1	2.0	0.422	0.422	0.323	0.333
		19	2.4	2.3	0.503	0.503	0.405	0.415
PLW3™ FORMLOK™ W3 FORMLOK™		18	2.7	2.5	0.564	0.564	0.471	0.481
		16	3.3	3.1	0.707	0.707	0.623	0.638
		22	1.9	1.8	0.736	0.736	0.393	0.410
		21	2.1	2.0	0.824	0.824	0.453	0.470
PLW3™ FORMLOK™ W3 FORMLOK™		20	2.3	2.2	0.907	0.907	0.510	0.528
		19	2.7	2.6	1.067	1.067	0.636	0.652
		18	2.9	2.7	1.213	1.213	0.752	0.768
		16	3.5	3.3	1.516	1.516	0.968	0.966
PLN™ FORMLOK™ N FORMLOK™		22	2.2	2.1	0.733	0.857	0.344	0.429
		20	2.6	2.5	0.908	1.032	0.443	0.531
		18	3.5	3.4	1.267	1.369	0.652	0.735
16	4.2	4.1	1.642	1.706	0.837	0.914		

Type	Dimensioned Profile	Gage	Weight Galv (psf)	I_d for Deflection		Moment	
				Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+ S_{eff} (in. ³ /ft)	- S_{eff} (in. ³ /ft)
DEEP VERCOR™		26	1.1	0.075	0.075	0.099	0.103
		24	1.4	0.097	0.097	0.137	0.138
		22	1.7	0.120	0.120	0.172	0.171
		20	2.1	0.143	0.143	0.204	0.204
SHALLOW VERCOR™		26	1.0	0.013	0.013	0.041	0.043
		24	1.3	0.018	0.018	0.059	0.059
		22	1.6	0.022	0.022	0.073	0.073

- Section properties have been computed in accordance with AISI's "S100: North American Specification for the Design of Cold-Formed Steel Structural Members." The section properties are based on the following steel strengths:

Profile	Specified Minimum Yield Strength (F_y)	F_y Used for Determining Nominal Strength
All FORMLOK™ Deck	50 ksi	50 ksi
All VERCOR™ Deck	80 ksi	60 ksi

- Section properties and values shown apply to all available widths.
- Material thickness is subject to AISI tolerances. See Verco's evaluation report for decimal thickness of material.
- Weights shown are approximations for design purposes.
- All dimensions are nominal and are subject to manufacturing tolerances.
- Nominal flexural strength, $M_n = F_y \cdot S_{eff}$ (+ or -).
ASD allowable moment, $M = M_n / \Omega_b$, where $\Omega_b = 1.67$.

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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, and 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 indentions (embossments) have been specifically designed to provide the maximum dual action for vertical loading.

FORMLOK Composite Slabs

The tables on pages 37–75 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 3,000 psi.

The allowable superimposed loads listed in the tables are limited to 400 psf for all FORMLOK decks. 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.

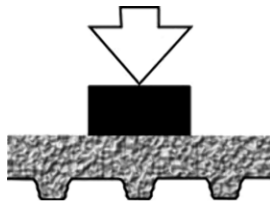
Composite Slab Design Criteria

Unshored: The allowable superimposed loads are based on the composite slab acting as a one-way, simply supported composite 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 stress 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 3.0 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 allowable concentrated load (based on an effective width determined using structural engineering principles) on the FORMLOK composite slab can be determined by comparing moments and shears from the allowable superimposed loads to those from the actual loading conditions (concentrated load plus 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.

Note: Distribution steel or other means to distribute the load may be required.

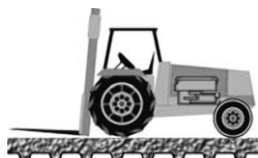
Parking Structures



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

- **Do not** use where salt is used for snow or ice removal. Salt from vehicles may deteriorate the FORMLOK deck by penetrating the slab through cracks.
- A 3 in. minimum depth of concrete should be used over the top of the FORMLOK deck.
- Instead of mesh, use rebars perpendicular to the FORMLOK deck flutes as distribution steel and rebars parallel to the FORMLOK deck flutes for shrinkage. Consider use of the parallel rebars 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



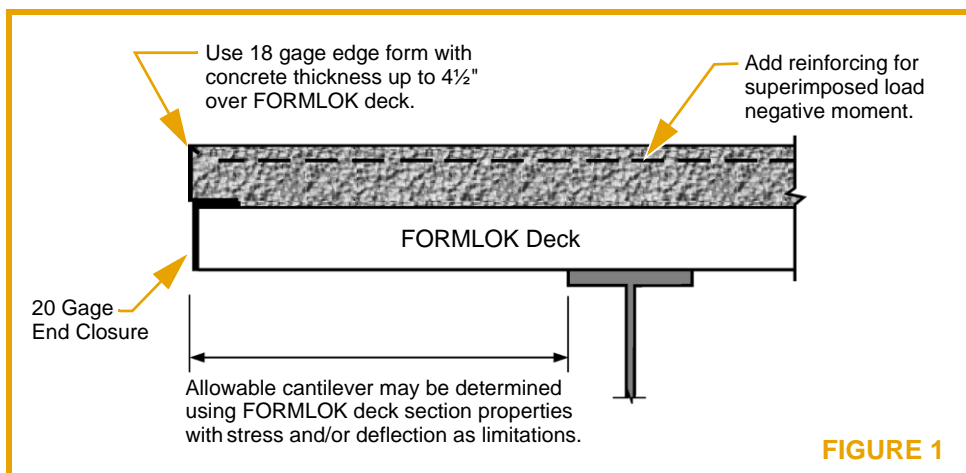
Allowable superimposed loads are based on static loading. FORMLOK composite slabs should not be used where heavy vibratory loads or heavy moving loads might occur. This type of load may be detrimental to the bond between the deck and concrete. Where moving loads such as forklifts or automobiles occur,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

Hanging Loads

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

Cantilevered FORMLOK Deck

If FORMLOK deck is cantilevered, it acts only as a form. The length of the cantilevers can be determined by using the FORMLOK deck section properties. Negative steel should be added over the supporting beam to help minimize 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 FORMLOK Composite Slabs

Minimum mesh is to be 6 x 6 - W1.4 x W1.4. If the concrete depth over the top of the FORMLOK deck exceeds 3¼ in., shrinkage and temperature reinforcement with an area equal to 0.00075 times the area of concrete fill over the FORMLOK deck is required. Building code requirements may exceed this minimum.

Concrete Type

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

Note: The concrete weight given in the tables on pages 37–75 does not include the allowance for deck deflection discussed on page 14.

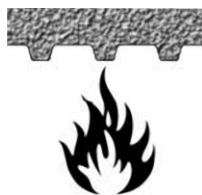
Concrete Thickness

A minimum 2 in. thickness of concrete over the FORMLOK deck is required to achieve composite action. A minimum 2½ in. thickness is suggested for better stiffness of the composite slab. Greater thickness may be required to meet fire ratings or specific load requirements.

FORMLOK Composite Slab Floor Vibrations

FORMLOK composite 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 slab and supporting structure. “Floor Vibrations Due to Human Activity” (AISC Steel Design Guide Series 11) is one source of additional information.

Fire-Rated FORMLOK Composite Slabs



FORMLOK composite slabs 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. 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 the fireproofing manufacturer’s data to determine fireproofing thickness required to meet a specific hourly rating.

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 underside of the deck. See specific UL assemblies for unrestrained hourly ratings.

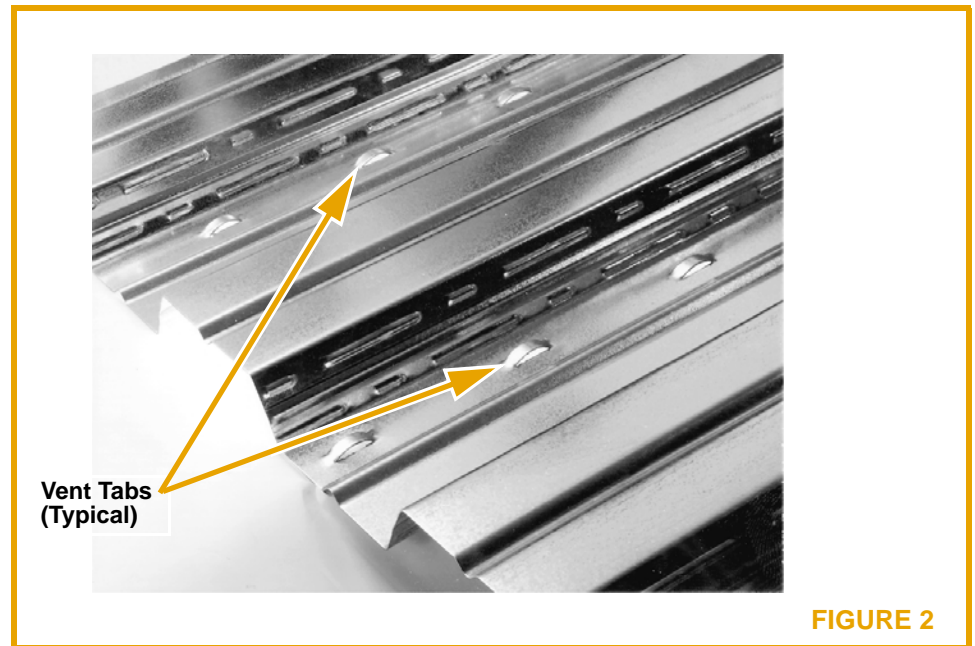
**Table 1: Unprotected Fire Resistance Rating
Concrete Thickness over FORMLOK Deck**

Restrained Assembly Rating	Normal Weight (in.)	Light Weight (in.)
1 Hour	3½	2½
2 Hour	4½	3¼
3 Hour	5¼	4¾

Refer to Table 9 on pages 30–31 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, strength requirements, and span limitations.

Venting FORMLOK Deck

FORMLOK deck is available with factory punched vent tabs to provide venting of the FORMLOK slab. 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. 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 allowable 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 shear values may be achieved when stud shear connectors are used. Refer to Table 5 on page 20 for further information about concrete diaphragms using stud shear connectors.

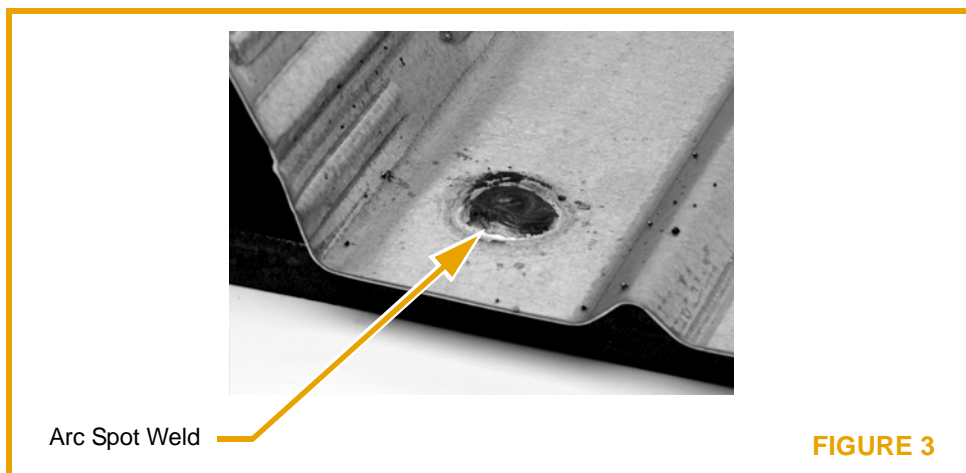
- The allowable stress increase permitted for load combinations in IBC Section 1605.3.2, including wind or seismic forces, shall not be used for allowable diaphragm shears.
- The flexibility factor (F) is the number of micro-inches a diaphragm web will deflect in a span of 1 ft under a shear load of 1 pound per ft.
- Allowable diaphragm shear values and flexibility factors for concrete-filled decks apply to either FORMLOK deck or deck without deformations or indentations (embossments).
- Allowable diaphragm shear and flexibility factors 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 deck alone, neglecting contribution from the concrete fill.
- Allowable 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.
- Allowable diaphragm shear values and flexibility factors for PLW2, W2, PLW3, and W3 FORMLOK decks used without concrete fill are provided on pages 82–85 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. diameter arc spot (puddle) welds or at least $\frac{3}{8}$ in. x 1 in. long arc seam welds. Welds are to be spaced not more than 12 in. on center across the width of the unit for all FORMLOK decks.

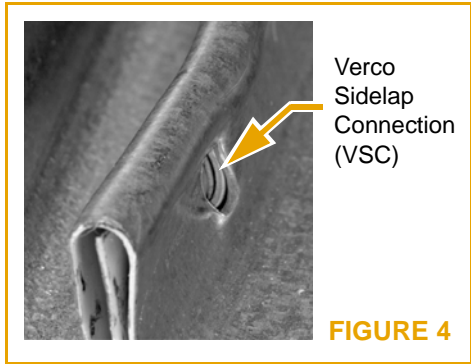


**Stud Shear Connectors/
Arc Spot Welds**

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

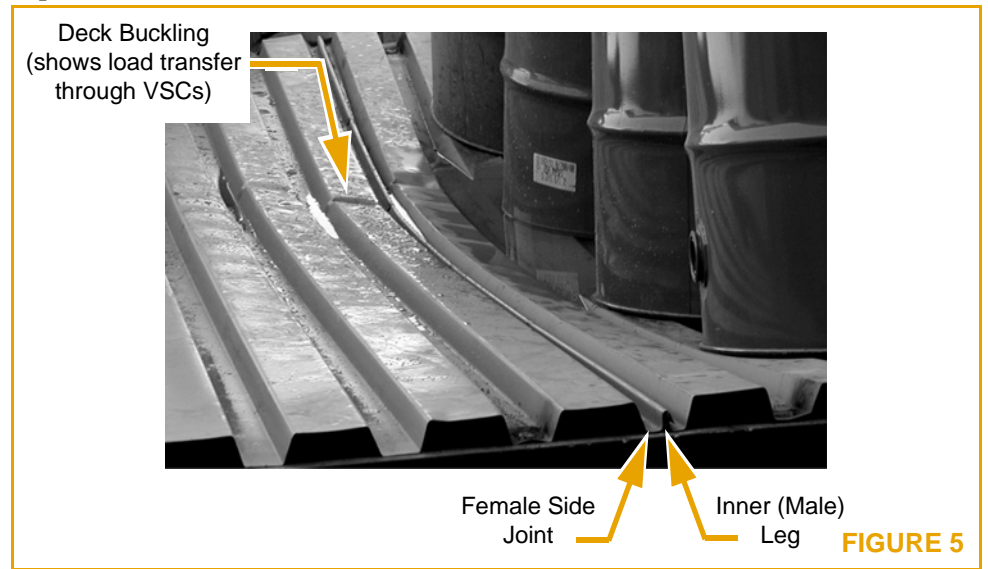
Sidelap Connections

FORMLOK deck is to be fastened at the sidelap with the PunchLok® tool, button punches, screws, or 1½ in. long top seam welds at 36 in. on center maximum.

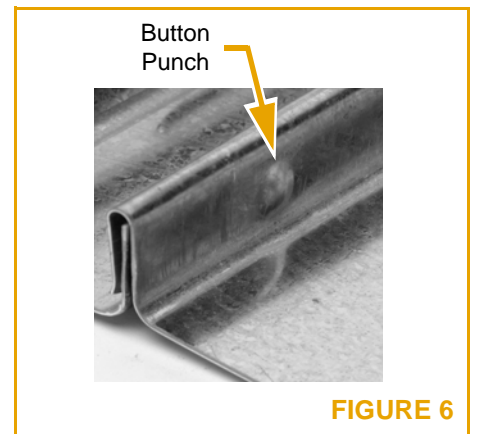


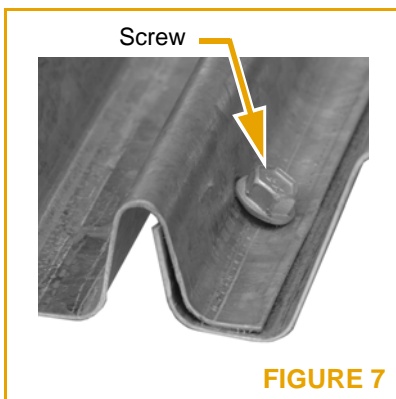
PunchLok® System: Connect sidelaps of the PLB, PLW2, PLW3, and PLN FORMLOK decks with the Verco PunchLok tool. The PunchLok tool creates a positive connection between the male and female lips of the FORMLOK decks. The connection made by the PunchLok tool is referred to as a VSC (Verco Sidelap Connection). 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 simple span of 20 gage, 1½ in. deep PLB deck was loaded with 138 psf, equivalent to 11.4 in. of concrete. The buckling of the sheet (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 for download from Verco’s website.



Button Punches: When sidelaps of FORMLOK decks are connected with button punches (BP), as shown in 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.





Screws: When self-drilling, self-tapping screws are used to connect the sidelaps of B-36-SS, N-24-SS, W2-36-SS, or W3-36-SS FORMLOK decks, they are to be minimum #10 x ¾ in. long. The “SS” designation indicates deck provided with extended female lip for screw fastening. See Figure 7.

Top Seam Welds: When sidelaps of FORMLOK decks are connected with top seam welds, the 1½ in. long weld must engage the top of the inner (male) leg. Clinch the joint before welding to create positive contact between the legs.

Consider the PunchLok® system as a cost-effective alternative to top seam welds.

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 shear, in pounds, for ½ in. effective diameter welds.

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

Table 2: Allowable Shear per Weld

Deck Gage	lb
22	1,015
21	1,155
20	1,257
19	1,470
18	1,645
16	2,065

The maximum spacing of welds at parallel collectors is 3 ft.

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 FORMLOK deck with concrete fill is attached to the supports with stud shear connectors, refer to Table 5 on page 20 for diaphragm shear values and flexibility factors.

FORMLOK Deck Finishes

FORMLOK decks are offered in various finishes:

Phosphatized/Painted

Cold rolled steel (ASTM A 1008 or ASTM A 1039) 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 pages 30–31 for specific listings.

Galvanized

Cold rolled zinc coated steel (ASTM A 653 or ASTM A 1063). Coating designation G60 is the standard zinc coating of the deck industry. Coating designation G90 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 37–75 are based on the dead weight of concrete and FORMLOK deck plus the more critical of either a 20 psf construction live load or a 150 lb concentrated load which simulates the effects of a worker standing on 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. Contact your Verco representative regarding the availability of deck lengths between 40 ft and 45 ft. Handling the deck during installation should also be considered when evaluating long deck lengths, especially in heavier gages.

Table 3: Deck Span Suggestions

Span Length	Deck Type
< 8 ft	PLB or B FORMLOK
7–10 ft	PLW2 or W2 FORMLOK
9–15 ft	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 ft².

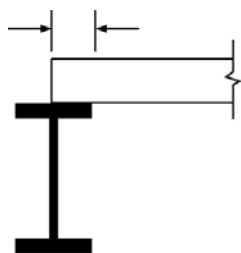
Concrete Placement



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 the pouring of concrete.

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

Bearing



Verco recommends 2 in. minimum bearing for FORMLOK deck. The required bearing should be verified based on specific project conditions. Adequate bearing is required to prevent web crippling of the deck during concrete placement and to allow for 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 a 20 psf uniform construction live load. Allowable reactions are applicable to FORMLOK deck before the concrete has acquired minimum compressive strength. Adequate bearing at parallel supports should be provided to make the specified connections.

Note: The superimposed load tables on pages 37–75 assume allowable reactions that correspond to the maximum bearing length permitted (see AISI S100 for additional information). Project conditions where this assumption is no longer valid require further evaluation and may result in reduced maximum unshored clear spans.

Design Criteria for FORMLOK Deck-as-a-Form

The following design criteria and formulas were used to calculate the maximum spans of FORMLOK deck without shoring. Loading combinations utilized are illustrated in Figure 8 for clarity.

- w_{dl} is the dead load of concrete plus deck plus deflection allowance.
- The following allowances for FORMLOK deck deflection are included in w_{dl} :
 - 3 psf for light weight concrete,
 - 4 psf for normal weight concrete.
- No allowance is included for deflection of structural supports.
- w_{ll} is 20 psf uniform construction live load.
- P is 150 pound concentrated construction live load.
- L is span length in feet. Span lengths shown in the tables are clear spans.
- ASD allowable moment, $M = M_n / \Omega_b$, where:
 - $\Omega_b = 1.67$
 - $M_n = F_y \cdot S_{eff}$ (+ or -), where:
 - $F_y = 50$ ksi (all FORMLOK decks)
 - $F_y = 60$ ksi (all VERCOR decks)
 - S_{eff} (+ or -) = Effective section modulus
- FORMLOK deck deflection is limited to the lesser of $L/180$ or $3/4$ in.
- The tables assume allowable reactions based on the maximum bearing length permitted by AISI S100. Specific project conditions may necessitate further evaluation.

Design Formulas

+M = Positive Bending Moment in ft-lb
 -M = Negative Bending Moment in ft-lb
 Δ = Deflection in inches
 E = 29,500,000 psi
 R_e = End reaction in lb/ft
 R_i = Interior reaction in lb/ft

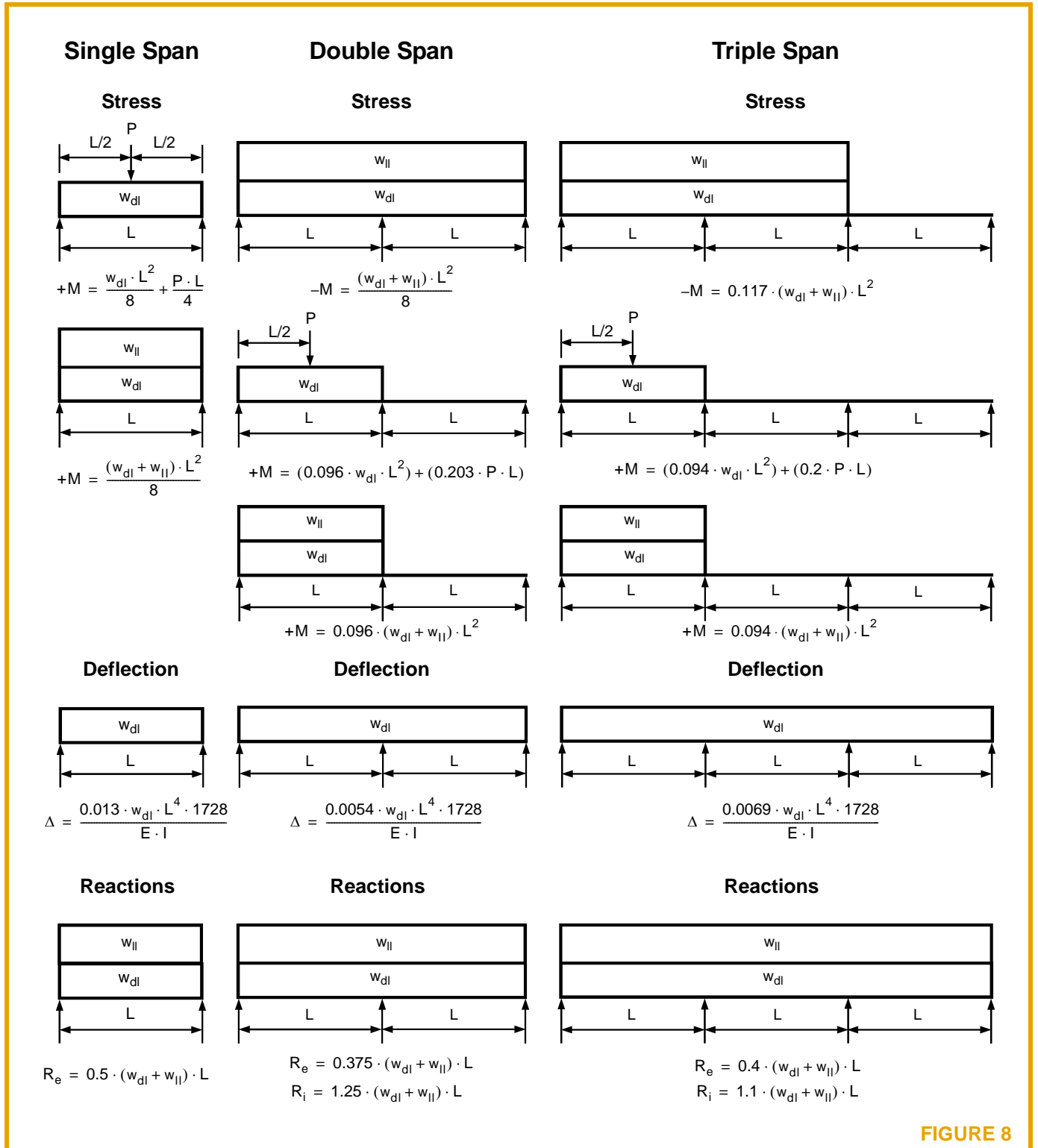


FIGURE 8

FORMLOK Composite Slab Design Example

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.*

Design Goals

The design goals for this example are as follows:

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

Given: 30' x 30' bay size

2-hour fire rated floor required

Underside of slab not exposed to view

Loads:

Live load	100 psf
Partition	20 psf
Mechanical	5 psf
Total Superimposed Load	125 psf

Span Options

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

Assume 6" wide framing members regardless of span used.

1. 15'-0" c-c span, 14'-6" clear span, 2 span condition.
Choice: PLW3 (or W3) FORMLOK - may require shoring based on concrete type and thickness chosen.
2. 10'-0" c-c span, 9'-6" clear span, 3 span condition.
Choices: PLW2 (or W2) FORMLOK **or** PLW3 (or W3) FORMLOK
3. 7'-6" c-c span, 7'-0" clear span, 4 span condition.
Choices: PLB (or B) FORMLOK **or** PLW2 (or W2) FORMLOK

➔ **Select:** Option 1 reduces the required framing, but may require shoring based on concrete selection. Options 2 and 3 offer reduced deck costs and eliminate any shoring requirements.

Concrete Type & Fire Rating Options

Use availability and relative cost of structural light weight (LW) versus normal weight (NW) concrete to determine the appropriate option. Refer to “Fire-Rated FORMLOK Composite Slabs” on page 8 and Table 9 on pages 30–31 for more information.

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

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

FORMLOK Composite Slab Design Example (continued)

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

Option	Clear Span	FORMLOK Deck Profile	LW Concrete Total Slab Depth (in.)	Shoring Required?	Allowable Super-imposed Load (psf)	Total Slab Weight ¹ (psf)	Span to Total Slab Depth Ratio	FORMLOK Deck Bearing	
								End 2"	Interior 6"
1	14'-6"	PLW3-18 ga	6¼	NO	170	49.4	28	OK	OK
2	9'-6"	PLW2-20 ga	5¼	NO	258	44.1	22	OK	OK
3	9'-6"	PLW3-20 ga	6¼	NO	275	48.8	18	OK	OK
4	7'-0"	PLB-22 ga	4¼	NO	301	39.6	18	OK	OK

¹ Total slab weight = concrete + deck deflection allowance + FORMLOK deck (galvanized deck assumed).

—▶ **Select:** Selection should be based on framing layout. Option 1 minimizes the number of framing members, but may require investigation into slab stiffness and project serviceability requirements. Choose between Options 2 and 3 based on assembly weight vs. slab stiffness. Utilizing the PunchLok[®] system with any choice gives 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 shear connector 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 due to lowest cost and appropriateness for assumed interior environment.

Specific 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

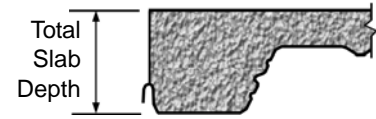


Table 4

Deck Type	Item	Units	Total Slab Depth							
			2½"	3"	3½"	4"	4½"	4¾"	5"	5¼"
Flat Slab	Volume	yd ³ /100 ft ²	0.772	0.926	1.080	1.235	1.389	1.466	1.543	1.620
	Weight	NW psf	30.2	36.3	42.3	48.3	54.4	57.4	60.4	63.4
		LW psf	22.9	27.5	32.1	36.7	41.3	43.5	45.8	48.1
Shallow VERCOR	Volume	yd ³ /100 ft ²	0.685	0.839	0.993	1.148	1.302	1.379	1.456	1.534
	Weight	NW psf	26.8	32.9	38.9	44.9	51.0	54.0	57.0	60.0
		LW psf	20.3	24.9	29.5	34.1	38.7	41.0	43.3	45.5
Deep VERCOR	Volume	yd ³ /100 ft ²			0.878	1.032	1.186	1.264	1.341	1.418
	Weight	NW psf			34.4	40.4	46.4	49.5	52.5	55.5
		LW psf			26.1	30.7	35.2	37.5	39.8	42.1
PLB B PLB-CD BCD	Volume	yd ³ /100 ft ²			0.781	0.936	1.090	1.167	1.244	1.321
	Weight	NW psf			30.6	36.6	42.7	45.7	48.7	51.7
		LW psf			23.2	27.8	32.4	34.7	37.0	39.2
PLW2 W2 PLW2-CD W2CD	Volume	yd ³ /100 ft ²				0.926	1.080	1.157	1.235	1.312
	Weight	NW psf				36.3	42.3	45.3	48.3	51.4
		LW psf				27.5	32.1	34.4	36.7	39.0
PLW3 W3 PLW3-CD W3CD	Volume	yd ³ /100 ft ²							1.080	1.157
	Weight	NW psf							42.3	45.3
		LW psf							32.1	34.4
PLN N PLN-CD NCD	Volume	yd ³ /100 ft ²							0.878	0.955
	Weight	NW psf							34.4	37.4
		LW psf							26.1	28.4

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.
- Weight given is pounds per square foot.

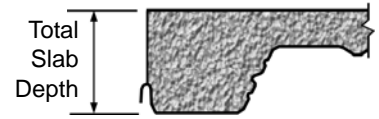


Table 4 (continued)

Deck Type	Item	Units	Total Slab Depth							
			5½"	5¾"	6"	6¼"	6½"	7"	7¼"	7½"
Flat Slab	Volume	yd ³ /100 ft ²	1.698	1.775	1.852	1.929	2.006	2.160	2.238	2.315
	Weight	NW psf	66.5	69.5	72.5	75.5	78.5	84.6	87.6	90.6
		LW psf	50.4	52.7	55.0	57.3	59.6	64.2	66.5	68.8
Shallow VERCOR	Volume	yd ³ /100 ft ²	1.611	1.688	1.765	1.842	1.919	2.074	2.151	2.228
	Weight	NW psf	63.1	66.1	69.1	72.1	75.1	81.2	84.2	87.2
		LW psf	47.8	50.1	52.4	54.7	57.0	61.6	63.9	66.2
Deep VERCOR	Volume	yd ³ /100 ft ²	1.495	1.572	1.649	1.726	1.804	1.958	2.035	2.112
	Weight	NW psf	58.5	61.5	64.6	67.6	70.6	76.7	79.7	82.7
		LW psf	44.4	46.7	49.0	51.3	53.6	58.2	60.4	62.7
PLB B PLB-CD BCD	Volume	yd ³ /100 ft ²	1.399	1.476	1.553	1.630	1.707	1.861	1.939	2.016
	Weight	NW psf	54.8	57.8	60.8	63.8	66.8	72.9	75.9	78.9
		LW psf	41.5	43.8	46.1	48.4	50.7	55.3	57.6	59.9
PLW2 W2 PLW2-CD W2CD	Volume	yd ³ /100 ft ²	1.389	1.466	1.543	1.620	1.698	1.852	1.929	2.006
	Weight	NW psf	54.4	57.4	60.4	63.4	66.5	72.5	75.5	78.5
		LW psf	41.3	43.5	45.8	48.1	50.4	55.0	57.3	59.6
PLW3 W3 PLW3-CD W3CD	Volume	yd ³ /100 ft ²	1.235	1.312	1.389	1.466	1.543	1.698	1.775	1.852
	Weight	NW psf	48.3	51.4	54.4	57.4	60.4	66.5	69.5	72.5
		LW psf	36.7	39.0	41.3	43.5	45.8	50.4	52.7	55.0
PLN N PLN-CD NCD	Volume	yd ³ /100 ft ²	1.032	1.109	1.186	1.264	1.341	1.495	1.572	1.649
	Weight	NW psf	40.4	43.4	46.4	49.5	52.5	58.5	61.5	64.6
		LW psf	30.7	32.9	35.2	37.5	39.8	44.4	46.7	49.0

Notes:
(continued
from pg 18)

- PLB-CD, BCD, PLW2-CD, W2CD, PLW3-CD, W3CD, PLN-CD, and NCD refer to cellular FORMLOK. Refer to pages 92-95 for additional information.
- To calculate volumes or weights if slab is thicker than listed in table: Combine volumes or weights from the maximum total slab depth for the specified profile with those of a flat slab to equal the desired total slab depth. For example, to determine the weight of a 12" total slab depth using PLW3 and NW concrete, combine weights of a 7½" slab depth for PLW3 (72.5 psf) with a 4½" flat slab (54.4 psf) for a total weight of 126.9 psf.

Diaphragms with Stud Shear Connectors

Table 5: Allowable Diaphragm Shear Values (plf) and Flexibility Factors (in./lb $\times 10^6$) for Decks with Concrete Fill and 3/4" Diameter Stud Shear Connectors^{1-8, 16, 17, 19}

Concrete Type ⁹	Concrete Thickness ¹⁰	Spacing of Shear Studs ^{11, 14}							F ¹²
		12"	16"	18"	24"	30"	32"	36"	
Minimum Concrete Reinforcement of 0.0025 Times the Area of Fill Above the Deck									
NW	2" ¹⁸	3110	3110	3110	3110	3110	3110	2870	0.40
	2½"	3890	3890	3890	3890	3440	3230	2870	0.32
	3"	4670	4670	4670	4300	3440	3230	2870	0.26
	3½"	5450	5450	5450	4300	3440	3230	2870	0.23
	4½"	7000	6460	5740	4300	3440	3230	2870	0.18
	6"	8610	6460	5740	4300	3440	3230	2870	0.13
LW	2" ¹⁸	2910	2910	2910	2910	2910	2910	2850	0.56
	2½"	3640	3640	3640	3640	3420	3200	2850	0.45
	3¼"	4740	4740	4740	4270	3420	3200	2850	0.35
	4¼"	6190	6190	5700	4270	3420	3200	2850	0.26
	6"	8550	6410	5700	4270	3420	3200	2850	0.19
Minimum Concrete Reinforcement of 0.0075 Times the Area of Fill Above the Deck¹³									
NW	2" ¹⁸	1310	1310	1310	1310	1310	1310	1310	0.40
	2½"	1640	1640	1640	1640	1640	1640	1640	0.32
	3"	1970	1970	1970	1970	1970	1970	1970	0.26
	3½"	2300	2300	2300	2300	2300	2300	2300	0.23
	4½"	2950	2950	2950	2950	2950	2950	2870	0.18
	6"	3940	3940	3940	3940	3440	3230	2870	0.13
LW	2" ¹⁸	1110	1110	1110	1110	1110	1110	1110	0.56
	2½"	1390	1390	1390	1390	1390	1390	1390	0.45
	3¼"	1810	1810	1810	1810	1810	1810	1810	0.35
	4¼"	2370	2370	2370	2370	2370	2370	2370	0.26
	6"	3350	3350	3350	3350	3350	3200	2850	0.19

¹ The allowable diaphragm shear values are based on concrete slab reinforcement with a minimum area as stated in the following table. Reinforcement shall have an equivalent area and spacing in both directions. Welded wire fabric of the sizes listed in the following table meet this requirement. The reinforcement is placed approximately 1" below the top of the concrete.

(Table 5 Note 1 continued on following page)

Table 5 Note 1 (continued from preceding page)

Minimum Reinforcement for Tabulated Shear Values

Concrete Thickness ¹⁰	Reinforcement = 0.0025 Times Area of Fill Above the Deck		Reinforcement = 0.00075 Times Area of Fill Above the Deck	
	Area of Steel (in. ² /ft)	Suggested Fabric ¹⁵	Area of Steel (in. ² /ft)	Suggested Fabric ¹⁵
2"	0.060	4 x 4 - W2.0 x W2.0	0.028	6 x 6 - W1.4 x W1.4
2½"	0.075	4 x 4 - W2.5 x W2.5	0.028	6 x 6 - W1.4 x W1.4
3"	0.090	6 x 6 - W4.5 x W4.5	0.028	6 x 6 - W1.4 x W1.4
¾"	0.098	6 x 6 - W5.0 x W5.0	0.029	6 x 6 - W2.0 x W2.0
3½"	0.105	4 x 4 - W3.5 x W3.5	0.032	6 x 6 - W2.0 x W2.0
4¼"	0.128	6 x 6 - W6.5 x W6.5	0.038	6 x 6 - W2.0 x W2.0
4½"	0.135	4 x 4 - W4.5 x W4.5	0.041	4 x 4 - W1.4 x W1.4
6"	0.180	4 x 4 - W6.0 x W6.0	0.054	6 x 6 - W2.9 x W2.9

² Stud shear connector diameter must be less than or equal to 2.5 times the steel support thickness unless connector is located directly over the support web.

³ See Figure 9 for details.

⁴ Allowable diaphragm shear strengths assume “weak stud position” as shown in Figure 10 with a single shear stud per rib at the spacing shown in the tables. The allowable values may be used when the deck is either perpendicular or parallel to the supports.

⁵ For local shear transfer within the field of the diaphragm, ¾" diaphragm shear stud connectors having an allowable shear value of 8.60 kips per stud for normal weight concrete fills and 8.55 kips per stud for structural light weight concrete shall be used. However, when using Deep VERCOR, ½" diameter studs having an allowable shear value of 3.83 kips per stud for normal weight concrete and 3.80 kips per stud for light weight concrete shall be used.

⁶ Sidelap connections shall be spaced at 36" on center maximum with either button punch, No. 10 screw, 1½" long top seam weld (standing seams), or 1½" long fillet weld (nested seams). Sidelaps of PLB, PLW2, PLW3, and PLN shall be connected with Verco Sidelap Connections (VSC) at 36" on center maximum.

⁷ To obtain factored (LRFD) diaphragm strengths, the values may be multiplied by a factor of 1.5 for all load combinations.

⁸ See ACI 318, Section 9.3.4 for possible reductions of the diaphragm shear capacity dependent on the vertical components of the primary lateral-force-resisting system. Tabulated values may be multiplied by $\phi/0.75$, where ϕ is modified in accordance with ACI 318, Section 9.3.4.

⁹ Design compressive strength $f'_c = 3000$ psi minimum.
NW = Normal weight concrete (145 pcf); LW = Structural light weight concrete (110 pcf).

¹⁰ Concrete thickness (t_f) is measured above top flute of steel deck.

¹¹ FORMLOK deck types PLB, B, PLBCD, BCD, BR, PLW2, W2, PLW2CD, W2CD, PLW3, W3, PLW3CD, W3CD, PLN, N, PLNCD, and NCD shall use a minimum ¾" diameter stud shear connectors to achieve the allowable values. Deep VERCOR (1⅝" deep) shall use ½" diameter stud shear connectors. The tabulated values shall be multiplied by a factor of 0.44 for Deep VERCOR.

¹² The flexibility factor (F) is the number of microinches a diaphragm web will deflect in a span of 1 foot under a shear load of 1 pound per foot.

¹³ Also compare to the allowable diaphragm capacity for FORMLOK decks with concrete thicknesses shown on pages 37–75.

(Notes continued on following page)

(Table 5 Notes continued from preceding page)

- 14 The maximum center-to-center spacing of stud shear connectors shall not exceed either 8 times the total slab thickness or 36".
- 15 Minimum lap of welded wire fabric shall be 12".
- 16 Steel decks shall be fastened to intermediate deck supports with arc spot welds or mechanical fasteners.
- 17 Stud shear connectors shall extend not less than 1½" above top of steel deck and shall have at least ½" concrete cover. Minimum stud lengths for each deck profile are given in Figure 9.
- 18 Tabulated shear values for slabs with 2" concrete cover thickness are not applicable to Deep VERCOR deck unless stud shear connectors meeting the requirements of footnote 17 are used.
- 19 All FORMLOK and Deep VERCOR steel deck profiles have an average rib width, w_r , of not less than 2" as required in AISC Specification Section I3.2.

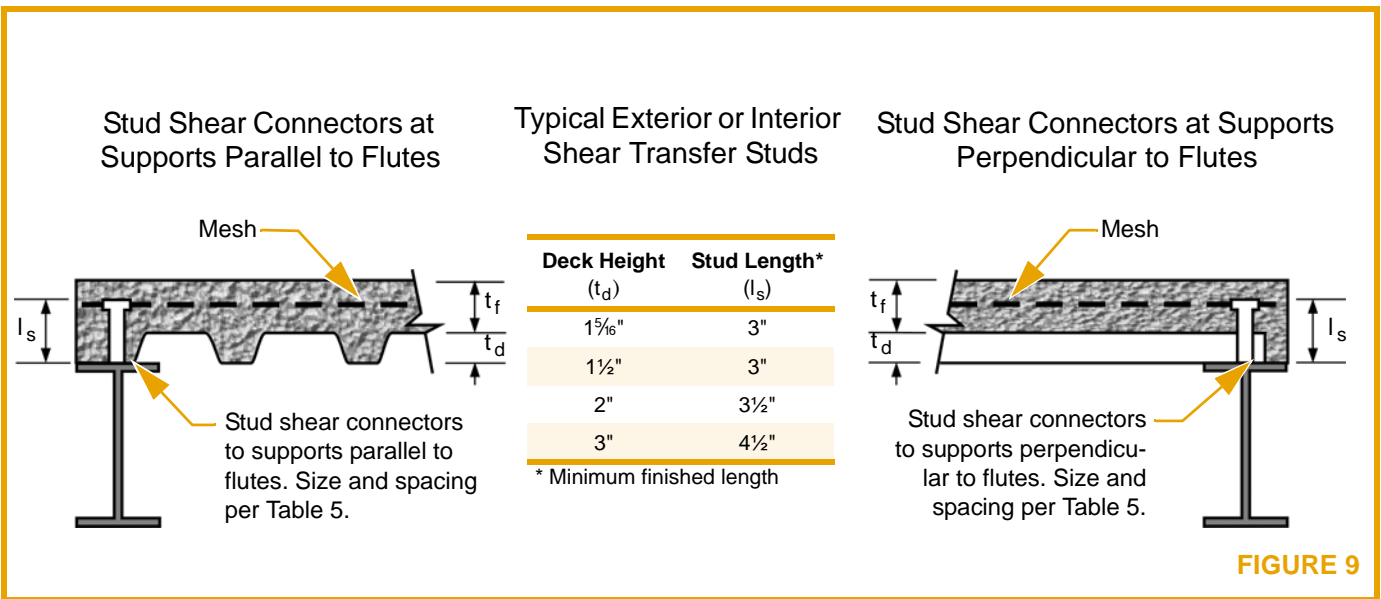


FIGURE 9

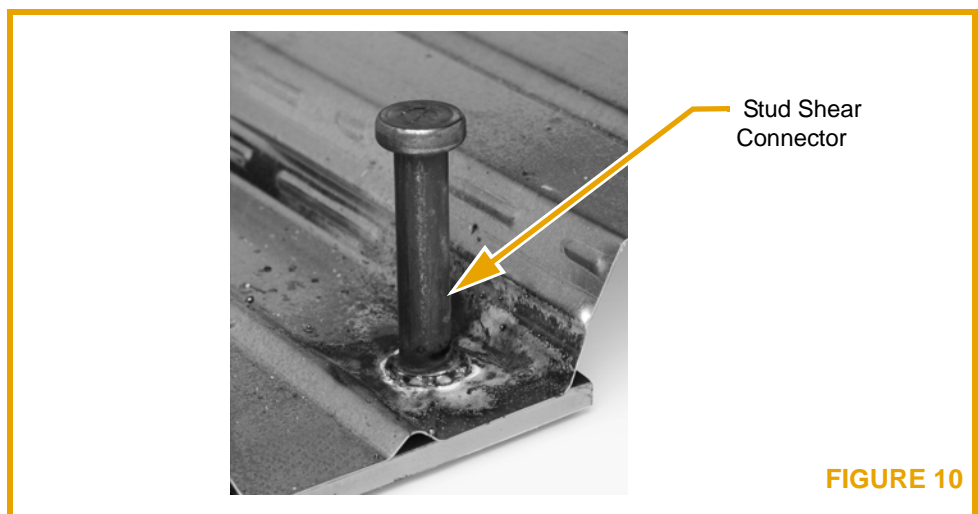


FIGURE 10

Stud Shear Connectors

Table 6: Allowable Shear (kips) per 3/4" Diameter Stud Shear Connector with FORMLOK Deck

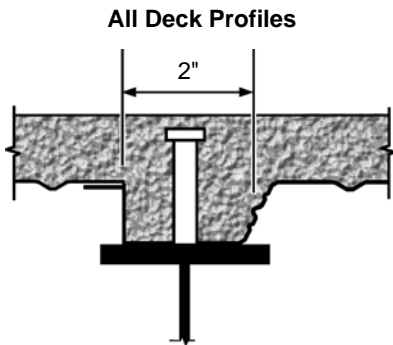
Deck Condition		Normal Weight Concrete (145 pcf)		Light Weight Concrete (110 pcf)		
		f' _c = 3 ksi	f' _c = 4 ksi	f' _c = 3 ksi	f' _c = 4 ksi	
No Deck (Solid Concrete)		10.50	13.05	8.55	10.60	
Deck Parallel	w _r /h _r ≥ 1.5	10.50	10.75	8.55	10.60	
	w _r /h _r < 1.5	9.15	9.15	8.55	9.15	
Deck Perpendicular	Weak Studs per Rib	1	8.60	8.60	8.55	8.60
		2	7.30	7.30	7.30	7.30
		3	6.05	6.05	6.05	6.05
	Strong Studs per Rib	1	10.50	10.75	8.55	10.60
		2	9.15	9.15	8.55	9.15
		3	7.55	7.55	7.55	7.55

Notes:

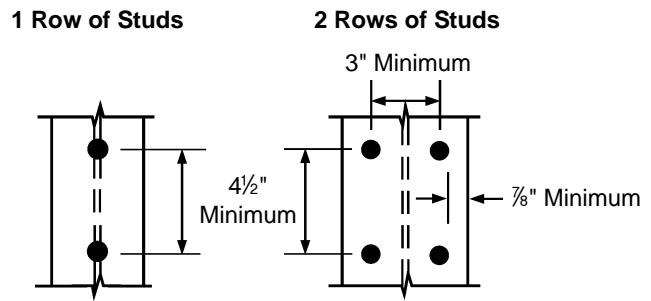
1. Values in Table 6 are based on the AISC Specification (13th Edition) Table 3-21 and Section I3.2d, "Shear Connectors."
2. For Deep VERCOR, values in Table 6 shall be modified by a factor of 0.44 for both parallel and perpendicular conditions, using a 1/2" diameter stud.
3. w_r/h_r ≥ 1.5 for PLW2 and W2 FORMLOK, PLW3 and W3 FORMLOK, and Deep VERCOR. w_r/h_r < 1.5 for PLB and B FORMLOK, PLN and N FORMLOK.
4. Values in Table 6 are applicable only to concrete made with ASTM C33 aggregate.
5. w_r indicates average width of concrete rib or haunch (in.); h_r indicates nominal rib height (in.).
6. After-weld shear stud lengths are assumed to be ≥ deck height + 1.5 in.
7. An ASD safety factor of Ω = 2.0 was utilized to determine the allowable shear per stud shear connector in Table 6.
8. A "weak" stud is defined as a stud whose distance from the edge of the stud shank to the steel deck web, measured at mid-height of the deck and in the load-bearing direction of the stud, is < 2". For "strong" studs, this distance is ≥ 2". See detail at bottom of Figure 11 for weak and strong stud placement.
9. When using composite beams or girders, designers should consider adding reinforcing steel in the concrete fill over the metal deck in the effective width of the composite beam or girder.
10. Designers should consider using partial composite design for possible reduction of the number of studs required.
11. If openings will be cut in the slab adjacent to the composite beams or girder during the life of the building, consideration should be given to the design of the composite section.

Stud Shear Connector Placement and Details

Minimum Rib Widths for Full Value of Stud

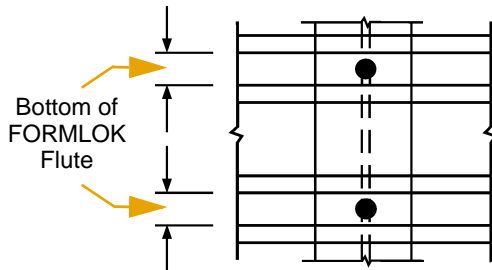
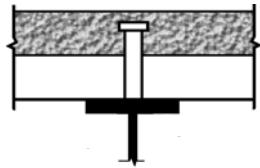


FORMLOK Deck Parallel to Girder

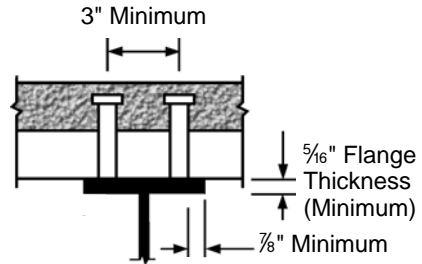


Suggested 3/4" Diameter Stud Placement and Minimum Flange Widths

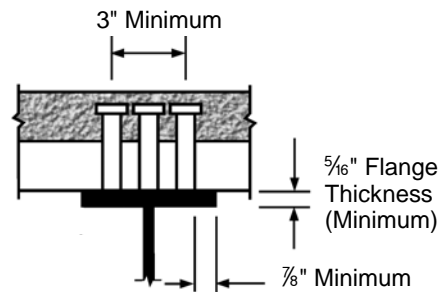
1 Stud per Flute (PLB and B FORMLOK)



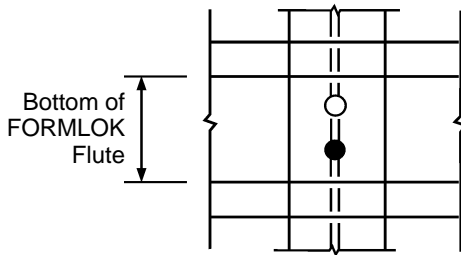
2 Studs per Flute (PLB and B FORMLOK)



3 Studs per Flute (PLW2, W2, PLW3, and W3 FORMLOK)



1 or 2 Studs per Flute (PLW2, W2, PLW3, and W3 FORMLOK)



Strong Stud/Weak Stud Placement

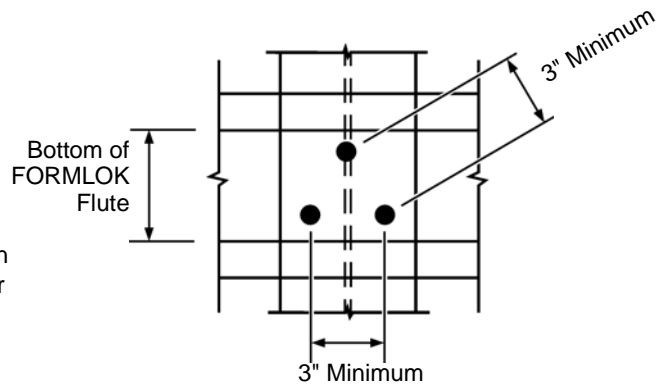
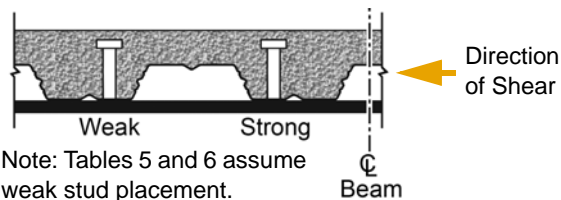
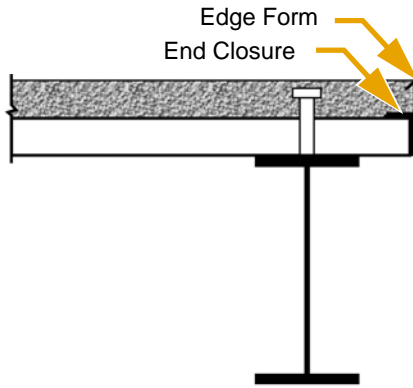


FIGURE 11

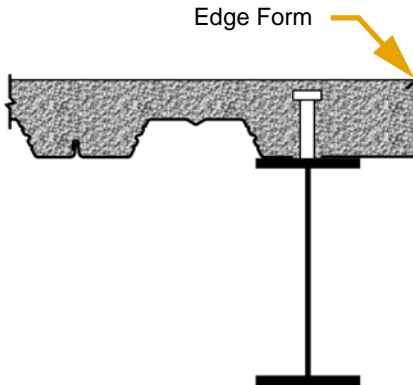
FORMLOK Composite Slab—Suggested Details

Edge Conditions

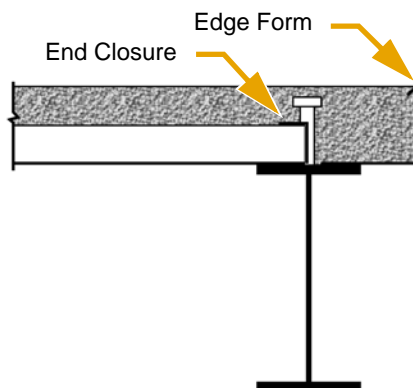
Cantilever



Parallel

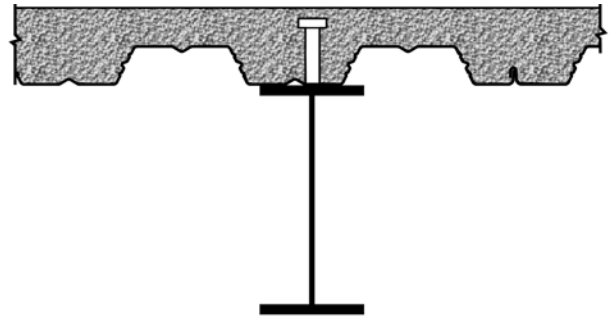


Perpendicular

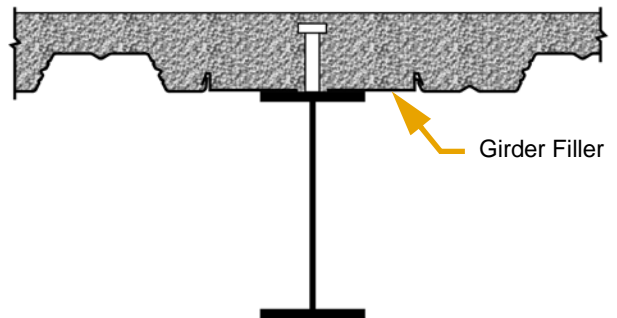


Interior Conditions

Parallel



Parallel with Filler Plates



Change of Deck Direction

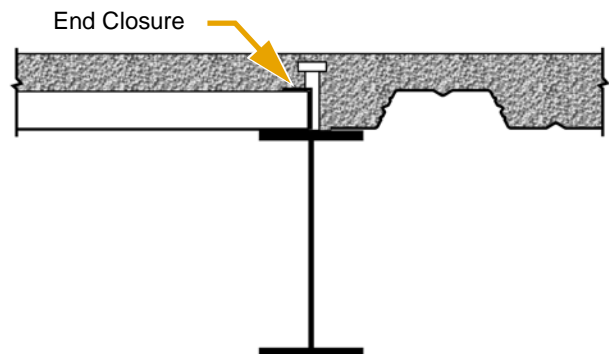


FIGURE 12

Edge Form Suggestions

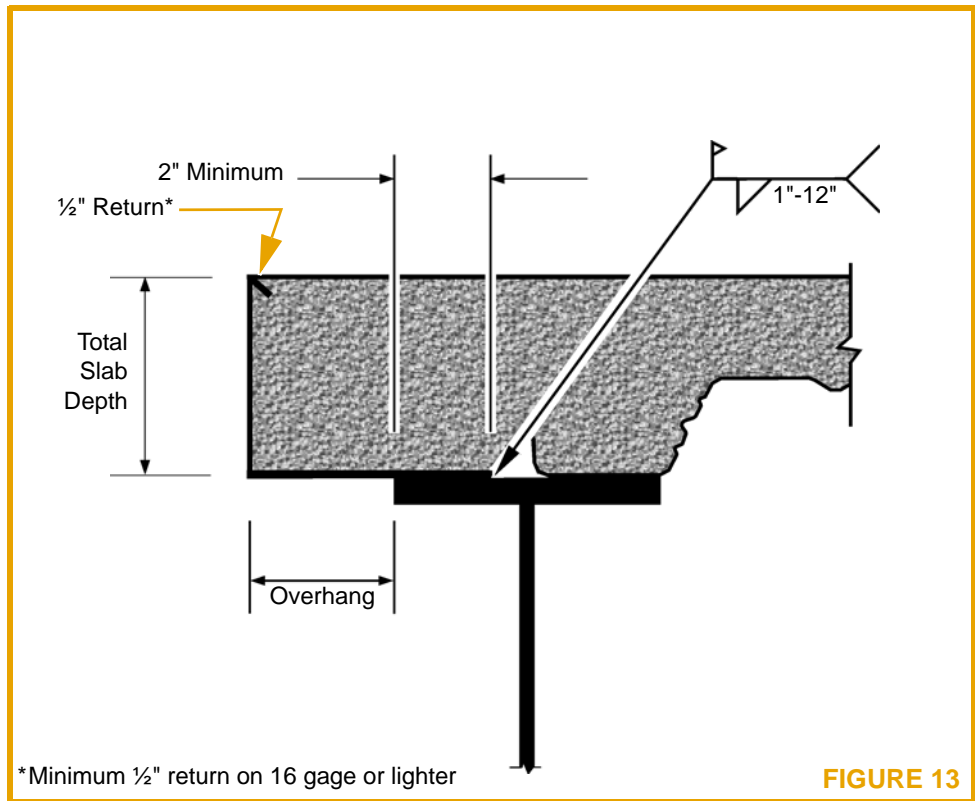


Table 7: Edge Form Gage Selection^{1, 3, 4}

Total Slab Depth ²	Overhang								
	2"	3"	4"	5"	6"	7"	8"	9"	10"
4"	18	18	16	14	12	12	12	10	10
4½"	18	18	16	14	12	12	12	10	10
5"	18	18	16	14	12	12	12	10	10
5½"	18	16	16	14	12	12	10	10	10
6"	18	16	14	14	12	12	10	10	
6½"	18	16	14	12	12	12	10	10	
7"	16	16	14	12	12	12	10	10	
7½"	16	14	14	12	12	10	10		

¹ Steel edge form minimum yield strength, $F_y = 33$ ksi.

² Normal weight concrete (145 pcf).

³ 100 psf superimposed load on overhang.

⁴ For overhangs greater than those shown, additional support or bent plates suggested.

Floor Deck Accessories

Profile Closures

Profile closures made from steel or neoprene are designed to fit Verco's FORMLOK and VERCOR deck products. See Table 8 for availability of closures by deck profile. Steel closures are 22 gage with a 1 in. return lip for fastening to deck with screws or tack welds. Neoprene closures for FORMLOK decks are 1 in. thick individual plugs. Neoprene closures for VERCOR decks are 1 in. thick, 36 in. long strips. See Figure 14.

Table 8: Availability of Profile Closures

Deck Profile	Steel Closures		Neoprene Closures	
	Underside	Topside	Underside	Topside
PLB or B FORMLOK	✓	✓	✓	✓
PLW2 or W2 FORMLOK	✓	✓	✓	
PLW3 or W3 FORMLOK	✓	✓	✓	
PLN or N FORMLOK	✓		✓	✓
Deep VERCOR			✓	✓
Shallow VERCOR			✓	✓

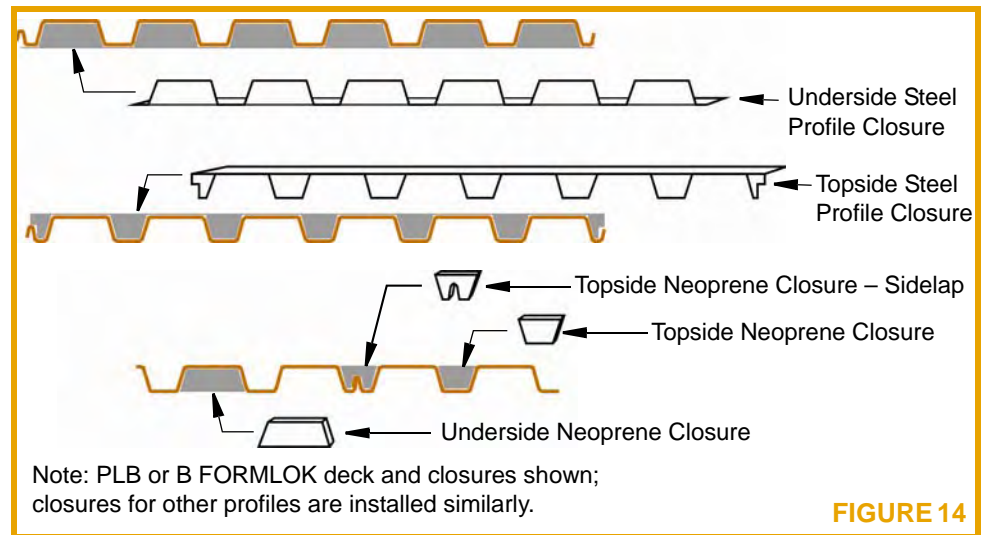


FIGURE 14

Weld Washers

Welding VERCOR decks lighter than 22 gage requires weld washers in accordance with AWS D1.3. Weld washers are not required or recommended for arc spot welds in FORMLOK decks. See Figure 15.

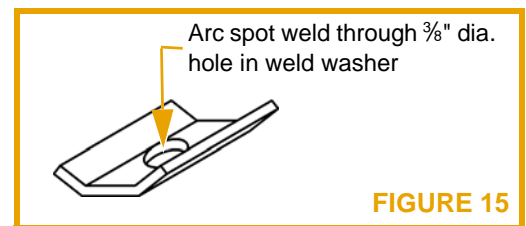
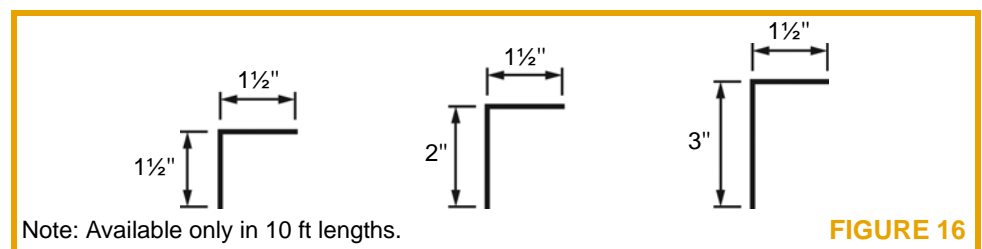


FIGURE 15

End Closures

20 gage steel end closures are available for all FORMLOK profiles. See Figure 16 for available sizes and Figure 12 for suggested details.



Note: Available only in 10 ft lengths.

FIGURE 16

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. These suggestions should be evaluated based on specific project conditions by the responsible design professional.

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.

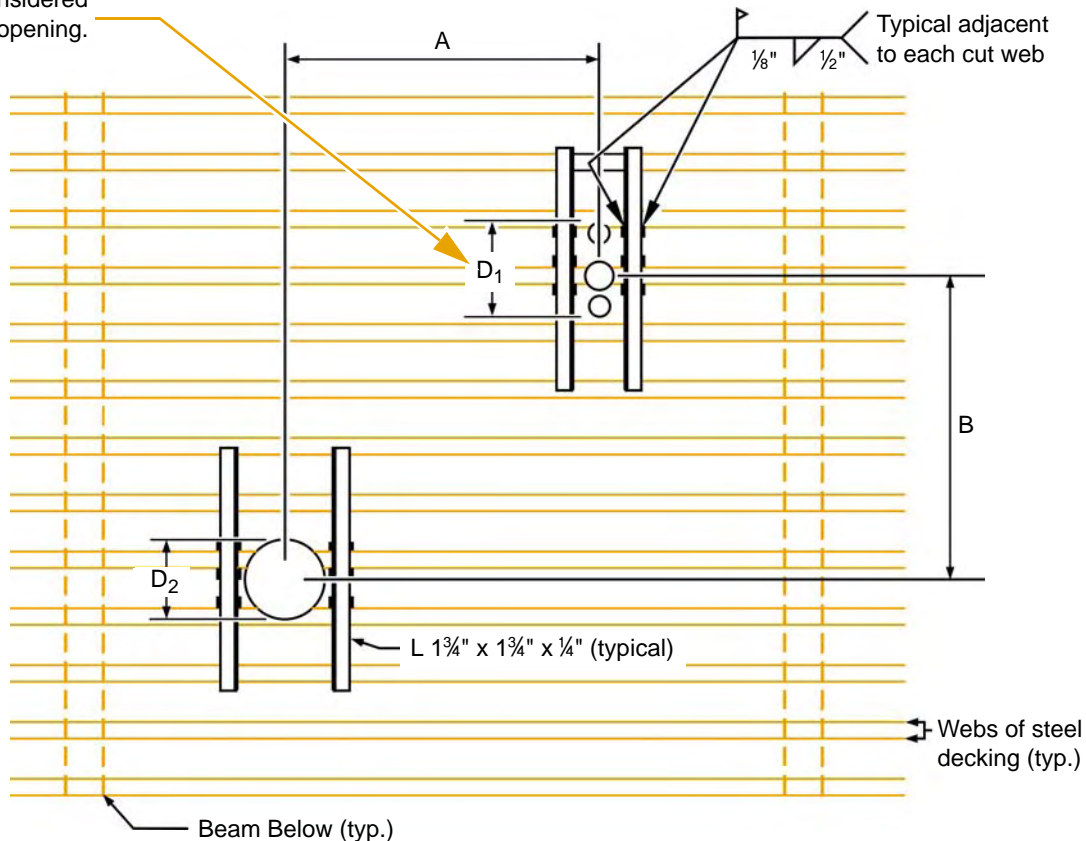
Note: The diagonal bars shown at larger openings are intended to address cracking at corners and are in addition to the reinforcing required for load distribution.

(continued on page 29)

Holes cutting no more than:

- 3 adjacent webs for 6" and 8" module deck.
- 2 adjacent webs for 12" 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" whichever is larger, there is no restriction on Dimension B.
4. If Dimension B is $>4D_1$, $4D_2$, or 32" whichever is larger, there is no restriction on Dimension A.
5. If Dimensions A and B are $<4D_1$, $4D_2$, or 32" 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 18.

FIGURE 17

FORMLOK Composite Slab Fire Resistance Ratings

Table 9 2, 4, 6, 8, 9

RESTRAINED ASSEMBLY RATING (hr)	UL #	FRAME	CONCRETE (in.) ⁷	FORMLOK DECK ¹					PROTECTED ⁵
				B	BR	W2	W3	N	
1-4	D739	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
1-3	D743	Beam	2" LW, NW			✓	✓		SFRM
2	D750	Beam	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
2-3	D755	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
2-3	D759	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
2-4	D760	Beam/Joist	2½" LW, NW	✓	✓	✓	✓		SFRM
2	D764	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
1-4	D767	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
2	D775	Beam	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
1-4	D779	Beam/Joist	2½" LW, NW	✓	✓	✓	✓		SFRM
1-4	D787	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
1-4	D788	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
2	D794	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
1-3	D795	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
1-4	D796	Beam/Joist	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
2	D826	Beam	¾" LW	✓	✓	✓	✓	✓	SFRM
2-3	D832	Beam	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
2	D840	Beam	(varies) LW	✓	✓	✓	✓	✓	SFRM
1-4	D858	Beam	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
1-3	D859	Beam	2" LW, NW	✓	✓	✓	✓	✓	SFRM
3	D867	Beam	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
1-3	D871	Beam	2½" LW, NW			✓	✓		SFRM
1-3	D875	Beam	2" LW, NW	✓	✓	✓	✓	✓	SFRM
2	D878	Beam	¾" LW	✓	✓	✓	✓	✓	SFRM
1-3	D883	Beam	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
2	D888	Beam	(varies) LW	✓	✓	✓	✓	✓	SFRM
1-4	D891	Beam	2½" LW, NW	✓	✓	✓	✓	✓	SFRM
3	D896	Beam	(varies) LW, NW	✓	✓	✓	✓	✓	SFRM
1-3	D898	Beam	2½" LW, NW			✓	✓		SFRM
1-3	D902	Beam/Joist	(varies) LW, NW	✓ ³	✓	✓ ³	✓ ³	✓ ³	No
2	D907	Beam	¾" LW	✓	✓	✓	✓	✓	No
¾-1	D914	Beam	2½" LW	✓	✓	✓	✓	✓	No
¾-3	D916	Beam/Joist	(varies) LW, NW	✓	✓	✓	✓	✓	No

(continued on following page)

Technical Guidelines

Table 9 (continued)

RESTRAINED ASSEMBLY RATING (hr)	UL #	FRAME	CONCRETE (in.) ⁷	FORMLOK DECK ¹					PROTECTED ⁵
				B	BR	W2	W3	N	
1-3	D919	Beam	(varies) LW, NW	✓	✓	✓	✓	✓	No
2	D920	Beam	3¼" LW			✓	✓		No
¾-3	D922	Beam/Joist	(varies) LW, NW	✓	✓	✓	✓	✓	No
¾-3	D923	Beam	(varies) LW, NW	✓	✓	✓	✓	✓	No
2-3	D924	Beam	(varies) LW, NW	✓		✓	✓		No
¾-3	D925	Beam/Joist	(varies) LW, NW						No
¾-3	D927	Beam/Joist	(varies) LW, NW	✓	✓	✓	✓	✓	No
1-3	D929	Beam	(varies) LW, NW	✓	✓	✓	✓	✓	No
2	D931	Beam	(varies) LW, NW	✓	✓	✓	✓	✓	No
1-3	D943	Beam/Joist	(varies) LW, NW	✓	✓	✓	✓	✓	No
1-3	D949	Beam/Joist	(varies) LW, NW	✓	✓	✓	✓	✓	No
1-3	D957	Beam/Joist	(varies) LW, NW	✓ ³	✓	✓ ³	✓ ³	✓ ³	No
¾-3	D958	Beam/Joist	(varies) LW, NW	✓ ³	✓	✓ ³	✓ ³	✓ ³	No
¾-1	D967	Beam	2½" LW	✓ ³	✓	✓ ³	✓ ³	✓ ³	No
1-3	D968	Beam	(varies) LW, NW	✓	✓	✓	✓	✓ ³	No
2-3	D969	Beam	(varies) LW, NW	✓		✓	✓		No
2	D973	Beam	3¾" NW	✓	✓	✓	✓	✓	No
3	D974	Beam/Joist	4½" NW	✓ ³	✓	✓ ³	✓ ³	✓ ³	No
1-3	D975	Beam	(varies) LW, NW	✓ ³	✓	✓ ³	✓ ³	✓ ³	No

¹ "B" = PLB and B FORMLOK "W2" = PLW2 and W2 FORMLOK
 "N" = PLN and N FORMLOK "W3" = PLW3 and W3 FORMLOK

² Refer to UL Fire Resistance Directory, evaluation reports for Verco Steel Deck, or municipality requirements for full details of construction including concrete thickness and strength requirements, and span limitations.

³ Denotes that the FORMLOK deck profile may be fluted or cellular.

⁴ Code-compliant Verco gray primer paint is formulated for compatibility with spray-applied fireproofing. Verco steel decks in the assemblies listed above may be galvanized or painted, excluding assemblies D924, D969, D973, and D974, which shall be galvanized only.

⁵ Protected assemblies have spray-applied fireproofing applied directly to the underside of the deck. Unprotected assemblies do not require spray-applied fireproofing applied to the underside of the deck. "SFRM = Spray-Applied Fire Resistive Materials."

⁶ Verco Decking, Inc. assumes no responsibility for adhesion of any spray-applied fireproofing material, nor for any treatment, cleaning, or surface preparation of the deck required for adhesion of fire protection material.

⁷ Concrete thickness is measured from top of deck to top of slab.

⁸ All assemblies except D750, D760, D775, D779, and D924 are permitted to be blended. Blended deck refers to the allowed combination of cellular and non-cellular deck for the floor system.

⁹ Sidelap fastening by either button punch, seam weld, or VSC is required. Minimum ¾" long #10 self-drilling screws may be substituted for button punches at the spacing indicated for button punches.

Steel Floor Deck Specification 05 31 13

The following suggested specification for VERCO® floor deck is in the Standard Form CSI MasterFormat 2011. Electronic versions are available for download from Verco’s website.

Steel Floor Deck Specification 05 31 13	Notes to Specifier
<p>PART 1 - GENERAL</p> <p>1.01 WORK INCLUDED A. The extent of steel decking is shown on the drawings, including basic layout and type of deck units required.</p> <p>1.02 RELATED WORK SPECIFIED ELSEWHERE 1. Structural Steel Framing: Section 05 12 00. 2. Concrete: Section 03 30 00. 3. Concrete Reinforcement: Section 03 20 00. 4. Temporary Shoring: Section 03 11 13.16. 5. Fireproofing: Section 07 81 00.</p> <p>1.03 QUALITY ASSURANCE A. Codes and Standards: 1. AISI S100, “North American Specification for the American Iron and Steel Institute Design of Cold-Formed Steel Structural Members” 2. AWS D1.3, “Structural Welding Code – Sheet Steel” 3. ASTM, designations as specified. 4. ICC-ES Report ESR-1735P 5. IAPMO ES Report ER-0217 6. 2006 International Building Code 7. 2009 International Building Code</p> <p>1.04 SUBMITTALS A. Shop Drawings 1. Deck layout, framing, and supports, with dimensions and sections. 2. Type and location of attachments. 3. <u>PunchLok® sidelap connection spacing.</u> 4. Details of accessories. 5. Deck manufacturer with profiles, properties, vertical load, allowable shear capacities, and flexibility factors.</p> <p>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.</p> <p>PART 2 – PRODUCTS</p> <p>2.01 MATERIALS A. Cold Rolled Steel: ASTM A 1008 or ASTM A 1039, SS Grade 50 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.</p> <p style="text-align: center;">**OR**</p>	<p>American Iron and Steel Institute</p> <p>American Welding Society American Society for Testing and Materials International Code Council Evaluation Service International Association of Plumbing and Mechanical Officials Evaluation Service</p> <p><u>Delete if PunchLok® System is not utilized and insert button punch, top seam weld, or screw (when -SS deck is used).</u></p> <p>For phosphatized/painted FORMLOK™ deck. ASTM A 1008 formerly A 611.</p>

Steel Floor Deck Specification 05 31 13 (continued)

Notes to Specifier (continued)

- A. Galvanized Steel: ASTM A 653 or ASTM A 1063, SS Grade 50
 - 1. Zinc coated per ASTM A 653 or ASTM A 1063, G60
OR
- A. Galvanized Steel: ASTM A 653 or ASTM A 1063, SS Grade 80
 - 1. Zinc coated per ASTM A 653 or ASTM A 1063, G90

For galvanized FORMLOK™ deck. ASTM A 653 formerly A 446.

For Deep or Shallow VERCOR™ deck. ASTM A 653 formerly A 446

2.02 FABRICATION

- A. General: Form deck units in lengths to span 3 or more supports, with butted 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:

Delete if VERCOR™ deck.
Delete if PunchLok® System not utilized and insert button punches, top seam welds, or screws (when -SS deck is used).

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

Delete if VERCOR™ deck only.

- 1. PLB™-36 FORMLOK™, ___ gage, 36" wide, 1½" deep having minimum ___ psf superimposed load for ___ span.

Designate gage: 22, 20, 18, or 16.
Designate load.
Designate span.

OR

- 1. B-36 FORMLOK™, ___ gage, 36" wide, 1½" deep having minimum ___ psf superimposed load for ___ span.

Designate gage: 22, 20, 18, or 16.
Designate load.
Designate span.

OR

- 1. PLW2™-36 FORMLOK™, ___ gage, 36" wide, 2" deep having minimum ___ psf superimposed load for ___ span.

Designate gage: 22, 21, 20, 19, 18, or 16.
Designate load.
Designate span.

OR

- 1. W2-36 FORMLOK™, ___ gage 36" wide, 2" deep having minimum ___ psf superimposed load for ___ span.

Designate gage: 22, 21, 20, 19, 18, or 16.
Designate load.
Designate span.

OR

- 1. PLW3™-36 FORMLOK™, ___ gage 36" wide, 3" deep having minimum ___ psf superimposed load for ___ span.

Designate gage: 22, 21, 20, 19, 18, or 16.
Designate load.
Designate span.

OR

- 1. W3-36 FORMLOK™, ___ gage 36" wide, 3" deep having minimum ___ psf superimposed load for ___ span.

Designate gage: 22, 21, 20, 19, 18, or 16.
Designate load.
Designate span.

OR

- 1. PLN™-24 FORMLOK™, ___ gage 24" wide, 3" deep having minimum ___ psf superimposed load for ___ span.

Designate gage: 22, 20, 18, or 16.
Designate load.
Designate span.

OR

- 1. N-24 FORMLOK™, ___ gage, 24" wide, 3" deep having minimum ___ psf superimposed load for ___ span.

Designate gage: 22, 20, 18, or 16.
Designate load.
Designate span.

OR

- 1. Deep VERCOR™, ___ gage, 36" wide coverage, 1½" deep.

Designate gage: 26, 24, 22, or 20.

OR

- 1. Shallow VERCOR™, ___ gage, 36" wide coverage, ¾" deep.

Designate gage: 26, 24, or 22.

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 at approximately 6 inches on center.
- C. Sidelap Vents: Provide factory rolled-in sidelap vents.

For FORMLOK™ deck. Delete if not required.

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

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 a minimum of 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 ½ 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 ⅜" diameter hole in 14 gage weld washer.
 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.

For FORMLOK™ deck only.

For VERCOR™ deck only.

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

Designate spacing. Replace with top seam welds or screws (when -SS deck is used) if button punches not permitted.

Note: Maximum sidelap connection spacing for VSCs, BPs, TSWs, and screws (when -SS deck is used) is 36" on center.

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 flexural strength and serviceability requirements 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

Using the Tables

Figure 19 highlights important considerations for using the deck tables. (This figure is based on the tables found on page 38 of this catalog.)

Design information for the tables on each page.

Concrete weight excluding FORM-LOK deck deflection allowance of 4 psf (NW) or 3 psf (LW).

Profile shows **weld locations** (in this case, 4 or 7 welds per sheet).

Welded Wire Fabric (mesh)

7 Welds
4 Welds

PLB™ or B FORMLOK™

- 4 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
36.6 psf
- Galvanized or Phosphatized/Painted

Shaded areas to the right of the black line indicate that **shoring** is required during construction. In this case, single spans longer than 6'-2", double spans longer than 7'-3", and triple spans longer than 7'-4" must be shored.

Allowable Superimposed Load is the load the composite slab can support in addition to the weight of the deck and concrete.

Allowable Superimposed Loads (psf)

Gage	Spans	Max UCS ¹	Span (ft-in.)									
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"
22	1	6'-2"	303	229	198	173	151	133	118	104	93	83
	2	7'-3"	303	265	234	173	151	133	118	104	93	83
	3	7'-4"	303	265	234	173	151	133	118	104	93	83

¹ Max UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded area

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)									
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"
22	q4	2065	2026	1993	1965	1940	1918	1898	1881	1865	1851
	F4	0.40	0.41	0.41	0.42	0.42	0.43	0.43	0.44	0.44	0.45
	q7	2274	2220	2173	2133	2097	2066	2038	2013	1991	1970
	F7	0.36	0.37	0.38	0.39	0.39	0.40	0.40	0.41	0.41	0.41

Allowable Diaphragm Shear (q) and Flexibility Factor (F) based on 4 welds to support per 36" sheet.

Allowable Diaphragm Shear (q) and Flexibility Factor (F) based on 7 welds to support per 36" sheet.

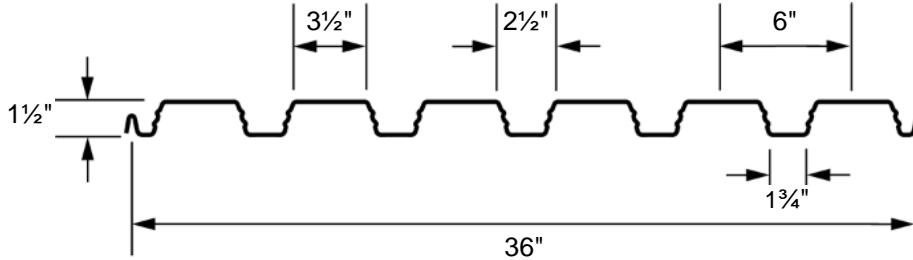
FIGURE 19

PLB™ or B FORMLOK™

- 1½" Deep Deck
- Galvanized or Phosphatized/Painted



Dimensions

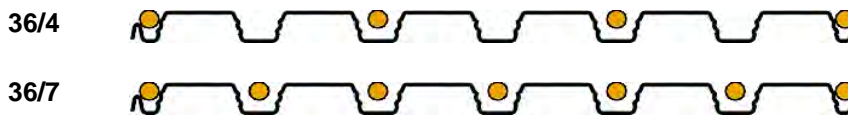


Deck Weight and Section Properties

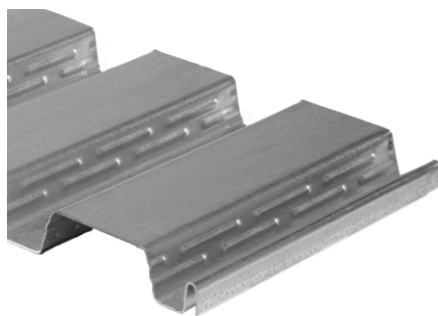
Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Note: Section properties are based on F_y = 50,000 psi.

Attachment Patterns to Supports

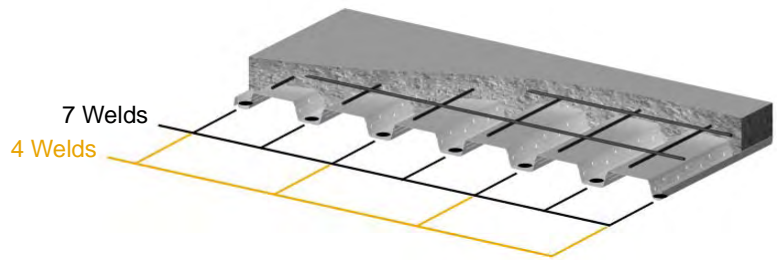


Embossment Pattern



PLB™ or B FORMLOK™

- 3½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
30.6 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	1	6'-6"	261	228	170	148	130	115	101	90	80	71	64
	2	7'-8"	261	228	202	180	130	115	101	90	80	71	64
	3	7'-9"	261	228	202	180	130	115	101	90	80	71	64
20	1	7'-9"	274	240	212	189	138	122	108	96	85	76	68
	2	9'-1"	274	240	212	189	170	153	140	96	85	76	68
	3	9'-3"	274	240	212	189	170	153	140	96	85	76	68
18	1	8'-10"	297	260	230	205	184	166	119	106	95	85	76
	2	10'-8"	297	260	230	205	184	166	151	138	127	117	76
	3	11'-0"	297	260	230	205	184	166	151	138	127	117	108
16	1	9'-6"	297	260	230	205	184	166	151	138	94	84	75
	2	11'-10"	297	260	230	205	184	166	151	138	127	117	108
	3	11'-7"	297	260	230	205	184	166	151	138	127	117	108

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

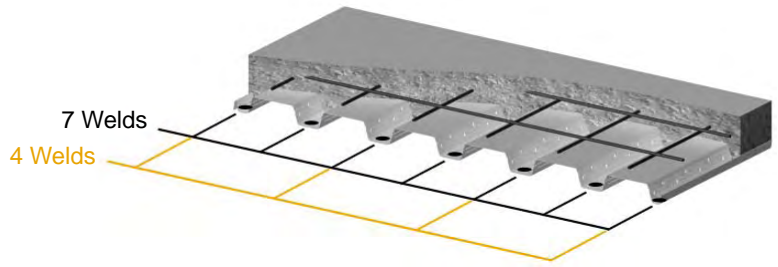
Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	q4	1825	1787	1754	1726	1701	1679	1659	1642	1626	1612	1599
	F4	0.45	0.46	0.47	0.48	0.48	0.49	0.50	0.50	0.51	0.51	0.52
	q7	2035	1981	1934	1893	1858	1827	1799	1774	1752	1732	1713
	F7	0.41	0.42	0.43	0.44	0.44	0.45	0.46	0.46	0.47	0.48	0.48
20	q4	1893	1847	1808	1773	1743	1717	1694	1673	1654	1637	1621
	F4	0.40	0.41	0.42	0.42	0.43	0.44	0.44	0.45	0.45	0.46	0.46
	q7	2145	2079	2023	1975	1932	1895	1861	1832	1805	1780	1758
	F7	0.35	0.36	0.37	0.38	0.39	0.40	0.40	0.41	0.42	0.42	0.43
18	q4	2046	1985	1932	1887	1847	1812	1781	1753	1728	1705	1684
	F4	0.32	0.33	0.34	0.35	0.35	0.36	0.37	0.37	0.38	0.38	0.39
	q7	2381	2294	2219	2155	2098	2048	2004	1964	1929	1896	1867
	F7	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.33	0.34	0.34	0.35
16	q4	2215	2138	2073	2016	1966	1922	1883	1848	1816	1788	1762
	F4	0.26	0.27	0.28	0.29	0.30	0.30	0.31	0.32	0.32	0.33	0.33
	q7	2634	2525	2432	2351	2280	2218	2162	2113	2068	2027	1991
	F7	0.22	0.23	0.24	0.25	0.26	0.26	0.27	0.28	0.28	0.29	0.29

B
3½"
NW

PLB™ or B FORMLOK™

- 4 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
36.6 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	1	6'-2"	303	229	198	173	151	133	118	104	93	83	74
	2	7'-3"	303	265	234	173	151	133	118	104	93	83	74
	3	7'-4"	303	265	234	173	151	133	118	104	93	83	74
20	1	7'-5"	318	279	246	183	160	141	125	111	99	89	79
	2	8'-8"	318	279	246	220	197	178	125	111	99	89	79
	3	8'-9"	318	279	246	220	197	178	125	111	99	89	79
18	1	8'-5"	344	301	266	237	213	155	138	123	109	98	88
	2	10'-2"	344	301	266	237	213	192	175	160	147	98	88
	3	10'-5"	344	301	266	237	213	192	175	160	147	98	88
16	1	9'-1"	342	300	265	236	212	192	174	121	108	97	87
	2	11'-3"	342	300	265	236	212	192	174	159	146	135	125
	3	11'-2"	342	300	265	236	212	192	174	159	146	135	125

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

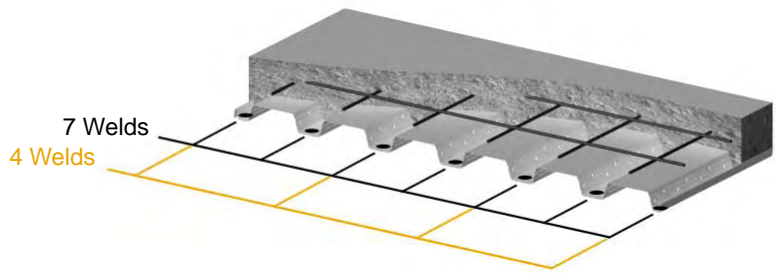
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	q4	2065	2026	1993	1965	1940	1918	1898	1881	1865	1851	1838
	F4	0.40	0.41	0.41	0.42	0.42	0.43	0.43	0.44	0.44	0.45	0.45
	q7	2274	2220	2173	2133	2097	2066	2038	2013	1991	1971	1952
	F7	0.36	0.37	0.38	0.39	0.39	0.40	0.40	0.41	0.41	0.42	0.42
20	q4	2132	2086	2047	2012	1983	1956	1933	1912	1893	1876	1860
	F4	0.35	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.40	0.40	0.40
	q7	2384	2318	2262	2214	2171	2134	2100	2071	2044	2020	1997
	F7	0.32	0.32	0.33	0.34	0.35	0.35	0.36	0.36	0.37	0.37	0.38
18	q4	2285	2224	2171	2126	2086	2051	2020	1992	1967	1944	1923
	F4	0.29	0.29	0.30	0.31	0.31	0.32	0.32	0.33	0.33	0.34	0.34
	q7	2620	2533	2459	2394	2337	2287	2243	2203	2168	2135	2106
	F7	0.25	0.26	0.27	0.27	0.28	0.29	0.29	0.30	0.30	0.31	0.31
16	q4	2454	2377	2312	2255	2205	2161	2122	2087	2055	2027	2001
	F4	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.29	0.29
	q7	2873	2764	2671	2590	2519	2457	2401	2352	2307	2267	2230
	F7	0.20	0.21	0.22	0.23	0.23	0.24	0.24	0.25	0.25	0.26	0.26

PLB™ or B FORMLOK™

- 4½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
42.7 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	1	5'-11"	306	263	227	198	174	153	135	120	107	95	85
	2	6'-11"	348	304	227	198	174	153	135	120	107	95	85
	3	7'-0"	348	304	269	198	174	153	135	120	107	95	85
20	1	7'-1"	365	319	282	210	184	162	144	128	114	102	91
	2	8'-3"	365	319	282	252	226	162	144	128	114	102	91
	3	8'-4"	365	319	282	252	226	162	144	128	114	102	91
18	1	8'-1"	393	344	304	271	244	178	158	140	125	112	101
	2	9'-9"	393	344	304	271	244	220	200	183	125	112	101
	3	10'-0"	393	344	304	271	244	220	200	183	168	112	101
16	1	8'-8"	391	342	302	269	242	219	156	138	124	111	99
	2	10'-9"	391	342	302	269	242	219	199	182	167	154	99
	3	10'-9"	391	342	302	269	242	219	199	182	167	154	99

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

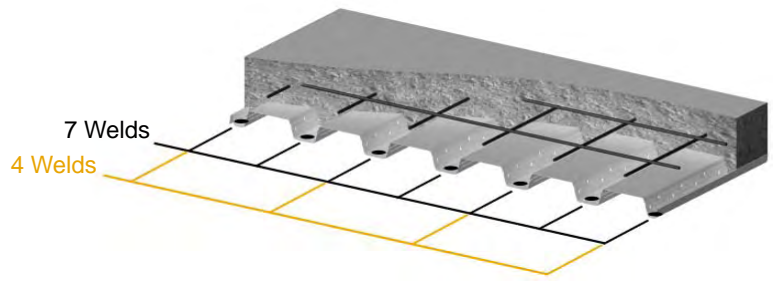
Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	q4	2304	2265	2232	2204	2179	2157	2138	2120	2104	2090	2077
	F4	0.36	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.39	0.39	0.40
	q7	2513	2459	2412	2372	2336	2305	2277	2252	2230	2210	2191
	F7	0.33	0.34	0.34	0.35	0.35	0.36	0.36	0.37	0.37	0.37	0.38
20	q4	2371	2325	2286	2252	2222	2195	2172	2151	2132	2115	2099
	F4	0.32	0.32	0.33	0.33	0.34	0.34	0.35	0.35	0.35	0.36	0.36
	q7	2623	2557	2501	2453	2410	2373	2340	2310	2283	2259	2237
	F7	0.29	0.29	0.30	0.31	0.31	0.32	0.32	0.33	0.33	0.33	0.34
18	q4	2524	2463	2410	2365	2325	2290	2259	2231	2206	2183	2162
	F4	0.26	0.26	0.27	0.28	0.28	0.28	0.29	0.29	0.30	0.30	0.30
	q7	2859	2772	2698	2633	2576	2527	2482	2442	2407	2374	2345
	F7	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.27	0.28
16	q4	2693	2616	2551	2494	2444	2400	2361	2326	2295	2266	2240
	F4	0.22	0.22	0.23	0.23	0.24	0.24	0.25	0.25	0.25	0.26	0.26
	q7	3112	3003	2910	2829	2758	2696	2640	2591	2546	2506	2469
	F7	0.19	0.19	0.20	0.21	0.21	0.22	0.22	0.22	0.23	0.23	0.24

B
4½"

PLB™ or B FORMLOK™

- 5 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
48.7 psf
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	1	5'-8"	347	297	257	224	197	173	153	136	121	108	96
	2	6'-8"	393	344	257	224	197	173	153	136	121	108	96
	3	6'-9"	393	344	257	224	197	173	153	136	121	108	96
20	1	6'-9"	400	361	272	237	208	184	163	145	129	115	103
	2	7'-11"	400	361	319	284	208	184	163	145	129	115	103
	3	8'-0"	400	361	319	284	255	184	163	145	129	115	103
18	1	7'-9"	400	389	344	306	227	201	178	159	142	127	114
	2	9'-4"	400	389	344	306	275	249	226	159	142	127	114
	3	9'-7"	400	389	344	306	275	249	226	207	142	127	114
16	1	8'-4"	400	386	341	304	273	198	176	157	140	125	112
	2	10'-4"	400	386	341	304	273	247	224	205	188	125	112
	3	10'-4"	400	386	341	304	273	247	224	205	188	125	112

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

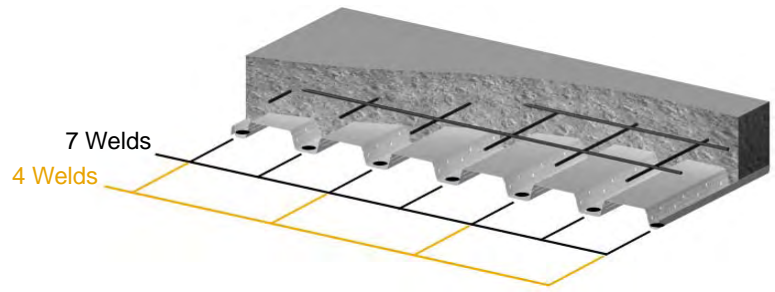
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	q4	2543	2504	2472	2443	2418	2396	2377	2359	2343	2329	2316
	F4	0.32	0.33	0.33	0.34	0.34	0.34	0.35	0.35	0.35	0.35	0.36
	q7	2752	2698	2651	2611	2575	2544	2516	2492	2469	2449	2431
	F7	0.30	0.31	0.31	0.32	0.32	0.32	0.33	0.33	0.33	0.34	0.34
20	q4	2610	2564	2525	2491	2461	2434	2411	2390	2371	2354	2338
	F4	0.29	0.29	0.30	0.30	0.31	0.31	0.31	0.31	0.32	0.32	0.32
	q7	2862	2796	2740	2692	2649	2612	2579	2549	2522	2498	2476
	F7	0.26	0.27	0.27	0.28	0.28	0.29	0.29	0.30	0.30	0.30	0.30
18	q4	2763	2702	2650	2604	2564	2529	2498	2470	2445	2422	2401
	F4	0.24	0.24	0.25	0.25	0.25	0.26	0.26	0.26	0.27	0.27	0.27
	q7	3098	3011	2937	2872	2816	2766	2721	2682	2646	2613	2584
	F7	0.21	0.22	0.22	0.23	0.23	0.24	0.24	0.24	0.25	0.25	0.25
16	q4	2932	2856	2790	2733	2683	2639	2600	2565	2534	2505	2479
	F4	0.20	0.20	0.21	0.21	0.22	0.22	0.22	0.23	0.23	0.23	0.24
	q7	3351	3242	3149	3068	2997	2935	2880	2830	2785	2745	2708
	F7	0.17	0.18	0.19	0.19	0.19	0.20	0.20	0.21	0.21	0.21	0.22

PLB™ or B FORMLOK™

- 6 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
60.8 psf
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	1	5'-4"	400	369	320	279	244	215	191	169	151	134	120
	2	6'-2"	400	369	320	279	244	215	191	169	151	134	120
	3	6'-3"	400	369	320	279	244	215	191	169	151	134	120
20	1	6'-3"	400	389	337	295	259	228	202	180	160	143	128
	2	7'-4"	400	400	395	295	259	228	202	180	160	143	128
	3	7'-5"	400	400	395	295	259	228	202	180	160	143	128
18	1	7'-3"	400	400	400	321	282	250	222	197	177	158	142
	2	8'-8"	400	400	400	379	340	308	222	197	177	158	142
	3	8'-11"	400	400	400	379	340	308	222	197	177	158	142
16	1	7'-10"	400	400	400	376	279	246	219	195	174	156	140
	2	9'-7"	400	400	400	376	337	305	277	253	174	156	140
	3	9'-8"	400	400	400	376	337	305	277	253	174	156	140

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

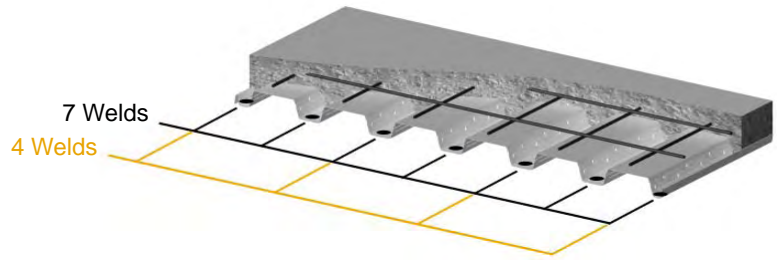
Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	q4	3021	2983	2950	2921	2896	2874	2855	2837	2822	2807	2794
	F4	0.27	0.28	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.29
	q7	3230	3176	3129	3089	3053	3022	2995	2970	2947	2927	2909
	F7	0.26	0.26	0.26	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28
20	q4	3088	3042	3003	2969	2939	2912	2889	2868	2849	2832	2817
	F4	0.24	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.27	0.27
	q7	3340	3275	3219	3170	3128	3090	3057	3027	3000	2976	2954
	F7	0.23	0.23	0.23	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.25
18	q4	3241	3180	3128	3082	3042	3007	2976	2948	2923	2900	2880
	F4	0.20	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.23
	q7	3577	3490	3415	3350	3294	3244	3199	3160	3124	3092	3062
	F7	0.18	0.19	0.19	0.19	0.20	0.20	0.20	0.21	0.21	0.21	0.21
16	q4	3410	3334	3268	3211	3161	3117	3078	3043	3012	2983	2957
	F4	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.20	0.20
	q7	3829	3721	3627	3546	3476	3413	3358	3308	3263	3223	3186
	F7	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.18	0.18

B
6"
NW

PLB™ or B FORMLOK™

- 3½ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
23.2 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	1	7'-0"	261	228	202	156	137	122	109	97	87	78	71
	2	8'-3"	261	228	202	180	161	122	109	97	87	78	71
	3	8'-4"	261	228	202	180	161	122	109	97	87	78	71
20	1	8'-5"	274	240	212	189	170	129	115	103	93	84	75
	2	9'-10"	274	240	212	189	170	153	140	119	93	84	75
	3	10'-0"	274	240	212	189	170	153	140	119	102	84	75
18	1	9'-8"	297	260	230	205	184	166	151	135	102	92	83
	2	11'-7"	297	260	230	205	184	166	151	135	116	100	87
	3	11'-9"	297	260	230	205	184	166	151	135	116	100	87
16	1	10'-4"	297	260	230	205	184	166	151	138	127	91	83
	2	12'-9"	297	260	230	205	184	166	151	138	127	111	96
	3	12'-4"	297	260	230	205	184	166	151	138	127	111	96

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

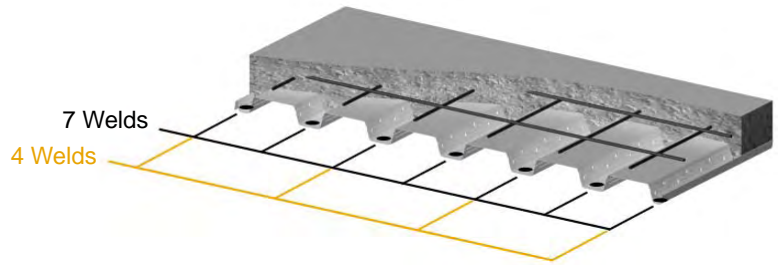
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	q4	1501	1463	1430	1401	1376	1354	1335	1317	1302	1287	1275
	F4	0.55	0.56	0.58	0.59	0.60	0.61	0.62	0.63	0.63	0.64	0.65
	q7	1711	1656	1609	1569	1534	1502	1475	1450	1427	1407	1389
	F7	0.48	0.50	0.51	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.59
20	q4	1569	1523	1483	1449	1419	1393	1369	1348	1329	1312	1297
	F4	0.48	0.49	0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.57	0.58
	q7	1820	1755	1699	1650	1608	1570	1537	1507	1480	1456	1434
	F7	0.41	0.43	0.44	0.46	0.47	0.48	0.49	0.50	0.51	0.52	0.52
18	q4	1722	1660	1608	1562	1523	1487	1456	1428	1403	1380	1360
	F4	0.38	0.39	0.41	0.42	0.43	0.44	0.45	0.46	0.46	0.47	0.48
	q7	2057	1970	1895	1830	1774	1724	1680	1640	1604	1572	1542
	F7	0.32	0.33	0.34	0.36	0.37	0.38	0.39	0.40	0.41	0.41	0.42
16	q4	1890	1814	1748	1691	1641	1597	1558	1523	1492	1463	1438
	F4	0.31	0.32	0.33	0.34	0.36	0.36	0.37	0.38	0.39	0.40	0.41
	q7	2310	2201	2107	2027	1956	1893	1838	1788	1743	1703	1666
	F7	0.25	0.26	0.28	0.29	0.30	0.31	0.32	0.33	0.33	0.34	0.35

PLB™ or B FORMLOK™

- 4 in. TOTAL SLAB DEPTH
- Light Weight Concrete (145 pcf)
27.8 psf
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	1	6'-9"	303	265	206	181	160	142	126	113	101	91	82
	2	7'-11"	303	265	234	209	160	142	126	113	101	91	82
	3	8'-0"	303	265	234	209	188	142	126	113	101	91	82
20	1	8'-1"	318	279	246	220	197	150	134	120	108	97	88
	2	9'-5"	318	279	246	220	197	178	162	120	108	97	88
	3	9'-7"	318	279	246	220	197	178	162	148	108	97	88
18	1	9'-2"	344	301	266	237	213	192	175	131	118	106	96
	2	11'-1"	344	301	266	237	213	192	175	160	147	135	125
	3	11'-4"	344	301	266	237	213	192	175	160	147	135	125
16	1	9'-10"	342	300	265	236	212	192	174	159	117	105	95
	2	12'-3"	342	300	265	236	212	192	174	159	146	135	125
	3	11'-11"	342	300	265	236	212	192	174	159	146	135	125

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

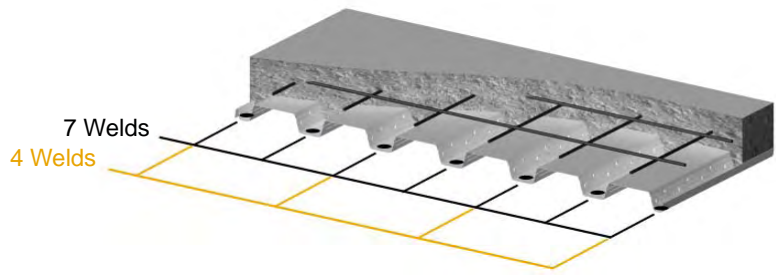
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	q4	1659	1621	1588	1559	1534	1512	1493	1475	1460	1445	1433
	F4	0.50	0.51	0.52	0.53	0.54	0.55	0.55	0.56	0.56	0.57	0.58
	q7	1869	1814	1767	1727	1692	1660	1633	1608	1585	1565	1547
	F7	0.44	0.45	0.47	0.48	0.49	0.50	0.50	0.51	0.52	0.53	0.53
20	q4	1726	1680	1641	1607	1577	1551	1527	1506	1487	1470	1455
	F4	0.44	0.45	0.46	0.47	0.48	0.49	0.49	0.50	0.51	0.51	0.52
	q7	1978	1913	1857	1808	1766	1728	1695	1665	1638	1614	1592
	F7	0.38	0.39	0.41	0.42	0.43	0.44	0.44	0.45	0.46	0.47	0.47
18	q4	1880	1818	1766	1720	1681	1645	1614	1586	1561	1538	1518
	F4	0.35	0.36	0.37	0.38	0.39	0.40	0.40	0.41	0.42	0.42	0.43
	q7	2215	2128	2053	1988	1932	1882	1838	1798	1762	1730	1700
	F7	0.29	0.31	0.32	0.33	0.34	0.35	0.35	0.36	0.37	0.38	0.38
16	q4	2048	1972	1906	1849	1799	1755	1716	1681	1650	1621	1596
	F4	0.28	0.30	0.31	0.32	0.32	0.33	0.34	0.35	0.35	0.36	0.37
	q7	2468	2359	2265	2185	2114	2051	1996	1946	1901	1861	1824
	F7	0.24	0.25	0.26	0.27	0.28	0.28	0.29	0.30	0.31	0.31	0.32

PLB™ or B FORMLOK™

- 4¾ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
34.7 psf
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	1	6'-4"	370	290	253	221	195	173	155	138	124	112	101
	2	7'-5"	370	324	286	221	195	173	155	138	124	112	101
	3	7'-6"	370	324	286	255	195	173	155	138	124	112	101
20	1	7'-7"	389	340	301	268	206	183	163	146	132	119	107
	2	8'-10"	389	340	301	268	241	217	163	146	132	119	107
	3	8'-11"	389	340	301	268	241	217	163	146	132	119	107
18	1	8'-8"	400	366	324	289	259	234	178	160	144	130	118
	2	10'-5"	400	366	324	289	259	234	213	195	179	130	118
	3	10'-8"	400	366	324	289	259	234	213	195	179	165	118
16	1	9'-3"	400	364	321	287	257	233	211	158	142	128	116
	2	11'-6"	400	364	321	287	257	233	211	193	177	164	151
	3	11'-5"	400	364	321	287	257	233	211	193	177	164	151

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

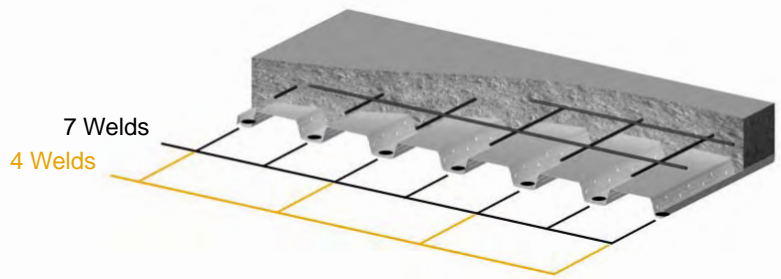
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	q4	1896	1858	1825	1796	1771	1749	1730	1712	1697	1682	1669
	F4	0.43	0.44	0.45	0.46	0.47	0.47	0.48	0.48	0.49	0.49	0.49
	q7	2105	2051	2004	1964	1929	1897	1870	1845	1822	1802	1784
	F7	0.39	0.40	0.41	0.42	0.43	0.43	0.44	0.45	0.45	0.46	0.46
20	q4	1963	1917	1878	1844	1814	1788	1764	1743	1724	1707	1692
	F4	0.38	0.39	0.40	0.41	0.41	0.42	0.43	0.43	0.44	0.44	0.44
	q7	2215	2150	2094	2045	2003	1965	1932	1902	1875	1851	1829
	F7	0.34	0.35	0.36	0.37	0.38	0.38	0.39	0.40	0.40	0.41	0.41
18	q4	2117	2055	2003	1957	1917	1882	1851	1823	1798	1775	1755
	F4	0.31	0.32	0.33	0.33	0.34	0.35	0.35	0.36	0.36	0.37	0.37
	q7	2452	2365	2290	2225	2169	2119	2074	2035	1999	1967	1937
	F7	0.27	0.28	0.28	0.29	0.30	0.31	0.31	0.32	0.33	0.33	0.34
16	q4	2285	2209	2143	2086	2036	1992	1953	1918	1887	1858	1833
	F4	0.26	0.26	0.27	0.28	0.29	0.29	0.30	0.30	0.31	0.31	0.32
	q7	2705	2596	2502	2421	2351	2288	2233	2183	2138	2098	2061
	F7	0.22	0.22	0.23	0.24	0.25	0.25	0.26	0.27	0.27	0.28	0.28

PLB™ or B FORMLOK™

- 5¾ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
43.8 psf
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	3"	4"
22	1.9	1.8	0.177	0.192	0.176	0.188	935	1076	1163	1559	1671
20	2.3	2.2	0.219	0.231	0.230	0.237	1301	1492	1609	2190	2340
18	2.9	2.8	0.302	0.306	0.314	0.331	2181	2484	2667	3714	3950
16	3.5	3.4	0.381	0.381	0.399	0.410	3265	3699	3955	5607	5938

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	1	5'-11"	400	364	317	278	245	218	194	174	156	141	127
	2	6'-11"	400	400	317	278	245	218	194	174	156	141	127
	3	7'-0"	400	400	358	278	245	218	194	174	156	141	127
20	1	7'-1"	400	400	376	293	259	230	205	184	165	149	135
	2	8'-3"	400	400	376	335	301	230	205	184	165	149	135
	3	8'-4"	400	400	376	335	301	230	205	184	165	149	135
18	1	8'-1"	400	400	400	361	324	250	223	201	181	163	148
	2	9'-8"	400	400	400	361	324	293	266	243	181	163	148
	3	10'-0"	400	400	400	361	324	293	266	243	223	163	148
16	1	8'-8"	400	400	400	358	321	290	221	198	178	161	146
	2	10'-9"	400	400	400	358	321	290	264	241	221	204	146
	3	10'-8"	400	400	400	358	321	290	264	241	221	204	146

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

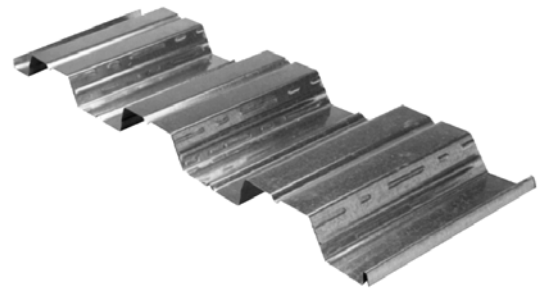
Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)										
		6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
22	q4	2212	2174	2141	2112	2087	2065	2046	2028	2013	1998	1985
	F4	0.37	0.38	0.39	0.39	0.39	0.40	0.40	0.41	0.41	0.41	0.42
	q7	2421	2367	2320	2280	2245	2213	2186	2161	2138	2118	2100
	F7	0.34	0.35	0.36	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.39
20	q4	2279	2233	2194	2160	2130	2104	2080	2059	2040	2023	2008
	F4	0.33	0.34	0.34	0.35	0.35	0.36	0.36	0.37	0.37	0.37	0.37
	q7	2531	2466	2410	2361	2319	2281	2248	2218	2191	2167	2145
	F7	0.30	0.31	0.31	0.32	0.32	0.33	0.33	0.34	0.34	0.35	0.35
18	q4	2433	2371	2319	2273	2233	2198	2167	2139	2114	2091	2071
	F4	0.27	0.27	0.28	0.29	0.29	0.30	0.30	0.30	0.31	0.31	0.31
	q7	2768	2681	2606	2541	2485	2435	2390	2351	2315	2283	2253
	F7	0.24	0.24	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.29	0.29
16	q4	2601	2525	2459	2402	2352	2308	2269	2234	2203	2174	2149
	F4	0.22	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.26	0.27	0.27
	q7	3021	2912	2818	2737	2667	2604	2549	2499	2454	2414	2377
	F7	0.19	0.20	0.21	0.21	0.22	0.22	0.23	0.23	0.24	0.24	0.25

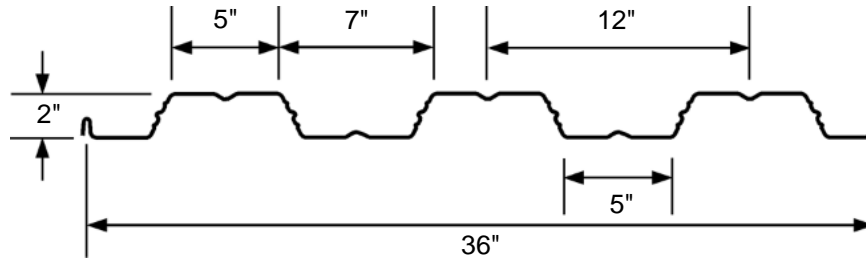
B
LW
5¾"

PLW2™ or W2 FORMLOK™

- 2" Deep Deck
- Galvanized or Phosphatized/Painted



Dimensions



W2 SUMMARY

Deck Weight and Section Properties

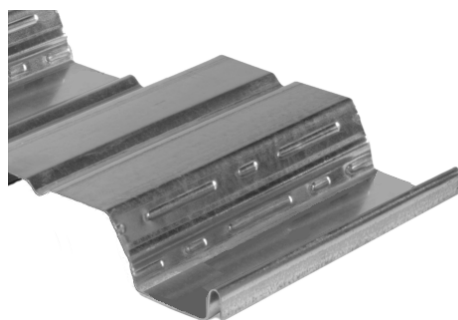
Gage	Weight (psf)		I_d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.⁴/ft)	Multiple Spans (in.⁴/ft)	+ S_{eff} (in.³/ft)	- S_{eff} (in.³/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Note: Section properties are based on $F_y = 50,000$ psi.

Attachments Pattern to Supports

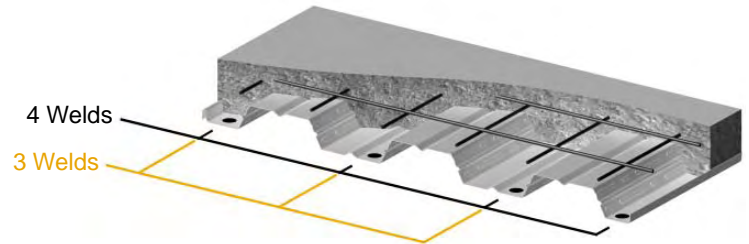


Embossment Pattern



PLW2™ or W2 FORMLOK™

- 4 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
36.3 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
22	1	7'-9"	261	232	172	152	135	120	107	96	86	78	70
	2	9'-0"	261	232	209	189	171	120	107	96	86	78	70
	3	9'-2"	261	232	209	189	171	120	107	96	86	78	70
21	1	8'-6"	292	260	234	211	155	139	125	112	101	91	82
	2	9'-8"	292	260	234	211	192	175	125	112	101	91	82
	3	10'-0"	292	260	234	211	192	175	161	112	101	91	82
20	1	9'-3"	324	288	259	234	213	158	142	128	116	105	95
	2	10'-3"	324	288	259	234	213	195	179	128	116	105	95
	3	10'-8"	324	288	259	234	213	195	179	165	116	105	95
19	1	10'-0"	389	347	311	275	242	214	190	161	146	133	121
	2	11'-5"	389	347	311	275	242	214	190	169	152	133	121
	3	11'-10"	389	347	311	275	242	214	190	169	152	136	121
18	1	10'-5"	400	386	335	293	258	229	203	181	162	146	131
	2	12'-3"	400	386	335	293	258	229	203	181	162	146	131
	3	12'-5"	400	386	335	293	258	229	203	181	162	146	131
16	1	11'-2"	400	396	356	322	292	261	233	208	187	157	143
	2	13'-11"	400	396	356	322	292	261	233	208	187	168	148
	3	13'-1"	400	396	356	322	292	261	233	208	187	168	148

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

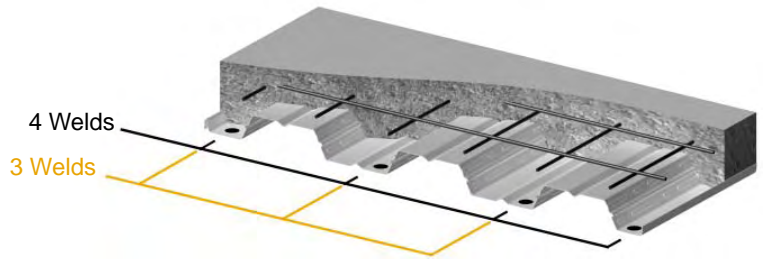
Allowable Diaphragm Shear Values, q (plf)

Gage	Welds	Span (ft-in.)										
		7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
22	q3	1635	1619	1606	1594	1583	1573	1565	1557	1550	1543	1537
	q4	1762	1734	1708	1686	1667	1649	1633	1619	1606	1594	1583
21	q3	1637	1620	1605	1592	1580	1570	1560	1552	1544	1537	1530
	q4	1788	1756	1729	1704	1683	1663	1646	1630	1616	1602	1590
20	q3	1643	1624	1608	1593	1580	1569	1559	1549	1541	1533	1526
	q4	1816	1781	1751	1725	1701	1680	1661	1643	1628	1613	1600
19	q3	1659	1637	1618	1602	1587	1573	1561	1550	1540	1531	1523
	q4	1877	1836	1801	1770	1742	1718	1696	1675	1657	1640	1625
18	q3	1678	1653	1632	1613	1596	1581	1568	1556	1545	1534	1525
	q4	1931	1886	1847	1812	1781	1753	1729	1706	1686	1667	1650
16	q3	1733	1702	1675	1652	1631	1612	1595	1580	1566	1553	1541
	q4	2071	2015	1965	1922	1883	1848	1817	1789	1763	1740	1718

PLW2 and W2 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

PLW2™ or W2 FORMLOK™

- 4½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
42.3 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)											
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	1	7'-5"	294	220	194	171	152	135	121	108	97	87	78	
	2	8'-7"	294	262	235	213	152	135	121	108	97	87	78	
	3	8'-9"	294	262	235	213	152	135	121	108	97	87	78	
21	1	8'-1"	329	293	263	196	174	156	140	125	113	102	92	
	2	9'-3"	329	293	263	238	216	156	140	125	113	102	92	
	3	9'-6"	329	293	263	238	216	198	140	125	113	102	92	
20	1	8'-9"	364	324	291	263	198	177	159	143	130	117	106	
	2	9'-10"	364	324	291	263	239	219	159	143	130	117	106	
	3	10'-2"	364	324	291	263	239	219	201	143	130	117	106	
19	1	9'-7"	400	389	349	316	287	262	199	180	163	149	136	
	2	10'-11"	400	389	349	316	287	262	241	222	163	149	136	
	3	11'-4"	400	389	349	316	287	262	241	222	206	149	136	
18	1	10'-0"	400	400	399	361	328	300	275	211	192	176	161	
	2	11'-9"	400	400	399	361	328	300	275	254	235	210	161	
	3	12'-0"	400	400	399	361	328	300	275	254	235	210	185	
16	1	10'-8"	400	400	397	359	327	298	274	253	191	174	159	
	2	13'-6"	400	400	397	359	327	298	274	253	234	217	197	
	3	12'-8"	400	400	397	359	327	298	274	253	234	217	197	

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

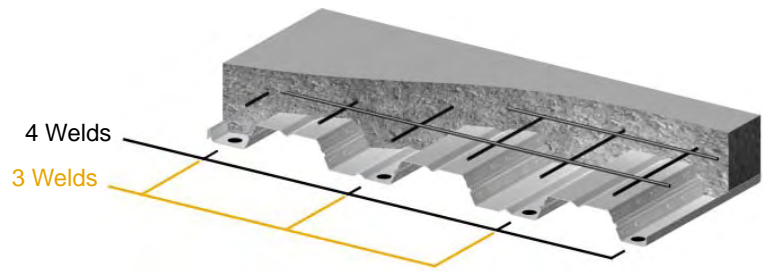
Gage	Welds	Span (ft-in.)											
		7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	q3	1874	1858	1845	1833	1822	1812	1804	1796	1789	1782	1777	
	q4	2001	1973	1947	1925	1906	1888	1872	1858	1845	1833	1822	
21	q3	1876	1859	1844	1831	1819	1809	1799	1791	1783	1776	1769	
	q4	2027	1995	1968	1943	1922	1902	1885	1869	1855	1842	1829	
20	q3	1882	1863	1847	1832	1819	1808	1798	1788	1780	1772	1765	
	q4	2055	2020	1990	1964	1940	1919	1900	1882	1867	1853	1839	
19	q3	1898	1877	1857	1841	1826	1812	1800	1789	1779	1770	1762	
	q4	2116	2075	2040	2009	1982	1957	1935	1915	1896	1880	1864	
18	q3	1917	1892	1871	1852	1835	1820	1807	1795	1784	1774	1764	
	q4	2170	2125	2086	2051	2020	1992	1968	1945	1925	1906	1889	
16	q3	1972	1941	1914	1891	1870	1851	1834	1819	1805	1792	1781	
	q4	2310	2254	2204	2161	2122	2087	2056	2028	2002	1979	1957	

PLW2 and W2 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W2
4½"
NW

PLW2™ or W2 FORMLOK™

- 5 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
48.3 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
22	1	7'-1"	329	246	216	191	169	151	135	120	108	97	87
	2	8'-3"	329	293	263	191	169	151	135	120	108	97	87
	3	8'-4"	329	293	263	191	169	151	135	120	108	97	87
21	1	7'-9"	367	328	247	219	195	174	156	140	126	114	103
	2	8'-10"	367	328	294	266	195	174	156	140	126	114	103
	3	9'-2"	367	328	294	266	242	174	156	140	126	114	103
20	1	8'-5"	400	363	326	247	221	198	178	160	145	131	119
	2	9'-5"	400	363	326	294	268	198	178	160	145	131	119
	3	9'-9"	400	363	326	294	268	245	178	160	145	131	119
19	1	9'-3"	400	400	390	353	321	246	222	201	182	166	151
	2	10'-6"	400	400	390	353	321	293	269	248	182	166	151
	3	10'-10"	400	400	390	353	321	293	269	248	182	166	151
18	1	9'-7"	400	400	400	400	366	334	259	235	214	196	179
	2	11'-3"	400	400	400	400	366	334	307	283	262	196	179
	3	11'-8"	400	400	400	400	366	334	307	283	262	243	179
16	1	10'-4"	400	400	400	400	364	332	305	233	212	194	177
	2	12'-11"	400	400	400	400	364	332	305	281	260	242	225
	3	12'-4"	400	400	400	400	364	332	305	281	260	242	225

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

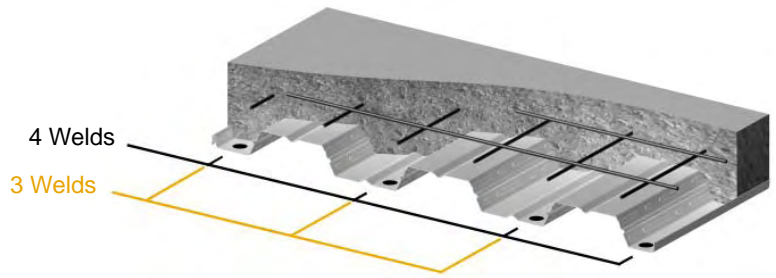
Allowable Diaphragm Shear Values, q (plf)

Gage	Welds	Span (ft-in.)										
		7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
22	q3	2113	2097	2084	2072	2061	2051	2043	2035	2028	2022	2016
	q4	2240	2212	2187	2164	2145	2127	2111	2097	2084	2072	2061
21	q3	2116	2098	2083	2070	2058	2048	2038	2030	2022	2015	2009
	q4	2266	2234	2207	2182	2161	2141	2124	2108	2094	2081	2069
20	q3	2121	2102	2086	2071	2059	2047	2037	2027	2019	2011	2004
	q4	2294	2259	2229	2203	2179	2158	2139	2122	2106	2092	2078
19	q3	2137	2116	2097	2080	2065	2051	2039	2028	2019	2009	2001
	q4	2355	2314	2279	2248	2221	2196	2174	2154	2135	2119	2103
18	q3	2156	2131	2110	2091	2074	2059	2046	2034	2023	2013	2003
	q4	2409	2364	2325	2290	2259	2232	2207	2184	2164	2145	2128
16	q3	2211	2180	2154	2130	2109	2090	2073	2058	2044	2031	2020
	q4	2549	2493	2443	2400	2361	2326	2295	2267	2241	2218	2196

PLW2 and W2 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

PLW2™ or W2 FORMLOK™

- 5½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
54.4 psf
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
22	1	6'-10"	313	273	240	212	188	167	149	134	120	108	97
	2	7'-11"	365	325	240	212	188	167	149	134	120	108	97
	3	8'-0"	365	325	292	212	188	167	149	134	120	108	97
21	1	7'-5"	400	311	274	243	216	193	173	155	140	126	114
	2	8'-6"	400	364	326	295	216	193	173	155	140	126	114
	3	8'-9"	400	364	326	295	216	193	173	155	140	126	114
20	1	8'-1"	400	400	361	274	245	219	197	177	160	145	132
	2	9'-0"	400	400	361	327	297	219	197	177	160	145	132
	3	9'-4"	400	400	361	327	297	219	197	177	160	145	132
19	1	8'-11"	400	400	400	391	303	272	246	222	202	184	168
	2	10'-1"	400	400	400	391	355	325	298	222	202	184	168
	3	10'-5"	400	400	400	391	355	325	298	222	202	184	168
18	1	9'-3"	400	400	400	400	400	318	287	261	237	217	198
	2	10'-10"	400	400	400	400	400	370	340	314	237	217	198
	3	11'-2"	400	400	400	400	400	370	340	314	290	217	198
16	1	9'-11"	400	400	400	400	400	368	284	258	235	214	196
	2	12'-5"	400	400	400	400	400	368	338	311	288	267	249
	3	12'-0"	400	400	400	400	400	368	338	311	288	267	249

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

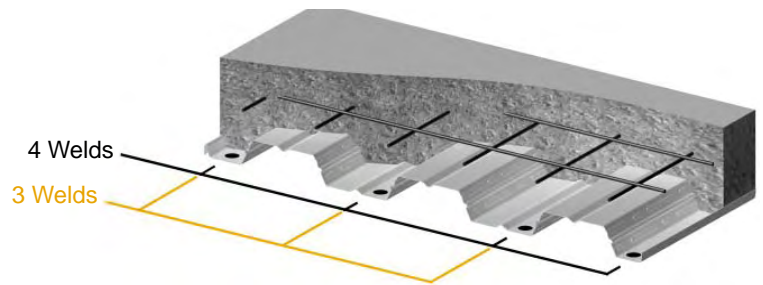
Gage	Welds	Span (ft-in.)										
		7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
22	q3	2352	2336	2323	2311	2300	2291	2282	2274	2267	2261	2255
	q4	2480	2451	2426	2403	2384	2366	2350	2336	2323	2311	2300
21	q3	2355	2337	2323	2309	2298	2287	2278	2269	2261	2254	2248
	q4	2505	2474	2446	2422	2400	2380	2363	2347	2333	2320	2308
20	q3	2360	2341	2325	2310	2298	2286	2276	2267	2258	2250	2243
	q4	2533	2499	2468	2442	2418	2397	2378	2361	2345	2331	2318
19	q3	2376	2355	2336	2319	2304	2290	2278	2268	2258	2249	2240
	q4	2594	2554	2518	2487	2460	2435	2413	2393	2374	2358	2342
18	q3	2395	2370	2349	2330	2314	2299	2285	2273	2262	2252	2242
	q4	2648	2603	2564	2529	2498	2471	2446	2423	2403	2384	2367
16	q3	2450	2419	2393	2369	2348	2329	2312	2297	2283	2270	2259
	q4	2788	2732	2682	2639	2600	2565	2534	2506	2480	2457	2435

PLW2 and W2 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W2
5½"
NW

PLW2™ or W2 FORMLOK™

- 6½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
66.5 psf
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
22	1	6'-4"	377	329	290	256	227	202	180	161	145	130	117
	2	7'-5"	400	329	290	256	227	202	180	161	145	130	117
	3	7'-6"	400	392	290	256	227	202	180	161	145	130	117
21	1	6'-11"	400	375	331	293	261	233	209	187	169	152	138
	2	7'-11"	400	400	331	293	261	233	209	187	169	152	138
	3	8'-2"	400	400	393	293	261	233	209	187	169	152	138
20	1	7'-6"	400	400	372	331	295	264	237	214	193	175	159
	2	8'-5"	400	400	400	331	295	264	237	214	193	175	159
	3	8'-9"	400	400	400	393	295	264	237	214	193	175	159
19	1	8'-5"	400	400	400	400	365	328	296	268	243	221	202
	2	9'-5"	400	400	400	400	400	328	296	268	243	221	202
	3	9'-9"	400	400	400	400	400	391	296	268	243	221	202
18	1	8'-9"	400	400	400	400	400	382	346	314	286	261	239
	2	10'-1"	400	400	400	400	400	400	400	314	286	261	239
	3	10'-5"	400	400	400	400	400	400	400	314	286	261	239
16	1	9'-4"	400	400	400	400	400	378	342	310	282	258	236
	2	11'-7"	400	400	400	400	400	400	400	374	346	321	236
	3	11'-6"	400	400	400	400	400	400	400	374	346	321	236

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

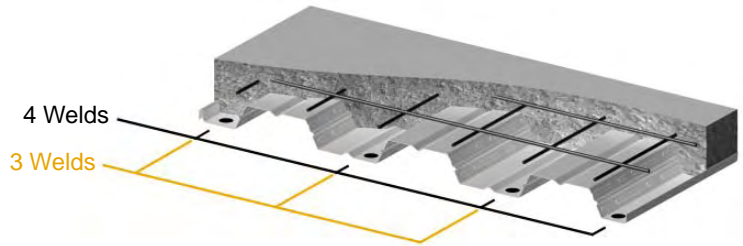
Allowable Diaphragm Shear Values, q (plf)

Gage	Welds	Span (ft-in.)										
		7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
22	q3	2830	2815	2801	2789	2778	2769	2760	2752	2745	2739	2733
	q4	2958	2929	2904	2882	2862	2844	2828	2814	2801	2789	2778
21	q3	2833	2816	2801	2787	2776	2765	2756	2747	2739	2732	2726
	q4	2983	2952	2924	2900	2878	2859	2841	2825	2811	2798	2786
20	q3	2838	2819	2803	2789	2776	2764	2754	2745	2736	2728	2721
	q4	3011	2977	2947	2920	2896	2875	2856	2839	2823	2809	2796
19	q3	2855	2833	2814	2797	2782	2769	2757	2746	2736	2727	2718
	q4	3072	3032	2997	2966	2938	2913	2891	2871	2853	2836	2821
18	q3	2873	2849	2827	2808	2792	2777	2763	2751	2740	2730	2721
	q4	3126	3081	3042	3007	2976	2949	2924	2901	2881	2862	2845
16	q3	2928	2898	2871	2847	2826	2807	2790	2775	2761	2749	2737
	q4	3267	3210	3161	3117	3078	3044	3012	2984	2958	2935	2914

PLW2 and W2 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

PLW2™ or W2 FORMLOK™

- 4 in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
27.5 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)											
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	1	8'-6"	261	232	209	189	144	129	116	105	95	86	78	
	2	9'-10"	261	232	209	189	171	157	116	105	95	86	78	
	3	10'-1"	261	232	209	189	171	157	144	105	95	86	78	
21	1	9'-4"	292	260	234	211	192	147	133	120	109	100	90	
	2	10'-6"	292	260	234	211	192	175	156	134	109	100	90	
	3	10'-11"	292	260	234	211	192	175	156	134	109	100	90	
20	1	10'-2"	324	288	259	234	213	188	161	136	121	106	93	
	2	11'-2"	324	288	259	234	213	188	161	139	121	106	93	
	3	11'-7"	324	288	259	234	213	188	161	139	121	106	93	
19	1	10'-11"	389	347	308	270	237	201	173	149	130	113	100	
	2	12'-5"	389	347	308	270	237	201	173	149	130	113	100	
	3	12'-11"	389	347	308	270	237	201	173	149	130	113	100	
18	1	11'-4"	400	376	328	288	249	211	181	157	136	119	105	
	2	13'-5"	400	376	328	288	249	211	181	157	136	119	105	
	3	13'-3"	400	376	328	288	249	211	181	157	136	119	105	
16	1	11'-11"	400	396	356	322	276	235	201	174	151	132	116	
	2	14'-10"	400	396	356	322	276	235	201	174	151	132	116	
	3	13'-11"	400	396	356	322	276	235	201	174	151	132	116	

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

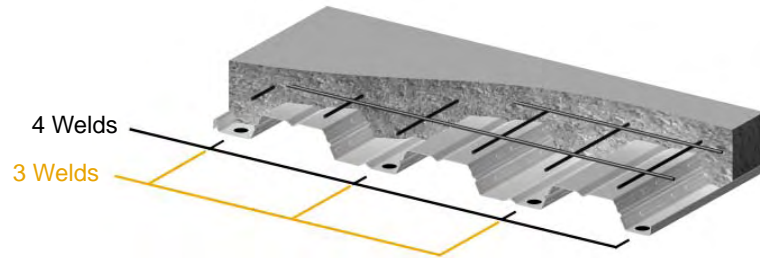
Gage	Welds	Span (ft-in.)											
		7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	q3	1310	1295	1281	1269	1258	1249	1240	1232	1225	1219	1213	
	q4	1438	1409	1384	1362	1342	1324	1309	1294	1281	1269	1258	
21	q3	1313	1296	1281	1268	1256	1245	1236	1227	1220	1212	1206	
	q4	1463	1432	1404	1380	1358	1339	1321	1305	1291	1278	1266	
20	q3	1318	1300	1283	1269	1256	1244	1234	1225	1216	1209	1201	
	q4	1491	1457	1427	1400	1376	1355	1336	1319	1303	1289	1276	
19	q3	1335	1313	1294	1277	1262	1249	1237	1226	1216	1207	1199	
	q4	1552	1512	1477	1446	1418	1393	1371	1351	1333	1316	1301	
18	q3	1353	1329	1307	1289	1272	1257	1243	1231	1220	1210	1201	
	q4	1607	1562	1522	1487	1457	1429	1404	1382	1361	1342	1325	
16	q3	1408	1378	1351	1327	1306	1287	1271	1255	1241	1229	1217	
	q4	1747	1690	1641	1597	1558	1524	1493	1464	1439	1415	1394	

PLW2 and W2 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W2^{4"}_{LW}

PLW2™ or W2 FORMLOK™

- 4½ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
32.1 psf
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)											
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	1	8'-1"	294	262	235	181	161	145	130	118	106	97	88	
	2	9'-5"	294	262	235	213	193	145	130	118	106	97	88	
	3	9'-7"	294	262	235	213	193	177	130	118	106	97	88	
21	1	8'-11"	329	293	263	238	184	166	149	135	123	112	102	
	2	10'-1"	329	293	263	238	216	198	181	135	123	112	102	
	3	10'-5"	329	293	263	238	216	198	181	135	123	112	102	
20	1	9'-8"	364	324	291	263	239	219	169	153	139	127	116	
	2	10'-9"	364	324	291	263	239	219	201	185	139	127	116	
	3	11'-1"	364	324	291	263	239	219	201	185	167	127	116	
19	1	10'-6"	400	389	349	316	287	262	238	205	173	156	138	
	2	11'-11"	400	389	349	316	287	262	238	205	179	156	138	
	3	12'-4"	400	389	349	316	287	262	238	205	179	156	138	
18	1	10'-10"	400	400	399	361	327	291	250	216	188	164	144	
	2	12'-10"	400	400	399	361	327	291	250	216	188	164	144	
	3	12'-10"	400	400	399	361	327	291	250	216	188	164	144	
16	1	11'-7"	400	400	397	359	327	298	274	238	207	182	160	
	2	14'-5"	400	400	397	359	327	298	274	238	207	182	160	
	3	13'-6"	400	400	397	359	327	298	274	238	207	182	160	

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

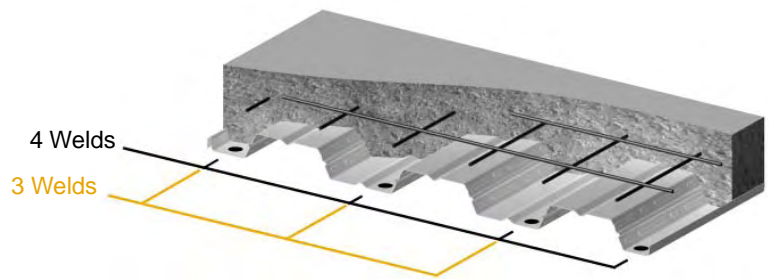
Allowable Diaphragm Shear Values, q (plf)

Gage	Welds	Span (ft-in.)											
		7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	q3	1468	1453	1439	1427	1416	1407	1398	1390	1383	1377	1371	
	q4	1596	1567	1542	1520	1500	1482	1467	1452	1439	1427	1416	
21	q3	1471	1454	1439	1426	1414	1403	1394	1385	1378	1370	1364	
	q4	1621	1590	1562	1538	1516	1497	1479	1463	1449	1436	1424	
20	q3	1476	1458	1441	1427	1414	1402	1392	1383	1374	1367	1359	
	q4	1649	1615	1585	1558	1534	1513	1494	1477	1461	1447	1434	
19	q3	1493	1471	1452	1435	1420	1407	1395	1384	1374	1365	1357	
	q4	1710	1670	1635	1604	1576	1551	1529	1509	1491	1474	1459	
18	q3	1511	1487	1465	1447	1430	1415	1401	1389	1378	1368	1359	
	q4	1765	1720	1680	1645	1615	1587	1562	1540	1519	1500	1483	
16	q3	1566	1536	1509	1485	1464	1445	1429	1413	1399	1387	1375	
	q4	1905	1848	1799	1755	1716	1682	1650	1622	1597	1573	1552	

PLW2 and W2 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

PLW2™ or W2 FORMLOK™

- 5¼ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
39.0 psf
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)											
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	1	7'-8"	347	309	240	213	190	171	154	139	125	114	103	
	2	8'-11"	347	309	277	251	190	171	154	139	125	114	103	
	3	9'-0"	347	309	277	251	228	171	154	139	125	114	103	
21	1	8'-5"	388	345	310	242	217	195	176	159	145	132	120	
	2	9'-6"	388	345	310	280	255	233	176	159	145	132	120	
	3	9'-10"	388	345	310	280	255	233	176	159	145	132	120	
20	1	9'-1"	400	382	343	310	282	220	199	180	164	150	137	
	2	10'-2"	400	382	343	310	282	258	237	180	164	150	137	
	3	10'-6"	400	382	343	310	282	258	237	218	164	150	137	
19	1	9'-11"	400	400	400	372	338	309	245	223	204	186	171	
	2	11'-3"	400	400	400	372	338	309	283	261	242	186	171	
	3	11'-8"	400	400	400	372	338	309	283	261	242	225	171	
18	1	10'-3"	400	400	400	400	385	352	323	260	237	218	200	
	2	12'-2"	400	400	400	400	385	352	323	298	276	251	221	
	3	12'-4"	400	400	400	400	385	352	323	298	276	251	221	
16	1	11'-0"	400	400	400	400	383	350	321	296	274	215	198	
	2	13'-10"	400	400	400	400	383	350	321	296	274	254	237	
	3	13'-0"	400	400	400	400	383	350	321	296	274	254	237	

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

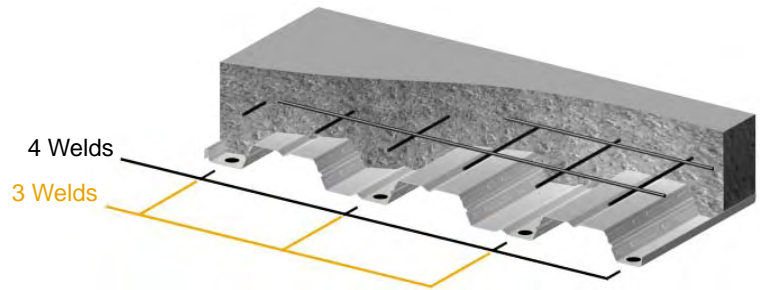
Gage	Welds	Span (ft-in.)											
		7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	q3	1705	1690	1676	1664	1653	1644	1635	1627	1620	1614	1608	
	q4	1833	1804	1779	1757	1737	1719	1703	1689	1676	1664	1653	
21	q3	1708	1691	1676	1663	1651	1640	1631	1622	1614	1607	1601	
	q4	1858	1827	1799	1775	1753	1734	1716	1700	1686	1673	1661	
20	q3	1713	1694	1678	1664	1651	1639	1629	1620	1611	1604	1596	
	q4	1886	1852	1822	1795	1771	1750	1731	1714	1698	1684	1671	
19	q3	1730	1708	1689	1672	1657	1644	1632	1621	1611	1602	1594	
	q4	1947	1907	1872	1841	1813	1788	1766	1746	1728	1711	1696	
18	q3	1748	1724	1702	1684	1667	1652	1638	1626	1615	1605	1596	
	q4	2002	1957	1917	1882	1852	1824	1799	1776	1756	1737	1720	
16	q3	1803	1773	1746	1722	1701	1682	1666	1650	1636	1624	1612	
	q4	2142	2085	2036	1992	1953	1919	1887	1859	1834	1810	1789	

PLW2 and W2 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W2
5¼"
LW

PLW2™ or W2 FORMLOK™

- 6¼ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
48.1 psf
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	5"	6"
22	1.8	1.7	0.340	0.340	0.246	0.256	412	475	527	793	855	911
21	2.0	1.9	0.381	0.381	0.283	0.294	492	565	626	945	1018	1084
20	2.1	2.0	0.422	0.422	0.323	0.333	577	661	732	1109	1193	1269
19	2.4	2.3	0.503	0.503	0.405	0.415	765	874	966	1472	1580	1678
18	2.7	2.5	0.564	0.564	0.471	0.481	940	1071	1182	1808	1939	2056
16	3.3	3.1	0.707	0.707	0.623	0.638	1424	1613	1773	2738	2926	3097

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)											
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	1	7'-2"	400	329	291	259	231	207	187	168	152	138	126	
	2	8'-4"	400	375	337	259	231	207	187	168	152	138	126	
	3	8'-5"	400	375	337	259	231	207	187	168	152	138	126	
21	1	7'-10"	400	400	331	294	263	237	214	193	176	160	146	
	2	8'-11"	400	400	376	340	263	237	214	193	176	160	146	
	3	9'-3"	400	400	376	340	309	237	214	193	176	160	146	
20	1	8'-6"	400	400	400	376	296	267	241	219	199	182	166	
	2	9'-6"	400	400	400	376	342	313	241	219	199	182	166	
	3	9'-10"	400	400	400	376	342	313	241	219	199	182	166	
19	1	9'-4"	400	400	400	400	400	328	297	270	247	226	207	
	2	10'-7"	400	400	400	400	400	374	343	317	247	226	207	
	3	10'-11"	400	400	400	400	400	374	343	317	247	226	207	
18	1	9'-8"	400	400	400	400	400	400	345	315	288	264	243	
	2	11'-4"	400	400	400	400	400	400	392	361	334	264	243	
	3	11'-9"	400	400	400	400	400	400	392	361	334	310	243	
16	1	10'-5"	400	400	400	400	400	400	388	311	284	261	240	
	2	13'-0"	400	400	400	400	400	400	388	358	331	308	286	
	3	12'-5"	400	400	400	400	400	400	388	358	331	308	286	

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

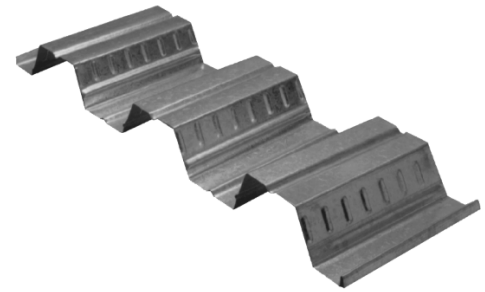
Allowable Diaphragm Shear Values, q (plf)

Gage	Welds	Span (ft-in.)											
		7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
22	q3	2021	2006	1992	1980	1969	1960	1951	1943	1936	1930	1924	
	q4	2149	2120	2095	2073	2053	2035	2019	2005	1992	1980	1969	
21	q3	2024	2007	1992	1978	1967	1956	1947	1938	1930	1923	1917	
	q4	2174	2143	2115	2091	2069	2050	2032	2016	2002	1989	1977	
20	q3	2029	2010	1994	1980	1967	1955	1945	1936	1927	1919	1912	
	q4	2202	2168	2138	2111	2087	2066	2047	2030	2014	2000	1987	
19	q3	2046	2024	2005	1988	1973	1960	1948	1937	1927	1918	1909	
	q4	2263	2223	2188	2157	2129	2104	2082	2062	2044	2027	2012	
18	q3	2064	2040	2018	1999	1983	1968	1954	1942	1931	1921	1912	
	q4	2317	2272	2233	2198	2167	2140	2115	2092	2072	2053	2036	
16	q3	2119	2089	2062	2038	2017	1998	1981	1966	1952	1940	1928	
	q4	2458	2401	2352	2308	2269	2235	2203	2175	2149	2126	2105	

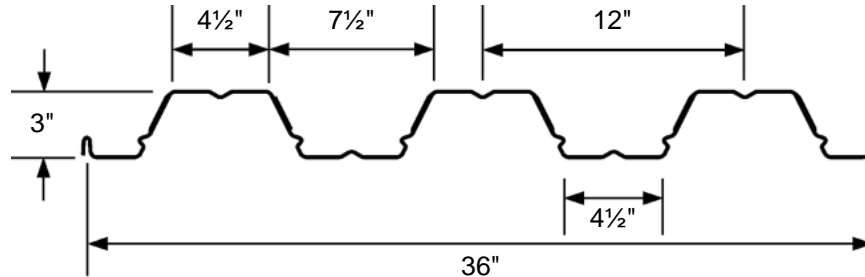
PLW2 and W2 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

PLW3™ or W3 FORMLOK™

- 3" Deep Deck
- Galvanized or Phosphatized/Painted



Dimensions

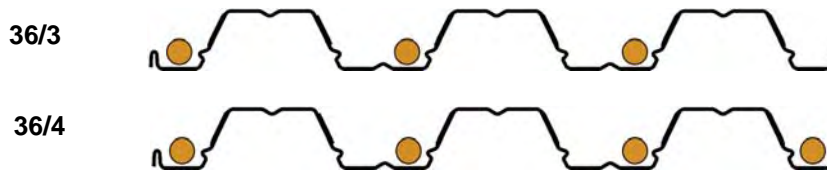


Deck Weight and Section Properties

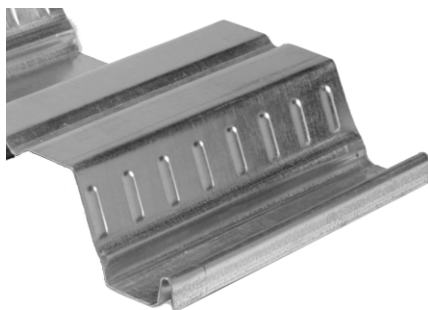
Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7 1/2"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Note: Section properties are based on F_y = 50,000 psi.

Attachment Patterns to Supports



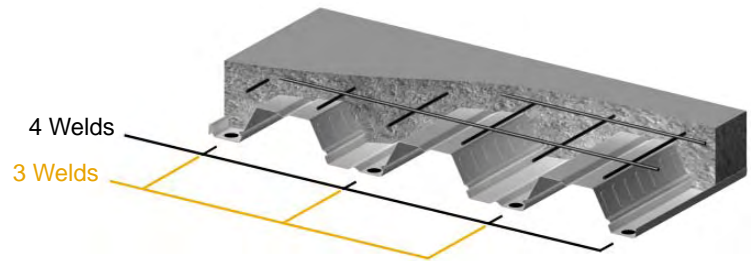
Embossment Pattern



W3 SUMMARY

PLW3™ or W3 FORMLOK™

- 5 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
42.3 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7½"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	10'-0"	254	229	208	190	175	120	108	97	88	79	72	65	58	53	48
	2	10'-7"	254	229	208	190	175	161	108	97	88	79	72	65	58	53	48
	3	10'-7"	254	229	208	190	175	161	108	97	88	79	72	65	58	53	48
21	1	10'-11"	274	248	225	206	189	174	120	108	98	89	81	73	66	60	55
	2	11'-8"	274	248	225	206	189	174	161	150	98	89	81	73	66	60	55
	3	12'-1"	274	248	225	206	189	174	161	150	140	89	81	73	66	60	55
20	1	11'-7"	294	265	241	220	202	187	173	160	108	98	89	81	74	67	61
	2	12'-4"	294	265	241	220	202	187	173	160	149	98	89	81	74	67	61
	3	12'-10"	294	265	241	220	202	187	173	160	149	140	89	81	74	67	61
19	1	12'-1"	333	301	274	250	230	212	191	172	155	116	106	97	89	82	75
	2	13'-9"	333	301	274	250	230	212	191	172	155	140	126	115	89	82	75
	3	14'-2"	333	301	274	250	230	212	191	172	155	140	126	115	104	82	75
18	1	12'-5"	370	334	304	278	255	232	208	187	169	134	122	112	103	95	88
	2	14'-10"	370	334	304	278	255	232	208	187	169	153	139	126	115	104	88
	3	14'-7"	370	334	304	278	255	232	208	187	169	153	139	126	115	104	88
16	1	13'-1"	400	400	365	333	299	268	241	217	197	178	162	143	132	122	113
	2	16'-4"	400	400	365	333	299	268	241	217	197	178	162	148	135	123	113
	3	15'-4"	400	400	365	333	299	268	241	217	197	178	162	148	135	123	113

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Allowable Diaphragm Shear Values, q (plf)

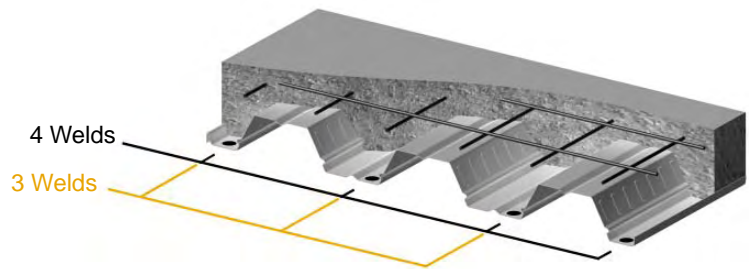
Gage	Welds	Span (ft-in.)														
		8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
22	q3	1606	1594	1583	1573	1565	1557	1550	1544	1538	1532	1527	1523	1518	1514	1511
	q4	1708	1686	1666	1648	1633	1618	1605	1593	1583	1572	1563	1555	1547	1539	1532
21	q3	1605	1592	1580	1570	1560	1552	1544	1537	1530	1524	1519	1514	1509	1505	1500
	q4	1729	1704	1683	1663	1646	1630	1616	1602	1590	1579	1569	1560	1551	1543	1535
20	q3	1608	1593	1580	1569	1559	1549	1541	1533	1526	1520	1513	1508	1503	1498	1493
	q4	1750	1724	1700	1679	1660	1643	1627	1613	1600	1588	1577	1567	1557	1548	1540
19	q3	1618	1602	1587	1573	1561	1550	1540	1531	1523	1515	1508	1502	1496	1490	1485
	q4	1801	1770	1742	1718	1696	1675	1657	1640	1625	1611	1598	1586	1575	1565	1555
18	q3	1634	1615	1598	1583	1569	1557	1546	1535	1526	1517	1509	1502	1495	1488	1482
	q4	1854	1819	1787	1759	1734	1711	1690	1671	1654	1638	1623	1609	1597	1585	1574
16	q3	1679	1655	1633	1614	1597	1582	1568	1555	1543	1532	1522	1513	1504	1496	1489
	q4	1973	1929	1890	1855	1823	1795	1769	1745	1723	1703	1684	1667	1651	1637	1623

PLW3 and W3 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W3
5"

PLW3™ or W3 FORMLOK™

- 5½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
48.3 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7½"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	9'-7"	278	251	228	209	145	130	117	105	95	85	77	70	63	57	51
	2	9'-9"	278	251	228	209	145	130	117	105	95	85	77	70	63	57	51
	3	9'-9"	278	251	228	209	145	130	117	105	95	85	77	70	63	57	51
21	1	10'-5"	300	271	247	225	207	144	130	117	106	96	87	79	71	65	59
	2	11'-2"	300	271	247	225	207	191	177	117	106	96	87	79	71	65	59
	3	11'-7"	300	271	247	225	207	191	177	164	106	96	87	79	71	65	59
20	1	11'-2"	321	290	264	241	221	204	189	128	116	106	96	87	79	72	66
	2	11'-10"	321	290	264	241	221	204	189	175	116	106	96	87	79	72	66
	3	12'-3"	321	290	264	241	221	204	189	175	163	106	96	87	79	72	66
19	1	11'-9"	363	328	298	273	250	231	214	198	138	125	115	105	96	88	80
	2	13'-2"	363	328	298	273	250	231	214	198	185	173	162	105	96	88	80
	3	13'-7"	363	328	298	273	250	231	214	198	185	173	162	152	96	88	80
18	1	12'-1"	400	364	331	302	277	256	237	220	205	144	132	121	111	102	94
	2	14'-3"	400	364	331	302	277	256	237	220	205	191	179	168	158	102	94
	3	14'-2"	400	364	331	302	277	256	237	220	205	191	179	168	158	102	94
16	1	12'-9"	400	400	395	361	332	306	283	263	245	223	166	153	141	131	121
	2	15'-11"	400	400	395	361	332	306	283	263	245	223	203	185	169	155	142
	3	14'-11"	400	400	395	361	332	306	283	263	245	223	203	185	169	155	121

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

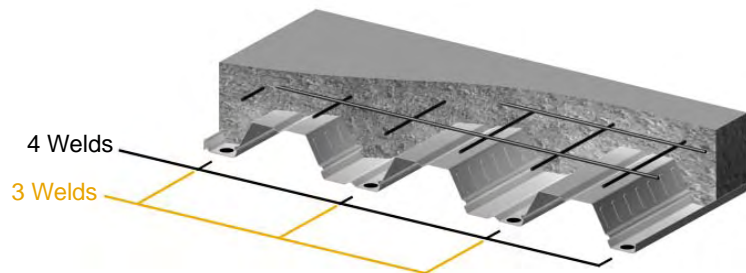
Gage	Welds	Span (ft-in.)														
		8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
22	q3	1845	1833	1822	1813	1804	1796	1789	1783	1777	1771	1766	1762	1757	1753	1750
	q4	1947	1925	1905	1888	1872	1857	1844	1832	1822	1812	1802	1794	1786	1778	1772
21	q3	1844	1831	1819	1809	1799	1791	1783	1776	1769	1763	1758	1753	1748	1744	1739
	q4	1968	1943	1922	1902	1885	1869	1855	1842	1829	1818	1808	1799	1790	1782	1774
20	q3	1847	1832	1819	1808	1798	1788	1780	1772	1765	1759	1753	1747	1742	1737	1733
	q4	1989	1963	1939	1918	1899	1882	1866	1852	1839	1827	1816	1806	1796	1787	1779
19	q3	1857	1841	1826	1812	1800	1789	1779	1770	1762	1754	1747	1741	1735	1729	1724
	q4	2040	2009	1982	1957	1935	1915	1896	1880	1864	1850	1837	1825	1814	1804	1794
18	q3	1873	1854	1837	1822	1808	1796	1785	1774	1765	1756	1748	1741	1734	1727	1721
	q4	2093	2058	2027	1998	1973	1950	1929	1910	1893	1877	1862	1849	1836	1824	1813
16	q3	1918	1894	1873	1853	1836	1821	1807	1794	1782	1771	1761	1752	1743	1735	1728
	q4	2213	2168	2129	2094	2062	2034	2008	1984	1962	1942	1924	1906	1891	1876	1862

PLW3 and W3 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W3 5½" NW

PLW3™ or W3 FORMLOK™

- 6 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
54.4 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7½"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft.-in.)														
			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"
22	1	9'-2"	304	274	250	176	158	141	127	114	103	93	83	75	68	61	55
	2	9'-0"	304	274	250	176	158	141	127	114	103	93	83	75	68	61	55
	3	9'-0"	304	274	250	176	158	141	127	114	103	93	83	75	68	61	55
21	1	10'-0"	328	296	269	246	226	157	141	127	115	104	94	85	77	70	63
	2	10'-9"	328	296	269	246	226	208	141	127	115	104	94	85	77	70	63
	3	11'-2"	328	296	269	246	226	208	193	127	115	104	94	85	77	70	63
20	1	10'-8"	350	317	288	263	241	223	154	139	126	114	104	94	86	78	71
	2	11'-5"	350	317	288	263	241	223	206	139	126	114	104	94	86	78	71
	3	11'-10"	350	317	288	263	241	223	206	191	126	114	104	94	86	78	71
19	1	11'-5"	396	358	325	297	273	252	233	164	149	136	124	113	104	95	87
	2	12'-8"	396	358	325	297	273	252	233	216	201	188	124	113	104	95	87
	3	13'-1"	396	358	325	297	273	252	233	216	201	188	176	113	104	95	87
18	1	11'-9"	400	396	360	329	302	278	258	239	170	156	142	131	120	110	101
	2	13'-8"	400	396	360	329	302	278	258	239	223	208	195	183	120	110	101
	3	13'-9"	400	396	360	329	302	278	258	239	223	208	195	183	120	110	101
16	1	12'-5"	400	400	400	392	360	332	307	285	266	195	179	165	152	141	130
	2	15'-4"	400	400	400	392	360	332	307	285	266	248	233	218	206	191	176
	3	14'-6"	400	400	400	392	360	332	307	285	266	248	233	218	206	191	130

¹ Max. UCS = Maximum Unshored Clear Span (ft.-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

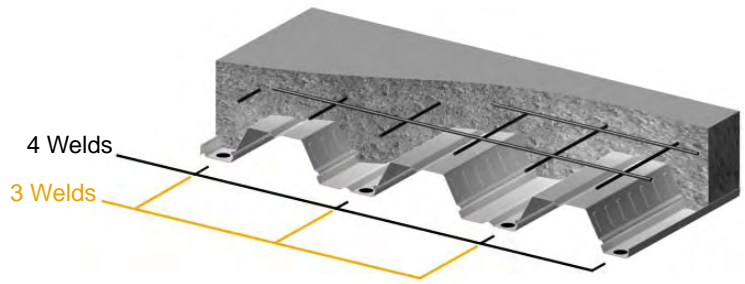
Gage	Welds	Span (ft.-in.)														
		8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
22	q3	2084	2072	2061	2052	2043	2035	2028	2022	2016	2010	2005	2001	1997	1992	1989
	q4	2186	2164	2144	2127	2111	2096	2083	2072	2061	2051	2041	2033	2025	2017	2077
21	q3	2083	2070	2058	2048	2038	2030	2022	2015	2009	2003	1997	1992	1987	1983	1979
	q4	2207	2182	2161	2141	2124	2108	2094	2081	2069	2058	2047	2038	2029	2021	2013
20	q3	2086	2071	2059	2047	2037	2027	2019	2011	2004	1998	1992	1986	1981	1976	1972
	q4	2229	2202	2178	2157	2138	2121	2105	2091	2078	2066	2055	2045	2035	2026	2018
19	q3	2097	2080	2065	2051	2039	2028	2019	2009	2001	1994	1987	1980	1974	1968	1963
	q4	2279	2248	2221	2196	2174	2154	2135	2119	2103	2089	2076	2064	2053	2043	2033
18	q3	2112	2093	2076	2061	2047	2035	2024	2013	2004	1995	1987	1980	1973	1967	1961
	q4	2332	2297	2266	2237	2212	2189	2169	2150	2132	2116	2101	2088	2075	2063	2052
16	q3	2157	2133	2112	2093	2075	2060	2046	2033	2021	2010	2000	1991	1982	1974	1967
	q4	2452	2407	2368	2333	2301	2273	2247	2223	2201	2181	2163	2145	2130	2115	2101

PLW3 and W3 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.



PLW3™ or W3 FORMLOK™

- 6½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
60.4 psf
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in. 4/ft)	Multiple Spans (in. 4/ft)	+S _{eff} (in. 3/ft)	-S _{eff} (in. 3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7½"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	8'-10"	331	299	215	192	171	153	138	124	111	100	90	81	73	66	59
	2	8'-5"	331	242	215	192	171	153	138	124	111	100	90	81	73	66	59
	3	8'-5"	331	242	215	192	171	153	138	124	111	100	90	81	73	66	59
21	1	9'-7"	357	323	293	268	189	170	153	138	125	113	102	92	83	75	68
	2	10'-3"	357	323	293	268	246	170	153	138	125	113	102	92	83	75	68
	3	10'-3"	357	323	293	268	246	170	153	138	125	113	102	92	83	75	68
20	1	10'-3"	381	345	313	286	263	185	167	151	137	124	113	102	93	84	77
	2	11'-0"	381	345	313	286	263	242	224	151	137	124	113	102	93	84	77
	3	11'-5"	381	345	313	286	263	242	224	151	137	124	113	102	93	84	77
19	1	11'-2"	400	389	354	323	297	274	253	178	162	147	134	123	112	102	94
	2	12'-2"	400	389	354	323	297	274	253	235	219	147	134	123	112	102	94
	3	12'-8"	400	389	354	323	297	274	253	235	219	205	134	123	112	102	94
18	1	11'-6"	400	400	391	358	328	303	280	260	184	169	154	141	130	119	109
	2	13'-3"	400	400	391	358	328	303	280	260	242	226	212	141	130	119	109
	3	13'-6"	400	400	391	358	328	303	280	260	242	226	212	199	130	119	109
16	1	12'-2"	400	400	400	400	391	360	333	310	288	211	194	179	165	152	140
	2	14'-9"	400	400	400	400	391	360	333	310	288	269	252	237	223	210	140
	3	14'-2"	400	400	400	400	391	360	333	310	288	269	252	237	223	152	140

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

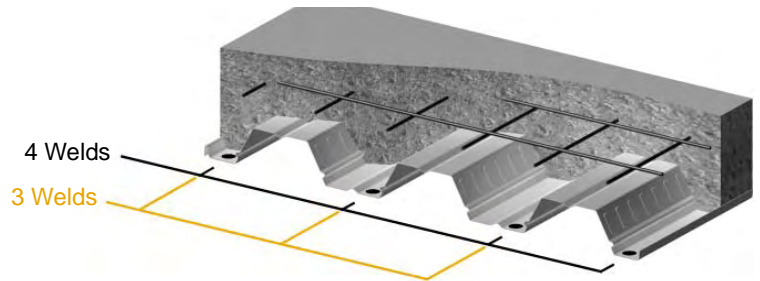
Gage	Welds	Span (ft-in.)														
		8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
22	q3	2323	2311	2300	2291	2282	2274	2267	2261	2255	2250	2245	2240	2236	2232	2228
	q4	2425	2403	2383	2366	2350	2336	2323	2311	2300	2290	2281	2272	2264	2257	2250
21	q3	2323	2309	2298	2287	2278	2269	2261	2254	2248	2242	2236	2231	2226	2222	2218
	q4	2446	2422	2400	2380	2363	2347	2333	2320	2308	2297	2286	2277	2268	2260	2252
20	q3	2325	2310	2298	2286	2276	2267	2258	2250	2243	2237	2231	2225	2220	2215	2211
	q4	2468	2441	2417	2396	2377	2360	2345	2330	2317	2305	2294	2284	2274	2265	2257
19	q3	2336	2319	2304	2290	2278	2268	2258	2249	2240	2233	2226	2219	2213	2207	2202
	q4	2518	2487	2460	2435	2413	2393	2374	2358	2342	2328	2315	2303	2292	2282	2272
18	q3	2352	2332	2315	2300	2286	2274	2263	2252	2243	2234	2226	2219	2212	2206	2200
	q4	2571	2536	2505	2477	2451	2428	2408	2389	2371	2355	2340	2327	2314	2302	2291
16	q3	2396	2372	2351	2332	2314	2299	2285	2272	2260	2249	2239	2230	2221	2213	2206
	q4	2691	2647	2607	2572	2540	2512	2486	2462	2440	2420	2402	2385	2369	2354	2340

PLW3 and W3 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W3 6½" NW

PLW3™ or W3 FORMLOK™

- 7½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
72.5 psf
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7½"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	8'-3"	388	283	251	224	200	179	161	144	130	117	105	95	85	77	69
	2	7'-4"	320	283	251	224	200	179	161	144	130	117	105	95	85	77	69
	3	7'-4"	320	283	251	224	200	179	161	144	130	117	105	95	85	77	69
21	1	8'-11"	400	378	276	247	221	198	179	161	145	131	119	107	97	88	79
	2	9'-2"	400	378	344	247	221	198	179	161	145	131	119	107	97	88	79
	3	9'-2"	400	378	344	247	221	198	179	161	145	131	119	107	97	88	79
20	1	9'-7"	400	400	367	335	240	216	195	176	160	145	131	119	108	98	89
	2	10'-4"	400	400	367	335	308	216	195	176	160	145	131	119	108	98	89
	3	10'-8"	400	400	367	335	308	284	195	176	160	145	131	119	108	98	89
19	1	10'-6"	400	400	400	378	347	320	228	207	188	171	156	143	130	119	109
	2	11'-5"	400	400	400	378	347	320	296	207	188	171	156	143	130	119	109
	3	11'-10"	400	400	400	378	347	320	296	275	188	171	156	143	130	119	109
18	1	11'-0"	400	400	400	400	384	354	327	236	215	196	180	164	151	138	127
	2	12'-5"	400	400	400	400	384	354	327	304	283	196	180	164	151	138	127
	3	12'-10"	400	400	400	400	384	354	327	304	283	264	180	164	151	138	127
16	1	11'-8"	400	400	400	400	400	400	389	361	267	245	225	208	191	177	163
	2	13'-10"	400	400	400	400	400	400	389	361	336	314	294	276	191	177	163
	3	13'-8"	400	400	400	400	400	400	389	361	336	314	294	276	191	177	163

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

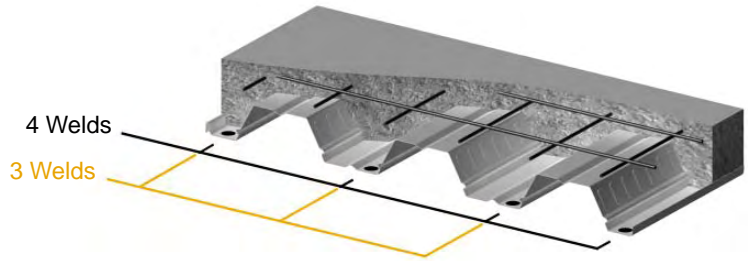
Gage	Welds	Span (ft-in.)														
		8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
22	q3	2801	2789	2778	2769	2760	2753	2745	2739	2733	2728	2723	2718	2714	2710	2706
	q4	2903	2881	2861	2844	2828	2814	2801	2789	2778	2768	2759	2750	2742	2735	2728
21	q3	2801	2787	2776	2765	2756	2747	2739	2732	2726	2720	2714	2709	2704	2700	2696
	q4	2924	2900	2878	2859	2841	2825	2811	2798	2786	2775	2765	2755	2746	2738	2731
20	q3	2803	2789	2776	2764	2754	2745	2736	2729	2721	2715	2709	2703	2698	2693	2689
	q4	2946	2919	2896	2875	2856	2838	2823	2808	2795	2783	2772	2762	2752	2744	2735
19	q3	2814	2797	2782	2769	2757	2746	2736	2727	2718	2711	2704	2697	2691	2686	2680
	q4	2997	2966	2938	2913	2891	2871	2853	2836	2821	2807	2794	2782	2770	2760	2750
18	q3	2830	2811	2794	2778	2765	2752	2741	2731	2721	2713	2705	2697	2690	2684	2678
	q4	3050	3014	2983	2955	2929	2907	2886	2867	2849	2833	2819	2805	2792	2780	2769
16	q3	2874	2850	2829	2810	2793	2777	2763	2750	2738	2728	2717	2708	2700	2692	2684
	q4	3169	3125	3085	3050	3019	2990	2964	2940	2918	2898	2880	2863	2847	2832	2818

PLW3 and W3 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W3
7½"

PLW3™ or W3 FORMLOK™

- 5 in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
32.1 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7½"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	11'-1"	254	229	208	190	175	161	149	107	97	89	81	74	68	62	57
	2	11'-11"	254	229	208	190	175	161	149	138	97	89	81	74	68	62	57
	3	12'-4"	254	229	208	190	175	161	149	138	129	89	81	74	68	62	57
21	1	12'-1"	274	248	225	206	189	174	161	150	140	99	90	83	76	70	64
	2	12'-9"	274	248	225	206	189	174	161	150	140	130	90	83	76	70	64
	3	13'-3"	274	248	225	206	189	174	161	150	140	130	120	83	76	70	64
20	1	12'-5"	294	265	241	220	202	187	172	155	140	108	99	91	84	77	71
	2	13'-6"	294	265	241	220	202	187	172	155	140	127	115	105	84	77	71
	3	14'-0"	294	265	241	220	202	187	172	155	140	127	115	105	96	77	71
19	1	12'-11"	333	301	274	250	230	212	191	172	156	141	116	107	99	91	85
	2	15'-0"	333	301	274	250	230	212	191	172	156	141	129	117	106	96	87
	3	15'-1"	333	301	274	250	230	212	191	172	156	141	129	117	106	96	87
18	1	13'-3"	370	334	304	278	255	230	207	187	170	154	140	122	112	101	91
	2	16'-3"	370	334	304	278	255	230	207	187	170	154	140	125	112	101	91
	3	15'-7"	370	334	304	278	255	230	207	187	170	154	140	125	112	101	91
16	1	14'-0"	400	400	365	331	296	266	240	217	197	175	155	139	124	112	101
	2	17'-5"	400	400	365	331	296	266	240	217	197	175	155	139	124	112	101
	3	16'-4"	400	400	365	331	296	266	240	217	197	175	155	139	124	112	101

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

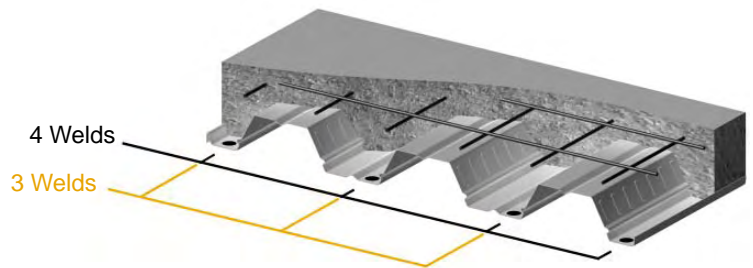
Gage	Welds	Span (ft-in.)														
		8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
22	q3	1281	1269	1259	1249	1240	1233	1226	1219	1213	1208	1203	1198	1194	1190	1186
	q4	1383	1361	1342	1324	1308	1294	1281	1269	1258	1248	1239	1230	1222	1215	1208
21	q3	1281	1268	1256	1245	1236	1227	1220	1212	1206	1200	1194	1189	1185	1180	1176
	q4	1404	1380	1358	1339	1321	1305	1291	1278	1266	1255	1245	1235	1226	1218	1211
20	q3	1283	1269	1256	1244	1234	1225	1216	1209	1202	1195	1189	1183	1178	1173	1169
	q4	1426	1399	1376	1355	1336	1318	1303	1289	1276	1263	1252	1242	1233	1224	1215
19	q3	1294	1277	1262	1249	1237	1226	1216	1207	1199	1191	1184	1177	1171	1166	1160
	q4	1477	1446	1418	1393	1371	1351	1333	1316	1301	1287	1274	1262	1250	1240	1230
18	q3	1310	1291	1274	1258	1245	1232	1221	1211	1201	1193	1185	1177	1170	1164	1158
	q4	1530	1494	1463	1435	1410	1387	1366	1347	1329	1313	1299	1285	1272	1260	1249
16	q3	1354	1330	1309	1290	1273	1257	1243	1230	1218	1208	1198	1188	1180	1172	1164
	q4	1649	1605	1566	1530	1499	1470	1444	1420	1399	1379	1360	1343	1327	1312	1298

PLW3 and W3 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W3^{5"}LW

PLW3™ or W3 FORMLOK™

- 5½ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
36.7 psf
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7½"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	10'-7"	278	251	228	209	191	176	128	116	106	96	88	80	74	67	62
	2	11'-6"	278	251	228	209	191	176	163	152	106	96	88	80	74	67	62
	3	11'-9"	278	251	228	209	191	176	163	152	106	96	88	80	74	67	62
21	1	11'-6"	300	271	247	225	207	191	177	164	117	107	98	90	82	76	69
	2	12'-4"	300	271	247	225	207	191	177	164	153	107	98	90	82	76	69
	3	12'-9"	300	271	247	225	207	191	177	164	153	143	98	90	82	76	69
20	1	12'-1"	321	290	264	241	221	204	189	175	163	117	107	98	90	83	77
	2	13'-0"	321	290	264	241	221	204	189	175	163	152	143	98	90	83	77
	3	13'-6"	321	290	264	241	221	204	189	175	163	152	143	134	90	83	77
19	1	12'-6"	363	328	298	273	250	231	214	198	185	173	125	116	107	99	91
	2	14'-5"	363	328	298	273	250	231	214	198	185	173	162	152	138	99	91
	3	14'-8"	363	328	298	273	250	231	214	198	185	173	162	152	138	125	91
18	1	12'-11"	400	364	331	302	277	256	237	220	205	191	143	132	122	113	105
	2	15'-8"	400	364	331	302	277	256	237	220	205	191	176	161	146	131	119
	3	15'-1"	400	364	331	302	277	256	237	220	205	191	176	161	146	131	119
16	1	13'-7"	400	400	395	361	332	306	283	263	243	222	201	179	152	141	131
	2	16'-11"	400	400	395	361	332	306	283	263	243	222	201	179	161	145	131
	3	15'-11"	400	400	395	361	332	306	283	263	243	222	201	179	161	145	131

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

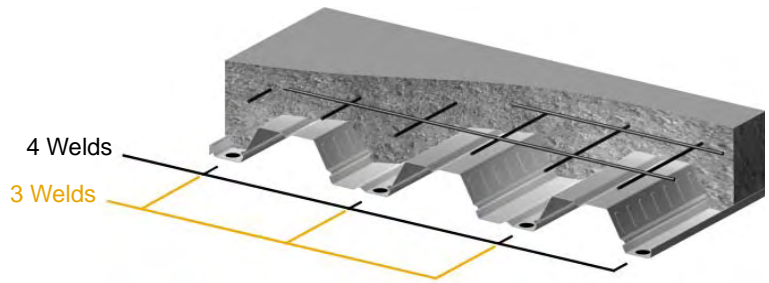
Gage	Welds	Span (ft-in.)														
		8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
22	q3	1439	1427	1417	1407	1398	1391	1384	1377	1371	1366	1361	1356	1352	1348	1344
	q4	1541	1519	1500	1482	1466	1452	1439	1427	1416	1406	1397	1388	1380	1373	1366
21	q3	1439	1426	1414	1403	1394	1385	1378	1370	1364	1358	1352	1347	1342	1338	1334
	q4	1562	1538	1516	1497	1479	1463	1449	1436	1424	1413	1403	1393	1384	1376	1369
20	q3	1441	1427	1414	1402	1392	1383	1374	1367	1360	1353	1347	1341	1336	1331	1327
	q4	1584	1557	1534	1513	1494	1476	1461	1447	1433	1421	1410	1400	1391	1382	1373
19	q3	1452	1435	1420	1407	1395	1384	1374	1365	1357	1349	1342	1335	1329	1324	1318
	q4	1635	1604	1576	1551	1529	1509	1491	1474	1459	1445	1432	1420	1408	1398	1388
18	q3	1468	1449	1432	1416	1403	1390	1379	1369	1359	1351	1343	1335	1328	1322	1316
	q4	1688	1652	1621	1593	1568	1545	1524	1505	1487	1471	1457	1443	1430	1418	1407
16	q3	1512	1488	1467	1448	1431	1415	1401	1388	1376	1366	1356	1346	1338	1330	1322
	q4	1807	1763	1724	1688	1657	1628	1602	1578	1557	1536	1518	1501	1485	1470	1456

PLW3 and W3 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W3
5½"

PLW3™ or W3 FORMLOK™

- 6¼ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
43.5 psf
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.⁴/ft)	Multiple Spans (in.⁴/ft)	+S _{eff} (in.³/ft)	-S _{eff} (in.³/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7½"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS¹	Span (ft-in.)														
			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"
22	1	10'-0"	317	287	261	238	219	160	145	132	120	109	100	91	83	76	70
	2	10'-7"	317	287	261	238	219	202	145	132	120	109	100	91	83	76	70
	3	10'-7"	317	287	261	238	219	202	145	132	120	109	100	91	83	76	70
21	1	10'-10"	342	309	281	257	236	218	160	145	133	121	111	101	93	85	78
	2	11'-8"	342	309	281	257	236	218	201	187	133	121	111	101	93	85	78
	3	12'-1"	342	309	281	257	236	218	201	187	174	121	111	101	93	85	78
20	1	11'-7"	366	330	300	275	252	232	215	200	144	132	121	111	102	94	86
	2	12'-4"	366	330	300	275	252	232	215	200	186	132	121	111	102	94	86
	3	12'-9"	366	330	300	275	252	232	215	200	186	174	121	111	102	94	86
19	1	12'-1"	400	373	339	310	285	263	243	226	210	154	142	131	120	111	103
	2	13'-8"	400	373	339	310	285	263	243	226	210	196	184	173	120	111	103
	3	14'-1"	400	373	339	310	285	263	243	226	210	196	184	173	163	111	103
18	1	12'-5"	400	400	375	343	315	290	269	250	232	175	161	149	137	127	118
	2	14'-10"	400	400	375	343	315	290	269	250	232	217	203	191	180	170	118
	3	14'-7"	400	400	375	343	315	290	269	250	232	217	203	191	180	170	118
16	1	13'-1"	400	400	400	400	375	346	320	297	277	259	242	185	171	159	148
	2	16'-4"	400	400	400	400	375	346	320	297	277	259	242	228	214	202	186
	3	15'-4"	400	400	400	400	375	346	320	297	277	259	242	228	214	202	186

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf)

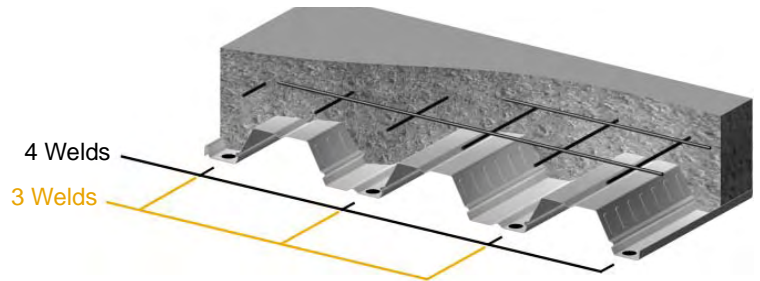
Gage	Welds	Span (ft-in.)														
		8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
22	q3	1676	1664	1653	1644	1635	1628	1621	1614	1608	1603	1598	1593	1589	1585	1581
	q4	1778	1756	1737	1719	1703	1689	1676	1664	1653	1643	1634	1625	1617	1610	1603
21	q3	1676	1663	1651	1640	1631	1622	1614	1607	1601	1595	1589	1584	1579	1575	1571
	q4	1799	1775	1753	1734	1716	1700	1686	1673	1661	1650	1640	1630	1621	1613	1606
20	q3	1678	1664	1651	1639	1629	1620	1611	1604	1597	1590	1584	1578	1573	1568	1564
	q4	1821	1794	1771	1750	1731	1713	1698	1684	1670	1658	1647	1637	1627	1619	1610
19	q3	1689	1672	1657	1644	1632	1621	1611	1602	1594	1586	1579	1572	1566	1561	1555
	q4	1872	1841	1813	1788	1766	1746	1728	1711	1696	1682	1669	1657	1645	1635	1625
18	q3	1705	1686	1669	1653	1640	1627	1616	1606	1596	1588	1580	1572	1565	1559	1553
	q4	1925	1889	1858	1830	1805	1782	1761	1742	1724	1708	1694	1680	1667	1655	1644
16	q3	1749	1725	1704	1685	1668	1652	1638	1625	1613	1603	1593	1583	1575	1567	1559
	q4	2044	2000	1960	1925	1894	1865	1839	1815	1793	1773	1755	1738	1722	1707	1693

PLW3 and W3 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

W3 6¼" LW

PLW3™ or W3 FORMLOK™

- 7¼ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
52.7 psf
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)					
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
							2"	3"	4"	4"	6"	7½"
22	1.9	1.8	0.736	0.736	0.393	0.410	383	441	490	778	894	908
21	2.1	2.0	0.824	0.824	0.453	0.470	461	530	588	934	1070	1126
20	2.3	2.2	0.907	0.907	0.510	0.528	540	619	686	1091	1248	1349
19	2.7	2.6	1.067	1.067	0.636	0.652	724	828	914	1456	1660	1791
18	2.9	2.7	1.213	1.213	0.752	0.768	922	1049	1157	1845	2098	2260
16	3.5	3.3	1.516	1.516	0.968	0.966	1395	1581	1737	2780	3143	3377

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	9'-4"	373	337	307	231	208	188	170	154	140	128	117	107	97	89	82
	2	9'-4"	373	337	307	231	208	188	170	154	140	128	117	107	97	89	82
	3	9'-4"	373	337	307	231	208	188	170	154	140	128	117	107	97	89	82
21	1	10'-2"	400	364	331	302	278	206	187	170	155	142	130	119	109	100	92
	2	10'-11"	400	364	331	302	278	256	187	170	155	142	130	119	109	100	92
	3	11'-4"	400	364	331	302	278	256	237	170	155	142	130	119	109	100	92
20	1	10'-11"	400	388	353	323	296	273	203	185	169	155	142	130	119	110	101
	2	11'-7"	400	388	353	323	296	273	253	235	169	155	142	130	119	110	101
	3	12'-0"	400	388	353	323	296	273	253	235	219	155	142	130	119	110	101
19	1	11'-7"	400	400	399	364	334	308	285	265	197	181	166	153	141	130	120
	2	12'-10"	400	400	399	364	334	308	285	265	247	231	166	153	141	130	120
	3	13'-4"	400	400	399	364	334	308	285	265	247	231	216	153	141	130	120
18	1	11'-11"	400	400	400	400	369	341	315	293	222	204	188	174	161	149	138
	2	13'-11"	400	400	400	400	369	341	315	293	273	255	239	224	161	149	138
	3	13'-11"	400	400	400	400	369	341	315	293	273	255	239	224	161	149	138
16	1	12'-7"	400	400	400	400	400	400	375	348	324	303	233	215	200	185	172
	2	15'-7"	400	400	400	400	400	400	375	348	324	303	283	266	251	236	223
	3	14'-8"	400	400	400	400	400	400	375	348	324	303	283	266	251	236	172

¹ Max UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line

Allowable Diaphragm Shear Values, q (plf)

Gage	Welds	Span (ft-in.)														
		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"
22	q3	1992	1980	1969	1960	1951	1944	1937	1930	1924	1919	1914	1909	1905	1901	1897
	q4	2094	2072	2052	2035	2019	2005	1992	1980	1969	1959	1950	1941	1933	1926	1919
21	q3	1992	1978	1967	1956	1947	1938	1930	1923	1917	1911	1905	1900	1895	1891	1887
	q4	2115	2091	2069	2050	2032	2016	2002	1989	1977	1966	1956	1946	1937	1929	1922
20	q3	1994	1980	1967	1955	1945	1936	1927	1920	1912	1906	1900	1894	1889	1884	1880
	q4	2137	2110	2087	2066	2047	2029	2014	1999	1986	1974	1963	1953	1943	1935	1926
19	q3	2005	1988	1973	1960	1948	1937	1927	1918	1909	1902	1895	1888	1882	1877	1871
	q4	2188	2157	2129	2104	2082	2062	2044	2027	2012	1998	1985	1973	1961	1951	1941
18	q3	2021	2002	1985	1969	1956	1943	1932	1922	1912	1904	1896	1888	1881	1875	1869
	q4	2241	2205	2174	2146	2120	2098	2077	2058	2040	2024	2010	1996	1983	1971	1960
16	q3	2065	2041	2020	2001	1984	1968	1954	1941	1929	1919	1909	1899	1891	1883	1875
	q4	2360	2316	2276	2241	2210	2181	2155	2131	2109	2089	2071	2054	2038	2023	2009

PLW3 and W3 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, F < 1.

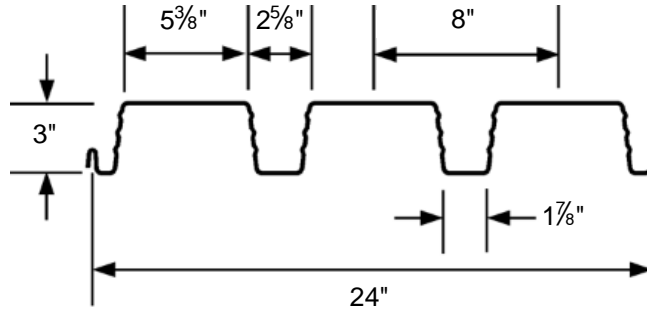
W3
LW
7¼"

PLN™ or N FORMLOK™

- 3" Deep Deck
- Galvanized or Phosphatized/Painted



Dimensions



Deck Weight and Section Properties

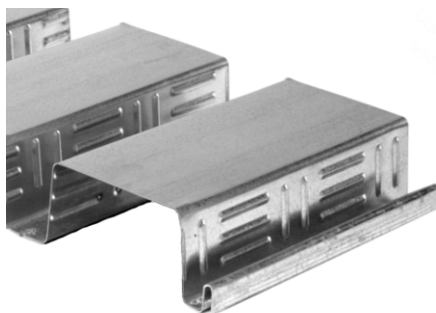
Gage	Weight (psf)		I_d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+ S_{eff} (in. ³ /ft)	- S_{eff} (in. ³ /ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Note: Section properties are based on $F_y = 50,000$ psi.

Attachment Patterns to Supports

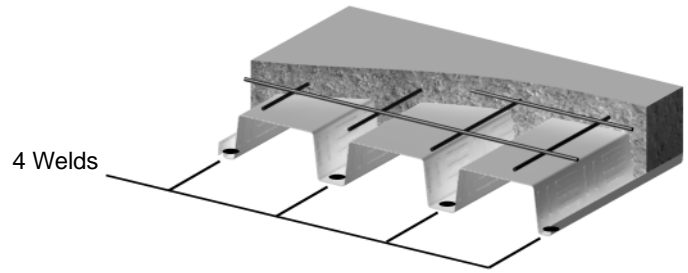


Embossment Pattern



PLN™ or N FORMLOK™

- 5 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
34.4 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/ Painted	Single Span (in.⁴/ft)	Multiple Spans (in.⁴/ft)	+S _{eff} (in.³/ft)	-S _{eff} (in.³/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	9'-9"	241	218	198	181	131	118	107	97	88	80	72	66	60	55	50
	2	11'-5"	241	218	198	181	166	153	142	97	88	80	72	66	60	55	50
	3	11'-6"	241	218	198	181	166	153	142	132	88	80	72	66	60	55	50
20	1	11'-5"	255	231	210	192	176	162	150	104	95	86	78	71	65	59	54
	2	13'-2"	255	231	210	192	176	162	150	139	130	121	114	71	65	59	54
	3	13'-5"	255	231	210	192	176	162	150	139	130	121	114	71	65	59	54
18	1	13'-1"	257	232	211	193	177	163	151	140	131	122	114	72	65	59	54
	2	15'-4"	257	232	211	193	177	163	151	140	131	122	114	107	101	95	90
	3	15'-8"	257	232	211	193	177	163	151	140	131	122	114	107	101	95	90
16	1	13'-11"	259	234	213	195	179	165	152	142	132	123	115	108	65	60	54
	2	17'-0"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	91
	3	16'-5"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	91

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

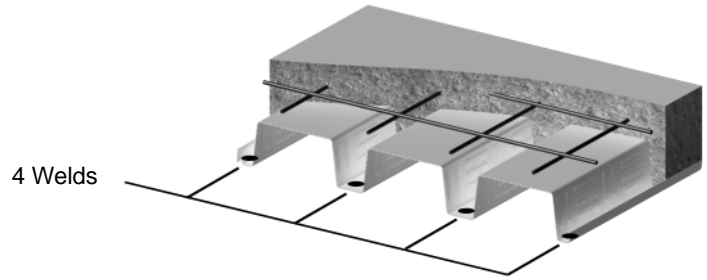
Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)														
		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"
22	q4	1699	1678	1658	1641	1625	1611	1599	1587	1576	1566	1557	1549	1541	1534	1527
	F4	1.10	1.11	1.13	1.14	1.15	1.16	1.17	1.18	1.19	1.19	1.20	1.21	1.21	1.22	1.22
20	q4	1741	1715	1692	1671	1652	1635	1620	1606	1593	1581	1570	1560	1551	1542	1534
	F4	0.98	0.99	1.01	1.02	1.03	1.04	1.05	1.06	1.07	1.08	1.09	1.09	1.10	1.11	1.11
18	q4	1842	1808	1777	1749	1724	1702	1681	1663	1646	1630	1615	1602	1589	1578	1567
	F4	0.80	0.82	0.83	0.84	0.86	0.87	0.88	0.89	0.90	0.91	0.91	0.92	0.93	0.94	0.94
16	q4	1959	1916	1877	1843	1812	1783	1758	1734	1713	1693	1675	1658	1643	1628	1615
	F4	0.67	0.69	0.70	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80	0.80	0.81	0.82

N 5" NW

PLN™ or N FORMLOK™

- 5½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
40.4 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	9'-4"	264	238	217	158	142	128	115	104	94	85	77	70	64	58	52
	2	10'-10"	264	238	217	198	182	168	115	104	94	85	77	70	64	58	52
	3	10'-11"	264	238	217	198	182	168	115	104	94	85	77	70	64	58	52
20	1	10'-10"	278	252	229	209	192	177	123	112	101	92	84	76	69	63	57
	2	12'-6"	278	252	229	209	192	177	164	152	142	132	84	76	69	63	57
	3	12'-9"	278	252	229	209	192	177	164	152	142	132	84	76	69	63	57
18	1	12'-8"	279	252	229	209	192	177	164	152	142	132	83	75	69	62	57
	2	14'-8"	279	252	229	209	192	177	164	152	142	132	124	117	110	103	57
	3	15'-1"	279	252	229	209	192	177	164	152	142	132	124	117	110	103	98
16	1	13'-5"	279	253	230	210	193	178	164	153	142	133	124	75	68	62	56
	2	16'-3"	279	253	230	210	193	178	164	153	142	133	124	117	110	104	98
	3	15'-11"	279	253	230	210	193	178	164	153	142	133	124	117	110	104	98

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

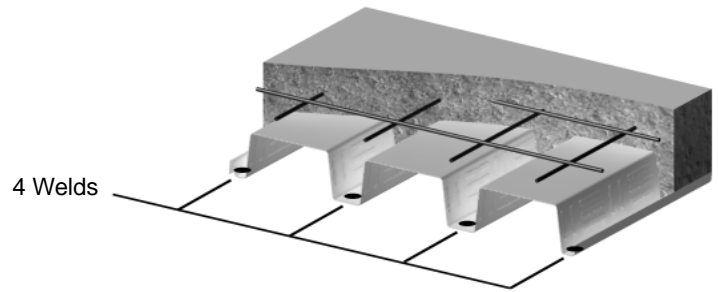
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)														
		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"
22	q4	1938	1917	1897	1880	1865	1850	1838	1826	1815	1805	1796	1788	1780	1773	1766
	F4	0.96	0.97	0.98	0.99	1.00	1.01	1.02	1.02	1.03	1.03	1.04	1.04	1.05	1.05	1.06
20	q4	1980	1954	1931	1910	1891	1874	1859	1845	1832	1820	1809	1799	1790	1781	1773
	F4	0.86	0.87	0.88	0.89	0.90	0.91	0.92	0.92	0.93	0.94	0.94	0.95	0.95	0.96	0.96
18	q4	2081	2047	2016	1988	1963	1941	1920	1902	1885	1869	1854	1841	1828	1817	1806
	F4	0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.78	0.79	0.80	0.80	0.81	0.81	0.82
16	q4	2198	2155	2116	2082	2051	2022	1997	1974	1952	1932	1914	1897	1882	1867	1854
	F4	0.60	0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.68	0.69	0.70	0.70	0.71	0.71

PLN™ or N FORMLOK™

- 6 in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
46.4 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/ Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	8'-11"	289	261	192	172	154	138	125	113	102	92	83	76	68	62	56
	2	10'-4"	289	261	238	217	199	138	125	113	102	92	83	76	68	62	56
	3	10'-5"	289	261	238	217	199	138	125	113	102	92	83	76	68	62	56
20	1	10'-4"	304	275	250	229	210	148	133	121	109	99	90	82	74	67	61
	2	12'-0"	304	275	250	229	210	193	179	166	155	99	90	82	74	67	61
	3	12'-2"	304	275	250	229	210	193	179	166	155	99	90	82	74	67	61
18	1	12'-4"	304	274	250	228	209	193	179	166	154	98	89	81	73	66	60
	2	14'-1"	304	274	250	228	209	193	179	166	154	144	135	127	119	66	60
	3	14'-7"	304	274	250	228	209	193	179	166	154	144	135	127	119	113	60
16	1	13'-1"	303	274	249	228	209	193	178	166	154	144	135	80	72	66	59
	2	15'-7"	303	274	249	228	209	193	178	166	154	144	135	127	119	113	106
	3	15'-5"	303	274	249	228	209	193	178	166	154	144	135	127	119	113	106

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

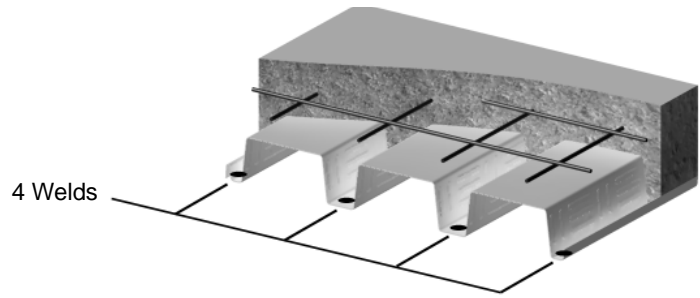
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)														
		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"
22	q4	2178	2156	2136	2119	2104	2090	2077	2065	2054	2045	2035	2027	2019	2012	2005
	F4	0.86	0.87	0.87	0.88	0.89	0.89	0.90	0.90	0.91	0.91	0.92	0.92	0.93	0.93	0.93
20	q4	2219	2193	2170	2149	2130	2113	2098	2084	2071	2059	2048	2038	2029	2020	2012
	F4	0.77	0.78	0.79	0.79	0.80	0.81	0.81	0.82	0.82	0.83	0.83	0.84	0.84	0.84	0.85
18	q4	2321	2286	2255	2227	2202	2180	2159	2141	2124	2108	2093	2080	2067	2056	2045
	F4	0.64	0.65	0.66	0.66	0.67	0.68	0.68	0.69	0.70	0.70	0.71	0.71	0.71	0.72	0.72
16	q4	2437	2394	2355	2321	2290	2262	2236	2213	2191	2172	2153	2136	2121	2106	2093
	F4	0.54	0.55	0.56	0.57	0.58	0.58	0.59	0.60	0.60	0.61	0.61	0.62	0.62	0.63	0.63

PLN™ or N FORMLOK™

- 6½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
52.5 psf
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in.⁴/ft)	Multiple Spans (in.⁴/ft)	+S _{eff} (in.³/ft)	-S _{eff} (in.³/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	8'-6"	316	286	209	187	167	150	135	122	110	100	90	82	74	67	60
	2	9'-11"	316	286	260	237	167	150	135	122	110	100	90	82	74	67	60
	3	10'-0"	316	286	260	237	218	150	135	122	110	100	90	82	74	67	60
20	1	9'-11"	332	301	273	250	178	161	145	131	118	107	97	88	80	73	66
	2	11'-6"	332	301	273	250	229	211	196	182	118	107	97	88	80	73	66
	3	11'-7"	332	301	273	250	229	211	196	182	118	107	97	88	80	73	66
18	1	12'-0"	331	299	272	248	228	210	195	181	168	106	96	87	79	71	65
	2	13'-6"	331	299	272	248	228	210	195	181	168	157	147	138	79	71	65
	3	14'-0"	331	299	272	248	228	210	195	181	168	157	147	138	130	71	65
16	1	12'-9"	329	298	271	247	227	209	194	180	168	157	94	85	77	70	63
	2	15'-0"	329	298	271	247	227	209	194	180	168	157	147	138	130	122	116
	3	15'-1"	329	298	271	247	227	209	194	180	168	157	147	138	130	122	116

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

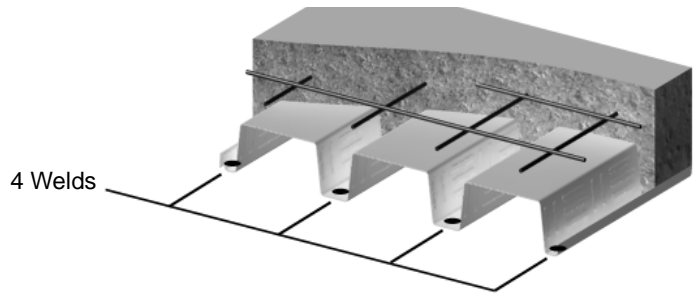
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)														
		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"
22	q4	2417	2395	2376	2358	2343	2329	2316	2304	2293	2284	2275	2266	2258	2251	2244
	F4	0.77	0.78	0.79	0.79	0.80	0.80	0.81	0.81	0.81	0.82	0.82	0.82	0.83	0.83	0.83
20	q4	2458	2432	2409	2388	2369	2352	2337	2323	2310	2298	2288	2277	2268	2259	2251
	F4	0.69	0.70	0.71	0.71	0.72	0.72	0.73	0.73	0.74	0.74	0.75	0.75	0.75	0.75	0.76
18	q4	2560	2525	2494	2466	2442	2419	2399	2380	2363	2347	2332	2319	2307	2295	2284
	F4	0.58	0.59	0.59	0.60	0.61	0.61	0.62	0.62	0.63	0.63	0.63	0.64	0.64	0.64	0.65
16	q4	2677	2633	2594	2560	2529	2501	2475	2452	2430	2411	2392	2376	2360	2345	2332
	F4	0.49	0.50	0.51	0.52	0.52	0.53	0.53	0.54	0.54	0.55	0.55	0.56	0.56	0.56	0.57

PLN™ or N FORMLOK™

- 7½ in. TOTAL SLAB DEPTH
- Normal Weight Concrete (145 pcf)
64.6 psf
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	7'-11"	313	277	246	220	197	177	159	143	129	117	105	95	86	78	70
	2	9'-2"	373	338	307	220	197	177	159	143	129	117	105	95	86	78	70
	3	9'-3"	373	338	307	220	197	177	159	143	129	117	105	95	86	78	70
20	1	9'-2"	392	355	322	233	209	188	170	153	138	125	113	103	93	84	76
	2	10'-8"	392	355	322	295	270	249	170	153	138	125	113	103	93	84	76
	3	10'-9"	392	355	322	295	270	249	170	153	138	125	113	103	93	84	76
18	1	11'-5"	389	352	320	292	268	247	229	151	136	123	111	101	91	82	75
	2	12'-7"	389	352	320	292	268	247	229	212	198	185	111	101	91	82	75
	3	13'-0"	389	352	320	292	268	247	229	212	198	185	173	101	91	82	75
16	1	12'-2"	386	349	317	290	266	246	227	211	197	121	109	99	89	81	73
	2	14'-0"	386	349	317	290	266	246	227	211	197	184	172	162	152	81	73
	3	14'-4"	386	349	317	290	266	246	227	211	197	184	172	162	152	81	73

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

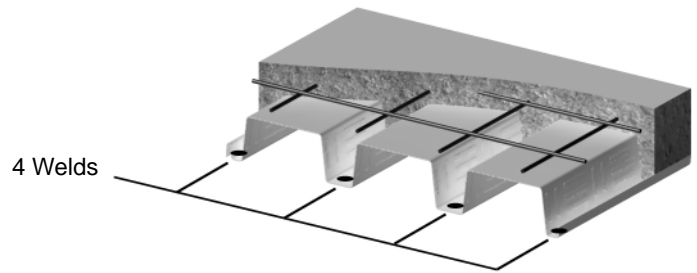
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)														
		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"
22	q4	2895	2873	2854	2836	2821	2807	2794	2782	2772	2762	2753	2744	2736	2729	2722
	F4	0.65	0.65	0.65	0.66	0.66	0.67	0.67	0.67	0.67	0.68	0.68	0.68	0.68	0.68	0.69
20	q4	2936	2910	2887	2866	2848	2831	2815	2801	2788	2777	2766	2756	2746	2737	2729
	F4	0.58	0.59	0.59	0.59	0.60	0.60	0.61	0.61	0.61	0.61	0.62	0.62	0.62	0.62	0.62
18	q4	3038	3003	2972	2945	2920	2897	2877	2858	2841	2825	2811	2797	2785	2773	2762
	F4	0.49	0.49	0.50	0.50	0.51	0.51	0.51	0.52	0.52	0.52	0.53	0.53	0.53	0.53	0.53
16	q4	3155	3111	3073	3038	3007	2979	2953	2930	2908	2889	2871	2854	2838	2824	2810
	F4	0.42	0.42	0.43	0.43	0.44	0.44	0.45	0.45	0.45	0.46	0.46	0.46	0.47	0.47	0.47

PLN™ or N FORMLOK™

- 5 in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
26.1 psf
- Galvanized or Phosphatized/Painted



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	10'-9"	241	218	198	181	166	153	115	105	96	88	80	74	68	63	58
	2	12'-7"	241	218	198	181	166	153	142	132	123	109	80	74	68	63	58
	3	12'-8"	241	218	198	181	166	153	142	132	123	109	80	74	68	63	58
20	1	12'-7"	255	231	210	192	176	162	150	139	130	118	86	79	73	67	62
	2	14'-3"	255	231	210	192	176	162	150	139	130	118	105	94	84	67	62
	3	14'-9"	255	231	210	192	176	162	150	139	130	118	105	94	84	76	62
18	1	13'-11"	257	232	211	193	177	163	151	140	131	122	114	107	73	67	62
	2	16'-8"	257	232	211	193	177	163	151	140	131	122	114	107	96	87	78
	3	16'-8"	257	232	211	193	177	163	151	140	131	122	114	107	96	87	78
16	1	14'-10"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	62
	2	18'-5"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	87
	3	17'-6"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	87

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

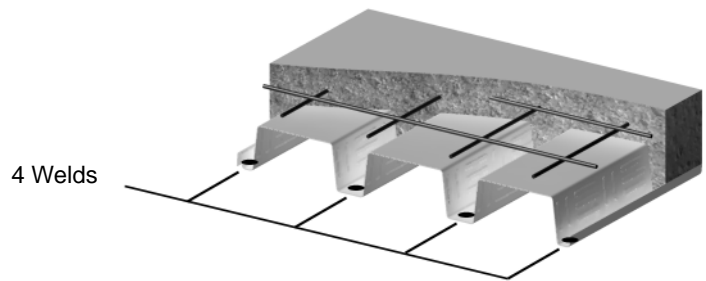
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)														
		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"
22	q4	1375	1353	1334	1317	1301	1287	1274	1262	1252	1242	1233	1224	1217	1209	1203
	F4	1.36	1.38	1.40	1.42	1.44	1.45	1.47	1.48	1.49	1.50	1.52	1.53	1.54	1.54	1.55
20	q4	1416	1390	1367	1346	1328	1311	1295	1281	1269	1257	1246	1236	1226	1218	1209
	F4	1.20	1.23	1.25	1.27	1.28	1.30	1.32	1.33	1.34	1.36	1.37	1.38	1.39	1.40	1.41
18	q4	1518	1483	1452	1425	1400	1377	1357	1338	1321	1305	1291	1277	1265	1253	1242
	F4	0.97	1.00	1.02	1.04	1.06	1.07	1.09	1.10	1.12	1.13	1.14	1.16	1.17	1.18	1.19
16	q4	1635	1591	1553	1518	1487	1459	1433	1410	1389	1369	1351	1334	1318	1304	1290
	F4	0.81	0.83	0.85	0.87	0.89	0.91	0.92	0.94	0.95	0.96	0.98	0.99	1.00	1.01	1.02

PLN™ or N FORMLOK™

- 5½ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
30.7 psf
- Galvanized or Phosphatized/Painted
- 1 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	10'-3"	264	238	217	198	182	137	124	113	103	95	87	79	73	67	62
	2	11'-11"	264	238	217	198	182	168	155	144	103	95	87	79	73	67	62
	3	12'-1"	264	238	217	198	182	168	155	144	134	95	87	79	73	67	62
20	1	12'-0"	278	252	229	209	192	177	164	152	142	101	93	85	78	72	66
	2	13'-8"	278	252	229	209	192	177	164	152	142	132	124	116	78	72	66
	3	14'-1"	278	252	229	209	192	177	164	152	142	132	124	116	110	72	66
18	1	13'-6"	279	252	229	209	192	177	164	152	142	132	124	117	78	72	66
	2	16'-0"	279	252	229	209	192	177	164	152	142	132	124	117	110	103	98
	3	16'-1"	279	252	229	209	192	177	164	152	142	132	124	117	110	103	98
16	1	14'-4"	279	253	230	210	193	178	164	153	142	133	124	117	110	71	65
	2	17'-9"	279	253	230	210	193	178	164	153	142	133	124	117	110	104	98
	3	16'-11"	279	253	230	210	193	178	164	153	142	133	124	117	110	104	98

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

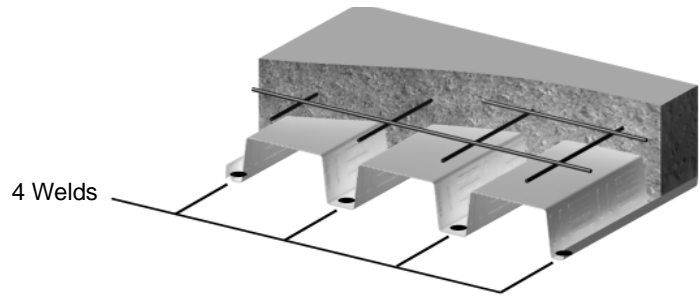
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)														
		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"
22	q4	1533	1511	1492	1475	1459	1445	1432	1420	1410	1400	1391	1382	1375	1367	1361
	F4	1.22	1.24	1.25	1.27	1.28	1.29	1.30	1.32	1.33	1.33	1.34	1.35	1.36	1.37	1.37
20	q4	1574	1548	1525	1504	1486	1469	1453	1439	1427	1415	1404	1394	1384	1376	1367
	F4	1.08	1.10	1.12	1.13	1.15	1.16	1.17	1.18	1.20	1.21	1.21	1.22	1.23	1.24	1.25
18	q4	1676	1641	1610	1583	1558	1535	1515	1496	1479	1463	1449	1435	1423	1411	1400
	F4	0.88	0.90	0.92	0.93	0.95	0.96	0.98	0.99	1.00	1.01	1.02	1.03	1.04	1.05	1.06
16	q4	1793	1749	1711	1676	1645	1617	1591	1568	1547	1527	1509	1492	1476	1462	1448
	F4	0.74	0.76	0.77	0.79	0.80	0.82	0.83	0.84	0.85	0.87	0.88	0.89	0.89	0.90	0.91

PLN™ or N FORMLOK™

- 6¼ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
37.5 psf
- Galvanized or Phosphatized/Painted
- 2 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in. ⁴ /ft)	Multiple Spans (in. ⁴ /ft)	+S _{eff} (in. ³ /ft)	-S _{eff} (in. ³ /ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	9'-7"	302	273	248	227	172	155	141	128	117	107	98	90	82	76	69
	2	11'-2"	302	273	248	227	208	192	178	128	117	107	98	90	82	76	69
	3	11'-4"	302	273	248	227	208	192	178	128	117	107	98	90	82	76	69
20	1	11'-3"	318	288	262	239	219	202	187	137	125	114	105	96	88	81	75
	2	12'-11"	318	288	262	239	219	202	187	174	162	151	105	96	88	81	75
	3	13'-2"	318	288	262	239	219	202	187	174	162	151	142	96	88	81	75
18	1	12'-11"	317	287	260	238	219	201	186	173	161	151	103	95	87	80	73
	2	15'-1"	317	287	260	238	219	201	186	173	161	151	141	133	125	118	111
	3	15'-5"	317	287	260	238	219	201	186	173	161	151	141	133	125	118	111
16	1	13'-9"	316	286	260	237	218	201	186	173	161	150	141	132	86	79	72
	2	16'-9"	316	286	260	237	218	201	186	173	161	150	141	132	124	117	111
	3	16'-3"	316	286	260	237	218	201	186	173	161	150	141	132	124	117	111

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

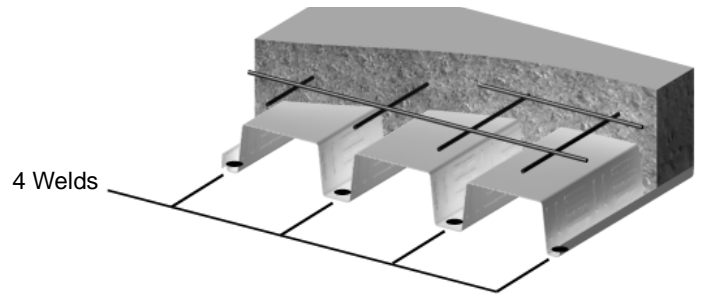
Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)														
		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"
22	q4	1770	1748	1729	1712	1696	1682	1669	1657	1647	1637	1628	1619	1612	1604	1597
	F4	1.06	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
20	q4	1811	1785	1762	1741	1723	1706	1690	1676	1663	1652	1641	1631	1621	1613	1604
	F4	0.94	0.95	0.97	0.98	0.99	1.00	1.01	1.02	1.02	1.03	1.04	1.05	1.05	1.06	1.06
18	q4	1913	1878	1847	1820	1795	1772	1752	1733	1716	1700	1686	1672	1660	1648	1637
	F4	0.77	0.79	0.80	0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.88	0.89	0.90	0.90
16	q4	2030	1986	1948	1913	1882	1854	1828	1805	1784	1764	1746	1729	1713	1699	1685
	F4	0.65	0.67	0.68	0.69	0.70	0.71	0.72	0.73	0.74	0.75	0.76	0.76	0.77	0.78	0.78

PLN™ or N FORMLOK™

- 7¼ in. TOTAL SLAB DEPTH
- Light Weight Concrete (110 pcf)
46.7 psf
- Galvanized or Phosphatized/Painted
- 3 Hour Fire Rating



Deck Weight and Section Properties

Gage	Weight (psf)		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv G60	Phos/Painted	Single Span (in.⁴/ft)	Multiple Spans (in.⁴/ft)	+S _{eff} (in.³/ft)	-S _{eff} (in.³/ft)	End Bearing			Interior Bearing	
							2"	3"	4"	4"	5"
22	2.2	2.1	0.733	0.857	0.344	0.429	654	753	836	1300	1402
20	2.6	2.5	0.908	1.032	0.443	0.531	921	1056	1169	1823	1961
18	3.5	3.4	1.267	1.369	0.652	0.735	1566	1783	1967	3085	3307
16	4.2	4.1	1.642	1.706	0.837	0.914	2367	2681	2946	4648	4967

Allowable Superimposed Loads (psf)

Gage	Spans	Max. UCS ¹	Span (ft-in.)														
			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"
22	1	8'-11"	359	324	250	225	203	183	166	151	138	126	115	105	97	89	81
	2	10'-5"	359	324	295	269	247	183	166	151	138	126	115	105	97	89	81
	3	10'-6"	359	324	295	269	247	228	166	151	138	126	115	105	97	89	81
20	1	10'-5"	377	341	310	283	260	195	177	161	147	134	123	113	103	95	87
	2	12'-1"	377	341	310	283	260	240	222	206	192	134	123	113	103	95	87
	3	12'-3"	377	341	310	283	260	240	222	206	192	134	123	113	103	95	87
18	1	12'-4"	374	338	307	281	258	238	220	204	190	132	121	111	102	93	86
	2	14'-2"	374	338	307	281	258	238	220	204	190	178	167	156	147	93	86
	3	14'-7"	374	338	307	281	258	238	220	204	190	178	167	156	147	139	86
16	1	13'-1"	372	336	305	279	256	236	219	203	189	177	165	109	100	92	84
	2	15'-8"	372	336	305	279	256	236	219	203	189	177	165	155	146	138	130
	3	15'-6"	372	336	305	279	256	236	219	203	189	177	165	155	146	138	130

¹ Max. UCS = Maximum Unshored Clear Span (ft-in.)

Shoring required in shaded areas to right of heavy line.

Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

Gage	Welds	Span (ft-in.)														
		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"
22	q4	2086	2064	2045	2027	2012	1998	1985	1973	1963	1953	1944	1935	1927	1920	1913
	F4	0.90	0.91	0.91	0.92	0.93	0.94	0.94	0.95	0.95	0.96	0.96	0.97	0.97	0.97	0.98
20	q4	2127	2101	2078	2057	2039	2022	2006	1992	1979	1968	1957	1947	1937	1928	1920
	F4	0.80	0.81	0.82	0.83	0.84	0.84	0.85	0.86	0.86	0.87	0.87	0.88	0.88	0.88	0.89
18	q4	2229	2194	2163	2136	2111	2088	2068	2049	2032	2016	2002	1988	1976	1964	1953
	F4	0.66	0.67	0.68	0.69	0.70	0.71	0.71	0.72	0.73	0.73	0.74	0.74	0.75	0.75	0.76
16	q4	2346	2302	2264	2229	2198	2170	2144	2121	2100	2080	2062	2045	2029	2015	2001
	F4	0.56	0.57	0.58	0.59	0.60	0.61	0.62	0.62	0.63	0.64	0.64	0.65	0.65	0.66	0.66

FORMLOK™ DECK WITHOUT FILL - TECHNICAL DATA

This section presents vertical load and diaphragm 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 78–81 list the allowable uniform loads. These are the total uniform loads which can be applied to the FORMLOK deck. Values are based on the allowable bending moment (stress) and limiting deflection to either $L/360$ or $L/180$. The symbol $\blacklozenge\blacklozenge\blacklozenge$ indicates that the allowable uniform load based on deflection exceeds the allowable load based on flexure (stress). See page 86 for the formulas used to determine the allowable uniform loads. Note that self-weight of the deck should be included when determining dead load.

Bearing

Verco recommends 2 in. minimum bearing on perpendicular supports for FORMLOK deck. The required bearing should be verified based on specific project conditions. Adequate bearing is required to prevent web crippling of the deck and to allow for proper attachment of the deck. The allowable reactions 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:

- The allowable stress increase permitted for load combinations in IBC Section 1605.3.2, including wind or seismic forces, shall not be used for allowable diaphragm shears.
- The flexibility factor (F) is the number of micrometers a diaphragm web will deflect in a span of 1 ft under a shear load of 1 pound per ft.
- 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 in Verco's evaluation report may be used as a guide in lieu of a rational analysis of the anticipated deflections.
- VSC = Verco Sidelap Connection made with the Verco PunchLok® tool on PLW2 and PLW3 FORMLOK decks.
- BP = Button punched sidelap connection. Screws may be substituted for BP at same spacing. See page 12 for additional information.

W2/W3
NO
FILL

- TSW = 1½" long top seam weld sidelap connection.
- Refer to “Sidelap Connections” below for information regarding connection spacing.
- Interpolation of allowable diaphragm shear between adjacent spans or sidelap spacings is permissible. For interpolated span lengths, use the diaphragm flexibility of the closest span length.

ATTACHMENT OF FORMLOK DECK

Support Fastening

The diaphragm shear values in the 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

Verco FORMLOK decks used without concrete fill are to be fastened at the sidelaps with either the PunchLok® tool, button punches, screws, or 1½" long top seam welds. Refer to “Sidelap Connections” on page 11 for information on specific connections. Spacing of sidelap connections shall be as specified.

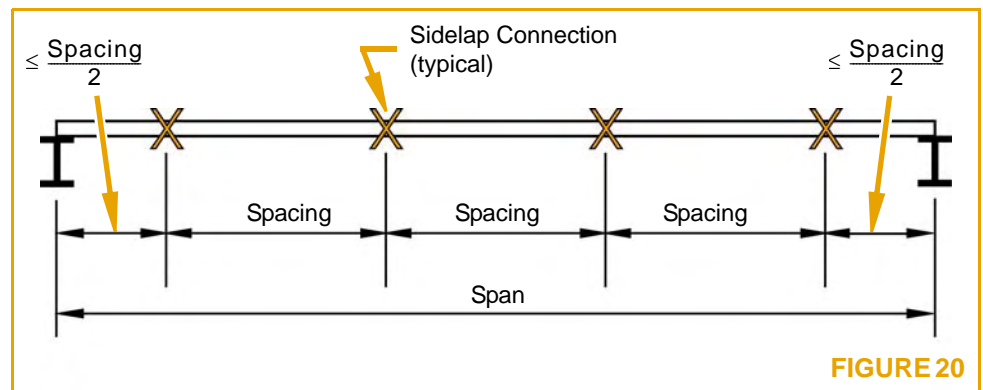


FIGURE 20

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 20. The number of sidelap connections per span based on spacing are noted in Table 10.

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

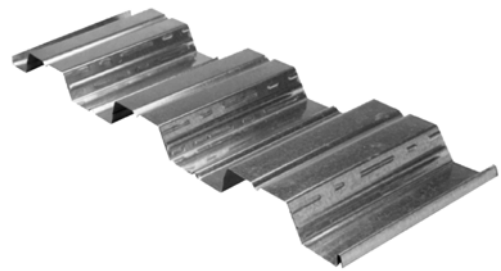
SPACING in.	SPAN (ft-in.)										
	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"
24	3	4	4	5	5	6	6	7	7	8	8
12	6	7	8	9	10	11	12	13	14	15	16
8	9	11	12	14	15	17	18	20	21	23	24
4	18	21	24	27	30	33	36	39	42	45	48

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.

PLW2™ or W2 FORMLOK™

- 2" Deep Deck
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



Allowable Uniform Loads (psf)

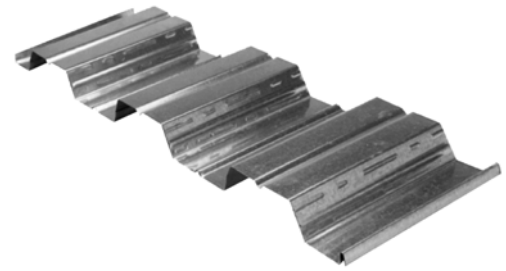
GAGE	SPAN (ft-in.)																	
	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	
SINGLE SPAN																		
22	Stress	137	116	100	87	77	68	61	55	49	45	41	37	34	31	29	27	25
	L/360	69	54	43	35	29	24	20	17	15	13	11	10	9	8	7	6	5
	L/180	◆◆◆	108	87	71	58	48	41	35	30	26	22	20	17	15	14	12	11
21	Stress	157	134	116	101	88	78	70	63	57	51	47	43	39	36	33	31	29
	L/360	77	61	49	40	33	27	23	19	17	14	13	11	10	9	8	7	6
	L/180	154	121	97	79	65	54	46	39	33	29	25	22	19	17	15	14	12
20	Stress	179	153	132	115	101	89	80	72	65	59	53	49	45	41	38	35	33
	L/360	86	67	54	44	36	30	25	22	18	16	14	12	11	9	8	8	7
	L/180	171	135	108	88	72	60	51	43	37	32	28	24	21	19	17	15	13
19	Stress	225	192	165	144	127	112	100	90	81	73	67	61	56	52	48	44	41
	L/360	102	80	64	52	43	36	30	26	22	19	17	14	13	11	10	9	8
	L/180	204	160	128	104	86	72	60	51	44	38	33	29	25	23	20	18	16
18	Stress	262	223	192	167	147	130	116	104	94	85	78	71	65	60	56	52	48
	L/360	114	90	72	59	48	40	34	29	25	21	19	16	14	13	11	10	9
	L/180	229	180	144	117	96	80	68	58	49	43	37	32	29	25	22	20	18
16	Stress	300	295	254	222	195	172	154	138	125	113	103	94	87	80	74	68	64
	L/360	143	113	90	73	60	50	42	36	31	27	23	20	18	16	14	13	11
	L/180	287	225	180	147	121	101	85	72	62	53	47	41	36	32	28	25	23
DOUBLE SPAN																		
22	Stress	142	121	104	91	80	71	63	57	51	46	42	39	36	33	30	28	26
	L/360	◆◆◆	◆◆◆	104	85	70	58	49	42	36	31	27	24	21	18	16	15	13
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	26
21	Stress	163	139	120	105	92	81	73	65	59	53	49	44	41	38	35	32	30
	L/360	◆◆◆	◆◆◆	117	95	78	65	55	47	40	35	30	26	23	21	18	16	15
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	29
20	Stress	185	158	136	118	104	92	82	74	67	60	55	50	46	43	39	37	34
	L/360	◆◆◆	◆◆◆	130	105	87	72	61	52	44	38	33	29	26	23	20	18	16
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	36

(Continued on following page)

W2 NO FILL

PLW2™ or W2 FORMLOK™

- 2" Deep Deck
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



Allowable Uniform Loads (psf) (continued)

GAGE	SPAN (ft-in.)																	
	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"	
DOUBLE SPAN (continued)																		
19	Stress	231	196	169	148	130	115	102	92	83	75	69	63	58	53	49	46	42
	L/360	◆◆◆	193	155	126	104	86	73	62	53	46	40	35	31	27	24	22	19
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	48	43	39
18	Stress	267	228	196	171	150	133	119	107	96	87	80	73	67	62	57	53	49
	L/360	◆◆◆	216	173	141	116	97	82	69	59	51	45	39	34	30	27	24	22
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	61	54	48	43
16	Stress	300	300	260	227	199	177	158	141	128	116	105	96	89	82	76	70	65
	L/360	◆◆◆	271	217	177	146	121	102	87	75	64	56	49	43	38	34	30	27
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	86	76	68	61	54
TRIPLE SPAN																		
22	Stress	178	151	131	114	100	89	79	71	64	58	53	48	44	41	38	35	33
	L/360	130	102	82	66	55	46	38	33	28	24	21	18	16	14	13	11	10
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	77	65	56	48	42	37	32	29	26	23	20
21	Stress	204	174	150	131	115	102	91	81	74	67	61	56	51	47	43	40	38
	L/360	145	114	92	74	61	51	43	37	31	27	24	21	18	16	14	13	11
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	86	73	63	54	47	41	36	32	29	26	23
20	Stress	231	197	170	148	130	115	103	92	83	76	69	63	58	53	49	46	42
	L/360	161	127	101	82	68	57	48	41	35	30	26	23	20	18	16	14	13
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	113	95	81	70	60	52	46	40	36	32	28	25
19	Stress	288	246	212	184	162	144	128	115	104	94	86	78	72	66	61	57	53
	L/360	192	151	121	98	81	68	57	48	41	36	31	27	24	21	19	17	15
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	162	135	114	97	83	72	62	55	48	42	38	34	30
18	Stress	300	285	245	214	188	166	148	133	120	109	99	91	84	77	71	66	61
	L/360	215	169	136	110	91	76	64	54	47	40	35	31	27	24	21	19	17
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	182	151	128	109	93	80	70	61	54	48	42	38	34
16	Stress	300	300	300	284	249	221	197	177	160	145	132	121	111	102	94	88	81
	L/360	270	212	170	138	114	95	80	68	58	50	44	38	34	30	27	24	21
	L/180	◆◆◆	◆◆◆	◆◆◆	276	228	190	160	136	117	101	88	77	67	60	53	47	42

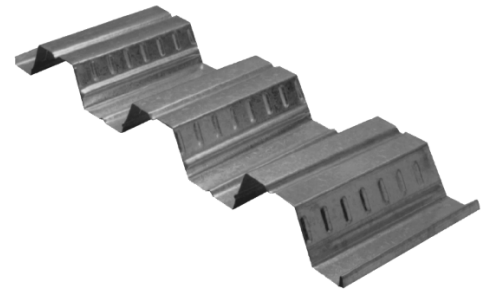
Notes:

1. Stress = Uniform load which produces maximum allowable stress in deck.
2. L/360 = Uniform load which produces L/360 deflection in deck.
L/180 = Uniform load which produces L/180 deflection in deck.
3. Self-weight of the deck should be included when determining dead load.
4. The symbol ◆◆◆ indicates allowable uniform load based on deflection exceeds allowable uniform load based on stress.

W2 NO FILL

PLW3™ or W3 FORMLOK™

- 3" Deep Deck
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



Allowable Uniform Loads (psf)

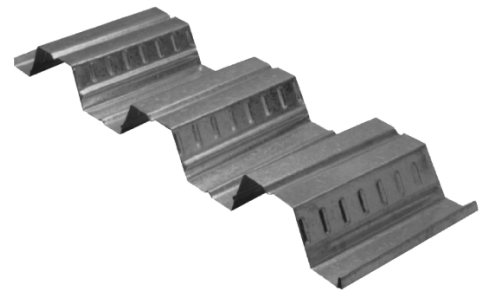
GAGE	SPAN (ft.-in.)																
	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	
SINGLE SPAN																	
22	Stress	218	186	160	140	123	109	97	87	79	71	65	55	47	40	35	31
	L/360	149	117	94	76	63	52	44	38	32	28	24	19	15	12	10	8
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	105	88	75	64	56	48	37	29	23	19	16
21	Stress	252	214	185	161	142	125	112	100	91	82	75	63	54	46	40	35
	L/360	167	131	105	85	70	59	49	42	36	31	27	21	16	13	11	9
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	141	117	99	84	72	62	54	42	33	26	21	18
20	Stress	283	241	208	181	159	141	126	113	102	93	84	71	60	52	45	40
	L/360	184	145	116	94	78	65	54	46	40	34	30	23	18	14	12	10
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	155	129	109	93	79	69	60	46	36	29	24	19
19	Stress	300	300	260	226	199	176	157	141	127	115	105	88	75	65	57	50
	L/360	216	170	136	111	91	76	64	54	47	40	35	27	21	17	14	11
	L/180	◆◆◆	◆◆◆	◆◆◆	221	182	152	128	109	93	81	70	54	43	34	28	23
18	Stress	300	300	300	267	235	208	186	167	150	136	124	104	89	77	67	59
	L/360	246	193	155	126	104	86	73	62	53	46	40	31	24	19	16	13
	L/180	◆◆◆	◆◆◆	◆◆◆	252	207	173	146	124	106	92	80	61	48	39	31	26
16	Stress	300	300	300	300	300	268	239	215	194	176	160	134	115	99	86	76
	L/360	◆◆◆	242	193	157	130	108	91	77	66	57	50	38	30	24	20	16
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	259	216	182	155	133	115	100	77	60	48	39	32
DOUBLE SPAN																	
22	Stress	228	194	167	146	128	113	101	91	82	74	68	57	49	42	36	32
	L/360	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	90	78	67	58	45	35	28	23	19
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆
21	Stress	261	222	192	167	147	130	116	104	94	85	78	65	56	48	42	37
	L/360	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	101	87	75	65	50	40	32	26	21
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆
20	Stress	293	250	216	188	165	146	130	117	106	96	87	73	62	54	47	41
	L/360	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	111	96	83	72	55	44	35	28	23
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆

(Continued on following page)

W3 NO FILL

PLW3™ or W3 FORMLOK™

- 3" Deep Deck
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



Allowable Uniform Loads (psf) (continued)

GAGE	SPAN (ft-in.)																	
	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"		
DOUBLE SPAN (continued)																		
19	Stress	300	300	266	232	204	180	161	144	130	118	108	91	77	67	58	51	
	L/360	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	154	131	112	97	84	65	51	41	33	27
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆
18	Stress	300	300	300	273	240	213	190	170	154	139	127	107	91	78	68	60	
	L/360	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	208	175	149	128	110	96	74	58	47	38	31	
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	
16	Stress	300	300	300	300	300	267	239	214	193	175	160	134	114	99	86	75	
	L/360	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	260	219	186	160	138	120	92	73	58	47	39	
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	
TRIPLE SPAN																		
22	Stress	285	243	209	182	160	142	127	114	103	93	85	71	61	52	46	40	
	L/360	281	221	177	144	119	99	83	71	61	52	46	35	28	22	18	15	
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	70	55	44	36	30	
21	Stress	300	278	240	209	184	163	145	130	118	107	97	82	70	60	52	46	
	L/360	◆◆◆	247	198	161	133	111	93	79	68	59	51	39	31	25	20	17	
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	79	62	50	40	33	
20	Stress	300	300	269	235	206	183	163	146	132	120	109	92	78	67	59	52	
	L/360	◆◆◆	272	218	177	146	122	103	87	75	65	56	43	34	27	22	18	
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	87	68	55	44	37	
19	Stress	300	300	300	290	255	226	201	181	163	148	135	113	96	83	72	64	
	L/360	◆◆◆	◆◆◆	257	209	172	143	121	103	88	76	66	51	40	32	26	21	
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	132	102	80	64	52	43	
18	Stress	300	300	300	300	300	266	237	213	192	174	159	133	114	98	85	75	
	L/360	◆◆◆	◆◆◆	292	237	195	163	137	117	100	86	75	58	46	36	30	24	
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	173	150	116	91	73	59	49	
16	Stress	300	300	300	300	300	300	298	268	242	219	200	168	143	123	107	94	
	L/360	◆◆◆	◆◆◆	◆◆◆	296	244	204	172	146	125	108	94	72	57	46	37	31	
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	216	188	145	114	91	74	61	

Notes:

1. Stress = Uniform load which produces maximum allowable stress in deck.
2. L/360 = Uniform load which produces L/360 deflection in deck.
L/180 = Uniform load which produces L/180 deflection in deck.
3. Self-weight of the deck should be included when determining dead load.
4. The symbol ◆◆◆ indicates allowable uniform load based on deflection exceeds allowable uniform load based on stress.

**W3
NO
FILL**

W2 FORMLOK™

- 4 Weld Pattern at Supports
- Button Punch, Screw, or 1½" Top Seam Weld
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

GAGE	SIDELAP ATTACHMENT	SPAN (ft.-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	
22	BP @ 24"	q	195	181	159	152	138	134	124	122	114
		F	15.1+255R	16.4+218R	18.6+191R	19.6+170R	21.7+153R	22.5+139R	24.7+127R	25.3+118R	27.4+109R
	BP @ 12"	q	242	222	207	195	186	179	173	168	164
		F	12.8+255R	13.9+218R	14.9+191R	15.9+170R	16.8+153R	17.6+139R	18.4+127R	19.2+118R	19.9+109R
	TSW @ 24"	q	221	220	192	194	174	177	162	166	154
		F	11.0+255R	9.9+218R	10.0+191R	9.2+170R	9.3+153R	8.6+139R	8.7+127R	8.2+118R	8.2+109R
TSW @ 12"	q	331	314	301	291	283	277	272	267	263	
	F	8.3+255R	7.8+218R	7.4+191R	7.1+170R	6.8+153R	6.5+139R	6.3+127R	6.1+118R	6.0+109R	
21	BP @ 24"	q	245	225	197	188	169	164	151	148	138
		F	13.3+191R	14.5+164R	16.4+143R	17.5+128R	19.4+115R	20.3+104R	22.2+96R	23.0+88R	24.9+82R
	BP @ 12"	q	296	269	249	234	223	213	205	199	194
		F	11.4+191R	12.5+164R	13.5+143R	14.5+128R	15.4+115R	16.2+104R	17.0+96R	17.8+88R	18.5+82R
	TSW @ 24"	q	286	281	245	246	221	224	204	208	193
		F	9.8+191R	8.9+164R	9.0+143R	8.4+128R	8.4+115R	7.9+104R	8.0+96R	7.5+88R	7.5+82R
TSW @ 12"	q	418	395	377	364	353	344	337	331	325	
	F	7.5+191R	7.1+164R	6.8+143R	6.5+128R	6.2+115R	6.0+104R	5.8+96R	5.7+88R	5.5+82R	
20	BP @ 24"	q	300	273	240	226	204	197	181	177	165
		F	11.7+147R	12.9+126R	14.6+111R	15.7+98R	17.4+88R	18.3+80R	20.1+74R	20.9+68R	22.7+63R
	BP @ 12"	q	355	321	296	277	262	250	240	232	225
		F	10.3+147R	11.3+126R	12.3+111R	13.2+98R	14.1+88R	14.9+80R	15.7+74R	16.5+68R	17.2+63R
	TSW @ 24"	q	362	353	307	306	274	277	253	257	238
		F	8.8+147R	8.1+126R	8.2+111R	7.6+98R	7.7+88R	7.2+80R	7.3+74R	6.9+68R	7.0+63R
TSW @ 12"	q	519	488	464	446	432	420	410	402	395	
	F	6.9+147R	6.5+126R	6.2+111R	6.0+98R	5.7+88R	5.6+80R	5.4+74R	5.2+68R	5.1+63R	
19	BP @ 24"	q	424	382	335	313	283	270	248	240	224
		F	9.4+93R	10.4+80R	11.8+70R	12.8+62R	14.3+56R	15.2+51R	16.7+46R	17.5+43R	19.0+40R
	BP @ 12"	q	486	437	400	371	349	331	316	304	293
		F	8.4+93R	9.4+80R	10.3+70R	11.1+62R	11.9+56R	12.7+51R	13.5+46R	14.3+43R	15.0+40R
	TSW @ 24"	q	548	527	458	452	404	405	369	372	344
		F	7.3+93R	6.8+80R	6.9+70R	6.4+62R	6.5+56R	6.1+51R	6.2+46R	5.9+43R	6.0+40R
TSW @ 12"	q	762	711	672	642	619	599	583	570	558	
	F	5.8+93R	5.5+80R	5.3+70R	5.1+62R	4.9+56R	4.8+51R	4.7+46R	4.5+43R	4.4+40R	
18	BP @ 24"	q	536	480	421	391	353	335	308	297	276
		F	7.9+66R	8.9+57R	10.1+50R	11.0+44R	12.3+40R	13.1+36R	14.4+33R	15.2+31R	16.6+28R
	BP @ 12"	q	604	539	491	454	425	402	382	366	352
		F	7.2+66R	8.1+57R	8.9+50R	9.7+44R	10.5+40R	11.2+36R	12.0+33R	12.7+31R	13.4+28R
	TSW @ 24"	q	734	705	612	599	536	533	485	487	450
		F	6.3+66R	5.9+57R	6.0+50R	5.6+44R	5.7+40R	5.4+36R	5.5+33R	5.2+31R	5.3+28R
TSW @ 12"	q	1001	935	880	838	804	777	754	735	718	
	F	5.1+66R	4.9+57R	4.7+50R	4.5+44R	4.4+40R	4.3+36R	4.2+33R	4.1+31R	4.0+28R	
16	BP @ 24"	q	812	720	631	581	524	493	453	433	403
		F	5.7+33R	6.4+29R	7.3+25R	8.0+22R	8.9+20R	9.7+18R	10.6+17R	11.4+15R	12.4+14R
	BP @ 12"	q	890	788	712	654	607	570	539	513	492
		F	5.3+33R	5.9+29R	6.6+25R	7.2+22R	7.9+20R	8.5+18R	9.2+17R	9.8+15R	10.4+14R
	TSW @ 24"	q	1075	1026	904	888	805	805	743	750	702
		F	4.6+33R	4.4+29R	4.5+25R	4.3+22R	4.3+20R	4.2+18R	4.2+17R	4.1+15R	4.1+14R
TSW @ 12"	q	1417	1324	1257	1208	1170	1142	1119	1102	1089	
	F	3.8+33R	3.7+29R	3.6+25R	3.5+22R	3.4+20R	3.4+18R	3.3+17R	3.2+15R	3.2+14R	

BP = Button Punch; TSW = Top Seam Weld; Screw may be substituted for BP at same spacing, see page 12 for add'l info.

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) and Flexibility Factors, F (in./lb x 10⁶)

GAGE	SIDELAP ATTACHMENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	
22	VSC @ 24"	q	443	429	386	380	351	348	327	326	309
		F	11.6+54R	10.9+46R	13.3+41R	12.6+36R	14.8+32R	14.1+29R	16.1+27R	15.4+25R	17.4+23R
	VSC @ 12"	q	554	519	492	470	453	438	426	415	393
		F	6.3+54R	6.6+46R	6.9+41R	7.2+36R	7.4+32R	7.7+29R	7.9+27R	8.1+25R	8.3+23R
	VSC @ 8"	q	640	613	573	547	506	471	441	415	393
		F	4.8+54R	4.8+46R	5.1+41R	5.2+36R	5.4+32R	5.4+29R	5.7+27R	5.7+25R	5.9+23R
VSC @ 4"	q	742	661	598	547	506	471	441	415	393	
	F	3.6+54R	3.6+46R	3.7+41R	3.7+36R	3.8+32R	3.8+29R	3.9+27R	3.9+25R	3.9+23R	
21	VSC @ 24"	q	542	523	471	463	427	424	397	397	376
		F	9.5+44R	9.0+37R	10.9+33R	10.3+29R	12.1+26R	11.6+24R	13.3+22R	12.7+20R	14.3+19R
	VSC @ 12"	q	674	630	597	570	549	531	516	503	476
		F	5.3+44R	5.6+37R	5.8+33R	6.0+29R	6.3+26R	6.5+24R	6.7+22R	6.8+20R	7.0+19R
	VSC @ 8"	q	776	742	694	662	612	570	534	503	476
		F	4.1+44R	4.2+37R	4.4+33R	4.4+29R	4.7+26R	4.7+24R	4.9+22R	4.9+20R	5.1+19R
VSC @ 4"	q	898	800	724	662	612	570	534	503	476	
	F	3.1+44R	3.2+37R	3.2+33R	3.3+29R	3.3+26R	3.4+24R	3.4+22R	3.4+20R	3.5+19R	
20	VSC @ 24"	q	646	622	560	550	508	503	472	471	447
		F	7.9+36R	7.5+31R	9.1+27R	8.7+24R	10.1+22R	9.7+20R	11.1+18R	10.6+17R	11.9+15R
	VSC @ 12"	q	801	748	708	676	650	629	611	596	566
		F	4.6+36R	4.8+31R	5.0+27R	5.2+24R	5.4+22R	5.5+20R	5.7+18R	5.9+17R	6.0+15R
	VSC @ 8"	q	919	878	821	788	728	678	635	598	566
		F	3.6+36R	3.7+31R	3.9+27R	3.9+24R	4.1+22R	4.1+20R	4.2+18R	4.2+17R	4.4+15R
VSC @ 4"	q	1068	952	861	788	728	678	635	598	566	
	F	2.8+36R	2.9+31R	2.9+27R	2.9+24R	3.0+22R	3.0+20R	3.0+18R	3.1+17R	3.1+15R	
19	VSC @ 24"	q	863	829	746	732	675	669	628	626	594
		F	5.8+25R	5.5+22R	6.6+19R	6.3+17R	7.3+15R	7.0+14R	8.0+13R	7.7+12R	8.7+11R
	VSC @ 12"	q	1063	992	937	895	861	833	809	789	770
		F	3.5+25R	3.7+22R	3.8+19R	4.0+17R	4.1+15R	4.2+14R	4.3+13R	4.4+12R	4.5+11R
	VSC @ 8"	q	1216	1160	1084	1054	991	923	865	814	770
		F	2.9+25R	2.9+22R	3.0+19R	3.1+17R	3.2+15R	3.2+14R	3.3+13R	3.3+12R	3.4+11R
VSC @ 4"	q	1454	1295	1172	1073	991	923	865	814	770	
	F	2.3+25R	2.4+22R	2.4+19R	2.4+17R	2.4+15R	2.5+14R	2.5+13R	2.5+12R	2.5+11R	
18	VSC @ 24"	q	984	1003	888	885	817	809	760	757	719
		F	4.6+20R	4.4+17R	5.2+15R	5.0+13R	5.8+12R	5.6+11R	6.3+10R	6.1+9R	6.8+8R
	VSC @ 12"	q	1283	1196	1131	1080	1038	1005	977	953	933
		F	2.9+20R	3.0+17R	3.1+15R	3.3+13R	3.4+12R	3.5+11R	3.5+10R	3.6+9R	3.7+8R
	VSC @ 8"	q	1465	1397	1306	1269	1208	1156	1083	1020	965
		F	2.4+20R	2.5+17R	2.6+15R	2.6+13R	2.7+12R	2.7+11R	2.8+10R	2.8+9R	2.9+8R
VSC @ 4"	q	1821	1622	1468	1344	1241	1156	1083	1020	965	
	F	2.0+20R	2.1+17R	2.1+15R	2.1+13R	2.1+12R	2.1+11R	2.2+10R	2.2+9R	2.2+8R	
16	VSC @ 24"	q	1261	1320	1132	1184	1050	1096	993	1033	950
		F	2.9+12R	2.8+10R	3.3+9R	3.2+8R	3.6+7R	3.5+6R	3.9+6R	3.8+5R	4.2+5R
	VSC @ 12"	q	1792	1672	1582	1512	1455	1410	1372	1340	1313
		F	2.0+12R	2.1+10R	2.2+9R	2.2+8R	2.3+7R	2.3+6R	2.4+6R	2.5+5R	2.5+5R
	VSC @ 8"	q	2043	1949	1823	1774	1691	1663	1604	1587	1520
		F	1.8+12R	1.8+10R	1.8+9R	1.9+8R	1.9+7R	1.9+6R	2.0+6R	2.0+5R	2.0+5R
VSC @ 4"	q	2608	2472	2313	2117	1956	1821	1706	1607	1520	
	F	1.6+12R	1.6+10R	1.6+9R	1.6+8R	1.6+7R	1.6+6R	1.6+6R	1.6+5R	1.6+5R	

VSC = Verco Sidelap Connection

W2 NO FILL

W3 FORMLOK™

- 4 Weld Pattern at Supports
- Button Punch, Screw, or 1½" Top Seam Weld
- Without Concrete Fill
- Galvanized or Phosphatized/Painted



Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

GAGE	SIDELAP ATTACHMENT	SPAN (ft.-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
22	BP @ 24"	q	155	145	127	123	111	109	100	93	87
		F	15.4+410R	16.5+351R	18.7+308R	19.6+273R	21.7+246R	22.3+224R	24.4+205R	26.9+176R	29.2+154R
	BP @ 12"	q	196	180	169	160	153	148	143	137	132
		F	12.8+410R	13.8+351R	14.8+308R	15.7+273R	16.5+246R	17.2+224R	17.9+205R	19.2+176R	20.3+154R
	TSW @ 24"	q	194	195	170	173	156	160	146	139	134
		F	11.0+410R	9.9+351R	9.9+308R	9.1+273R	9.2+246R	8.5+224R	8.6+205R	8.1+176R	7.7+154R
	TSW @ 12"	q	296	283	272	264	258	252	248	241	236
		F	8.2+410R	7.7+351R	7.3+308R	7.0+273R	6.7+246R	6.4+224R	6.2+205R	5.9+176R	5.6+154R
21	BP @ 24"	q	211	195	171	163	147	143	131	121	113
		F	13.0+278R	14.1+239R	15.9+209R	16.9+186R	18.7+167R	19.5+152R	21.3+139R	23.7+119R	26.0+104R
	BP @ 12"	q	257	235	218	206	195	187	181	171	164
		F	11.1+278R	12.1+239R	13.0+209R	13.9+186R	14.7+167R	15.4+152R	16.2+139R	17.5+119R	18.7+104R
	TSW @ 24"	q	275	272	237	239	214	218	199	189	181
		F	9.5+278R	8.6+239R	8.7+209R	8.0+186R	8.1+167R	7.5+152R	7.6+139R	7.2+119R	6.9+104R
	TSW @ 12"	q	407	385	369	357	347	339	332	321	313
		F	7.2+278R	6.8+239R	6.5+209R	6.2+186R	6.0+167R	5.8+152R	5.6+139R	5.3+119R	5.0+104R
20	BP @ 24"	q	243	223	195	185	167	162	149	136	127
		F	11.9+233R	13.0+200R	14.8+175R	15.7+155R	17.4+140R	18.2+127R	19.9+117R	22.3+100R	24.6+87R
	BP @ 12"	q	292	265	246	231	219	209	201	190	181
		F	10.3+233R	11.3+200R	12.2+175R	13.1+155R	13.9+140R	14.7+127R	15.4+117R	16.7+100R	17.9+87R
	TSW @ 24"	q	322	317	276	277	248	252	230	217	208
		F	8.8+233R	8.1+200R	8.1+175R	7.5+155R	7.6+140R	7.1+127R	7.2+117R	6.8+100R	6.5+87R
	TSW @ 12"	q	471	444	425	410	397	387	379	366	357
		F	6.8+233R	6.4+200R	6.1+175R	5.9+155R	5.6+140R	5.5+127R	5.3+117R	5.0+100R	4.8+87R
19	BP @ 24"	q	372	336	295	276	249	239	219	198	183
		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	20.3+51R
	BP @ 12"	q	430	387	355	330	310	295	282	262	248
		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	15.5+51R
	TSW @ 24"	q	528	510	444	440	394	395	361	337	320
		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	5.5+51R
	TSW @ 12"	q	742	694	658	630	608	590	575	551	534
		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	4.1+51R
18	BP @ 24"	q	478	429	376	350	316	300	276	248	227
		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	17.9+36R
	BP @ 12"	q	542	484	442	409	383	362	345	318	299
		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	14.0+36R
	TSW @ 24"	q	663	643	566	564	511	515	476	442	417
		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	4.9+36R
	TSW @ 12"	q	912	859	822	794	773	756	744	710	685
		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	3.7+36R
16	BP @ 24"	q	752	667	585	538	486	457	420	374	340
		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	13.6+18R
	BP @ 12"	q	826	732	662	608	565	530	502	458	426
		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	11.2+18R
	TSW @ 24"	q	1003	958	844	830	752	752	694	656	629
		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	3.9+18R
	TSW @ 12"	q	1327	1241	1179	1133	1098	1071	1050	1021	1003
		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	3.0+18R

BP = Button Punch; TSW = Top Seam Weld; Screw may be substituted for BP at same spacing, see page 12 for add'l info.

W3 NO FILL

PLW3™ FORMLOK™

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



Allowable Diaphragm Shear Values, q (plf) and Flexibility Factors, F (in./lb x 10⁶)

GAGE	SIDELAP ATTACHMENT	SPAN (ft-in.)										
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"		
22	VSC @ 24"	q	389	377	339	335	309	307	288	272	261	
		F	12.0+85R	11.2+73R	13.7+64R	12.9+57R	15.2+51R	14.4+46R	16.5+42R	17.8+36R	18.9+32R	
	VSC @ 12"	q	489	458	434	415	400	387	376	359	346	
		F	6.5+85R	6.8+73R	7.1+64R	7.4+57R	7.6+51R	7.9+46R	8.1+42R	8.5+36R	8.9+32R	
	VSC @ 8"	q	566	542	507	494	470	462	444	413	374	
		F	5.0+85R	5.0+73R	5.3+64R	5.3+57R	5.6+51R	5.6+46R	5.8+42R	6.1+36R	6.3+32R	
	VSC @ 4"	q	739	695	629	576	532	495	464	413	374	
		F	3.7+85R	3.7+73R	3.8+64R	3.8+57R	3.9+51R	3.9+46R	4.0+42R	4.0+36R	4.1+32R	
	21	VSC @ 24"	q	514	497	447	440	406	403	377	357	342
			F	9.2+63R	8.7+54R	10.5+48R	10.0+42R	11.7+38R	11.1+35R	12.7+32R	13.7+27R	14.6+24R
		VSC @ 12"	q	642	600	568	543	522	505	491	468	451
			F	5.2+63R	5.4+54R	5.7+48R	5.9+42R	6.1+38R	6.3+35R	6.4+32R	6.8+27R	7.1+24R
VSC @ 8"		q	739	707	661	643	611	600	578	535	484	
		F	4.1+63R	4.1+54R	4.3+48R	4.3+42R	4.5+38R	4.6+35R	4.7+32R	4.9+27R	5.1+24R	
VSC @ 4"		q	960	900	814	745	689	641	601	535	484	
		F	3.1+63R	3.2+54R	3.2+48R	3.2+42R	3.3+38R	3.3+35R	3.4+32R	3.4+27R	3.5+24R	
20		VSC @ 24"	q	582	561	505	496	457	454	425	402	385
			F	8.1+56R	7.7+48R	9.3+42R	8.9+37R	10.3+33R	9.9+30R	11.3+28R	12.1+24R	13.0+21R
		VSC @ 12"	q	723	676	639	611	587	568	552	526	507
			F	4.7+56R	4.9+48R	5.1+42R	5.3+37R	5.5+33R	5.6+30R	5.8+28R	6.1+24R	6.4+21R
	VSC @ 8"	q	832	795	743	722	687	674	649	602	545	
		F	3.7+56R	3.7+48R	3.9+42R	4.0+37R	4.1+33R	4.2+30R	4.3+28R	4.5+24R	4.6+21R	
	VSC @ 4"	q	1077	1012	916	838	775	721	676	602	545	
		F	2.9+56R	2.9+48R	3.0+42R	3.0+37R	3.0+33R	3.1+30R	3.1+28R	3.2+24R	3.2+21R	
	19	VSC @ 24"	q	831	798	718	704	650	643	603	570	545
			F	5.6+37R	5.4+32R	6.4+28R	6.1+25R	7.1+22R	6.8+20R	7.7+18R	8.3+16R	8.9+14R
		VSC @ 12"	q	1025	955	903	862	828	801	778	742	715
			F	3.5+37R	3.6+32R	3.7+28R	3.9+25R	4.0+22R	4.1+20R	4.2+18R	4.4+16R	4.6+14R
VSC @ 8"		q	1173	1119	1045	1015	965	947	912	867	784	
		F	2.8+37R	2.9+32R	3.0+28R	3.0+25R	3.1+22R	3.1+20R	3.3+18R	3.4+16R	3.5+14R	
VSC @ 4"		q	1508	1427	1319	1207	1115	1039	973	867	784	
		F	2.3+37R	2.3+32R	2.4+28R	2.4+25R	2.4+22R	2.4+20R	2.5+18R	2.5+16R	2.5+14R	
18		VSC @ 24"	q	982	973	875	857	791	783	735	694	664
			F	4.5+29R	4.3+25R	5.1+21R	4.9+19R	5.6+17R	5.4+16R	6.1+14R	6.6+12R	7.0+11R
		VSC @ 12"	q	1245	1160	1096	1046	1006	972	945	901	869
			F	2.9+29R	3.0+25R	3.1+21R	3.2+19R	3.3+17R	3.4+16R	3.5+14R	3.6+12R	3.8+11R
	VSC @ 8"	q	1422	1356	1266	1229	1170	1148	1106	1060	982	
		F	2.4+29R	2.4+25R	2.5+21R	2.6+19R	2.6+17R	2.7+16R	2.7+14R	2.8+12R	2.9+11R	
	VSC @ 4"	q	1823	1724	1649	1512	1397	1301	1218	1085	982	
		F	2.0+29R	2.0+25R	2.1+21R	2.1+19R	2.1+17R	2.1+16R	2.1+14R	2.2+12R	2.2+11R	
	16	VSC @ 24"	q	1265	1325	1136	1189	1054	1100	997	955	922
			F	2.9+17R	2.8+15R	3.2+13R	3.1+11R	3.5+10R	3.4+9R	3.8+9R	4.1+7R	4.4+6R
		VSC @ 12"	q	1761	1641	1551	1481	1425	1379	1341	1281	1238
			F	2.0+17R	2.1+15R	2.1+13R	2.2+11R	2.3+10R	2.3+9R	2.4+9R	2.5+7R	2.6+6R
VSC @ 8"		q	2006	1912	1787	1737	1655	1625	1567	1505	1460	
		F	1.8+17R	1.8+15R	1.8+13R	1.8+11R	1.9+10R	1.9+9R	2.0+9R	2.0+7R	2.1+6R	
VSC @ 4"		q	2561	2424	2320	2239	2174	2049	1920	1710	1547	
		F	1.6+17R	1.6+15R	1.6+13R	1.6+11R	1.6+10R	1.6+9R	1.6+9R	1.6+7R	1.7+6R	

VSC = Verco Sidelap Connection

W3 NO FILL

VERCOR™ FORM DECK TECHNICAL DATA

Material

Deep and Shallow VERCOR form decks are fabricated from G90 galvanized steel conforming to ASTM A 653 or A 1063, SS Grade 80.

Galvanized VERCOR deck can be considered as a permanent form. Uncoated decks should not be considered permanent forms; therefore, the reinforced slab should be designed for the total load. Uncoated deck is available only as a special order.

Uniform Load Tables

The tables on pages 88 and 90 list the allowable uniform loads. These are the total uniform loads which can be applied to the VERCOR form deck. Values are based on the allowable bending moment (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 flexure (stress). Note that self-weight of the deck should be included when determining dead load.

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

Span	Bending Moment	Deflection
Single	$+M = 0.125 \cdot w \cdot L^2$	$\Delta = \frac{0.013 \cdot w \cdot L^4 \cdot 1728}{E \cdot I_{d(\text{single})}}$
Double	$-M = 0.125 \cdot w \cdot L^2$	$\Delta = \frac{0.0054 \cdot w \cdot L^4 \cdot 1728}{E \cdot I_{d(\text{mult})}}$
Triple	$-M = 0.1 \cdot w \cdot L^2$	$\Delta = \frac{0.0069 \cdot w \cdot L^4 \cdot 1728}{E \cdot I_{d(\text{mult})}}$

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

Allowable Unshored Span Tables

The maximum allowable unshored spans shown on pages 89 and 91 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 deck deflection allowance. The following allowances for VERCOR deck deflection are included:

- 3 psf for light weight concrete.
- 4 psf for normal weight concrete.

No allowance is included for deflection of structural supports.

Welding VERCOR decks lighter than 22 gage requires weld washers in accordance with AWS D1.3 (see Figure 21).

VERCOR Attachment to Supports

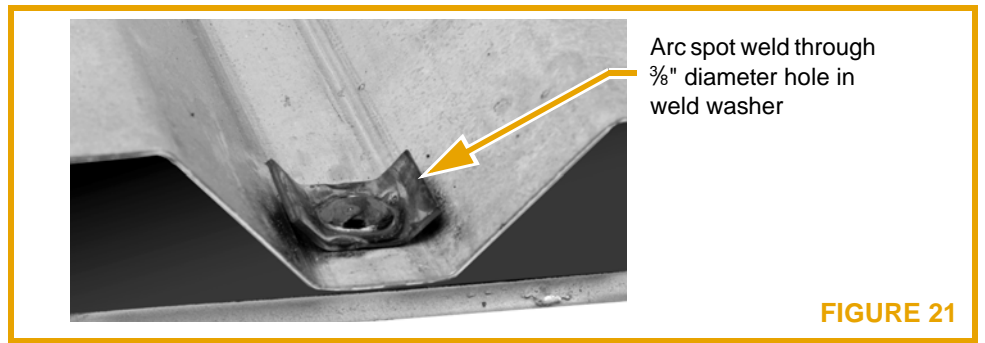


FIGURE 21

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 22 shows suggested minimum attachment patterns for spans up to 3 ft and spans 3 ft to 8 ft. If spans exceed 8 ft, a maximum attachment spacing of 12 in. at the perpendicular supports is suggested.

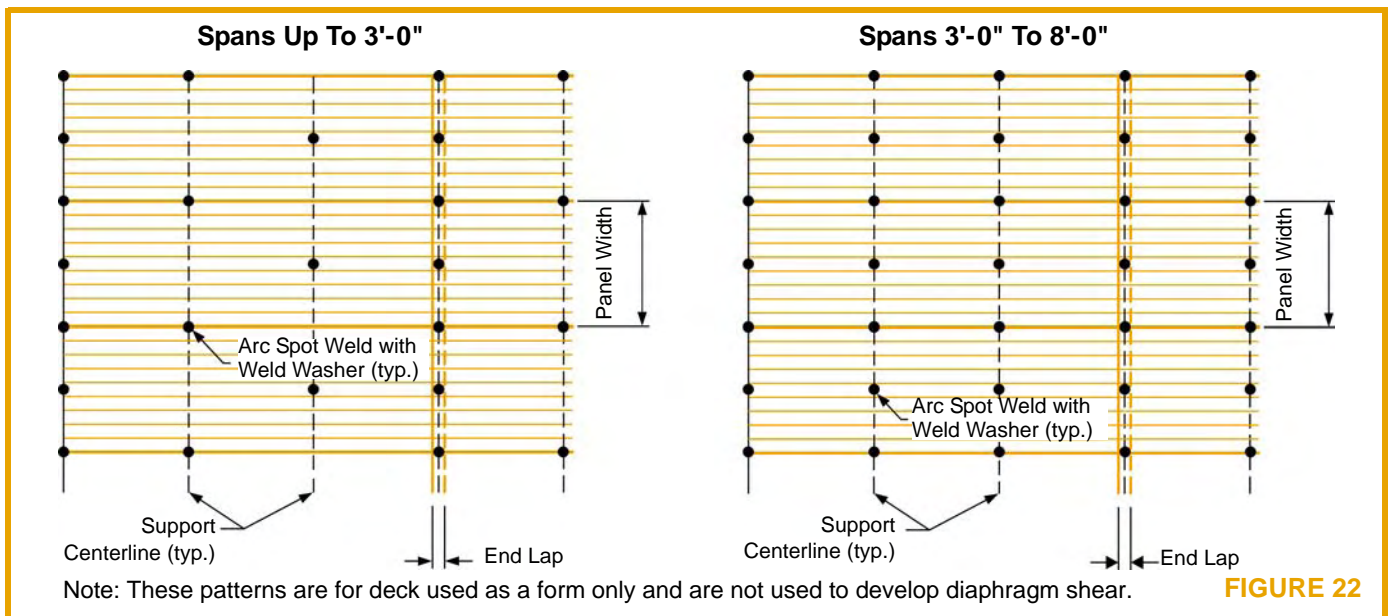


FIGURE 22

See Table 5 on page 20 for allowable diaphragm values for Deep VERCOR deck with concrete fill and stud shear connectors. In addition, see Verco's evaluation report for diaphragm values for Deep VERCOR deck welded to the supports with insulating concrete fill and for Deep VERCOR deck without concrete fill fastened to the supports with screws.

VERCOR Venting

Deep and Shallow VERCOR decks are available with rolled-in sidelap vents as shown in Figure 23. Vents are spaced at approximately 10 in. on center.

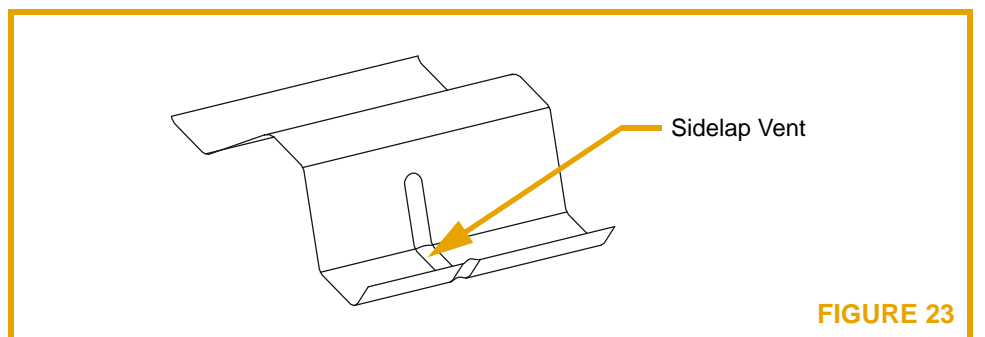
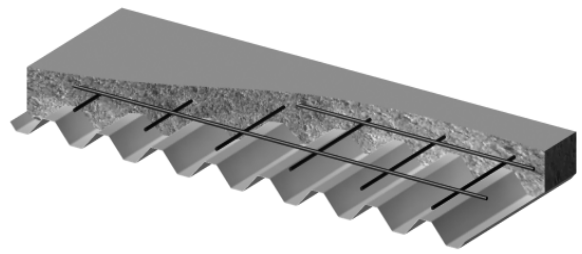


FIGURE 23

Deep VERCOR™

- 1⁵/₁₆ in. Non-Composite Form Deck
- Galvanized



Deck Weight and Section Properties

Gage	Weight		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)				
	Galv (psf)	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing			Interior Bearing		
						2"	3"	4"	3"	4"	
26	1.1	0.075	0.075	0.099	0.103	492	572	639	829	916	
24	1.4	0.097	0.097	0.137	0.138	802	927	1032	1366	1503	
22	1.7	0.120	0.120	0.172	0.171	1184	1361	1510	2029	2225	
20	2.1	0.143	0.143	0.204	0.204	1628	1864	2064	2807	3069	

Note: Section properties are based on F_y = 60,000 psi (specified minimum F_y = 80,000 psi).

Allowable Uniform Loads (psf)

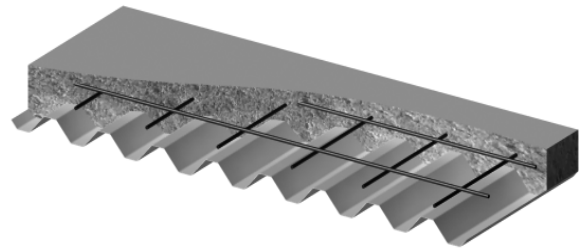
Gage		Span (ft-in.)													
		3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"
Single Span															
26	Stress	264	194	149	117	95	79	66	56	48	42				
	L/240	182	115	77	54	39	30	23	18	14	12				
	L/180	243	153	103	72	53	39	30	24	19	16				
24	Stress	300	268	206	162	132	109	91	78	67	58	51			
	L/240	236	149	100	70	51	38	29	23	19	15	12			
	L/180	◆◆◆	198	133	93	68	51	39	31	25	20	17			
22	Stress	300	300	258	204	165	136	115	98	84	73	65	57	51	
	L/240	292	184	123	86	63	47	36	29	23	19	15	13	11	
	L/180	◆◆◆	245	164	115	84	63	49	38	31	25	21	17	14	
20	Stress	300	300	300	242	196	162	136	116	100	87	77	68	60	54
	L/240	◆◆◆	219	147	103	75	56	43	34	27	22	18	15	13	11
	L/180	◆◆◆	292	196	137	100	75	58	46	36	30	24	20	17	15
Double Span															
26	Stress	275	202	155	122	99	82	69	59	50	44	39	34	31	27
	L/240	◆◆◆	◆◆◆	◆◆◆	◆◆◆	95	71	55	43	35	28	23	19	16	14
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	58	46	37	31	26	22	18
24	Stress	300	270	207	164	132	109	92	78	68	59	52	46	41	37
	L/240	◆◆◆	◆◆◆	◆◆◆	◆◆◆	123	92	71	56	45	36	30	25	21	18
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	74	60	48	40	33	28	24
22	Stress	300	300	257	203	164	136	114	97	84	73	64	57	51	45
	L/240	◆◆◆	◆◆◆	◆◆◆	◆◆◆	152	114	88	69	55	45	37	31	26	22
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	92	74	60	49	41	35	29
20	Stress	300	300	300	242	196	162	136	116	100	87	77	68	60	54
	L/240	◆◆◆	◆◆◆	◆◆◆	◆◆◆	181	136	105	82	66	54	44	37	31	26
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	110	88	71	59	49	41	35
Triple Span															
26	Stress	300	252	193	153	124	102	86	73	63	55	48	43	38	34
	L/240	◆◆◆	216	145	102	74	56	43	34	27	22	18	15	13	11
	L/180	◆◆◆	◆◆◆	◆◆◆	136	99	74	57	45	36	29	24	20	17	14
24	Stress	300	300	259	204	166	137	115	98	84	74	65	57	51	46
	L/240	◆◆◆	280	187	132	96	72	56	44	35	28	23	20	16	14
	L/180	◆◆◆	◆◆◆	250	176	128	96	74	58	47	38	31	26	22	19

(Continued on following page)

VERCOR™

Deep VERCOR™

- 1⁵/₁₆ in. Non-Composite Form Deck
- Galvanized



Allowable Uniform Loads (psf) (continued)

Gage	Span (ft-in.)															
	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	
Triple Span (continued)																
22	Stress	300	300	300	253	205	170	143	121	105	91	80	71	63	57	51
	L/240	◆◆◆	◆◆◆	232	163	119	89	69	54	43	35	29	24	20	17	15
	L/180	◆◆◆	◆◆◆	◆◆◆	217	158	119	92	72	58	47	39	32	27	23	20
20	Stress	300	300	300	300	245	202	170	145	125	109	96	85	76	68	61
	L/240	◆◆◆	◆◆◆	276	194	142	106	82	64	52	42	35	29	24	21	18
	L/180	◆◆◆	◆◆◆	◆◆◆	259	189	142	109	86	69	56	46	38	32	28	24

Notes:

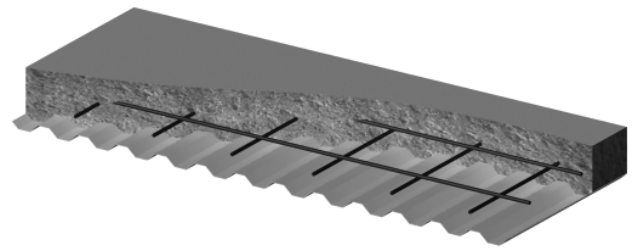
1. Stress = Uniform load which produces maximum allowable stress in deck.
2. L/240 = Uniform load which produces L/240 deflection in deck.
L/180 = Uniform load which produces L/180 deflection in deck.
3. Self-weight of the deck should be included when determining dead load.
4. The symbol ◆◆◆ indicates allowable uniform load based on deflection exceeds allowable uniform load based on stress.

Maximum Allowable Unshored Clear Spans (ft-in.)

Total Slab Depth	Normal Weight Concrete - 145 pcf					Light Weight Concrete - 110 pcf				
	Concrete Weight	Gage	1 Span	2 Span	3 Span	Concrete Weight	Gage	1 Span	2 Span	3 Span
3½"	34.4 psf	26	4'-10"	5'-8"	5'-9"	26.1 psf	26	5'-2"	6'-1"	6'-2"
		24	5'-11"	7'-1"	7'-2"		24	6'-6"	7'-9"	7'-10"
		22	6'-4"	8'-3"	7'-10"		22	6'-11"	8'-11"	8'-7"
		20	6'-9"	8'-11"	8'-4"		20	7'-4"	9'-9"	9'-1"
4"	40.4 psf	26	4'-7"	5'-5"	5'-6"	30.7 psf	26	5'-0"	5'-11"	5'-11"
		24	5'-8"	6'-9"	6'-10"		24	6'-2"	7'-5"	7'-6"
		22	6'-1"	7'-10"	7'-6"		22	6'-8"	8'-7"	8'-2"
		20	6'-5"	8'-6"	7'-11"		20	7'-0"	9'-4"	8'-8"
4½"	46.4 psf	26	4'-5"	5'-3"	5'-3"	35.2 psf	26	4'-10"	5'-8"	5'-9"
		24	5'-5"	6'-6"	6'-7"		24	5'-11"	7'-1"	7'-2"
		22	5'-10"	7'-6"	7'-2"		22	6'-5"	8'-3"	7'-10"
		20	6'-2"	8'-2"	7'-7"		20	6'-9"	9'-0"	8'-4"
5"	52.5 psf	26	4'-3"	5'-0"	5'-1"	39.8 psf	26	4'-8"	5'-6"	5'-7"
		24	5'-3"	6'-3"	6'-4"		24	5'-9"	6'-10"	6'-11"
		22	5'-7"	7'-3"	6'-11"		22	6'-2"	7'-11"	7'-7"
		20	5'-11"	7'-10"	7'-4"		20	6'-6"	8'-8"	8'-0"
5½"	58.5 psf	26	4'-2"	4'-11"	4'-11"	44.4 psf	26	4'-6"	5'-4"	5'-5"
		24	5'-1"	6'-0"	6'-1"		24	5'-7"	6'-8"	6'-9"
		22	5'-5"	6'-11"	6'-9"		22	5'-11"	7'-8"	7'-4"
		20	5'-9"	7'-7"	7'-1"		20	6'-3"	8'-4"	7'-9"
6"	64.6 psf	26	4'-0"	4'-9"	4'-9"	49.0 psf	26	4'-5"	5'-2"	5'-3"
		24	4'-11"	5'-10"	5'-11"		24	5'-5"	6'-5"	6'-6"
		22	5'-3"	6'-9"	6'-6"		22	5'-9"	7'-5"	7'-2"
		20	5'-7"	7'-4"	6'-11"		20	6'-1"	8'-1"	7'-6"
6½"	70.6 psf	26	3'-11"	4'-7"	4'-8"	53.6 psf	26	4'-3"	5'-0"	5'-1"
		24	4'-9"	5'-8"	5'-9"		24	5'-3"	6'-3"	6'-4"
		22	5'-2"	6'-6"	6'-4"		22	5'-7"	7'-2"	6'-11"
		20	5'-5"	7'-1"	6'-9"		20	5'-11"	7'-10"	7'-4"

Shallow VERCOR™

- 9/16 in. Non-Composite Form Deck
- Galvanized



Deck Weight and Section Properties

Gage	Weight		I _d for Deflection		Moment		Allowable Reactions per ft of Width (lb)			
	Galv (psf)	Single Span (in.4/ft)	Multiple Spans (in.4/ft)	+S _{eff} (in.3/ft)	-S _{eff} (in.3/ft)	End Bearing		Interior Bearing		
						1½"	2"	1½"	2"	
26	1.0	0.013	0.013	0.041	0.043	581	644	788	862	
24	1.3	0.018	0.018	0.059	0.059	980	1081	1375	1497	
22	1.6	0.022	0.022	0.073	0.073	1466	1611	2105	2283	

Note: Section properties are based on F_y = 60,000 psi (specified minimum F_y = 80,000 psi).

Allowable Uniform Loads (psf)

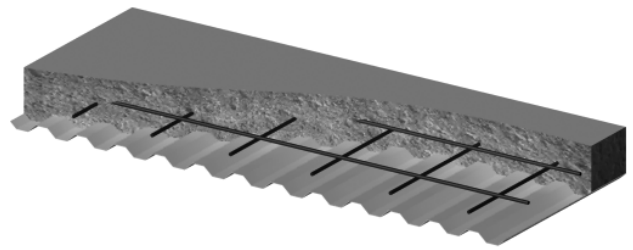
Gage		Span (ft-in.)										
		1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
Single Span												
26	Stress	300	300	246	157	109	80					
	L/240	◆◆◆	253	107	55	32	20					
	L/180	◆◆◆	◆◆◆	142	73	42	27					
24	Stress	300	300	300	227	157	116	89	70			
	L/240	◆◆◆	◆◆◆	148	76	44	28	18	13			
	L/180	◆◆◆	◆◆◆	197	101	58	37	25	17			
22	Stress	300	300	300	280	195	143	110	87	70		
	L/240	◆◆◆	◆◆◆	181	92	54	34	23	16	12		
	L/180	◆◆◆	◆◆◆	241	123	71	45	30	21	15		
Double Span												
26	Stress	300	300	258	165	115	84	65	51			
	L/240	◆◆◆	◆◆◆	257	132	76	48	32	23			
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	101	64	43	30			
24	Stress	300	300	300	227	157	116	89	70	57	47	39
	L/240	◆◆◆	◆◆◆	◆◆◆	182	105	66	44	31	23	17	13
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	141	88	59	42	30	23	18
22	Stress	300	300	300	280	195	143	110	87	70	58	49
	L/240	◆◆◆	◆◆◆	◆◆◆	223	129	81	54	38	28	21	16
	L/180	◆◆◆	◆◆◆	◆◆◆	◆◆◆	172	108	72	51	37	28	21
Triple Span												
26	Stress	300	300	300	206	143	105	81	64			
	L/240	◆◆◆	◆◆◆	201	103	60	38	25	18			
	L/180	◆◆◆	◆◆◆	268	137	79	50	34	24			
24	Stress	300	300	300	283	197	144	111	87	71	59	49
	L/240	◆◆◆	◆◆◆	278	143	82	52	35	24	18	13	10
	L/180	◆◆◆	◆◆◆	◆◆◆	190	110	69	46	33	24	18	14
22	Stress	300	300	300	300	243	179	137	108	88	72	61
	L/240	◆◆◆	◆◆◆	◆◆◆	174	101	63	43	30	22	16	13
	L/180	◆◆◆	◆◆◆	◆◆◆	232	134	85	57	40	29	22	17

Notes:

1. Stress = Uniform load which produces maximum allowable stress in deck.
2. L/240 = Uniform load which produces L/240 deflection in deck.
L/180 = Uniform load which produces L/180 deflection in deck.
3. Self-weight of the deck should be included when determining dead load.
4. The symbol ◆◆◆ indicates allowable uniform load based on deflection exceeds allowable uniform load based on stress.

Shallow VERCOR™

- 9/16 in. Non-Composite Form Deck
- Galvanized



Maximum Allowable Unshored Clear Spans (ft-in.)

Total Slab Depth	Normal Weight Concrete - 145 pcf					Light Weight Concrete - 110 pcf				
	Concrete Weight	Gage	1 Span	2 Spans	3 Spans	Concrete Weight	Gage	1 Span	2 Spans	3 Spans
2½"	26.8 psf	26	2'-6"	3'-1"	3'-1"	20.3 psf	26	2'-8"	3'-2"	3'-3"
		24	3'-5"	4'-1"	4'-1"		24	3'-7"	4'-4"	4'-4"
		22	3'-10"	4'-9"	4'-9"		22	4'-3"	5'-1"	5'-2"
3"	32.9 psf	26	2'-6"	2'-11"	3'-0"	24.9 psf	26	2'-7"	3'-1"	3'-2"
		24	3'-3"	3'-11"	3'-11"		24	3'-6"	4'-2"	4'-3"
		22	3'-8"	4'-7"	4'-6"		22	4'-0"	4'-11"	4'-11"
3½"	38.9 psf	26	2'-5"	2'-10"	2'-11"	29.5 psf	26	2'-6"	3'-0"	3'-1"
		24	3'-2"	3'-9"	3'-10"		24	3'-4"	4'-0"	4'-1"
		22	3'-6"	4'-5"	4'-4"		22	3'-10"	4'-9"	4'-8"
4"	44.9 psf	26	2'-4"	2'-9"	2'-10"	34.1 psf	26	2'-6"	2'-11"	3'-0"
		24	3'-1"	3'-8"	3'-8"		24	3'-3"	3'-11"	3'-11"
		22	3'-4"	4'-3"	4'-1"		22	3'-8"	4'-7"	4'-6"
4½"	51.0 psf	26	2'-3"	2'-8"	2'-9"	38.7 psf	26	2'-5"	2'-10"	2'-11"
		24	3'-0"	3'-6"	3'-7"		24	3'-2"	3'-10"	3'-10"
		22	3'-3"	4'-1"	3'-11"		22	2'-6"	4'-5"	4'-4"
5"	57.0 psf	26	2'-3"	2'-8"	2'-8"	43.3 psf	26	2'-4"	2'-10"	2'-10"
		24	2'-11"	3'-5"	3'-6"		24	3'-1"	3'-8"	3'-9"
		22	3'-1"	4'-0"	3'-10"		22	3'-5"	4'-4"	4'-2"

CELLULAR FORMLOK™ DECK DESIGN INFORMATION

Properties

Section properties have been computed in accordance with AISI's "S100: North American Specification for the Design of Cold-Formed Steel Structural Members."

Material

Cellular FORMLOK deck sections are fabricated from galvanized steel conforming to ASTM A 653 or A 1063, SS Grade 50. 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_{eff} (+ or -) is the effective section modulus.

M (+ or -) is the ASD allowable moment where $M = M_n / \Omega_b$, where $\Omega_b = 1.67$ and $M_n = F_y \cdot S_{eff}$ (+ or -).

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 $\Omega = 2.35$.

"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 Deck Bearing

Compare end and interior reactions to the allowable reactions for fluted (non-cellular) deck of the same gage as the fluted top section of the cellular deck.

Allowable Superimposed Loads and Diaphragm Values

Allowable superimposed loads and allowable diaphragm shear values and flexibility factors shown in the FORMLOK tables on pages 37–75 for a given concrete type and thickness may be applied to cellular FORMLOK deck 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

Refer to FORMLOK Composite Slab Fire Resistance Ratings on pages 30–31 for unprotected fire rated assemblies using cellular FORMLOK deck.

Acoustical Cellular FORMLOK Deck

Cellular PLB-CD, BCD, PLN-CD, NCD, PLW2-CD, W2CD, PLW3-CD, and W3CD FORMLOK floor decks are available with acoustical perforations in the flat bottom plate. Acoustical deck can provide sound attenuation in buildings where the underside of the deck is exposed to the interior. Acoustical perforations are $\frac{5}{32}$ -inch in diameter on $\frac{7}{32}$ -inch staggered centers in bands centered under the top flanges of the fluted top sections. Insulation is factory installed (see Figure 24). Sound absorption information is shown in Table 11. Noise Reduction Coefficient (NRC) values were determined by tests in accordance with ANSI/ASTM C423 conducted by Riverbank Acoustical Laboratories. Test reports furnished upon request.

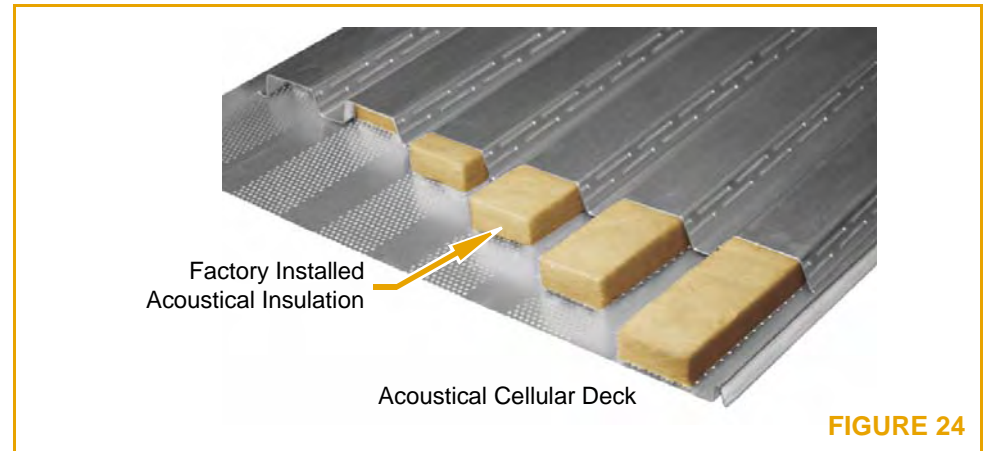
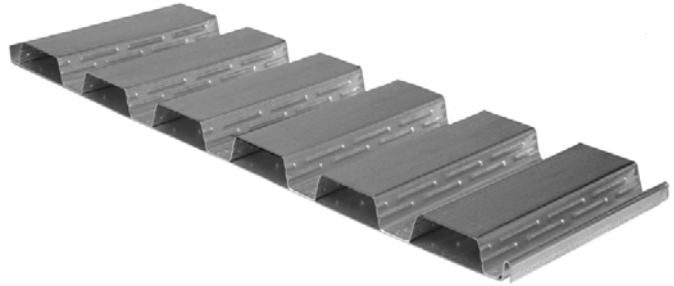


FIGURE 24

Table 11: Noise Reduction Coefficients for Acoustical Cellular Deck

Profile	Absorption Coefficients						Noise Reduction Coefficient
	125	250	500	1000	2000	4000	
PLB-CD or BCD	0.60	0.55	0.80	1.01	0.89	0.66	0.80
PLN-CD or NCD	0.84	0.79	1.16	0.98	0.82	0.60	0.95
PLW2-CD or W2CD	0.59	0.53	0.84	0.87	0.59	0.46	0.70
PLW3-CD or W3CD	0.70	0.67	1.06	0.86	0.63	0.42	0.80

PLB-CD and BCD FORMLOK™

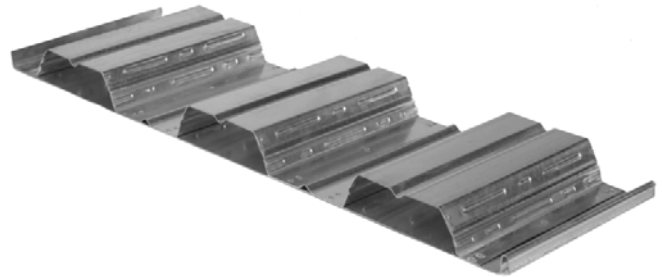


Deck Weight and Section Properties (per ft of width)

Gage	Weight (psf)	I _d for Deflections		Positive Moment		Negative Moment		Vertical Shear	
		Single Span (in. ⁴)	Multiple Span (in. ⁴)	+S _{eff} (in. ³)	+M (in.-kips)	-S _{eff} (in. ³)	-M (in.-kips)	End (lb)	Interior (lb)
20/20	3.6	0.416	0.416	0.279	8.4	0.382	11.4	340	510
20/18	4.1	0.454	0.454	0.287	8.6	0.428	12.8	318	369
20/16	4.5	0.485	0.485	0.293	8.8	0.447	13.4	306	303
18/20	4.1	0.535	0.535	0.417	12.5	0.453	13.6	369	612
18/18	4.6	0.587	0.587	0.428	12.8	0.552	16.5	517	667
18/16	5.1	0.631	0.631	0.437	13.1	0.575	17.2	491	524
16/18	5.3	0.704	0.704	0.587	17.6	0.629	18.8	549	757
16/16	5.8	0.759	0.759	0.599	17.9	0.700	20.9	718	821

Note: Section properties are based on F_y = 50,000 psi.

PLW2-CD and W2CD FORMLOK™

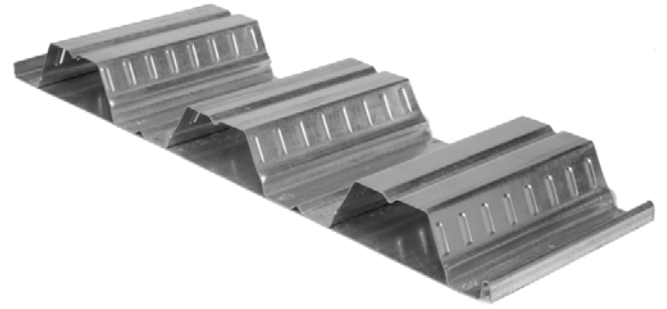


Deck Weight and Section Properties (per ft of width)

Gage	Weight (psf)	I _d for Deflections		Positive Moment		Negative Moment		Vertical Shear	
		Single Span (in. ⁴)	Multiple Span (in. ⁴)	+S _{eff} (in. ³)	+M (in.-kips)	-S _{eff} (in. ³)	-M (in.-kips)	End (lb)	Interior (lb)
20/20	3.4	0.666	0.666	0.363	10.9	0.429	12.8	404	614
20/18	3.8	0.714	0.714	0.372	11.1	0.446	13.3	376	433
20/16	4.3	0.753	0.753	0.377	11.3	0.458	13.7	359	392
18/20	3.9	0.847	0.847	0.526	15.8	0.549	16.4	439	755
18/18	4.3	0.911	0.911	0.536	16.1	0.570	17.1	596	741
18/16	4.8	0.964	0.964	0.544	16.3	0.586	17.5	562	643
16/18	4.9	1.087	1.087	0.704	21.1	0.702	21.0	638	867
16/16	5.4	1.153	1.153	0.714	21.4	0.722	21.6	831	949

Note: Section properties are based on F_y = 50,000 psi.

Refer to pages 92-93 for cellular deck design information.



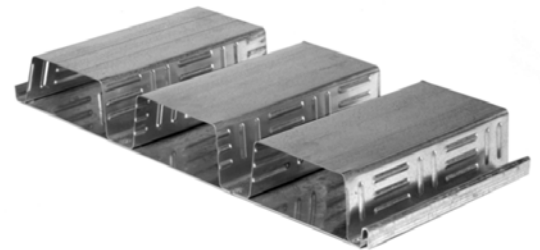
PLW3-CD and W3CD FORMLOK™

Deck Weight and Section Properties (per ft of width)

Gage	Weight (psf)	I _d for Deflections		Positive Moment		Negative Moment		Vertical Shear	
		Single Span (in. ⁴)	Multiple Span (in. ⁴)	+S _{eff} (in. ³)	+M (in.-kips)	-S _{eff} (in. ³)	-M (in.-kips)	End (lb)	Interior (lb)
20/20	3.6	1.456	1.456	0.542	16.2	0.625	18.7	571	912
20/18	4.0	1.554	1.554	0.541	16.2	0.652	19.5	528	617
20/16	4.5	1.615	1.615	0.566	16.9	0.672	20.1	502	554
18/20	4.1	1.813	1.813	0.852	25.5	0.813	24.3	628	1171
18/18	4.6	1.949	1.949	0.862	25.8	0.846	25.3	869	1144
18/16	5.0	2.062	2.062	0.859	25.7	0.874	26.2	816	956
16/18	5.2	2.315	2.315	1.105	33.1	1.037	31.1	934	1354
16/16	5.7	2.453	2.453	1.123	33.6	1.073	32.1	1206	1406

Note: Section properties are based on F_y = 50,000 psi.

PLN-CD and NCD FORMLOK™



Deck Weight and Section Properties (per ft of width)

Gage	Weight (psf)	I _d for Deflections		Positive Moment		Negative Moment		Vertical Shear	
		Single Span (in. ⁴)	Multiple Span (in. ⁴)	+S _{eff} (in. ³)	+M (in.-kips)	-S _{eff} (in. ³)	-M (in.-kips)	End (lb)	Interior (lb)
20/20	4.1	1.681	1.681	0.518	15.5	0.706	21.2	559	1039
20/18	4.6	1.841	1.841	0.515	15.4	0.909	27.2	522	718
20/16	5.1	1.951	1.951	0.555	16.6	1.022	30.6	500	550
18/20	4.8	2.159	2.159	0.805	24.1	0.852	25.5	608	1253
18/18	5.3	2.369	2.369	0.826	24.7	1.055	31.6	850	1275
18/16	5.8	2.544	2.544	0.843	25.2	1.318	39.5	805	966
16/18	6.1	2.881	2.881	1.121	33.6	1.199	35.9	906	1455
16/16	6.6	3.106	3.106	1.144	34.3	1.475	44.2	1181	1498

Note: Section properties are based on F_y = 50,000 psi.

Refer to pages 92-93 for cellular deck design information.

Metric (SI) Conversions

Table 12

	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 ²
	ft	x	0.3048 = m		pcf	x	16.01846 = kg/m ³
Area	in. ²	x	645.16 = mm ²	Force	lb	x	4.448222 = N
	in. ²	x	6.4516 = cm ²		plf	x	14.5939 = N/m
	ft ²	x	0.09290304 = m ²		psi	x	6.894757 = kN/m ²
Volume	in. ³	x	16,387.06 = mm ³		psf	x	47.88026 = N/m ²
	in. ³	x	16.38706 = cm ³		in.-lb (in.-kips)	x	0.1129848 = Nm (kNm)
	ft ³	x	0.02831685 = m ³	in.-lb/ft (in.-kips/ft)	x	0.3706850 = Nm/m (kNm/m)	
Moments of Inertia	in. ⁴	x	416231.4 = mm ⁴	Flexibility	in./lb x 10 ⁶	x	5.71015 = mm/N x 10 ⁶
	in. ⁴	x	41.62314 = cm ⁴		Galvanizing	oz/ft ²	x
	in. ⁴ /ft	x	1365588 = mm ⁴ /m	Paint		mil	x
	in. ⁴ /ft	x	136.5588 = cm ⁴ /m				
Section Modulus	in. ³ /ft	x	53763 = mm ³ /m				
	in. ³ /ft	x	53.763 = cm ³ /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 10-2010 and common mathematical practices.

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

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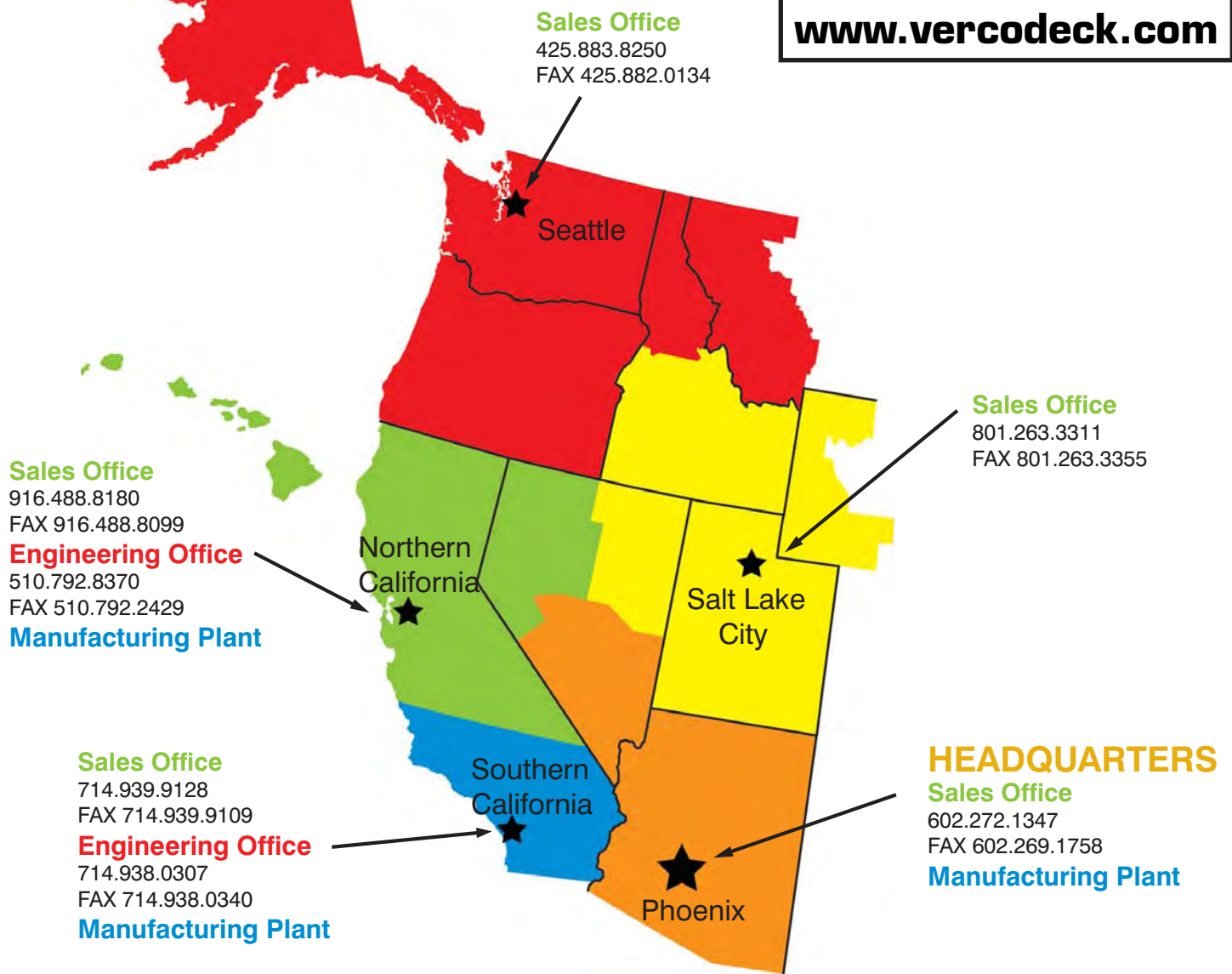
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