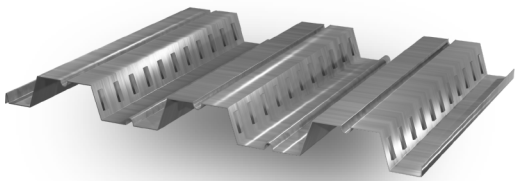
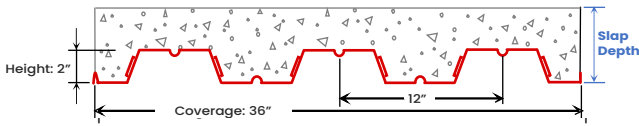


## 2" COMPOSITE DECK

### 50 ksi

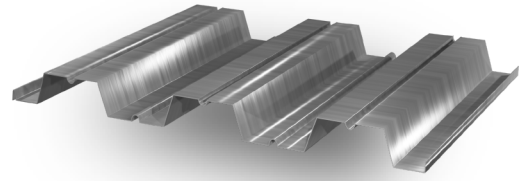
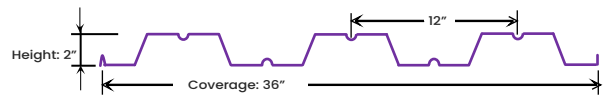
2" Composite Deck provides positive bending reinforcement for the composite steel deck-slab. Also provides resistance to horizontal loads resulting from wind or seismic forces.



## 2" FORM DECK

### 50 ksi

2" Form Deck is generally attached to the structure using the same methods as the roof deck or floor deck. 2" Form Deck works as a floor deck when used as a concrete form.



### Section Properties and Flexural Resistance (Bare Deck)

Material: Galvanized G90 or G60 ASTM  
A653 Structural Steel Fy = 50 ksi.

Gage	Design Thickness (inches)	Weight (psf)	Fy (ksi)	Se+ (in²) per foot	Se- (in²) per foot	ASD (Ω = 1.67)		I <sub>d+</sub> (in4) per foot	I <sub>d-</sub> (in4) per foot
						Mp/Ω inch-lbs per foot	Mn/Ω inch-lbs per foot		
22	0.0295	1.7	50	0.232	0.248	6931	7438	0.298	0.277
20	0.0358	2.1	50	0.309	0.328	9251	9830	0.378	0.353
18	0.0474	2.7	50	0.466	0.490	13942	14681	0.529	0.503
16	0.0598	3.4	50	0.624	0.629	18693	18822	0.682	0.670

Note: All section properties and ASD flexural strengths are calculated in accordance with ANSI/SDI C-2017, ANSI/SDI NC-2017, and AISI S100-2012 and AISI S100-2016

### Shear and Web Crippling (Bare Deck)

Gage	Design Thickness (inches)	Fy (ksi)	V <sub>n</sub> /Ω lbs per foot	Web Crippling (R <sub>n</sub> /Ω), lbs/ft One Flange Loading End Bearing			Web Crippling (R <sub>n</sub> /Ω), lbs/ft One Flange Loading Interior Bearing		
				2"	3"	4"	2"	3"	4"
				2"	3"	4"	2"	3"	4"
22	0.0295	50	1994	413	476	528	644	728	800
20	0.0358	50	2792	589	675	748	924	1041	1139
18	0.0474	50	3676	983	1120	1235	1558	1742	1897
16	0.0598	50	4611	1501	1700	1868	2400	2667	2893

Note: All section properties and ASD flexural strengths are calculated in accordance with ANSI/SDI C-2017, ANSI/SDI NC-2017, and AISI S100-2012 and AISI S100-2016

## ASD Uniform Superimposed Downward Loads (psf)

Span Cond.	Gage	Fy	6'- 0"	7'- 0"	8'- 0"	9'- 0"	10'- 0"	11'- 0"	12'- 0"	13'- 0"	14'- 0"	15'- 0"	16'- 0"
Single	22	50	128	94	72	57	46	38	32	27	24	21	18
	20	50	171	126	96	76	62	51	43	36	31	27	24
	18	50	258	190	145	115	93	77	65	55	47	41	36
	16	50	346	254	195	154	125	103	87	74	64	55	49
Double	22	50	138	101	77	61	50	41	34	29	25	22	19
	20	50	182	134	102	81	66	54	46	39	33	29	26
	18	50	272	200	153	121	98	81	68	58	50	43	38
	16	50	349	256	196	155	125	104	87	74	64	56	49
Triple	22	50	172	126	97	77	62	51	43	37	32	28	24
	20	50	228	167	128	101	82	68	57	48	42	36	32
	18	50	340	250	191	151	122	101	85	72	62	54	48
	16	50	436	320	245	194	157	130	109	93	80	70	61

Notes:

- All section properties and ASD ( $\Omega = 1.67$ ) uniform loads are calculated in accordance with ANSI/SDI C-2017, ANSI/SDI NC-2017 and AISI S100-2012 and AISI S100-2016.
- Loads shown in tables are uniformly distributed superimposed loads in psf. Span length assumes center-to-centerspacing of supports. Tabulated loads shall not be increased by assuming clear span dimensions.
- Bending Moment formulae used for flexural stress limitations are:
  - Simple and Two Span  $M = Wl^2/8$
  - Three Span or More  $M = Wl^2/10$
- Web crippling and shear have not been accounted for in these tables. Required bearing should be determined based on specific span conditions.

## Uniform Superimposed Service Load that Causes L/240 Deflection (psf)

Span Cond.	Gage	Fy	6'- 0"	7'- 0"	8'- 0"	9'- 0"	10'- 0"	11'- 0"	12'- 0"	13'- 0"	14'- 0"	15'- 0"	16'- 0"
Single	22	50	84	53	35	25	18	14	11	8	7	5	4
	20	50	107	68	45	32	23	17	13	11	8	7	6
	18	50	153	96	65	45	33	25	19	15	12	10	8
	16	50	204	128	86	60	44	33	25	20	16	13	11
Double	22	50	202	128	85	60	44	33	25	20	16	13	11
	20	50	259	163	109	77	56	42	32	25	20	17	14
	18	50	368	232	155	109	80	60	46	36	29	24	19
	16	50	490	309	207	145	106	80	61	48	39	31	26
Triple	22	50	158	100	67	47	34	26	20	16	12	10	8
	20	50	202	127	85	60	44	33	25	20	16	13	11
	18	50	288	182	122	85	62	47	36	28	23	18	15
	16	50	384	242	162	114	83	62	48	38	30	25	20

Note: For loads that cause L/120 Deflection, multiply by 2.0. For loads that cause L/180 Deflection, multiply by 1.5. For loads that cause L/360 Deflection, multiply by 0.667.



**Construction Span Table - 20 psf Construction Load**

Normal Weight Concrete (145 pcf)				
Total Slab Depth	Gage	Maximum Unshored Clear Span		
		1 span	2 span	3 span
4.00" (t=2.00) 39 psf	22	7' 8"	9' 0"	9' 1"
	20	9' 4"	10' 6"	10' 11"
	18	10' 7"	12' 11"	13' 4"
	16	11' 6"	14' 7"	15' 1"
4.50" (t=2.50) 45 psf	22	7' 4"	8' 7"	8' 8"
	20	8' 10"	10' 0"	10' 5"
	18	10' 1"	12' 3"	12' 8"
	16	11' 0"	13' 11"	14' 4"
5.00" (t=3.00) 51 psf	22	7' 0"	8' 2"	8' 3"
	20	8' 9"	10' 6"	10' 10"
	18	9' 8"	11' 9"	12' 2"
	16	10' 6"	13' 4"	13' 9"
5.50" (t=3.50) 57 psf	22	6' 9"	7' 10"	7' 11"
	20	8' 1"	9' 3"	9' 6"
	18	9' 4"	11' 3"	11' 8"
	16	10' 2"	12' 9"	13' 2"
6.00" (t=4.00) 63 psf	22	6' 6"	7' 7"	7' 8"
	20	7' 10"	8' 11"	9' 2"
	18	9' 0"	10' 10"	11' 3"
	16	9' 10"	12' 4"	12' 9"
6.50" (t=4.50) 69 psf	22	6' 4"	7' 4"	7' 5"
	20	7' 6"	8' 7"	8' 10"
	18	8' 9"	10' 6"	10' 10"
	16	9' 6"	11' 10"	12' 3"

Lightweight Concrete (115 pcf)				
Total Slab Depth	Gage	Maximum Unshored Clear Span		
		1 span	2 span	3 span
4.00" (t=2.00) 31psf	22	8' 4"	9' 9"	9' 10"
	20	10' 1"	11' 4"	11' 9"
	18	11' 5"	13' 10"	14' 4"
	16	12' 5"	15' 8"	16' 3"
4.50" (t=2.50) 35 psf	22	7' 12"	9' 4"	9' 5"
	20	9' 8"	10' 11"	11' 3"
	18	11' 0"	13' 4"	13' 9"
	16	11' 11"	15' 1"	15' 7"
5.00" (t=3.00) 39 psf	22	7' 8"	9' 0"	9' 1"
	20	9' 7"	11' 7"	12' 0"
	18	10' 7"	12' 11"	13' 4"
	16	11' 6"	14' 7"	15' 1"
5.50" (t=3.50) 44 psf	22	7' 5"	8' 8"	8' 9"
	20	8' 11"	10' 1"	10' 6"
	18	10' 2"	12' 4"	12' 9"
	16	11' 1"	14' 0"	14' 6"
6.00" (t=4.00) 48 psf	22	7' 2"	8' 4"	8' 6"
	20	8' 8"	9' 10"	10' 2"
	18	9' 11"	12' 0"	12' 5"
	16	10' 9"	13' 7"	14' 0"
6.50" (t=4.50) 53 psf	22	6' 11"	8' 1"	8' 2"
	20	8' 4"	9' 6"	9' 9"
	18	9' 7"	11' 7"	12' 0"
	16	10' 5"	13' 1"	13' 7"

Note: Web crippling and shear have not been accounted for in these tables. Required bearing should be determined based on specific span conditions.



## Composite Deck-Slab Allowable Superimposed Load (ASD)

Slab Thickness	F <sub>y</sub> : 50 ksi		f' <sub>c</sub> : 3000 psi						Normal Weight Concrete (145 pcf)								
	Gage	Weight (psf)	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"
4"	22	39	324	280	243	213	187	166	148	132	118	106	96	86	78	71	64
	20	39	392	338	295	258	228	202	181	162	145	131	119	108	98	89	81
	18	39	400	400	386	340	300	267	239	215	194	175	159	145	132	121	111
	16	39	400	400	400	400	374	333	298	269	243	220	200	183	167	154	141
4.5"	22	45	394	340	295	259	228	202	180	161	144	130	117	106	96	87	79
	20	45	400	400	358	314	277	246	220	197	177	160	145	131	119	109	99
	18	45	400	400	400	400	364	324	290	261	235	213	194	177	161	148	136
	16	45	400	400	400	400	400	400	362	326	295	268	244	222	204	187	172
5"	22	51	400	400	350	307	270	240	213	191	171	154	139	126	114	104	95
	20	51	400	400	400	372	328	292	260	234	210	190	172	156	142	130	119
	18	51	400	400	400	400	400	385	344	309	279	253	230	210	192	176	161
	16	51	400	400	400	400	400	400	400	387	350	318	289	264	242	223	205
5.5"	22	57	400	400	400	356	314	278	248	222	199	180	162	147	134	121	111
	20	57	400	400	400	400	381	339	303	272	245	221	200	182	166	151	139
	18	57	400	400	400	400	400	400	400	360	325	295	268	244	223	205	188
	16	57	400	400	400	400	400	400	400	400	400	370	337	308	282	259	239
6"	22	63	400	400	400	400	359	318	284	254	228	206	186	169	153	139	127
	20	63	400	400	400	400	400	387	346	311	280	253	229	209	190	174	159
	18	63	400	400	400	400	400	400	400	400	372	337	307	280	256	235	216
	16	63	400	400	400	400	400	400	400	400	400	400	386	353	324	297	274
6.5"	22	69	400	400	400	400	400	359	320	286	257	232	210	190	173	158	144
	20	69	400	400	400	400	400	400	390	350	316	285	259	236	215	196	180
	18	69	400	400	400	400	400	400	400	400	400	381	346	316	289	265	244
	16	69	400	400	400	400	400	400	400	400	400	400	400	399	366	336	310

## Composite Deck-Slab Allowable Superimposed Load (ASD)

Slab Thickness	F <sub>y</sub> : 50 ksi		f' <sub>c</sub> : 3000 psi							Lightweight Concrete (115 pcf)							
	Gage	Weight (psf)	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"
4"	22	31	315	272	237	208	184	163	145	130	117	106	96	87	79	72	66
	20	31	379	328	286	251	222	198	177	159	143	129	117	107	97	89	81
	18	31	400	400	372	328	290	259	232	209	188	171	155	142	130	119	110
	16	31	400	400	400	400	359	320	287	259	234	213	194	177	163	150	138
4.5"	22	35	384	332	289	254	224	199	178	159	144	130	117	107	97	89	81
	20	35	400	399	348	306	271	241	215	194	175	158	144	131	119	109	100
	18	35	400	400	400	398	353	315	282	254	230	208	190	173	159	146	134
	16	35	400	400	400	400	400	389	349	315	285	259	236	216	199	183	168
5"	22	39	400	394	344	302	267	237	212	190	171	155	140	128	116	106	97
	20	39	400	400	400	364	322	287	256	231	208	188	171	156	143	131	120
	18	39	400	400	400	400	400	374	336	302	273	248	226	207	189	174	160
	16	39	400	400	400	400	400	400	400	375	340	309	282	258	237	218	201
5.5"	22	44	400	400	399	351	310	276	246	221	199	180	163	149	136	124	113
	20	44	400	400	400	400	374	333	298	268	242	220	200	182	166	152	140
	18	44	400	400	400	400	400	400	391	352	318	289	264	241	221	203	187
	16	44	400	400	400	400	400	400	400	400	396	360	329	301	276	254	235
6"	22	48	400	400	400	400	355	316	282	254	229	207	188	171	156	143	131
	20	48	400	400	400	400	400	382	342	308	278	252	229	209	191	175	161
	18	48	400	400	400	400	400	400	400	400	365	332	303	277	254	233	215
	16	48	400	400	400	400	400	400	400	400	400	400	377	346	318	292	270
6.5"	22	53	400	400	400	400	400	356	319	286	258	234	212	193	176	161	148
	20	53	400	400	400	400	400	400	386	347	314	284	259	236	216	198	182
	18	53	400	400	400	400	400	400	400	400	400	375	342	313	287	264	243
	16	53	400	400	400	400	400	400	400	400	400	400	400	391	359	331	306

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