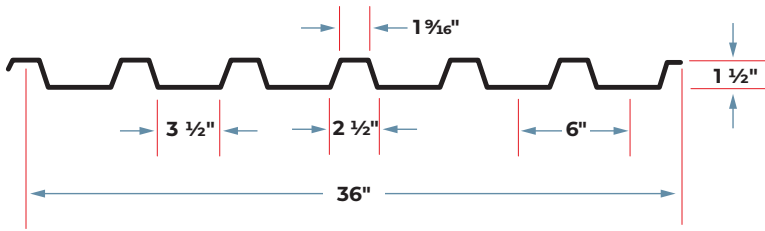


# 1.5" FORM DECK

GRADE 80 STEEL / FIELD INVERTED DECK



## Options

Vented

## Section Properties

Gage	Design Thickness (inches)	Weight (psf)	F <sub>y</sub> (ksi)	S <sub>e</sub> + (inch <sup>3</sup> ) per foot	S <sub>e</sub> - (inch <sup>3</sup> ) per foot	ASD (Ω = 1.67)		I <sub>d</sub> + (inch <sup>4</sup> ) per ft.	I <sub>d</sub> - (inch <sup>4</sup> ) per ft.
						M <sub>p</sub> / Ω (inch-lbs per ft)	M <sub>n</sub> / Ω (inch-lbs per foot)		
22	0.0295	1.6	60	0.175	0.166	6269	5958	0.167	0.142
20	0.0358	2.0	60	0.215	0.206	7738	7398	0.209	0.178
18	0.0474	2.6	60	0.306	0.291	11006	10455	0.288	0.252
16	0.0598	3.0	60	0.389	0.375	13976	13461	0.363	0.334

### Note

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

## Shear and Web Crippling

Gage	V <sub>n</sub> / Ω (lbs/ft)	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		
		1-1/2"	2"	3"	1-1/2"	2"	3"
		22	2908	961	1056	1216	1316
20	4563	1372	1503	1723	1926	2082	2344
18	6038	2297	2505	2853	3327	3579	4001
16	7463	3517	3820	4327	5214	5584	6207

### Note

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

## Allowable Uniform Downward Loads, ASD (PSF)

Span	Gage	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
Single	22	167	138	116	99	85	74	65	58	52	46	42
	20	206	171	143	122	105	92	81	71	64	57	52
	18	293	243	204	174	150	130	115	102	91	81	73
	16	373	308	259	221	190	166	146	129	115	103	93
Double	22	159	131	110	94	81	71	62	55	49	44	40
	20	197	163	137	117	101	88	77	68	61	55	49
	18	279	230	194	165	142	124	109	96	86	77	70
	16	359	297	249	212	183	160	140	124	111	99	90
Triple	22	199	164	138	118	101	88	78	69	61	55	50
	20	247	204	171	146	126	110	96	85	76	68	62
	18	349	288	242	206	178	155	136	121	108	97	87
	16	449	371	312	266	229	199	175	155	138	124	112

### Notes

- All section properties and ASD (Ω = 1.67) uniform loads are calculated in accordance with ANSI/SDI RD-2017, AISI S100-2012 and AISI S100-2016
- Loads shown in tables are uniformly distributed superimposed loads in psf. Span length assumes center-to-center spacing 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  $M = \frac{wL^2}{8}$  Three Span or More  $M = \frac{wL^2}{10}$
- 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	Gage	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
Single	22	75	56	43	34	27	22	18	15	13	11	9
	20	93	70	54	43	34	28	23	19	16	14	12
	18	132	100	77	60	48	39	32	27	23	19	17
	16	176	132	102	80	64	52	43	36	30	26	22
Double	22	180	135	104	82	66	53	44	37	31	26	22
	20	225	169	130	102	82	67	55	46	39	33	28
	18	319	240	185	145	116	95	78	65	55	47	40
	16	423	318	245	193	154	125	103	86	73	62	53
Triple	22	141	106	81	64	51	42	34	29	24	21	18
	20	176	132	102	80	64	52	43	36	30	26	22
	18	250	188	144	114	91	74	61	51	43	36	31
	16	331	249	192	151	121	98	81	67	57	48	41

**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	Deck Type	Maximum Unshored Clear Span		
		1 span	2 span	3 span
3.50 (t=2.00) 36 PSF	1.5x6x22 ga	7' 5"	8' 5"	8' 8"
	1.5x6x20 ga	8' 6"	9' 5"	9' 8"
	1.5x6x18 ga	10' 8"	11' 2"	11' 6"
	1.5x6x16 ga	12' 5"	12' 8"	13' 1"
4.00 (t=2.50) 42 PSF	1.5x6x22 ga	7' 0"	8' 0"	8' 3"
	1.5x6x20 ga	8' 1"	8' 11"	9' 3"
	1.5x6x18 ga	10' 1"	10' 7"	10' 12"
	1.5x6x16 ga	11' 9"	12' 0"	12' 5"
4.50 (t=3.00) 48 PSF	1.5x6x22 ga	6' 9"	7' 8"	7' 11"
	1.5x6x20 ga	8' 6"	9' 0"	9' 4"
	1.5x6x18 ga	9' 8"	10' 1"	10' 6"
	1.5x6x16 ga	11' 2"	11' 6"	11' 10"
5.00 (t=3.50) 54 PSF	1.5x6x22 ga	6' 5"	7' 4"	7' 7"
	1.5x6x20 ga	7' 5"	8' 2"	8' 5"
	1.5x6x18 ga	9' 2"	9' 8"	10' 0"
	1.5x6x16 ga	10' 8"	11' 0"	11' 5"
5.50 (t=4.00) 60 PSF	1.5x6x22 ga	6' 3"	7' 1"	7' 3"
	1.5x6x20 ga	7' 1"	7' 10"	8' 1"
	1.5x6x18 ga	8' 10"	9' 4"	9' 8"
	1.5x6x16 ga	10' 3"	10' 7"	10' 11"
6.00 (t=4.50) 66 PSF	1.5x6x22 ga	6' 0"	6' 10"	7' 0"
	1.5x6x20 ga	6' 10"	7' 7"	7' 10"
	1.5x6x18 ga	8' 6"	9' 0"	9' 4"
	1.5x6x16 ga	9' 10"	10' 3"	10' 7"

Lightweight Concrete (115 pcf)				
Total Slab Depth	Deck Type	Maximum Unshored Clear Span		
		1 span	2 span	3 span
3.50 (t=2.00) 27 PSF	1.5x6x22 ga	8' 1"	9' 2"	9' 6"
	1.5x6x20 ga	9' 4"	10' 3"	10' 7"
	1.5x6x18 ga	11' 10"	12' 2"	12' 7"
	1.5x6x16 ga	13' 10"	13' 10"	14' 3"
4.00 (t=2.50) 32 PSF	1.5x6x22 ga	7' 8"	8' 9"	9' 0"
	1.5x6x20 ga	8' 10"	9' 9"	10' 1"
	1.5x6x18 ga	11' 2"	11' 7"	11' 12"
	1.5x6x16 ga	13' 0"	13' 2"	13' 7"
4.50 (t=3.00) 37 PSF	1.5x6x22 ga	7' 4"	8' 4"	8' 8"
	1.5x6x20 ga	9' 6"	9' 12"	10' 4"
	1.5x6x18 ga	10' 7"	11' 1"	11' 5"
	1.5x6x16 ga	12' 4"	12' 7"	12' 12"
5.00 (t=3.50) 41 PSF	1.5x6x22 ga	7' 1"	8' 1"	8' 4"
	1.5x6x20 ga	8' 2"	8' 12"	9' 4"
	1.5x6x18 ga	10' 3"	10' 8"	11' 1"
	1.5x6x16 ga	11' 10"	12' 2"	12' 6"
5.50 (t=4.00) 46 PSF	1.5x6x22 ga	6' 10"	7' 9"	8' 0"
	1.5x6x20 ga	7' 10"	8' 8"	8' 11"
	1.5x6x18 ga	9' 9"	10' 3"	10' 7"
	1.5x6x16 ga	11' 4"	11' 8"	12' 1"
6.00 (t=4.50) 50 PSF	1.5x6x22 ga	6' 7"	7' 6"	7' 9"
	1.5x6x20 ga	7' 7"	8' 5"	8' 8"
	1.5x6x18 ga	9' 6"	9' 12"	10' 4"
	1.5x6x16 ga	10' 12"	11' 4"	11' 8"

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