SECTION PROPERTIES AND FLEXURAL RESISTANCE (BARE DECK)

1.5WR

Gage	Design Thickness (inches)	Weight (psf)	F_y ksi	S_e + (inch³) per foot	Se - (inch³) per foot	ASD (Ω = 1.67)		I_d + (inch⁴) per ft.	I_d - (inch⁴) per ft.
						M_p/ Ω inch-lbs per ft	M_n/ Ω inch-lbs per foot		
22	0.0295	1.6	50	0.170	0.179	5079	5351	0.152	0.170
20	0.0358	2.0	50	0.224	0.231	6707	6916	0.189	0.211
18	0.0474	2.6	50	0.314	0.325	9411	9721	0.262	0.287
16	0.0598	3.0	50	0.400	0.408	11966	12216	0.343	0.357

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 (BARE DECK) (50 KSI)

1.5WR

Gage	V_n/Ω (lbs/ft)	Web Crippling (R_n/Ω), lbs/ft One Flange Loading End Bearing			Web Crippling (R_n/Ω), lbs/ft One Flange Loading Interior Bearing		
		1-1/2"	2"	3"	1-1/2"	2"	3"
22	2947	793	871	1003	1180	1280	1448
20	3555	1130	1238	1419	1706	1844	2076
18	4655	1887	2058	2344	2904	3123	3491
16	5802	2886	3134	3550	4504	4824	5361

NOTE

ALL SECTION PROPERTIES AND ASD FLEXURAL STRENGTHS ARE CALCULATED IN ACCORDANCE WITH ANSI/SDI RD-2017, AISI S100-2012 AND AISI S100-2016

1.5WR (50 KSI) ASD UNIFORM DOWNWARD LOADS

1.5WR Deck (Bare Deck – Roof)

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**	135	112	94	80	69	60	53	47	42	38	34
	20	179	148	124	106	91	79	70	62	55	50	45
	18	251	207	174	148	128	112	98	82	77	70	63
	16	319	264	222	189	163	142	125	110	98	88	80
Double	**22**	143	118	99	84	73	63	56	49	44	40	36
	20	184	152	128	109	94	82	72	64	57	51	46
	18	259	214	180	153	132	115	101	90	80	72	65
	16	326	269	226	193	166	145	127	113	101	90	81
Triple	**22**	178	147	124	106	91	79	70	62	55	49	45
	20	231	191	160	136	118	102	90	80	71	64	58
	18	324	268	225	192	165	144	127	112	100	90	81
	16	407	337	283	241	208	181	159	141	126	113	102

1.5WR (50 KSI) ASD UNIFORM UPWARD LOADS

1.5WR (50 ksi)

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**	143	118	99	84	73	63	56	49	44	40	36
	20	184	152	128	109	94	82	72	64	57	51	46
	18	259	214	180	153	132	115	101	90	80	72	65
	16	326	269	226	193	166	145	127	113	101	90	81
Double	**22**	135	112	94	80	69	60	53	47	42	38	34
	20	179	148	124	106	91	79	70	62	55	50	45
	18	251	207	174	148	128	112	98	87	77	70	63
	16	319	264	222	189	163	142	125	110	98	88	80
Triple	**22**	169	140	118	100	86	75	66	59	52	47	42
	20	224	185	155	132	114	99	87	77	69	62	56
	18	314	259	218	186	160	139	123	109	97	87	78
	16	399	330	277	236	204	177	156	138	123	110	100

1. ALL SECTION PROPERTIES AND ASD ($\Omega = 1.67$) UNIFORM LOADS ARE CALCULATED IN ACCORDANCE WITH ANSI/SDI RD-2017, AISI S100-2012 AND AISI S100-2016.
2. LOADS SHOWN IN TABLES ARE UNIFORMLY DISTRIBUTED SUPERIMPOSED LOADS IN PSF. SPAN LENGTH ASSUMES CENTER-TO-CENTER SPACING OF SUPPORTS. TABULATED LOADS SHALL NOT INCREASE BY ASSUMING CLEAR SPAN DIMENSIONS.
3. BENDING MOMENT FORMULAE USED FOR FLEXURAL STRESS LIMITATIONS ARE:

   SIMPLE AND TWO SPAN $\quad M = \frac{w\ell^2}{8}$

   THREE SPAN OR MORE $\quad M = \frac{w\ell^2}{10}$

4. WEB CRIPPILING AND SHEAR HAVE NOT BEEN ACCOUNTED FOR IN THESE TABLES. REQUIRE BEARING SHOULD BE DETERMINED BASED ON SPECIFIC SPAN CONDITIONS.

UNIFORM SERVICE LOAD THAT CAUSES L/240 DEFLECTION (PSF)

1.5WR (50 ksi)

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**	80	60	46	36	29	24	20	16	14	12	10
	20	99	75	57	45	36	29	24	20	17	14	12
	18	138	103	80	63	50	41	34	28	24	20	17
	16	180	135	104	82	66	53	44	37	31	26	23
Double	**22**	192	145	111	88	70	57	47	39	33	28	24
	20	239	179	138	109	87	71	58	49	41	35	30
	18	332	249	192	151	121	98	81	67	57	48	41
	16	434	326	251	198	158	129	106	88	74	63	54
Triple	**22**	151	113	87	69	55	45	37	31	26	22	19
	20	187	140	108	85	68	55	46	38	32	27	23
	18	260	195	150	118	95	77	63	53	44	38	32
	16	340	255	197	155	124	101	83	69	58	50	42

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.

1.5WR (50 KSI) ROOF DECK CONSTRUCTION SPANS (ANSI/SDI RD-2017 SECTION 2.4.A.3 AND 2.4.A.4)

1.5WR Deck (Bare Deck – Roof)

Span	Gage	ASD Span	ASD Cantilever Span
Single	**22**	8′-06″	2′-02″
	20	11′-02″	2′-10″
	18	15′-08″	4′-00″
	16	19′-11″	5′-00″
Double or Triple	**22**	10′-05″	
	20	13′-09″	
	18	19′-04″	
	16	24′-07″	

NOTE

1. ALL CONSTRUCTION LOAD SPANS ARE CALCULATED USING A 200 POUND SERVICE LOAD ON A 1 FOOT WIDTH OF DECK, IN ACCORDANCE WITH ANSI/SDI RD-2017.
2. ALL CANTILEVER CONSTRUCTION LOAD SPANS ARE CALCULATED USING A 200 POUND SERVICE LOAD ON A 1 FOOT WIDTH OF DECK AND A 10 PSF UNIFORM DISTRIBUTED LOAD, IN ACCORDANCE WITH ANSI/SDI RD-2017.