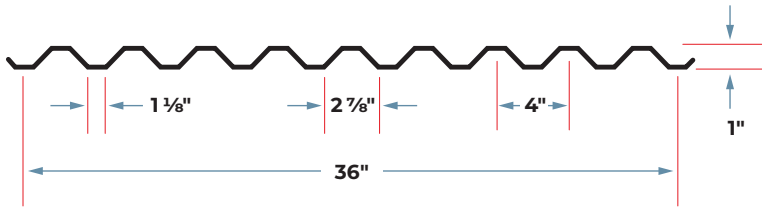


# 1" ROOF DECK

## GRADE 80 STEEL



### 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)		
26	0.0179	0.9	60	0.061	0.064	2184	2314	0.035	0.035
24	0.0239	1.2	60	0.090	0.095	3218	3416	0.048	0.048
22	0.0295	1.5	60	0.118	0.124	4248	4449	0.061	0.061
20	0.0358	1.8	60	0.152	0.152	5446	5443	0.077	0.077

**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"
		26	1691	458	507	590	559
24	3005	779	860	994	1006	1096	1246
22	3715	1146	1259	1450	1531	1660	1878
20	4508	1631	1787	2049	2240	2421	2726

**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	2'-0"	2"-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
Single	26	364	233	162	119	91	72	58	48	40	34	30
	24	536	343	238	175	134	106	86	71	60	51	44
	22	708	453	315	231	177	140	113	94	79	67	58
	20	908	581	403	296	227	179	145	120	101	86	74
Double	26	386	247	171	126	96	76	62	51	43	37	31
	24	569	364	253	186	142	112	91	75	63	54	46
	22	742	475	330	242	185	146	119	98	82	70	61
	20	907	581	403	296	227	179	145	120	101	86	74
Triple	26	482	309	214	157	121	95	77	64	54	46	39
	24	712	455	316	232	178	141	114	94	79	67	58
	22	927	593	412	303	232	183	148	123	103	88	76
	20	1134	726	504	370	283	224	181	150	126	107	93

### Allowable Uniform Upward Loads, ASD (PSF)

Span	Gage	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
Single	26	386	247	171	126	96	76	62	51	43	37	31
	24	569	364	253	186	142	112	91	75	63	54	46
	22	742	475	330	242	185	146	119	98	82	70	61
	20	907	581	403	296	227	179	145	120	101	86	74
Double	26	364	233	162	119	91	72	58	48	40	34	30
	24	536	343	238	175	134	106	86	71	60	51	44
	22	708	453	315	231	177	140	113	94	79	67	58
	20	908	581	403	296	227	179	145	120	101	86	74
Triple	26	455	291	202	149	114	90	73	60	51	43	37
	24	670	429	298	219	168	132	107	89	74	63	55
	22	885	566	393	289	221	175	142	117	98	84	72
	20	1134	726	504	370	284	224	182	150	126	107	93

- Notes**
- 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
  - 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	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
Single	26	268	137	79	50	34	24	17	13	10	8	6
	24	383	196	113	71	48	34	25	18	14	11	9
	22	492	252	146	92	62	43	32	24	18	14	11
	20	629	322	186	117	79	55	40	30	23	18	15
Double	26	645	330	191	120	81	57	41	31	24	19	15
	24	922	472	273	172	115	81	59	44	34	27	22
	22	1186	607	351	221	148	104	76	57	44	35	28
	20	1515	776	449	283	189	133	97	73	56	44	35
Triple	26	505	259	150	94	63	44	32	24	19	15	12
	24	722	369	214	135	90	63	46	35	27	21	17
	22	928	475	275	173	116	81	59	45	34	27	22
	20	1186	607	351	221	148	104	76	57	44	35	28

**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.

### Maximum Construction and Cantilever Spans

Span	Gage	ASD Span	ASD Cantilever Span
Single	26	3'-08"	1'-00"
	24	5'-04"	1'-05"
	22	7'-01"	1'-10"
	20	9'-01"	2'-03"
Double or Triple	26	4'-06"	
	24	6'-07"	
	22	8'-09"	
	20	11'-02"	

- Notes**
- 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.
  - 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.