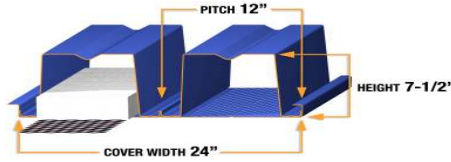


SECTION PROPERTIES $f_y=40$ ksi

GAGE	Wd	I _b (DEFLECTION)	S _p	S _n	Rbe			Rbi			V _a
					4"	5"	6"	4"	5"	6"	
20/20	5.01	13.247	2.056	2.899	797	865	927	1493	1606	1708	1686
20/18	5.53	14.476	2.058	3.004	797	865	927	1493	1606	1708	1686
18/20	6.11	17.359	3.190	3.759	1372	1484	1586	2488	2668	2829	3919
18/18	6.63	18.512	3.180	3.884	1372	1484	1586	2488	2668	2829	3919
18/16	7.19	19.571	3.175	4.001	1372	1484	1586	2488	2668	2829	3919



LRFD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM LRFD LOADS (psf)														
Span	Load Combinations	SINGLE SPAN					DOUBLE SPAN					TRIPLE SPAN				
		GAGE														
		20/20	20/18	18/20	18/18	18/16	20/20	20/18	18/20	18/18	18/16	20/20	20/18	18/20	18/18	18/16
15' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	100*	100*	176*	175*	174*	85*	84*	144*	143*	142*	98*	97*	164*	164*	163*
	D+L (Deflection)	100	100	176	175	174	85	84	144	143	142	98	97	164	164	163
	L (Deflection)	100	100	176	175	174	85	84	144	143	142	98	97	164	164	163
16' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	94*	93*	164*	163*	163*	79*	79*	134*	134*	133*	91*	90*	153*	153*	152*
	D+L (Deflection)	94	93	164	163	163	79	79	134	134	133	91	90	153	153	152
	L (Deflection)	94	93	164	163	163	79	79	134	134	133	91	90	153	153	152
17' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	88*	87*	154*	153*	153*	74*	74*	126*	125*	125*					
	D+L (Deflection)	88	87	154	153	153	74	74	126	125	125					
	L (Deflection)	88	87	154	153	153	74	74	126	125	125					
18' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	83*	82*	145*	144*	144*	70*	69*	118*	118*	117*					
	D+L (Deflection)	83	82	145	144	144	70	69	118	118	117					
	L (Deflection)	83	82	145	144	144	70	69	118	118	117					
19' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	78*	77*	137*	136*	136*	66*	65*	112*	111*	111*					
	D+L (Deflection)	78	77	137	136	136	66	65	112	111	111					
	L (Deflection)	78	77	137	136	136	66	65	112	111	111					
20' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	74*	73*	130*	129*	129*	62*	62*	106*	105*	105*					
	D+L (Deflection)	74	73	130	129	129	62	62	106	105	105					
	L (Deflection)	72	73	95	101	107	62	62	106	105	105					
21' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	70*	69*	123*	123*	122*	59*	58*	100*	100*	99*					
	D+L (Deflection)	70	69	111	118	122	59	58	100	100	99					
	L (Deflection)	63	67	82	88	93	59	58	100	100	99					
22' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	66*	66*	117*	117*	116*	56*	55*	96*	96*	94*					
	D+L (Deflection)	66	66	91	97	103	56	55	96	95	94					
	L (Deflection)	54	58	71	76	80	56	55	96	95	94					
23' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	63*	63*	112*	111*	111*	53*	53*	91*	91*	90*					
	D+L (Deflection)	57	61	75	80	85	53	53	91	90	90					
	L (Deflection)	48	51	62	67	70	53	53	91	90	90					
24' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	60*	60*	107*	106*	106*	51*	50*	87*	86*	86*					
	D+L (Deflection)	47	50	63	67	70	51	50	87	86	86					
	L (Deflection)	42	45	55	59	62	51	50	87	86	86					
25' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	58*	57*	102*	102*	101*										
	D+L (Deflection)	40	42	52	56	59										
	L (Deflection)	37	40	49	52	55										
26' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	55*	55*	98*	98*	97*										
	D+L (Deflection)	33	35	44	47	49										
	L (Deflection)	33	35	43	46	49										
27' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	53*	52*	94*	94*	93*										
	D+L (Deflection)	28	29	37	39	41										
	L (Deflection)	28	29	37	39	41										
28' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	51*	50*	91*	90*	89*										
	D+L (Deflection)	23	25	31	33	35										
	L (Deflection)	23	25	31	33	35										

15' - 0"	$\lambda_D D + \lambda_L L$ (Strength)	100*	← Max. superimposed factored LRFD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	100	← Max. superimposed unfactored LRFD dead + live load (psf) (governed by deflection limitation of L/240 or 1")
	L (Deflection)	100	← Max. superimposed unfactored LRFD live load (psf) (governed by deflection limitation of L/360 or 1")

↑ Vertical load span (center to center spacing)

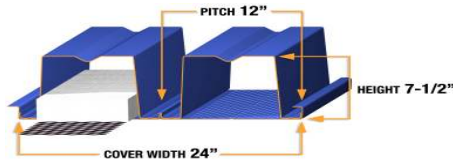
- | | | | |
|------------------------|--|----------------------|--|
| Wd | Weight of deck (uncoated), psf | Rbe | Allowable exterior web crippling value per foot of deck width, plf |
| I_b | Moment of inertia for deflection per foot of deck width (in ⁴)/ft | Rbi | Allowable interior web crippling value per foot of deck width, plf |
| S_p | Section modulus for positive bending per foot of deck width, (in ³)/ft | V_a | Allowable shear value per foot of deck width, plf |
| S_n | Section modulus for negative bending per foot of deck width, (in ³)/ft | D | Uniform dead load, psf |
| λ_D, λ_L | Load factors for D & L loads to be applied by Engineer in accordance with Building C | L | Uniform live load, psf |

- Notes:**
- Bending strength based on allowable flexural stress of 38 ksi.
 - Loads marked with asterisk (*) are governed by moment & shear, interior (6" bearing) and exterior (4" bearing) reactions (web crippling) or applied moment & reactions.
 - An upper limit of 400 psf has been applied to the loads.
 - Deck length over 45'-0" require inquiry and special accommodations. Please contact the Metal-Dek Group® for further information.

SECTION PROPERTIES

fy=40 ksi

GAGE	Wd	I _D (DEFLECTION)	S _P	S _N	Rbe			Rbi			V _a
					4"	5"	6"	4"	5"	6"	
16/18	7.81	22.489	4.603	4.809	2133	2302	2455	3796	4057	4293	7881
16/16	8.37	23.990	4.575	4.947	2133	2302	2455	3796	4057	4293	7881
16/14	9.04	25.477	4.556	5.078	2133	2302	2455	3796	4057	4293	7881
14/16	9.78	28.212	6.294	6.066	3240	3487	3710	5688	6060	6397	15392
14/14	10.45	30.041	6.416	6.237	3240	3487	3710	5688	6060	6397	15392



LRFD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM LRFD LOADS (psf)													
Span	Load Combinations	SINGLE SPAN					DOUBLE SPAN					TRIPLE SPAN			
		GAGE													
		16/18	16/16	16/14	14/16	14/14	16/18	16/16	16/14	14/16	14/14	16/18	16/16	16/14	14/16
22' - 0"	λ _D D+λ _L L (Strength)	185*	184*	183*	283*	282*	147*	146*	145*	221*	220*				
	D+L (Deflection)	118	126	134	148	158	147	146	145	221	220				
	L (Deflection)	92	99	105	116	123	147	146	145	221	220				
23' - 0"	λ _D D+λ _L L (Strength)	176*	175*	175*	270*	269*	140*	139*	138*	211*	210*				
	D+L (Deflection)	98	104	111	123	131	140	139	138	211	210				
	L (Deflection)	81	86	92	102	108	140	139	138	211	210				
24' - 0"	λ _D D+λ _L L (Strength)	168*	168*	167*	258*	257*	134*	133*	132*	201*	201*				
	D+L (Deflection)	81	87	92	102	108	134	133	132	201	201				
	L (Deflection)	71	76	81	89	95	134	133	132	201	201				
25' - 0"	λ _D D+λ _L L (Strength)	161*	161*	160*	243	247*									
	D+L (Deflection)	68	72	77	85	91									
	L (Deflection)	63	67	71	79	84									
26' - 0"	λ _D D+λ _L L (Strength)	155*	154*	153*	224	228									
	D+L (Deflection)	57	61	64	71	76									
	L (Deflection)	56	60	63	70	75									
27' - 0"	λ _D D+λ _L L (Strength)	149*	148*	147*	207	210									
	D+L (Deflection)	48	51	54	60	64									
	L (Deflection)	48	51	54	60	64									
28' - 0"	λ _D D+λ _L L (Strength)	139	138	136	192	195									
	D+L (Deflection)	40	43	45	50	54									
	L (Deflection)	40	43	45	50	54									
29' - 0"	λ _D D+λ _L L (Strength)	129	128	126	178	181									
	D+L (Deflection)	34	36	38	43	45									
	L (Deflection)	34	36	38	43	45									
30' - 0"	λ _D D+λ _L L (Strength)	120	119	117	165	168									
	D+L (Deflection)	29	31	32	36	38									
	L (Deflection)	29	31	32	36	38									
31' - 0"	λ _D D+λ _L L (Strength)	112	111	109	154	157									
	D+L (Deflection)	24	26	27	30	32									
	L (Deflection)	24	26	27	30	32									
32' - 0"	λ _D D+λ _L L (Strength)	105	103	102	144	146									
	D+L (Deflection)	20	22	23	26	27									
	L (Deflection)	20	22	23	26	27									
33' - 0"	λ _D D+λ _L L (Strength)	98	96	95	135	137									
	D+L (Deflection)	17	18	19	21	23									
	L (Deflection)	17	18	19	21	23									
34' - 0"	λ _D D+λ _L L (Strength)	91	90	89	126	128									
	D+L (Deflection)	14	15	16	18	19									
	L (Deflection)	14	15	16	18	19									
35' - 0"	λ _D D+λ _L L (Strength)	86	85	83	118	120									
	D+L (Deflection)	12	13	13	15	16									
	L (Deflection)	12	13	13	15	16									

22' - 0"	λ _D D+λ _L L (Strength)	185*	← Max. superimposed factored LRFD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	118	← Max. superimposed unfactored LRFD dead + live load (psf) (governed by deflection limitation of L/240 or 1")
	L (Deflection)	92	← Max. superimposed unfactored LRFD live load (psf) (governed by deflection limitation of L/360 or 1")

Vertical load span (center to center spacing)

- | | | | |
|---------------------------------|--|----------------------|--|
| Wd | Weight of deck (uncoated), psf | Rbe | Allowable exterior web crippling value per foot of deck width, plf |
| I_D | Moment of inertia for deflection per foot of deck width (in ⁴)ft | Rbi | Allowable interior web crippling value per foot of deck width, plf |
| S_P | Section modulus for positive bending per foot of deck width, (in ³)ft | V_a | Allowable shear value per foot of deck width, plf |
| S_N | Section modulus for negative bending per foot of deck width, (in ³)ft | D | Uniform dead load, psf |
| λ _D , λ _L | Load factors for D & L loads to be applied by Engineer in accordance with Building C | L | Uniform live load, psf |

- Notes:**
- Bending strength based on allowable flexural stress of 38 ksi.
 - Loads marked with asterisk (*) are governed by moment & shear, interior (6" bearing) and exterior (4" bearing) reactions (web crippling) or applied moment & reactions.
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