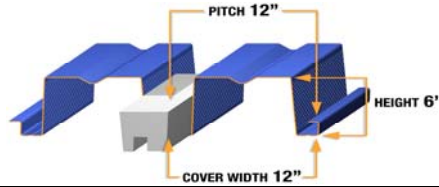


SECTION PROPERTIES

fy=40 ksi

GAGE	Wd	Ip	In	Sp	Sn	Rbe			Rbi			Va
						4"	5"	6"	4"	5"	6"	
20	3.23	5.071	5.152	1.396	1.546	625	640	653	965	1040	1107	1783
18	4.28	6.954	6.992	2.092	2.165	1174	1199	1221	1599	1715	1821	4147
16	5.39	8.815	8.815	2.693	2.728	1955	1993	2026	2427	2596	2749	8344
14	6.73	11.002	11.002	3.404	3.404	2982	3210	3268	3620	3861	4079	13447



LSD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM LSD LOADS (psf)											
Span	Load Combinations	SINGLE SPAN				DOUBLE SPAN				TRIPLE SPAN			
		GAGE											
		20	18	16	14	20	18	16	14	20	18	16	14
15' - 0"	$\alpha_D + \alpha_L$ (Strength)	79*	151*	254*	355	55*	92*	140*	209*	63*	105*	160*	239*
	D+L (Deflection)	79	131	166	207	55	92	140	209	63	105	160	239
	L (Deflection)	66	90	114	143	55	92	140	209	63	105	160	239
16' - 0"	$\alpha_D + \alpha_L$ (Strength)	74*	141*	238*	311	51*	86*	131*	196*	59*	98*	149*	223*
	D+L (Deflection)	74	107	136	170	51	86	131	196	59	98	149	223
	L (Deflection)	54	74	94	118	51	86	131	196	59	98	149	223
17' - 0"	$\alpha_D + \alpha_L$ (Strength)	70*	133*	217	274	48*	80*	123*	184*				
	D+L (Deflection)	65	89	112	140	48	80	123	184				
	L (Deflection)	45	62	79	98	48	80	123	184				
18' - 0"	$\alpha_D + \alpha_L$ (Strength)	65*	125*	193	244	45*	76*	115*	167**				
	D+L (Deflection)	54	74	94	117	45	76	115	167				
	L (Deflection)	38	52	66	83	45	76	115	167				
19' - 0"	$\alpha_D + \alpha_L$ (Strength)	62*	118*	172	218	43*	71*	107**	152**				
	D+L (Deflection)	45	62	79	99	43	71	107	152				
	L (Deflection)	32	44	56	70	43	71	107	152				
20' - 0"	$\alpha_D + \alpha_L$ (Strength)	58*	112*	155	196	40*	67*	98**	139**				
	D+L (Deflection)	38	53	67	84	40	67	98	139				
	L (Deflection)	28	38	48	60	40	67	98	139				
21' - 0"	$\alpha_D + \alpha_L$ (Strength)	56*	106*	140	177	38*	62**	90**	127**				
	D+L (Deflection)	33	45	57	71	38	62	90	127				
	L (Deflection)	24	33	42	52	38	62	90	124				
22' - 0"	$\alpha_D + \alpha_L$ (Strength)	53*	98	127	160	35**	58**	83**	117**				
	D+L (Deflection)	28	39	49	61	35	58	83	117				
	L (Deflection)	21	29	36	45	35	58	83	108				
23' - 0"	$\alpha_D + \alpha_L$ (Strength)	50*	90	115	146	33**	53**	77**	108**				
	D+L (Deflection)	24	33	42	53	33	53	77	108				
	L (Deflection)	18	25	32	40	33	53	75	94				
24' - 0"	$\alpha_D + \alpha_L$ (Strength)	48*	82	105	133	30**	49**	71**	100**				
	D+L (Deflection)	21	29	36	46	30	49	71	100				
	L (Deflection)	16	22	28	35	30	49	66	83				
25' - 0"	$\alpha_D + \alpha_L$ (Strength)	46*	75	97	122								
	D+L (Deflection)	18	25	32	40								
	L (Deflection)	14	19	25	31								
26' - 0"	$\alpha_D + \alpha_L$ (Strength)	44*	69	89	112								
	D+L (Deflection)	16	22	28	34								
	L (Deflection)	13	17	22	27								
27' - 0"	$\alpha_D + \alpha_L$ (Strength)	42	64	82	104								
	D+L (Deflection)	14	19	24	30								
	L (Deflection)	11	15	20	24								
28' - 0"	$\alpha_D + \alpha_L$ (Strength)	39	59	76	96								
	D+L (Deflection)	12	17	21	26								
	L (Deflection)	10	14	18	22								

15' - 0"	$\alpha_D + \alpha_L$ (Strength)	79*	← Max. superimposed factored LSD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	79	← Max. superimposed unfactored LSD dead + live load (psf) (governed by deflection limitation of L/240)
	L (Deflection)	66	← Max. superimposed unfactored LSD live load (psf) (governed by deflection limitation of L/360)
			← Vertical load span (center to center spacing)

Wd Weight of deck (uncoated), psf

Ip Moment of inertia for positive bending per foot of deck width, (in⁴)/ft

In Moment of inertia for negative bending per foot of deck width, (in⁴)/ft

Sp Section modulus for positive bending per foot of deck width, (in³)/ft

Sn Section modulus for negative bending per foot of deck width, (in³)/ft

α_D, α_L Load factors for D & L loads to be applied by Engineer in accordance with Building Codes.

Rbe Allowable exterior web crippling value per foot of deck width, plf

Rbi Allowable interior web crippling value per foot of deck width, plf

Va Allowable shear value per foot of deck width, plf

D Uniform dead load, psf

L Uniform live load, psf

- Notes:
- Bending strength based on allowable flexural stress of 36 ksi.
 - Loads marked with asterisk (*) are governed by interior (6" bearing) or exterior (4" bearing) reactions (web crippling).
 - Loads marked with two asterisks (**) are governed by moment & shear or moment & reactions (web crippling) assuming 6" of interior bearing.
 - 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.

The section properties table is based on 2001 AISI's North American Specification for the Design of Cold-Formed Steel Structural Members (2004 Supplement).

Loads are calculated in accordance with requirements of CSSBI 10M-06. Standard for Steel Roof Deck.