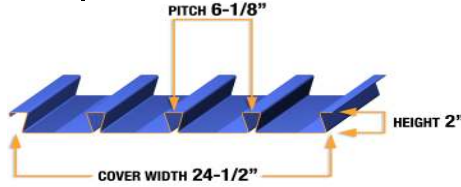


**SECTION PROPERTIES**

fy=40 ksi

GAGE	Wd	Ip	In	Sp	Sn	Rbe			Rbi			Va
						2"	3"	4"	4"	5"	6"	
22	2.22	0.404	0.327	0.289	0.268	968	1115	1238	1832	1975	2105	3775
20	2.69	0.493	0.426	0.363	0.337	1378	1580	1750	2600	2797	2976	4559
18	3.56	0.658	0.616	0.485	0.462	2296	2615	2884	4317	4628	4908	5985
16	4.48	0.834	0.816	0.617	0.598	3500	3965	4357	6566	7017	7424	7481



LSD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM LSD LOADS (psf)											
Span	Load Combinations	SINGLE SPAN				DOUBLE SPAN				TRIPLE SPAN			
		GAGE											
		22	20	18	16	22	20	18	16	22	20	18	16
8' - 6"	$\alpha_D D + \alpha_L L$ (Strength)	93	117	157	199	82**	108**	148**	191**	103**	135**	185**	239**
	D+L (Deflection)	41	50	67	85	82	108	148	191	79	97	129	164
	L (Deflection)	29	35	47	59	68	83	111	141	54	66	88	112
9' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	83	104	139	177	74**	96**	131**	170**	92**	120**	165**	213**
	D+L (Deflection)	34	42	56	71	74	96	131	170	66	81	108	137
	L (Deflection)	24	30	39	50	58	70	94	119	46	56	74	94
9' - 6"	$\alpha_D D + \alpha_L L$ (Strength)	74	93	125	158	66**	86**	117**	152**	83**	107**	147**	191**
	D+L (Deflection)	29	35	47	59	66	86	116	147	56	68	91	116
	L (Deflection)	21	25	34	43	49	60	80	101	39	47	63	80
10' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	67	84	112	142	60**	77**	106**	137**	75**	97**	133**	172**
	D+L (Deflection)	24	30	40	50	60	74	99	126	48	58	78	99
	L (Deflection)	18	22	29	37	42	51	68	87	33	41	54	69
10' - 6"	$\alpha_D D + \alpha_L L$ (Strength)	60	76	101	129	54**	70**	96**	124**	68**	88**	120**	156**
	D+L (Deflection)	21	25	34	43	52	64	85	108	41	50	67	85
	L (Deflection)	15	19	25	32	36	44	59	75	29	35	47	59
11' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	55	69	92	117	49**	63**	87**	112**	62**	79**	109**	141**
	D+L (Deflection)	18	22	29	37	45	55	74	93	35	43	58	73
	L (Deflection)	13	16	22	27	32	39	51	65	25	31	41	52
11' - 6"	$\alpha_D D + \alpha_L L$ (Strength)	50	62	84	106	45**	57**	79**	102**	57**	72**	100**	129**
	D+L (Deflection)	15	19	25	32	39	48	64	81	31	37	50	63
	L (Deflection)	12	14	19	24	28	34	45	57	22	27	36	45
12' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	45	57	76	97	41**	53**	72**	94**	52**	66**	91**	118**
	D+L (Deflection)	13	16	21	27	34	42	56	71	27	33	44	55
	L (Deflection)	10	12	17	21	24	30	40	50	19	24	31	40
12' - 6"	$\alpha_D D + \alpha_L L$ (Strength)	42	52	70	89	38**	48**	66**	86**	48**	61**	84**	109**
	D+L (Deflection)	11	14	19	24	30	37	49	62	23	29	38	48
	L (Deflection)	9	11	15	19	22	26	35	44	17	21	28	35
13' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	38	48	64	82	35**	44**	61**	79**	44**	56**	77**	100**
	D+L (Deflection)	10	12	16	20	26	32	43	55	21	25	33	42
	L (Deflection)	8	10	13	17	19	23	31	40	15	18	25	31
13' - 6"	$\alpha_D D + \alpha_L L$ (Strength)	35	44	59	76	32**	41**	56**	73**	41**	52**	71**	92**
	D+L (Deflection)	9	10	14	18	23	29	38	48	18	22	29	37
	L (Deflection)	7	9	12	15	17	21	28	35	14	17	22	28
14' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	33	41	55	70	30**	38**	52**	67**	38**	48**	66**	85**
	D+L (Deflection)	7	9	12	15	21	25	34	43	16	20	26	33
	L (Deflection)	6	8	10	13	15	19	25	32	12	15	20	25
14' - 6"	$\alpha_D D + \alpha_L L$ (Strength)	30	38	51	65	27**	35**	48**	62**	35**	44**	61**	79**
	D+L (Deflection)	6	8	11	13	18	23	30	38	14	17	23	29
	L (Deflection)	6	7	9	12	14	17	22	28	11	13	18	23
15' - 0"	$\alpha_D D + \alpha_L L$ (Strength)	28	35	47	60	25**	32**	45**	58**	33**	41**	57**	74**
	D+L (Deflection)	6	7	9	12	16	20	27	34	13	15	21	26
	L (Deflection)	5	6	9	11	12	15	20	26	10	12	16	20

8' - 6"	$\alpha_D D + \alpha_L L$ (Strength)	93	← Max. superimposed factored LSD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	41	← Max. superimposed unfactored LSD dead + live load (psf) (governed by deflection limitation of L/240)
	L (Deflection)	29	← 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, (in<sup>4</sup>)/ft
- In** Moment of inertia for negative bending per foot of deck width, (in<sup>4</sup>)/ft
- Sp** Section modulus for positive bending per foot of deck width, (in<sup>3</sup>)/ft
- Sn** Section modulus for negative bending per foot of deck width, (in<sup>3</sup>)/ft
- $\alpha_D, \alpha_L$  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, pif
- Rbi** Allowable interior web crippling value per foot of deck width, pif
- Va** Allowable shear value per foot of deck width, pif
- 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 reactions (web crippling) assuming 4" of interior bearing.
  - Loads marked with two asterisks (\*\*) are governed by moment & shear or moment & reactions (web crippling) assuming 4" 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. Acoustical profile is also available.