

## 1.5 B, BI, BA, BIA

Maximum Sheet Length 42'-0"

Extra charge for lengths under 6'-0"

ICC ER-3415

Factory Mutual Approved\*

Deck type & gauge — Max. deck span

1.5B22, 1.5BI22..... 6'-0"

1.5B20, 1.5BI20..... 6'-6"

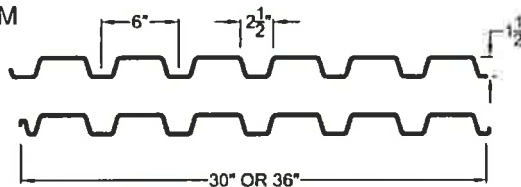
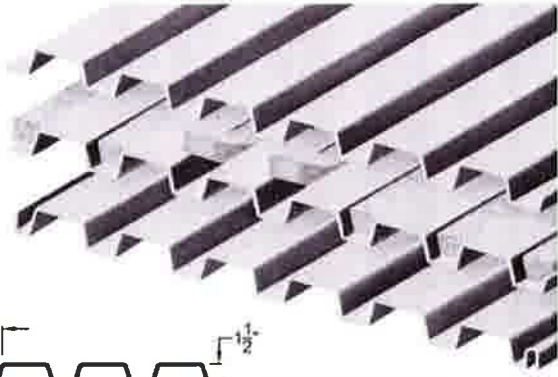
1.5B18, 1.5BI18..... 7'-5"

FM Approvals No. 0C8A7.AM & 0G1A4.AM

1.5B16, 1.5BI16..... 9'-4"

FM Approvals No. 3029260

\* Acoustical Deck is not approved by Factory Mutual



Interlocking side lap is not drawn to show actual detail.

### SECTION PROPERTIES

Deck type	Design thickness in.	W psf	Section Properties				V <sub>n</sub> lbs/ft	F <sub>y</sub> ksi
			I <sub>p</sub>	S <sub>p</sub>	I <sub>n</sub>	S <sub>n</sub>		
			in <sup>4</sup> /ft	in <sup>3</sup> /ft	in <sup>4</sup> /ft	in <sup>3</sup> /ft		
B24	0.0239	1.46	0.107	0.120	0.135	0.131	2634	60
B22	0.0295	1.78	0.155	0.186	0.183	0.192	1818	33
B20	0.0358	2.14	0.201	0.234	0.222	0.247	2193	33
B19	0.0418	2.49	0.246	0.277	0.260	0.289	2546	33
B18	0.0474	2.82	0.289	0.318	0.295	0.327	2870	33
B16	0.0598	3.54	0.373	0.408	0.373	0.411	3578	33

### ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient <sup>1</sup>
	125	250	500	1000	2000	4000	
1.5BA, 1.5BIA	.11	.18	.66	1.02	0.61	0.33	0.60

<sup>1</sup> Source: Riverbank Acoustical Laboratories.  
Test was conducted with 1.50 pcf fiberglass batts and 2 inch polyisocyanurate foam insulation for the SDI.

Type B (wide rib) deck provides excellent structural load carrying capacity per pound of steel utilized, and its nestable design eliminates the need for die-set ends.

1" or more rigid insulation is required for Type B deck.

Acoustical deck (Type BA, BIA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the vertical webs where the load carrying properties are negligibly affected (less than 5%).

Inert, non-organic glass fiber sound absorbing batts are placed in the rib openings to absorb up to 60% of the sound striking the deck.

Batts are field installed and may require separation.

### VERTICAL LOADS FOR TYPE 1.5B

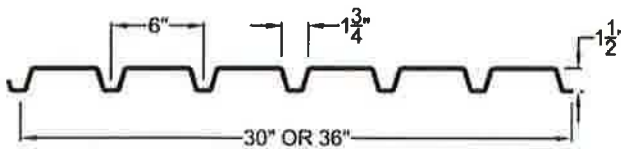
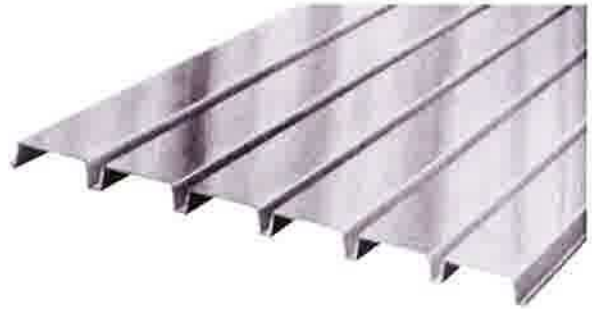
No. of Spans	Deck Type	Max. SDI Const. Span	Allowable Total (PSF) / Load Causing Deflection of L/240 or 1 inch (PSF)											
			Span (ft.-in.) ctr to ctr of supports											
			5-0	5-6	6-0	6-6	7-0	7-6	8-0	8-6	9-0	9-6	10-0	
1	B24	4'-8"	115 / 56	95 / 42	80 / 32	68 / 26	59 / 20	51 / 17	45 / 14	40 / 11	35 / 10	32 / 8	29 / 7	
	B22	5'-7"	98 / 81	81 / 61	68 / 47	58 / 37	50 / 30	44 / 24	38 / 20	34 / 17	30 / 14	27 / 12	25 / 10	
	B20	6'-5"	123 / 105	102 / 79	86 / 61	73 / 48	63 / 38	55 / 31	48 / 26	43 / 21	38 / 18	34 / 15	31 / 13	
	B19	7'-1"	146 / 129	121 / 97	101 / 75	86 / 59	74 / 47	65 / 38	57 / 31	51 / 26	45 / 22	40 / 19	36 / 16	
	B18	7'-8"	168 / 152	138 / 114	116 / 89	99 / 69	85 / 55	74 / 45	65 / 37	58 / 31	52 / 26	46 / 22	42 / 19	
2	B24	5'-10"	124 / 153	103 / 115	86 / 88	74 / 70	64 / 56	56 / 45	49 / 37	43 / 31	39 / 26	35 / 22	31 / 19	
	B22	6'-11"	100 / 213	83 / 160	70 / 124	59 / 97	51 / 78	45 / 63	39 / 52	35 / 43	31 / 37	28 / 31	25 / 27	
	B20	7'-9"	128 / 267	106 / 201	89 / 155	76 / 122	66 / 97	57 / 79	51 / 65	45 / 54	40 / 46	36 / 39	32 / 33	
	B19	8'-5"	150 / 320	124 / 240	104 / 185	89 / 145	77 / 116	67 / 95	59 / 78	52 / 65	47 / 55	42 / 47	38 / 40	
	B18	9'-1"	169 / 369	140 / 277	118 / 213	101 / 168	87 / 134	76 / 109	67 / 90	59 / 75	53 / 63	48 / 54	43 / 46	
3	B24	5'-10"	154 / 120	128 / 90	108 / 69	92 / 55	79 / 44	69 / 35	61 / 29	54 / 24	48 / 21	43 / 17	39 / 15	
	B22	6'-11"	124 / 187	103 / 126	87 / 97	74 / 76	64 / 81	56 / 50	49 / 41	43 / 34	39 / 29	35 / 24	31 / 21	
	B20	7'-9"	159 / 209	132 / 157	111 / 121	95 / 95	82 / 76	72 / 62	63 / 51	56 / 43	50 / 36	45 / 31	40 / 26	
	B19	8'-5"	186 / 250	154 / 188	130 / 145	111 / 114	96 / 91	84 / 74	74 / 61	65 / 51	58 / 43	52 / 37	47 / 31	
	B18	9'-1"	210 / 289	174 / 217	147 / 167	126 / 132	108 / 105	95 / 86	83 / 71	74 / 59	66 / 50	59 / 42	54 / 36	
B16	10'-3"	264 / 369	219 / 277	185 / 214	158 / 168	136 / 135	119 / 109	105 / 90	93 / 75	83 / 63	74 / 54	67 / 46		

Notes: 1. Minimum exterior bearing length required is 1.50 inches. Minimum interior bearing length required is 3.00 inches. If these minimum lengths are not provided, web crippling must be checked.

## 1.5 F

Maximum Sheet Length 42'-0"  
 Extra Charge for Lengths Under 6'-0"  
 ICC ER-3415

Factory Mutual Approved  
 Deck type & gauge — Max. deck span  
 1.5F22..... 4'-11"  
 1.5F20..... 5'-5"  
 1.5F18..... 6'-3"  
 FM Approvals No. 0C8A7.AM



Type F (intermediate rib) deck is designed to provide the most economical combination of structural load carrying capacity and insulation materials. The rib openings permit fast and easy installation, and the nestable design eliminates the need for die-set ends. 1" rigid insulation is recommended for Type F deck.

### SECTION PROPERTIES

Deck type	Design thickness in.	W psf	Section Properties				V <sub>a</sub> lbs/ft	F <sub>y</sub> ksi
			I <sub>b</sub> in <sup>4</sup> /ft	S <sub>b</sub> in <sup>3</sup> /ft	I <sub>n</sub> in <sup>4</sup> /ft	S <sub>n</sub> in <sup>3</sup> /ft		
F22	0.0295	1.73	0.113	0.112	0.129	0.121	1944	33
F20	0.0358	2.09	0.145	0.139	0.157	0.148	2347	33
F19	0.0418	2.42	0.177	0.166	0.183	0.172	2726	33
F18	0.0474	2.74	0.206	0.190	0.208	0.195	3077	33

### VERTICAL LOADS FOR TYPE 1.5F

No. of Spans	Deck Type	Max. SDI Const. Span	Allowable Total (PSF) / Load Causing Deflection of L/240 or 1 inch (PSF)										
			Span (ft.-in.) ctr to ctr of supports										
			4-0	4-6	5-0	5-6	6-0	6-6	7-0	7-6	8-0	8-6	9-0
1	F22	4'-3"	92 / 116	73 / 81	59 / 59	49 / 45	41 / 34	35 / 27	30 / 22	26 / 18	23 / 14	20 / 12	18 / 10
	F20	5'-4"	114 / 149	90 / 104	73 / 76	61 / 57	51 / 44	43 / 35	37 / 28	33 / 23	29 / 19	25 / 15	23 / 13
	F19	6'-0"	137 / 181	108 / 127	87 / 93	72 / 70	61 / 54	52 / 42	45 / 34	39 / 28	34 / 23	30 / 19	27 / 16
	F18	6'-5"	156 / 211	124 / 148	100 / 108	83 / 81	70 / 63	59 / 49	51 / 39	44 / 32	39 / 26	35 / 22	31 / 19
2	F22	5'-3"	99 / 299	78 / 210	63 / 153	52 / 115	44 / 88	38 / 70	32 / 56	28 / 45	25 / 37	22 / 31	20 / 26
	F20	6'-6"	121 / 373	96 / 262	78 / 191	64 / 143	54 / 110	46 / 87	40 / 70	35 / 57	30 / 47	27 / 39	24 / 33
	F19	7'-1"	140 / 444	111 / 312	90 / 227	75 / 171	63 / 132	53 / 104	46 / 83	40 / 67	35 / 56	31 / 46	28 / 39
	F18	7'-8"	159 / 511	126 / 359	102 / 262	85 / 196	71 / 151	61 / 119	52 / 95	46 / 77	40 / 64	35 / 53	32 / 45
3	F22	5'-3"	123 / 234	97 / 164	79 / 120	65 / 90	55 / 69	47 / 55	41 / 44	35 / 35	31 / 29	28 / 24	25 / 21
	F20	6'-6"	151 / 292	119 / 205	97 / 149	80 / 112	67 / 86	57 / 68	50 / 54	43 / 44	38 / 36	34 / 30	30 / 26
	F19	7'-1"	175 / 348	139 / 244	112 / 178	93 / 134	78 / 103	67 / 81	58 / 65	50 / 53	44 / 43	39 / 36	35 / 31
	F18	7'-8"	198 / 400	157 / 281	127 / 205	105 / 154	89 / 119	76 / 93	65 / 75	57 / 61	50 / 50	44 / 42	40 / 35

Notes: 1. Minimum exterior bearing length required is 1.50 inches. Minimum interior bearing length required is 3.00 inches.  
 If these minimum lengths are not provided, web crippling must be checked.