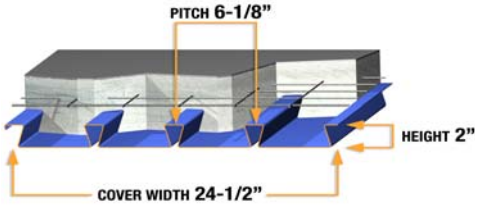
Metal Dek Group®
a unit of CSI®

VERSA-DEK® S FLOOR (LRFD)

2" high x 6-1/8" pitch x 24-1/2" wide



SECTION PROPERTIES

fy=40 ksi

GAGE	Wd	I_D	Sp	Sn	Rbe			Rbi		
					2"	3"	4"	4"	5"	6"
22	2.22	0.409	0.289	0.268	1089	1254	1393	2076	2239	2386
20	2.69	0.497	0.363	0.337	1550	1777	1969	2947	3170	3372
18	3.56	0.661	0.485	0.462	2583	2942	3245	4892	5245	5563
16	4.48	0.836	0.617	0.598	3937	4461	4902	7441	7952	8414

MAXIMUM SUPERIMPOSED LRFD LOADS, (psf), NO STUDS ON BEAMS

Span	h (Wc)	4 (33.7)				4.25 (36.0)				4.5 (38.3)				4.75 (40.5)			
	Load Combinations	GAGE															
		22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
8'-0"	λ_DD+λ_LL (Strength)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	392	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
9'-0"	λ_DD+λ_LL (Strength)	364	381	400	400	393	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	364	381	400	400	393	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	275	297	334	369	324	350	393	400	378	400	400	400	400	400	400	400
10'-0"	λ_DD+λ_LL (Strength)	324	340	368	400	351	367	398	400	377	395	400	400	400	400	400	400
	D+L (Deflection)	265	289	328	400	316	344	390	400	373	395	400	400	400	400	400	400
	L (Deflection)	200	217	243	269	236	255	286	315	276	298	334	367	320	345	386	400
11'-0"	λ_DD+λ_LL (Strength)	277	297	327	341	310	331	359	388	340	356	386	400	363	381	400	400
	D+L (Deflection)	190	208	237	303	228	249	283	315	270	294	334	371	317	345	391	400
	L (Deflection)	151	163	183	202	177	192	215	237	207	224	251	276	240	259	290	319
12'-0"	λ_DD+λ_LL (Strength)	224	241	266	287	252	270	298	321	281	301	332	357	312	335	368	396
	D+L (Deflection)	138	152	174	195	167	183	209	233	199	217	248	276	235	256	291	324
	L (Deflection)	116	125	141	155	137	148	166	183	160	172	193	213	185	199	223	246
13'-0"	λ_DD+λ_LL (Strength)	183	197	218	236	206	222	245	264	230	248	273	295	256	275	304	327
	D+L (Deflection)	101	112	129	145	123	135	156	175	148	162	186	208	175	192	219	245
	L (Deflection)	91	99	111	122	108	116	130	144	126	135	152	167	145	157	176	193
14'-0"	λ_DD+λ_LL (Strength)	150	162	180	195	170	183	203	219	190	205	227	245	212	229	253	273
	D+L (Deflection)	74	82	96	109	91	101	117	132	110	122	140	158	132	145	167	187
	L (Deflection)	73	79	89	98	86	93	104	115	101	108	122	134	116	126	141	155
15'-0"	λ_DD+λ_LL (Strength)	124	134	150	163	140	152	169	183	158	171	190	205	177	191	212	229
	D+L (Deflection)	53	60	71	81	67	75	88	100	82	91	106	120	99	110	127	144
	L (Deflection)	53	60	71	80	67	75	85	93	82	88	99	109	95	102	114	126
16'-0"	λ_DD+λ_LL (Strength)	102	112	125	136	116	127	141	154	131	143	159	173	147	160	178	193
	D+L (Deflection)	37	43	52	60	48	55	65	75	60	68	80	92	74	83	97	110
	L (Deflection)	37	43	52	60	48	55	65	75	60	68	80	90	74	83	94	104
17'-0"	λ_DD+λ_LL (Strength)	85	93	104	114	97	105	118	129	110	119	134	146	99	134	150	163
	D+L (Deflection)	25	30	37	44	34	39	48	56	44	50	60	69	55	62	74	85
	L (Deflection)	25	30	37	44	34	39	48	56	44	50	60	69	55	62	74	85
18'-0"	λ_DD+λ_LL (Strength)	63	77	87	96	69	88	99	109	75	100	113	123	82	113	127	138
	D+L (Deflection)	16	19	25	31	23	27	34	41	30	36	44	52	39	45	55	64
	L (Deflection)	16	19	25	31	23	27	34	41	30	36	44	52	39	45	55	64
19'-0"	λ_DD+λ_LL (Strength)	52	63	72	80	57	73	83	91	62	83	95	104	67	91	107	117
	D+L (Deflection)	8	11	16	21	13	17	23	28	20	24	31	38	27	32	40	48
	L (Deflection)	8	11	16	21	13	17	23	28	20	24	31	38	27	32	40	48
20'-0"	λ_DD+λ_LL (Strength)	42	58	60	67	46	64	69	77	51	70	79	88	55	76	90	99
	D+L (Deflection)	2	4	8	12	6	9	14	19	11	15	21	26	17	21	28	35
	L (Deflection)	2	4	8	12	6	9	14	19	11	15	21	26	17	21	28	35

MAXIMUM UNSHORED CONSTRUCTION CLEAR SPANS

1span	7'-2"	8'-3"	9'-9"	11'-2"	7'-0"	8'-0"	9'-6"	10'-11"	6'-10"	7'-10"	9'-3"	10'-8"	6'-8"	7'-8"	9'-1"	10'-5"
2span	8'-11"	9'-11"	11'-7"	13'-1"	8'-9"	9'-9"	11'-4"	12'-10"	8'-6"	9'-6"	11'-1"	12'-7"	8'-4"	9'-4"	10'-11"	12'-4"
3span	9'-2"	10'-3"	12'-0"	13'-7"	9'-0"	10'-1"	11'-9"	13'-3"	8'-10"	9'-10"	11'-6"	13'-0"	8'-8"	9'-8"	11'-3"	12'-9"
cantilever	2'-10"	3'-5"	4'-4"	5'-2"	2'-10"	3'-4"	4'-3"	5'-1"	2'-9"	3'-4"	4'-2"	5'-0"	2'-9"	3'-3"	4'-1"	4'-11"
cy/100sf	1.13				1.21				1.29				1.37			

8'-0"	λ_DD+λ_LL (Strength)	400
	D+L (Deflection)	400
	L (Deflection)	392

Max. superimposed LRFD factored dead + live load (psf) (governed by strength limitation)
Max. superimposed LRFD unfactored dead + live load (psf) (governed by deflection limitation of L/240)
Max. superimposed LRFD unfactored live load (psf) (governed by deflection limitation of L/360)
Vertical load span (center to center spacing)

Wd	Weight of deck (uncoated), psf
I_D	Moment of inertia for deflection per foot of deck width (in^4)/ft
Sp	Section modulus for positive bending per foot of deck width, (in^3)/ft
Sn	Section modulus for negative bending per foot of deck width, (in^3)/ft
f'c	3000 psi
λ_D, λ_L	Load factors for dead and live loads to be applied by Engineer in accordance with Building Codes.
Rbe	Allowable exterior web crippling value per foot of deck, plf
Rbi	Allowable interior web crippling value per foot of deck, plf
h	Total height of concrete slab, in
Wc	Weight of concrete (neglecting deflection), psf
D	Uniform dead load, psf
L	Uniform live load, psf

If welded wire fabric is not supplied per ACI requirements (0.00075*Ac), reduce loads by 10%. The section property table is based on 2001 AISI's Cold-Formed Steel Design Manual, 2004 Supplement. The live loads and unshored construction clear spans are based on the Steel Deck Institute's Composite Deck Design Handbook, March 1997 and Design Manual, Pub. No. 30, and ASCE's Standard for the Structural Design of Composite Slabs. The loads in these tables are based on a Simple Span Design Analysis.

110 PCF LIGHTWEIGHT CONCRETE TABLE

Metal Dek Group®
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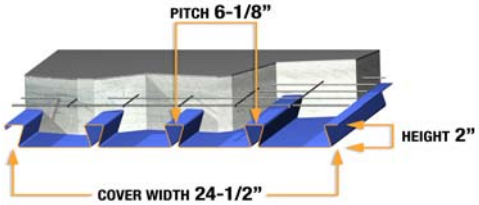
VERSA-DEK® S FLOOR (LRFD)

2" high x 6-1/8" pitch x 24-1/2" wide



SECTION PROPERTIES

fy=40 ksi

GAGE	Wd	I_D	Sp	Sn	Rbe			Rbi		
					2"	3"	4"	4"	5"	6"
22	2.22	0.409	0.289	0.268	1089	1254	1393	2076	2239	2386
20	2.69	0.497	0.363	0.337	1550	1777	1969	2947	3170	3372
18	3.56	0.661	0.485	0.462	2583	2942	3245	4892	5245	5563
16	4.48	0.836	0.617	0.598	3937	4461	4902	7441	7952	8414

MAXIMUM SUPERIMPOSED LRFD LOADS, (psf), NO STUDS ON BEAMS

h (Wc)		5 (42.8)				5.25 (45.1)				5.5 (47.4)				5.75 (49.7)			
Span	Load Combinations	GAGE															
		22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
8'-0"	λ_DD+λ_LL (Strength)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
9'-0"	λ_DD+λ_LL (Strength)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
10'-0"	λ_DD+λ_LL (Strength)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	368	396	400	400	400	400	400	400	400	400	400	400	400	400	400	400
11'-0"	λ_DD+λ_LL (Strength)	387	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	369	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	276	298	333	366	316	340	380	400	358	386	400	400	400	400	400	400
12'-0"	λ_DD+λ_LL (Strength)	345	369	400	400	369	392	400	400	392	400	400	400	400	400	400	400
	D+L (Deflection)	274	298	338	376	317	345	391	400	364	396	400	400	400	400	400	400
	L (Deflection)	213	229	257	282	243	262	293	322	276	297	332	365	312	336	375	400
13'-0"	λ_DD+λ_LL (Strength)	284	305	336	362	306	335	369	398	325	367	400	400	345	400	400	400
	D+L (Deflection)	206	225	256	286	239	261	297	330	276	301	341	379	316	344	389	400
	L (Deflection)	167	180	202	222	191	206	230	253	217	234	261	287	245	264	295	324
14'-0"	λ_DD+λ_LL (Strength)	235	253	280	302	256	279	308	333	272	306	338	365	289	335	370	399
	D+L (Deflection)	156	171	196	219	182	199	228	254	211	231	263	293	243	265	301	335
	L (Deflection)	134	144	162	178	153	165	184	203	174	187	209	230	196	211	236	259
15'-0"	λ_DD+λ_LL (Strength)	196	212	235	254	216	234	259	280	230	257	285	308	243	281	312	337
	D+L (Deflection)	118	131	151	169	139	153	176	198	162	178	204	229	188	205	235	262
	L (Deflection)	109	117	131	144	124	134	150	165	141	152	170	187	160	172	192	211
16'-0"	λ_DD+λ_LL (Strength)	164	178	198	215	182	197	219	237	146	217	241	261	156	238	264	286
	D+L (Deflection)	90	100	116	131	106	118	137	154	125	138	159	179	145	160	184	206
	L (Deflection)	90	97	108	119	103	110	124	136	116	125	140	154	132	142	158	174
17'-0"	λ_DD+λ_LL (Strength)	106	150	167	182	114	166	186	202	122	184	205	222	130	202	225	244
	D+L (Deflection)	67	75	89	101	81	90	106	120	96	107	124	141	113	125	145	163
	L (Deflection)	67	75	89	99	81	90	103	113	96	105	117	128	110	118	132	145
18'-0"	λ_DD+λ_LL (Strength)	88	126	142	155	95	141	158	172	101	133	174	190	108	142	192	209
	D+L (Deflection)	49	56	68	78	61	69	81	93	73	82	97	110	87	97	113	129
	L (Deflection)	49	56	68	78	61	69	81	93	73	82	97	108	87	97	111	122
19'-0"	λ_DD+λ_LL (Strength)	73	98	120	132	78	105	134	147	84	113	149	163	89	120	164	179
	D+L (Deflection)	35	41	51	59	44	51	62	72	55	62	75	86	66	74	88	101
	L (Deflection)	35	41	51	59	44	51	62	72	55	62	75	86	66	74	88	101
20'-0"	λ_DD+λ_LL (Strength)	60	82	102	112	64	89	114	125	69	95	127	139	74	101	140	154
	D+L (Deflection)	24	29	37	44	31	37	46	55	40	46	57	66	49	56	68	79
	L (Deflection)	24	29	37	44	31	37	46	55	40	46	57	66	49	56	68	79
MAXIMUM UNSHORED CONSTRUCTION CLEAR SPANS																	
1span		6'-6"	7'-6"	8'-11"	10'-2"	6'-5"	7'-4"	8'-8"	10'-0"	6'-3"	7'-2"	8'-6"	9'-9"	6'-2"	7'-1"	8'-4"	9'-7"
2span		8'-3"	9'-2"	10'-8"	12'-2"	8'-1"	9'-0"	10'-6"	11'-11"	7'-11"	8'-10"	10'-4"	11'-9"	7'-9"	8'-8"	10'-2"	11'-6"
3span		8'-6"	9'-6"	11'-1"	12'-6"	8'-4"	9'-4"	10'-10"	12'-4"	8'-2"	9'-2"	10'-8"	12'-1"	8'-1"	9'-0"	10'-6"	11'-11"
cantilever		2'-9"	3'-3"	4'-0"	4'-10"	2'-8"	3'-2"	4'-0"	4'-9"	2'-8"	3'-2"	3'-11"	4'-8"	2'-7"	3'-1"	3'-10"	4'-7"
cy/100sf		1.44				1.52				1.60				1.67			

8'-0"	λ_DD+λ_LL (Strength)	400
	D+L (Deflection)	400
	L (Deflection)	400

Max. superimposed LRFD factored dead + live load (psf) (governed by strength limitation)

Max. superimposed LRFD unfactored dead + live load (psf) (governed by deflection limitation of L/240)

Max. superimposed LRFD unfactored live load (psf) (governed by deflection limitation of L/360)

Vertical load span (center to center spacing)

Wd	Weight of deck (uncoated), psf
I_D	Moment of inertia for deflection per foot of deck width (in^4)/ft
Sp	Section modulus for positive bending per foot of deck width, (in^3)/ft
Sn	Section modulus for negative bending per foot of deck width, (in^3)/ft
f'c	3000 psi
λ_D, λ_L	Load factors for dead and live loads to be applied by Engineer in accordance with Building Codes.
Rbe	Allowable exterior web crippling value per foot of deck, plf
Rbi	Allowable interior web crippling value per foot of deck, plf
h	Total height of concrete slab, in
Wc	Weight of concrete (neglecting deflection), psf
D	Uniform dead load, psf
L	Uniform live load, psf

If welded wire fabric is not supplied per ACI requirements (0.00075*Ac), reduce loads by 10%. The section property table is based on 2001 AISI's Cold-Formed Steel Design Manual, 2004 Supplement. The live loads and unshored construction clear spans are based on the Steel Deck Institute's Composite Deck Design Handbook, March 1997 and Design Manual, Pub. No. 30, and ASCE's Standard for the Structural Design of Composite Slabs. The loads in these tables are based on a Simple Span Design Analysis.

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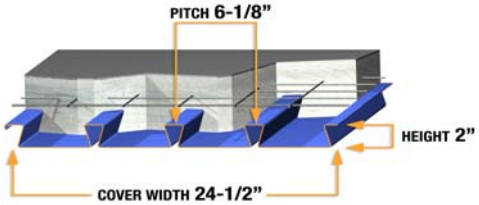

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16	4.48	0.836	0.617	0.598	3937	4461	4902	7441	7952	8414

MAXIMUM SUPERIMPOSED LRFD LOADS, (psf), NO STUDS ON BEAMS

Span	h (Wc)	6 (52.0)				6.25 (54.3)				6.5 (56.6)				6.75 (58.9)			
	Load Combinations	GAGE															
		22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
8'-0"	λ_DD+λ_LL (Strength)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
9'-0"	λ_DD+λ_LL (Strength)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
10'-0"	λ_DD+λ_LL (Strength)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
11'-0"	λ_DD+λ_LL (Strength)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
12'-0"	λ_DD+λ_LL (Strength)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	350	377	400	400	392	400	400	400	400	400	400	400	400	400	400	400
13'-0"	λ_DD+λ_LL (Strength)	364	400	400	400	383	400	400	400	400	400	400	400	400	400	400	400
	D+L (Deflection)	359	390	400	400	383	400	400	400	400	400	400	400	400	400	400	400
	L (Deflection)	276	297	331	364	308	332	370	400	343	369	400	400	381	400	400	400
14'-0"	λ_DD+λ_LL (Strength)	305	364	400	400	321	394	400	400	337	400	400	400	353	400	400	400
	D+L (Deflection)	277	301	342	380	314	341	387	400	337	384	400	400	353	400	400	400
	L (Deflection)	221	237	265	291	247	265	296	325	275	295	330	362	305	328	365	400
15'-0"	λ_DD+λ_LL (Strength)	257	307	340	367	271	333	369	398	221	352	399	400	233	369	400	400
	D+L (Deflection)	215	235	268	299	244	267	303	338	221	301	342	380	233	338	383	400
	L (Deflection)	179	193	216	237	201	216	241	265	221	240	268	294	233	266	297	326
16'-0"	λ_DD+λ_LL (Strength)	165	260	288	312	175	282	313	339	184	301	339	368	194	315	366	397
	D+L (Deflection)	165	184	211	236	175	210	240	268	184	238	271	303	194	268	305	340
	L (Deflection)	148	159	178	195	165	178	199	218	184	198	221	243	194	219	245	269
17'-0"	λ_DD+λ_LL (Strength)	138	221	246	267	146	189	268	291	154	199	290	315	162	210	314	341
	D+L (Deflection)	131	144	166	187	146	165	190	214	154	188	216	242	162	210	244	273
	L (Deflection)	123	133	148	163	138	148	165	182	154	165	184	202	162	183	204	224
18'-0"	λ_DD+λ_LL (Strength)	115	151	210	229	121	160	229	250	128	169	249	271	135	178	270	294
	D+L (Deflection)	101	113	131	149	118	130	151	171	128	149	172	194	135	170	195	220
	L (Deflection)	101	112	125	137	116	125	139	153	128	139	155	170	135	154	172	189
19'-0"	λ_DD+λ_LL (Strength)	95	128	180	197	101	135	197	215	106	143	214	234	112	150	233	254
	D+L (Deflection)	78	88	103	118	92	102	120	136	106	118	138	156	112	135	157	177
	L (Deflection)	78	88	103	117	92	102	119	130	106	118	132	145	112	131	146	160
20'-0"	λ_DD+λ_LL (Strength)	78	108	155	169	83	114	169	185	88	121	179	202	92	127	188	220
	D+L (Deflection)	59	67	81	93	70	80	95	109	83	93	109	125	92	107	125	143
	L (Deflection)	59	67	81	93	70	80	95	109	83	93	109	124	92	107	125	138
MAXIMUM UNSHORED CONSTRUCTION CLEAR SPANS																	
1span		6'-1"	6'-11"	8'-3"	9'-5"	6'-0"	6'-10"	8'-1"	9'-3"	5'-10"	6'-9"	7'-11"	9'-1"	5'-9"	6'-7"	7'-10"	8'-11"
2span		7'-8"	8'-7"	10'-0"	11'-4"	7'-6"	8'-5"	9'-10"	11'-2"	7'-5"	8'-4"	9'-8"	11'-0"	7'-4"	8'-2"	9'-7"	10'-10"
3span		7'-11"	8'-10"	10'-4"	11'-9"	7'-9"	8'-9"	10'-2"	11'-6"	7'-8"	8'-7"	10'-0"	11'-4"	7'-7"	8'-5"	9'-10"	11'-2"
cantilever		2'-7"	3'-1"	3'-10"	4'-7"	2'-7"	3'-0"	3'-9"	4'-6"	2'-6"	3'-0"	3'-9"	4'-5"	2'-6"	2'-11"	3'-8"	4'-4"
cy/100sf		1.75				1.83				1.91				1.98			

8'-0"	λ_DD+λ_LL (Strength)	400
	D+L (Deflection)	400
	L (Deflection)	400

Max. superimposed LRFD factored dead + live load (psf) (governed by strength limitation)
Max. superimposed LRFD unfactored dead + live load (psf) (governed by deflection limitation of L/240)
Max. superimposed LRFD unfactored live load (psf) (governed by deflection limitation of L/360)
Vertical load span (center to center spacing)

Wd	Weight of deck (uncoated), psf	Rbe	Allowable exterior web crippling value per foot of deck, 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, plf
Sp	Section modulus for positive bending per foot of deck width, (in^3)/ft	h	Total height of concrete slab, in
Sn	Section modulus for negative bending per foot of deck width, (in^3)/ft	Wc	Weight of concrete (neglecting deflection), psf
f'c	3000 psi	D	Uniform dead load, psf
λ_D, λ_L	Load factors for dead and live loads to be applied by Engineer in accordance with Building Codes.	L	Uniform live load, psf

If welded wire fabric is not supplied per ACI requirements (0.00075*Ac), reduce loads by 10%. The section property table is based on 2001 AISI's Cold-Formed Steel Design Manual, 2004 Supplement. The live loads and unshored construction clear spans are based on the Steel Deck Institute's Composite Deck Design Handbook, March 1997 and Design Manual, Pub. No. 30, and ASCE's Standard for the Structural Design of Composite Slabs. The loads in these tables are based on a Simple Span Design Analysis.

110 PCF LIGHTWEIGHT CONCRETE TABLE