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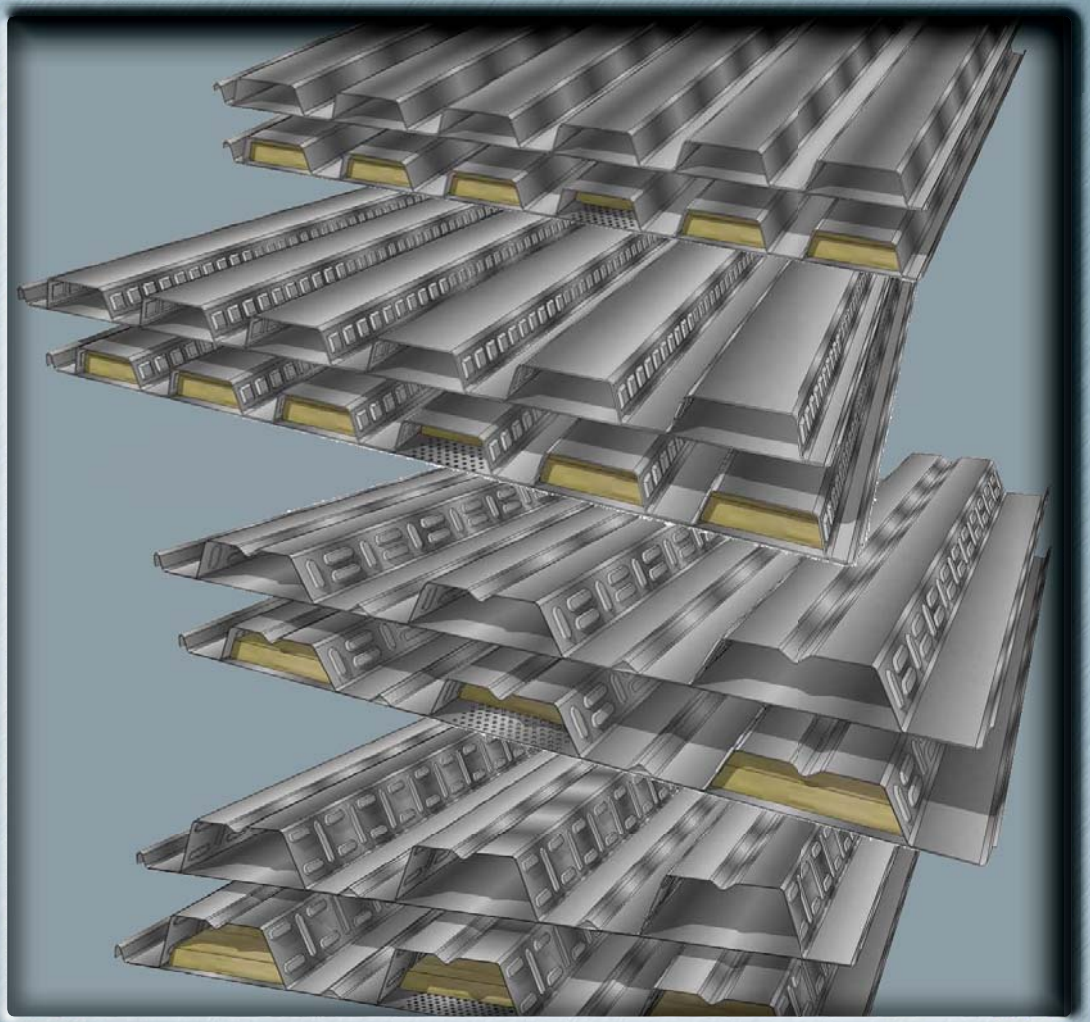
CELLULAR DECK
WITH COMPOSITE STUD TABLES



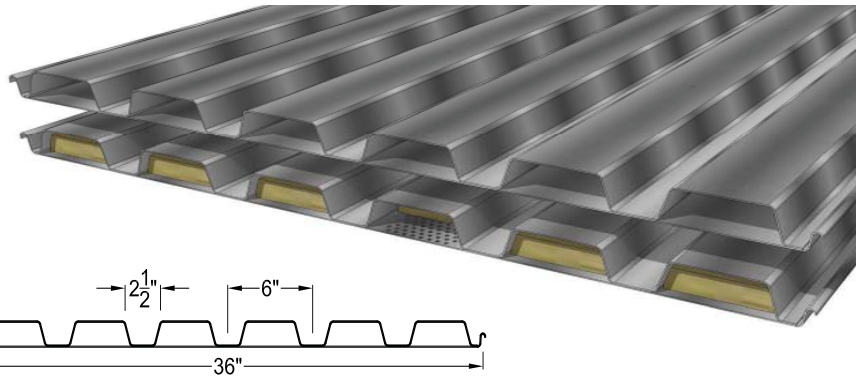
VULCRAFT 2010 STEEL DECK CELLULAR

1.5BP, 1.5BPA

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.

FM Global Approved*

*FM Global approval numbers and spans are available in the Vulcraft Deck Catalog, pg. 13.



SECTION PROPERTIES FOR 1.5BP, 1.5BPA

BP, BPA Hat/Pan Gage	Allowable web crippling load						W psf	Section Properties				V_a lbs/ft	F_y ksi
	1 flange loading		2 flange loading		Design Thickness(in.)			I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft		
	Rext lbs/ftw	Rint lbs/ftw	Rext lbs/ftw	Rint lbs/ftw	Hat	Pan							
20/20	768	1417	850	1775	0.0358	0.0358	3.83	0.357	0.301	0.357	0.394	2218	33
20/18	770	1419	852	1777	0.0358	0.0474	4.36	0.388	0.310	0.388	0.413	2206	33
18/20	1286	2387	1531	3027	0.0474	0.0358	4.47	0.483	0.446	0.483	0.510	2911	33
18/18	1287	2388	1532	3029	0.0474	0.0474	5.00	0.527	0.458	0.527	0.532	2903	33
18/16	1289	2391	1535	3033	0.0474	0.0598	5.56	0.567	0.468	0.567	0.556	2887	33
16/18	1972	3675	2476	4699	0.0598	0.0474	5.68	0.668	0.631	0.668	0.657	3620	33
16/16	1977	3683	2485	4711	0.0598	0.0598	6.24	0.722	0.664	0.722	0.685	3578	33

ROOF

ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
1.5BPA	0.34	0.42	0.36	0.22	0.17	0.17	0.30 W/O Insulation
	0.38	0.49	0.63	0.98	0.74	0.54	0.70 W/ Insulation

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

Acoustical deck (Type 1.5BPA) is particularly suitable in structures such as auditoriums, school, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

VERTICAL LOADS FOR TYPE 1.5BP, 1.5BPA

No. of Spans	BP, BPA Hat/Pan Gage	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										
			6-0	7-0	8-0	9-0	10-0	11-0	12-0	13-0	14-0	15-0	16-0
1	20/20	8'-6	110 / 108	81 / 68	62 / 46	49 / 32	40 / 23	33 / 18	28 / 14	23 / 11	20 / 9	18 / 7	15 / 6
	20/18	8'-10	113 / 118	83 / 74	64 / 50	50 / 35	41 / 25	34 / 19	28 / 15	24 / 12	21 / 9	18 / 8	16 / 6
	18/20	9'-11	163 / 147	120 / 92	92 / 62	73 / 43	59 / 32	49 / 24	41 / 18	35 / 14	30 / 12	26 / 9	23 / 8
	18/18	10'-4	168 / 160	123 / 101	94 / 67	74 / 47	60 / 35	50 / 26	42 / 20	36 / 16	31 / 13	27 / 10	24 / 8
	18/16	10'-9	171 / 172	126 / 108	96 / 73	76 / 51	62 / 37	51 / 28	43 / 22	36 / 17	31 / 14	27 / 11	24 / 9
	16/18	11'-8	231 / 203	170 / 128	130 / 86	103 / 60	83 / 44	69 / 33	58 / 25	49 / 20	42 / 16	37 / 13	32 / 11
	16/16	12'-1	243 / 219	179 / 138	137 / 92	108 / 65	87 / 47	72 / 36	61 / 27	52 / 22	45 / 17	39 / 14	34 / 12
2	20/20	10'-0	140 / 261	104 / 164	80 / 110	63 / 77	51 / 56	43 / 42	36 / 33	31 / 26	26 / 21	23 / 17	20 / 14
	20/18	10'-6	146 / 284	108 / 179	83 / 120	66 / 84	54 / 61	45 / 46	37 / 35	32 / 28	28 / 22	24 / 18	21 / 15
	18/20	11'-8	181 / 353	134 / 222	103 / 149	82 / 105	66 / 76	55 / 57	46 / 44	40 / 35	34 / 28	30 / 23	26 / 19
	18/18	12'-2	189 / 385	140 / 243	108 / 163	85 / 114	69 / 83	57 / 63	48 / 48	41 / 38	36 / 30	31 / 25	27 / 20
	18/16	12'-8	197 / 415	146 / 261	112 / 175	89 / 123	72 / 90	60 / 67	50 / 52	43 / 41	37 / 33	32 / 27	28 / 22
	16/18	13'-9	233 / 488	173 / 308	133 / 206	105 / 145	86 / 105	71 / 79	60 / 61	51 / 48	44 / 38	38 / 31	34 / 26
	16/16	14'-3	242 / 528	180 / 332	138 / 223	110 / 156	89 / 114	74 / 86	62 / 66	53 / 52	46 / 42	40 / 34	35 / 28
3	20/20	10'-0	172 / 204	126 / 129	97 / 86	76 / 61	62 / 44	51 / 33	43 / 26	37 / 20	32 / 16	28 / 13	24 / 11
	20/18	10'-6	177 / 222	130 / 140	100 / 94	79 / 66	64 / 48	53 / 36	44 / 28	38 / 22	33 / 17	28 / 14	25 / 12
	18/20	11'-8	224 / 277	166 / 174	128 / 117	102 / 82	83 / 60	69 / 45	58 / 35	49 / 27	43 / 22	37 / 18	33 / 15
	18/18	12'-2	233 / 302	173 / 190	134 / 127	106 / 89	86 / 65	71 / 49	60 / 38	51 / 30	44 / 24	39 / 19	34 / 16
	18/16	12'-8	242 / 325	180 / 204	139 / 137	111 / 96	90 / 70	75 / 53	63 / 41	54 / 32	46 / 26	40 / 21	36 / 17
	16/18	13'-9	288 / 383	214 / 241	165 / 161	131 / 113	106 / 83	88 / 62	74 / 48	63 / 38	55 / 30	48 / 24	42 / 20
	16/16	14'-3	299 / 414	222 / 260	172 / 174	136 / 123	111 / 89	92 / 67	77 / 52	66 / 41	57 / 33	50 / 26	44 / 22

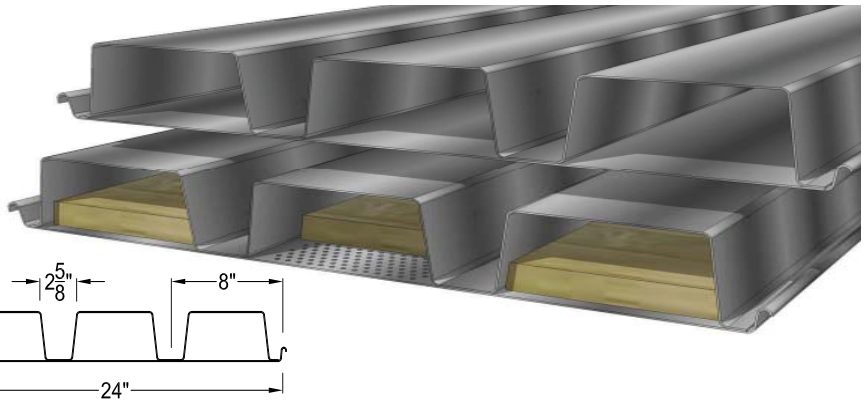
Notes: 1. Minimum exterior bearing length required is 1.50 inches. Minimum interior bearing length required is 3.00 inches. If these minimum lengths are not provided, web crippling must be checked.

3NP, 3NPA

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.

FM Global Approved*

*FM Global approval numbers and spans are available in the Vulcraft Deck Catalog, pg. 13.



SECTION PROPERTIES FOR 3NP, 3NPA

NP, NPA Hat/Pan Gage	Allowable web crippling load						W psf	Section Properties				V_a lbs/ft	F_y ksi
	1 flange loading		2 flange loading		Design Thickness(in.)			I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft		
	Rext lbs/ftw	Rint lbs/ftw	Rext lbs/ftw	Rint lbs/ftw	Hat	Pan							
20/20	555	1100	571	1307	0.0358	0.0358	4.30	1.487	0.613	1.384	0.801	3287	33
20/18	555	1100	571	1307	0.0358	0.0474	4.83	1.604	0.608	1.586	1.007	3287	33
18/20	939	1853	1056	2247	0.0474	0.0358	5.08	2.012	0.897	1.725	0.985	4704	33
18/18	939	1853	1056	2247	0.0474	0.0474	5.61	2.184	0.919	1.948	1.190	4704	33
18/16	939	1853	1056	2247	0.0474	0.0598	6.18	2.335	0.936	2.221	1.372	4704	33
16/18	1449	2850	1735	3503	0.0598	0.0474	6.45	2.797	1.267	2.324	1.362	5903	33
16/16	1449	2850	1735	3503	0.0598	0.0598	6.98	3.005	1.292	2.608	1.635	5903	33

ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
3NPA	0.40	0.38	0.47	0.19	0.11	0.17	0.30 W/O Insulation
	0.48	0.56	0.98	0.92	0.72	0.58	0.80 W/ Insulation

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

Acoustical deck (Type 3NPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

VERTICAL LOADS FOR TYPE 3NP, 3NPA

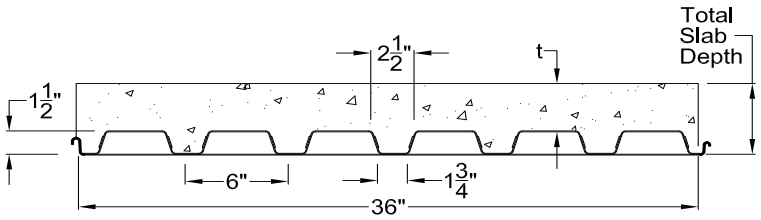
No. of Spans	NP, NPA Hat/Pan Gage	Max. SDI Const. Span	Allowable Total (PSF) / Load Causing Deflection of L/240 or 1 inch (PSF)										
			Span (ft.-in.) ctr to ctr of supports										
			6-0	7-0	8-0	9-0	10-0	11-0	12-0	13-0	14-0	15-0	16-0
1	20/20	16'-4	185 / 451	158 / 284	126 / 190	100 / 134	81 / 97	67 / 73	56 / 56	48 / 44	41 / 36	36 / 29	32 / 24
	20/18	16'-4	185 / 487	158 / 307	125 / 205	99 / 144	80 / 105	66 / 79	56 / 61	47 / 48	41 / 38	36 / 31	31 / 26
	18/20	19'-10	313 / 611	241 / 385	185 / 258	146 / 181	118 / 132	98 / 99	82 / 76	70 / 60	60 / 48	53 / 39	46 / 32
	18/18	20'-1	313 / 663	247 / 417	189 / 280	149 / 196	121 / 143	100 / 108	84 / 83	72 / 65	62 / 52	54 / 42	47 / 35
	18/16	20'-3	313 / 709	252 / 446	193 / 299	152 / 210	123 / 153	102 / 115	86 / 89	73 / 70	63 / 56	55 / 45	48 / 37
	16/18	22'-6	464 / 849	341 / 535	261 / 358	206 / 252	167 / 183	138 / 138	116 / 106	99 / 83	85 / 67	74 / 54	65 / 45
	16/16	23'-1	473 / 912	347 / 574	266 / 385	210 / 270	170 / 197	141 / 148	118 / 114	101 / 90	87 / 72	76 / 58	66 / 48
2	20/20	18'-8	147 / 1,049	126 / 661	110 / 443	98 / 311	88 / 227	80 / 170	72 / 131	62 / 103	53 / 83	46 / 67	41 / 55
	20/18	18'-8	147 / 1,166	126 / 734	110 / 492	98 / 346	88 / 252	80 / 189	73 / 146	68 / 115	63 / 92	58 / 75	51 / 61
	18/20	20'-9	247 / 1,366	212 / 860	185 / 576	157 / 405	128 / 295	106 / 222	89 / 171	76 / 134	66 / 108	57 / 87	50 / 72
	18/18	22'-8	247 / 1,510	212 / 951	185 / 637	165 / 448	148 / 326	127 / 245	107 / 189	92 / 148	79 / 119	69 / 97	61 / 80
	18/16	23'-2	247 / 1,665	212 / 1,049	185 / 703	165 / 493	148 / 360	135 / 270	123 / 208	105 / 164	91 / 131	79 / 107	70 / 88
	16/18	24'-5	380 / 1,872	326 / 1,179	273 / 790	217 / 555	176 / 404	146 / 304	123 / 234	105 / 184	91 / 147	79 / 120	70 / 99
	16/16	25'-2	380 / 2,052	326 / 1,292	285 / 866	253 / 608	210 / 443	174 / 333	147 / 256	126 / 202	108 / 162	95 / 131	83 / 108
3	20/20	18'-8	167 / 822	143 / 518	125 / 347	111 / 244	100 / 178	91 / 133	83 / 103	75 / 81	64 / 65	56 / 53	49 / 43
	20/18	18'-8	167 / 913	143 / 575	125 / 385	111 / 271	100 / 197	91 / 148	83 / 114	74 / 90	64 / 72	56 / 58	49 / 48
	18/20	20'-9	281 / 1,070	241 / 674	211 / 451	187 / 317	159 / 231	132 / 174	111 / 134	95 / 105	82 / 84	71 / 68	63 / 56
	18/18	22'-8	281 / 1,183	241 / 745	211 / 499	187 / 351	168 / 256	153 / 192	131 / 148	112 / 116	97 / 93	84 / 76	74 / 62
	18/16	23'-2	281 / 1,305	241 / 822	211 / 550	187 / 387	168 / 282	153 / 212	134 / 163	114 / 128	98 / 103	86 / 83	75 / 69
	16/18	24'-5	432 / 1,466	370 / 923	324 / 619	268 / 435	219 / 317	181 / 238	153 / 183	131 / 144	113 / 115	99 / 94	87 / 77
	16/16	25'-2	432 / 1,607	370 / 1,012	324 / 678	288 / 476	259 / 347	216 / 261	182 / 201	156 / 158	135 / 127	118 / 103	104 / 85

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 VLP, VLPA

No Studs

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				V_a lbs/ft	F_y ksi
	Hat	Pan		I_p in^4/ft	S_p in^3/ft	I_n in^4/ft	S_n in^3/ft		
1.5VLP20/20	0.0358	0.0358	3.83	0.355	0.295	0.295	0.380	2093	33
1.5VLP20/18	0.0358	0.0474	4.36	0.383	0.300	0.352	0.414	2093	33
1.5VLP18/20	0.0474	0.0358	4.47	0.483	0.440	0.368	0.449	2747	33
1.5VLP18/18	0.0474	0.0474	5.00	0.526	0.449	0.424	0.533	2747	33
1.5VLP18/16	0.0474	0.0598	5.56	0.564	0.457	0.504	0.557	2747	33
1.5VLP16/18	0.0598	0.0474	5.68	0.669	0.623	0.503	0.633	3430	33
1.5VLP16/16	0.0598	0.0598	6.24	0.722	0.635	0.584	0.686	3430	33

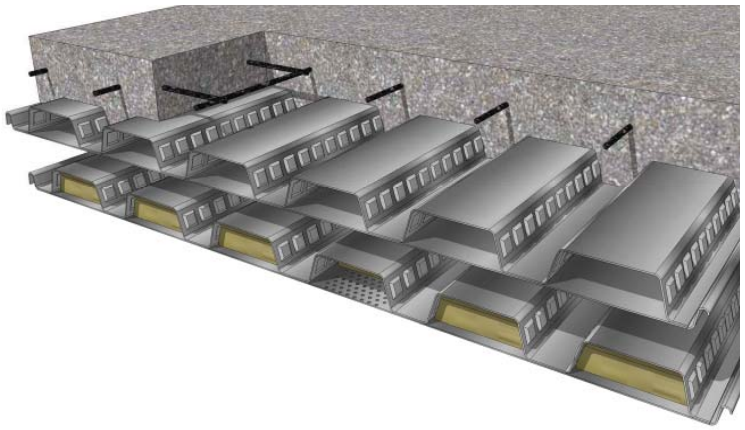
(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

Total Slab Depth	1.5VLP/1.5VLPA Hat/Pan Gauge	SDI Max. Unshored Clear Span			Superimposed Live Load (PSF) Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span	6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.00 (t=2.50) 42 PSF	20/20	6'-0	8'-0	8'-0	319	238	197	167	143	122	97	77	60	47	
	20/18	6'-0	8'-1	8'-1	319	238	197	166	142	122	97	76	60	47	
	18/20	7'-8	9'-10	10'-2	365	301	229	194	166	145	122	96	77	62	51
	18/18	7'-9	10'-5	10'-5	365	301	228	193	166	144	122	96	77	62	51
	18/16	7'-10	10'-6	10'-6	365	301	228	193	166	144	122	96	77	62	51
	16/18	9'-5	11'-6	11'-11	365	301	255	220	166	144	126	107	85	69	57
	16/16	9'-6	11'-11	12'-4	365	301	255	220	165	144	126	107	85	69	57
4.50 (t=3.00) 48 PSF	20/20	5'-8	7'-8	7'-8	337	273	226	191	164	142	115	92	72	56	43
	20/18	5'-9	7'-9	7'-9	337	272	226	191	163	141	115	91	72	56	43
	18/20	7'-3	9'-4	9'-8	400	344	261	222	190	165	145	128	106	86	69
	18/18	7'-4	9'-11	9'-11	400	344	261	221	190	165	145	128	106	86	69
	18/16	7'-5	10'-0	10'-0	400	344	261	221	190	165	144	127	106	86	69
	16/18	8'-11	11'-0	11'-4	400	344	291	220	189	164	144	127	113	98	81
	16/16	9'-0	11'-5	11'-9	400	344	291	251	189	164	144	127	112	98	81
5.00 (t=3.50) 54 PSF	20/20	5'-5	7'-4	7'-4	381	309	256	216	185	160	134	106	84	66	50
	20/18	5'-6	7'-5	7'-5	381	308	256	216	185	160	133	106	84	66	50
	18/20	6'-11	8'-11	9'-3	400	356	296	250	215	187	164	145	124	101	82
	18/18	7'-0	9'-6	9'-6	400	389	295	250	215	187	164	144	124	101	82
	18/16	7'-1	9'-7	9'-7	400	389	295	250	215	186	163	144	123	101	81
	16/18	8'-6	10'-7	10'-11	400	388	328	249	214	186	163	144	127	113	101
	16/16	8'-7	10'-11	11'-4	400	388	328	249	214	186	163	143	127	113	101
5.50 (t=4.00) 60 PSF	20/20	5'-2	7'-1	7'-1	400	345	286	242	207	179	152	121	96	75	58
	20/18	5'-3	7'-1	7'-1	400	345	286	242	207	179	152	121	96	75	58
	18/20	6'-8	8'-7	8'-11	400	398	331	280	241	209	183	162	142	115	94
	18/18	6'-8	9'-1	9'-1	400	397	330	280	240	209	183	162	141	115	94
	18/16	6'-9	9'-2	9'-2	400	397	330	279	240	209	183	161	141	115	94
	16/18	8'-1	10'-2	10'-6	400	400	367	278	239	208	182	161	143	127	113
	16/16	8'-2	10'-6	10'-10	400	400	367	278	239	207	182	160	142	127	113
6.00 (t=4.50) 66 PSF	20/20	5'-0	6'-10	6'-10	400	383	317	268	230	199	170	136	108	85	65
	20/18	5'-1	6'-10	6'-10	400	382	317	268	229	199	170	136	108	85	65
	18/20	6'-5	8'-3	8'-7	400	400	366	310	267	232	203	179	159	130	106
	18/18	6'-5	8'-9	8'-9	400	400	366	310	266	232	203	179	159	130	106
	18/16	6'-6	8'-10	8'-10	400	400	366	310	266	231	203	179	159	130	106
	16/18	7'-10	9'-9	10'-1	400	400	364	308	265	230	202	178	158	141	126
	16/16	7'-10	10'-2	10'-6	400	400	364	308	265	230	202	178	158	141	126

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.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
3 1/2	0.78	0.211	6x6 - W1.4xW1.4
4	0.94	0.253	6x6 - W1.4xW1.4
4 1/2	1.09	0.294	6x6 - W1.4xW1.4
4 3/4	1.17	0.315	6x6 - W1.4xW1.4
5	1.24	0.336	6x6 - W2.1xW2.1
5	1.40	0.378	6x6 - W2.1xW2.1
5 3/4	1.48	0.398	6x6 - W2.1xW2.1
6	1.55	0.419	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
1.5VLPA	0.09	0.11	0.25	0.14	0.16	0.28	0.15 W/O Insulation
	0.14	0.21	0.61	0.99	0.69	0.27	0.65 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

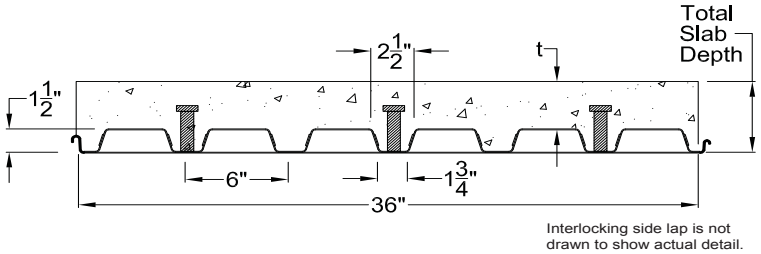
Total Slab Depth	1.5VLP/1.5VLPA Hat/Pan Gauge	SDI Max. Unshored Clear Span			Superimposed Live Load (PSF) Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span	6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.00 (t=2.50) 33 PSF	20/20	6'-6	8'-8	8'-8	283	213	177	150	123	92	71	56	45		
	20/18	6'-7	8'-9	8'-9	283	213	177	150	123	92	71	56	45		
	18/20	8'-5	10'-7	11'-0	323	266	225	174	139	104	80	63	51	41	
	18/18	8'-6	11'-5	11'-5	323	266	225	174	139	104	80	63	51	41	
	18/16	8'-7	11'-5	11'-5	323	266	225	173	139	104	80	63	51	41	
	16/18	10'-5	12'-5	12'-10	323	266	225	195	155	116	90	70	56	46	
	16/16	10'-5	12'-11	13'-4	323	266	225	195	155	116	90	70	56	46	
4.50 (t=3.00) 37 PSF	20/20	6'-3	8'-4	8'-4	324	245	203	172	148	129	101	79	63	52	42
	20/18	6'-3	8'-5	8'-5	324	244	203	172	148	128	101	79	63	52	42
	18/20	8'-0	10'-2	10'-6	369	305	258	199	172	147	114	89	72	58	48
	18/18	8'-1	10'-10	10'-10	369	305	258	199	171	147	114	89	72	58	48
	18/16	8'-2	10'-11	10'-11	369	305	258	199	171	147	114	89	72	58	48
	16/18	9'-10	11'-11	12'-4	369	304	257	222	171	149	126	99	79	65	53
	16/16	9'-11	12'-5	12'-9	369	304	257	222	170	148	126	99	79	65	53
4.75 (t=3.25) 40 PSF	20/20	6'-1	8'-2	8'-2	345	261	217	184	158	137	118	93	74	60	50
	20/18	6'-2	8'-3	8'-3	345	260	216	183	158	137	118	93	74	60	50
	18/20	7'-10	10'-0	10'-4	393	324	250	212	183	159	133	105	84	68	56
	18/18	7'-11	10'-8	10'-8	393	324	250	212	183	159	133	105	84	68	56
	18/16	7'-11	10'-8	10'-8	393	324	249	212	182	159	133	105	84	68	56
	16/18	9'-7	11'-9	12'-1	392	324	274	236	182	158	139	116	93	76	62
	16/16	9'-8	12'-2	12'-7	392	324	274	236	181	158	139	116	93	76	62
5.50 (t=3.50) 42 PSF	20/20	5'-11	8'-0	8'-0	341	277	230	195	168	146	128	108	87	70	58
	20/18	6'-0	8'-1	8'-1	367	276	230	195	167	145	127	108	87	70	58
	18/20	7'-8	9'-9	10'-1	400	344	265	225	194	169	149	122	97	79	65
	18/18	7'-9	10'-5	10'-5	400	344	265	225	194	169	149	122	97	79	65
	18/16	7'-9	10'-6	10'-6	400	344	265	225	194	169	148	122	97	79	65
	16/18	9'-5	11'-6	11'-11	400	343	291	251	193	168	148	131	108	88	72
	16/16	9'-6	11'-11	12'-4	400	343	291	251	193	168	148	131	108	88	72
5.75 (t=4.25) 49 PSF	20/20	5'-7	7'-7	7'-7	400	326	272	230	198	172	151	133	116	94	77
	20/18	5'-8	7'-8	7'-8	400	326	271	230	198	172	151	133	115	94	76
	18/20	7'-2	9'-3	9'-7	400	400	313	266	229	200	176	156	139	119	98
	18/18	7'-3	9'-10	9'-10	400	400	312	265	229	199	175	155	139	119	98
	18/16	7'-4	9'-11	9'-11	400	400	312	265	228	199	175	155	138	119	98
	16/18	8'-10	10'-11	11'-3	400	400	342	264	227	198	174	155	138	123	108
	16/16	8'-11	11'-4	11'-8	400	400	342	264	227	198	174	154	137	123	108

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.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.

1.5 VLP, VLPA

Stud Spacing - 12in C-C

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				A_s in²/ft	ΦV_n lbs/ft	N (Normal Wt. Concrete) studs/ft	N (Lightweight. Concrete) studs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft					
1.5VLP20/20	0.0358	0.0358	3.83	0.355	0.295	0.295	0.380	0.583	3182	0.612	0.656	33
1.5VLP20/18	0.0358	0.0474	4.36	0.383	0.300	0.352	0.414	0.583	3182	0.612	0.656	33
1.5VLP18/20	0.0474	0.0358	4.47	0.483	0.440	0.368	0.449	0.776	4175	0.811	0.868	33
1.5VLP18/18	0.0474	0.0474	5.00	0.526	0.449	0.424	0.533	0.776	4175	0.811	0.868	33
1.5VLP18/16	0.0474	0.0598	5.56	0.564	0.457	0.504	0.557	0.776	4175	0.811	0.868	33
1.5VLP16/18	0.0598	0.0474	5.68	0.669	0.623	0.503	0.633	0.983	5214	1.023	1.095	33
1.5VLP16/16	0.0598	0.0598	6.24	0.722	0.635	0.584	0.686	0.983	5214	1.023	1.095	33

(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

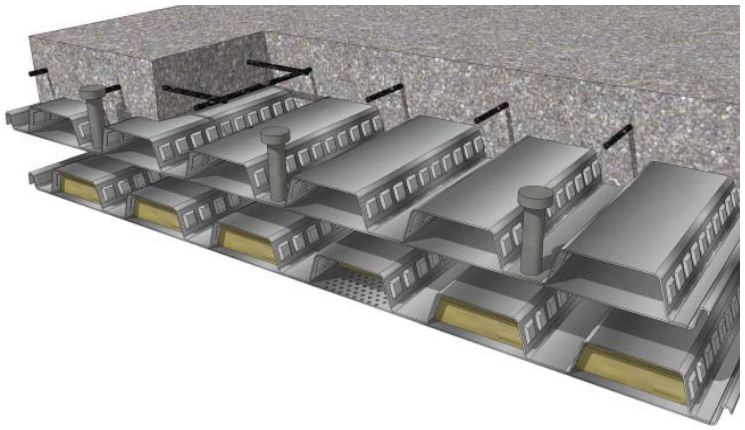
Total Slab Depth	1.5VLP/1.5VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in²/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 12 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.00 (t=2.50) 42 PSF	20/20	6'-0	8'-0	8'-0	22.16	4127	400	358	267	204	159	126	100	80	64	51	
	20/18	6'-0	8'-1	8'-1	22.16	4127	400	358	266	204	159	126	100	80	64	51	
	18/20	7'-8	9'-10	10'-2	22.16	4127	400	400	351	271	210	158	122	96	77	62	51
	18/18	7'-9	10'-5	10'-5	22.16	4127	400	400	351	271	210	158	122	96	77	62	51
	18/16	7'-10	10'-6	10'-6	22.16	4127	400	400	351	270	210	158	122	96	77	62	51
	16/18	9'-5	11'-6	11'-11	22.16	4127	399	398	350	270	212	170	136	107	85	69	57
	16/16	9'-6	11'-11	12'-4	22.16	4127	399	398	349	270	212	170	136	107	85	69	57
4.50 (t=3.00) 48 PSF	20/20	5'-8	7'-8	7'-8	26.08	4857	400	400	316	242	189	150	119	96	77	61	48
	20/18	5'-9	7'-9	7'-9	26.08	4857	400	400	315	241	188	149	119	95	77	61	48
	18/20	7'-3	9'-4	9'-8	26.08	4857	400	400	400	322	254	203	165	135	108	88	73
	18/18	7'-4	9'-11	9'-11	26.08	4857	400	400	400	322	254	203	165	134	108	88	73
	18/16	7'-5	10'-0	10'-0	26.08	4857	400	400	400	322	253	203	164	134	108	88	73
	16/18	8'-11	11'-0	11'-4	26.08	4857	400	399	398	320	253	203	164	134	111	91	75
	16/16	9'-0	11'-5	11'-9	26.08	4857	400	399	398	321	252	202	164	134	110	91	75
5.00 (t=3.50) 54 PSF	20/20	5'-5	7'-4	7'-4	30.26	5634	400	400	364	279	218	173	138	111	89	71	56
	20/18	5'-6	7'-5	7'-5	30.26	5634	400	400	364	279	218	173	138	111	89	71	56
	18/20	6'-11	8'-11	9'-3	30.26	5634	400	400	400	374	295	236	192	157	129	106	87
	18/18	7'-0	9'-6	9'-6	30.26	5634	400	400	400	373	294	236	191	156	128	106	87
	18/16	7'-1	9'-7	9'-7	30.26	5634	400	400	400	373	294	236	191	156	128	106	87
	16/18	8'-6	10'-6	10'-11	30.26	5634	400	400	398	371	293	235	191	156	129	106	88
	16/16	8'-7	10'-11	11'-4	30.26	5634	400	400	398	371	293	235	191	156	129	106	87
5.50 (t=4.00) 60 PSF	20/20	5'-2	7'-1	7'-1	34.68	6412	400	400	400	317	248	196	157	126	102	81	64
	20/18	5'-3	7'-1	7'-1	34.68	6412	400	400	400	316	247	196	157	126	102	81	64
	18/20	6'-8	8'-7	8'-11	34.68	6459	400	400	400	400	336	269	218	179	147	121	100
	18/18	6'-8	9'-1	9'-1	34.68	6459	400	400	400	400	335	269	218	179	147	121	100
	18/16	6'-9	9'-2	9'-2	34.68	6459	400	400	400	400	335	269	218	178	147	121	99
	16/18	8'-1	10'-2	10'-6	34.68	6459	400	400	399	397	334	268	218	179	147	122	101
	16/16	8'-2	10'-6	10'-10	34.68	6459	400	400	399	397	333	267	217	178	147	121	100
6.00 (t=4.50) 66 PSF	20/20	5'-0	6'-10	6'-10	39.37	6848	400	400	400	354	277	220	176	142	114	91	72
	20/18	5'-1	6'-10	6'-10	39.37	6848	400	400	400	354	277	220	176	142	114	91	72
	18/20	6'-5	8'-3	8'-7	39.37	7331	400	400	400	400	376	302	245	201	165	136	112
	18/18	6'-5	8'-9	8'-9	39.37	7331	400	400	400	400	376	302	245	201	165	136	112
	18/16	6'-6	8'-10	8'-10	39.37	7331	400	400	400	400	376	301	245	200	165	136	112
	16/18	7'-10	9'-9	10'-1	39.37	7331	400	400	399	398	374	300	244	201	166	137	113
	16/16	7'-10	10'-2	10'-6	39.37	7331	400	400	399	398	374	300	244	200	165	137	113

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.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
3 1/2	0.78	0.211	6x6 - W1.4xW1.4
4	0.94	0.253	6x6 - W1.4xW1.4
4 1/2	1.09	0.294	6x6 - W1.4xW1.4
4 3/4	1.17	0.315	6x6 - W1.4xW1.4
5	1.24	0.336	6x6 - W2.1xW2.1
5	1.40	0.378	6x6 - W2.1xW2.1
5 3/4	1.48	0.398	6x6 - W2.1xW2.1
6	1.55	0.419	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
1.5VLPA	0.09	0.11	0.25	0.14	0.16	0.28	0.15 W/O Insulation
	0.14	0.21	0.61	0.99	0.69	0.27	0.65 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

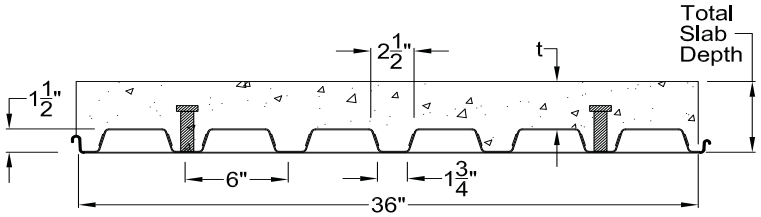
Total Slab Depth	1.5VLP/1.5VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c	ΦV_{nt}	Superimposed Live Load (PSF) - Shear Studs at 12 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span	in^2/ft	lb/ft	6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.00 (t=2.50) 33 PSF	20/20	6'-6	8'-8	8'-8	22.16	3096	400	358	240	168	123	92	71	56	45		
	20/18	6'-7	8'-9	8'-9	22.16	3096	400	358	240	168	123	92	71	56	45		
	18/20	8'-5	10'-7	11'-0	22.16	3096	400	400	271	191	139	104	80	63	51	41	
	18/18	8'-6	11'-4	11'-4	22.16	3096	400	400	271	191	139	104	80	63	51	41	
	18/16	8'-7	11'-5	11'-5	22.16	3096	400	400	271	191	139	104	80	63	51	41	
	16/18	10'-5	12'-5	12'-10	22.16	3096	393	388	302	212	155	116	90	70	56	46	
	16/16	10'-5	12'-11	13'-4	22.16	3096	393	388	302	212	155	116	90	70	56	46	
4.50 (t=3.00) 37 PSF	20/20	6'-3	8'-4	8'-4	26.08	3643	400	400	323	239	174	131	101	79	63	52	42
	20/18	6'-3	8'-5	8'-5	26.08	3643	400	400	323	239	174	131	101	79	63	52	42
	18/20	8'-0	10'-2	10'-6	26.08	3643	400	400	383	269	196	147	114	89	72	58	48
	18/18	8'-1	10'-10	10'-10	26.08	3643	400	400	383	269	196	147	114	89	72	58	48
	18/16	8'-2	10'-11	10'-11	26.08	3643	400	400	383	269	196	147	114	89	72	58	48
	16/18	9'-10	11'-11	12'-4	26.08	3643	397	392	388	299	218	164	126	99	79	65	53
	16/16	9'-11	12'-4	12'-9	26.08	3643	397	392	388	299	218	164	126	99	79	65	53
4.75 (t=3.25) 40 PSF	20/20	6'-1	8'-2	8'-2	28.14	3930	400	400	348	269	204	153	118	93	74	60	50
	20/18	6'-2	8'-3	8'-3	28.14	3930	400	400	348	269	204	153	118	93	74	60	50
	18/20	7'-10	10'-0	10'-4	28.14	3930	400	400	400	315	230	173	133	105	84	68	56
	18/18	7'-11	10'-8	10'-8	28.14	3930	400	400	400	315	230	173	133	105	84	68	56
	18/16	7'-11	10'-8	10'-8	28.14	3930	400	400	400	315	230	173	133	105	84	68	56
	16/18	9'-7	11'-9	12'-1	28.14	3930	399	393	389	346	255	192	148	116	93	76	62
	16/16	9'-8	12'-2	12'-6	28.14	3930	399	393	389	346	255	192	148	116	93	76	62
5.50 (t=3.50) 42 PSF	20/20	5'-11	8'-0	8'-0	30.26	4226	400	400	373	288	227	178	137	108	87	70	58
	20/18	6'-0	8'-1	8'-1	30.26	4226	400	400	373	288	227	178	137	108	87	70	58
	18/20	7'-8	9'-9	10'-1	30.26	4226	400	400	400	366	267	201	155	122	97	79	65
	18/18	7'-9	10'-5	10'-5	30.26	4226	400	400	400	366	267	201	155	122	97	79	65
	18/16	7'-9	10'-6	10'-6	30.26	4226	400	400	400	367	267	201	155	122	97	79	65
	16/18	9'-5	11'-6	11'-11	30.26	4226	400	395	391	372	294	223	171	135	108	88	72
	16/16	9'-6	11'-11	12'-4	30.26	4226	400	395	391	371	294	223	171	135	108	88	72
5.75 (t=4.25) 49 PSF	20/20	5'-7	7'-7	7'-7	36.99	5167	400	400	400	346	273	219	178	146	120	99	81
	20/18	5'-8	7'-8	7'-8	36.99	5167	400	400	400	346	273	219	178	145	120	99	81
	18/20	7'-2	9'-3	9'-7	36.99	5167	400	400	400	400	367	296	233	183	146	119	98
	18/18	7'-3	9'-10	9'-10	36.99	5167	400	400	400	400	366	296	233	183	146	119	98
	18/16	7'-4	9'-11	9'-11	36.99	5167	400	400	400	400	366	296	233	183	146	119	98
	16/18	8'-10	10'-11	11'-3	36.99	5167	400	400	395	388	355	288	237	197	162	132	108
	16/16	8'-11	11'-4	11'-8	36.99	5167	400	400	395	388	354	288	237	197	162	132	108

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.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

1.5 VLP, VLPA

Stud Spacing - 24in C-C

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				A_s in²/ft	ΦV_n lbs/ft	N (Normal Wt. Concrete) studs/ft	N (Lightweight. Concrete) studs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft					
1.5VLP20/20	0.0358	0.0358	3.83	0.355	0.295	0.295	0.380	0.583	3182	0.612	0.656	33
1.5VLP20/18	0.0358	0.0474	4.36	0.383	0.300	0.352	0.414	0.583	3182	0.612	0.656	33
1.5VLP18/20	0.0474	0.0358	4.47	0.483	0.440	0.368	0.449	0.776	4175	0.811	0.868	33
1.5VLP18/18	0.0474	0.0474	5.00	0.526	0.449	0.424	0.533	0.776	4175	0.811	0.868	33
1.5VLP18/16	0.0474	0.0598	5.56	0.564	0.457	0.504	0.557	0.776	4175	0.811	0.868	33
1.5VLP16/18	0.0598	0.0474	5.68	0.669	0.623	0.503	0.633	0.983	5214	1.023	1.095	33
1.5VLP16/16	0.0598	0.0598	6.24	0.722	0.635	0.584	0.686	0.983	5214	1.023	1.095	33

(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

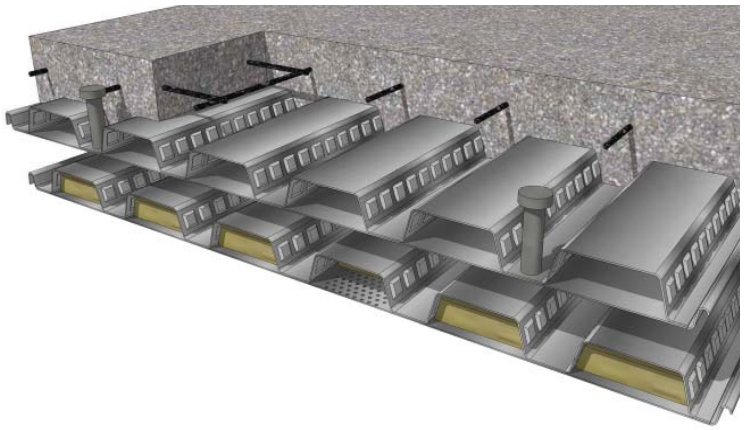
Total Slab Depth	1.5VLP/1.5VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in²/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 24 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.00 (t=2.50) 42 PSF	20/20	6'-0	8'-0	8'-0	22.16	4127	385	336	254	197	156	126	102	83	68	55	44
	20/18	6'-0	8'-1	8'-1	22.16	4127	385	336	254	197	156	125	102	83	67	55	44
	18/20	7'-8	9'-10	10'-2	22.16	4127	386	362	304	241	195	158	122	96	77	62	51
	18/18	7'-9	10'-5	10'-5	22.16	4127	386	362	304	241	195	158	122	96	77	62	51
	18/16	7'-10	10'-6	10'-6	22.16	4127	386	362	304	241	195	158	122	96	77	62	51
	16/18	9'-5	11'-6	11'-11	22.16	4127	382	349	302	245	189	157	132	107	85	69	57
	16/16	9'-6	11'-11	12'-4	22.16	4127	382	349	302	245	189	157	132	107	85	69	57
4.50 (t=3.00) 48 PSF	20/20	5'-8	7'-8	7'-8	26.08	4857	388	377	299	232	184	148	120	98	80	65	53
	20/18	5'-9	7'-9	7'-9	26.08	4857	388	377	299	232	184	148	120	98	80	65	52
	18/20	7'-3	9'-4	9'-8	26.08	4857	400	379	347	284	230	189	157	132	108	88	73
	18/18	7'-4	9'-11	9'-11	26.08	4857	400	379	347	283	229	189	157	132	108	88	73
	18/16	7'-5	10'-0	10'-0	26.08	4857	400	379	347	283	229	188	157	131	108	88	73
	16/18	8'-11	11'-0	11'-4	26.08	4857	400	371	344	270	221	184	154	131	112	96	81
	16/16	9'-0	11'-5	11'-9	26.08	4857	400	371	344	286	221	183	154	130	111	95	81
5.00 (t=3.50) 54 PSF	20/20	5'-5	7'-4	7'-4	30.26	5634	397	383	344	268	212	171	139	113	93	76	61
	20/18	5'-6	7'-5	7'-5	30.26	5634	397	383	344	267	212	170	138	113	92	75	61
	18/20	6'-11	8'-11	9'-3	30.26	5634	400	383	360	326	264	217	181	152	128	109	92
	18/18	7'-0	9'-6	9'-6	30.26	5634	400	396	360	326	264	217	181	152	128	109	92
	18/16	7'-1	9'-7	9'-7	30.26	5634	400	396	360	326	264	217	180	152	128	109	92
	16/18	8'-6	10'-6	10'-11	30.26	5634	400	394	363	310	254	211	177	150	128	110	94
	16/16	8'-7	10'-11	11'-4	30.26	5634	400	394	363	310	253	210	177	150	128	110	94
5.50 (t=4.00) 60 PSF	20/20	5'-2	7'-1	7'-1	34.68	6412	400	390	379	303	240	193	157	128	105	86	69
	20/18	5'-3	7'-1	7'-1	34.68	6412	400	390	379	303	240	193	157	128	105	86	69
	18/20	6'-8	8'-7	8'-11	34.68	6459	400	399	373	354	299	246	205	172	146	124	105
	18/18	6'-8	9'-1	9'-1	34.68	6459	400	399	373	354	299	246	205	172	145	123	105
	18/16	6'-9	9'-2	9'-2	34.68	6459	400	399	373	354	299	246	204	172	145	123	105
	16/18	8'-1	10'-2	10'-6	34.68	6459	400	400	383	338	286	238	200	170	145	124	107
	16/16	8'-2	10'-6	10'-10	34.68	6459	400	400	383	338	286	237	200	169	145	124	107
6.00 (t=4.50) 66 PSF	20/20	5'-0	6'-10	6'-10	39.37	6848	400	397	385	338	268	216	176	144	118	96	78
	20/18	5'-1	6'-10	6'-10	39.37	6848	400	397	385	338	268	216	175	143	118	96	78
	18/20	6'-5	8'-3	8'-7	39.37	7331	400	400	387	366	334	275	229	193	163	138	117
	18/18	6'-5	8'-9	8'-9	39.37	7331	400	400	387	365	334	275	229	192	163	138	117
	18/16	6'-6	8'-10	8'-10	39.37	7331	400	400	387	365	334	274	229	192	163	138	117
	16/18	7'-10	9'-9	10'-1	39.37	7331	400	400	382	353	319	265	223	189	162	139	119
	16/16	7'-10	10'-2	10'-6	39.37	7331	400	400	381	353	319	265	223	189	162	139	119

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.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
3 1/2	0.78	0.211	6x6 - W1.4xW1.4
4	0.94	0.253	6x6 - W1.4xW1.4
4 1/2	1.09	0.294	6x6 - W1.4xW1.4
4 3/4	1.17	0.315	6x6 - W1.4xW1.4
5	1.24	0.336	6x6 - W2.1xW2.1
5	1.40	0.378	6x6 - W2.1xW2.1
5 3/4	1.48	0.398	6x6 - W2.1xW2.1
6	1.55	0.419	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
1.5VLPA	0.09	0.11	0.25	0.14	0.16	0.28	0.15 W/O Insulation
	0.14	0.21	0.61	0.99	0.69	0.27	0.65 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

Total Slab Depth	1.5VLP/1.5VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in^2/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 24 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.00 (t=2.50) 33 PSF	20/20	6'-6	8'-8	8'-8	22.16	3096	372	329	240	168	123	92	71	56	45		
	20/18	6'-7	8'-9	8'-9	22.16	3096	372	328	240	168	123	92	71	56	45		
	18/20	8'-5	10'-7	11'-0	22.16	3096	367	343	271	191	139	104	80	63	51	41	
	18/18	8'-6	11'-4	11'-4	22.16	3096	367	343	271	191	139	104	80	63	51	41	
	18/16	8'-7	11'-5	11'-5	22.16	3096	367	343	271	191	139	104	80	63	51	41	
	16/18	10'-5	12'-5	12'-10	22.16	3096	358	327	286	212	155	116	90	70	56	46	
	16/16	10'-5	12'-11	13'-4	22.16	3096	358	327	286	212	155	116	90	70	56	46	
4.50 (t=3.00) 37 PSF	20/20	6'-3	8'-4	8'-4	26.08	3643	382	363	295	231	174	131	101	79	63	52	42
	20/18	6'-3	8'-5	8'-5	26.08	3643	382	363	295	231	174	131	101	79	63	52	42
	18/20	8'-0	10'-2	10'-6	26.08	3643	387	360	340	269	196	147	114	89	72	58	48
	18/18	8'-1	10'-10	10'-10	26.08	3643	387	360	340	269	196	147	114	89	72	58	48
	18/16	8'-2	10'-11	10'-11	26.08	3643	387	360	340	269	196	147	114	89	72	58	48
	16/18	9'-10	11'-11	12'-4	26.08	3643	383	348	323	272	212	164	126	99	79	65	53
	16/16	9'-11	12'-4	12'-9	26.08	3643	383	348	323	271	212	164	126	99	79	65	53
4.75 (t=3.25) 40 PSF	20/20	6'-1	8'-2	8'-2	28.14	3930	387	367	317	249	199	153	118	93	74	60	50
	20/18	6'-2	8'-3	8'-3	28.14	3930	387	367	317	248	199	153	118	93	74	60	50
	18/20	7'-10	10'-0	10'-4	28.14	3930	397	368	336	295	230	173	133	105	84	68	56
	18/18	7'-11	10'-8	10'-8	28.14	3930	397	368	336	295	230	173	133	105	84	68	56
	18/16	7'-11	10'-8	10'-8	28.14	3930	397	368	336	295	230	173	133	105	84	68	56
	16/18	9'-7	11'-9	12'-1	28.14	3930	396	359	331	291	228	190	148	116	93	76	62
	16/16	9'-8	12'-2	12'-6	28.14	3930	396	359	331	291	228	190	148	116	93	76	62
5.50 (t=3.50) 42 PSF	20/20	5'-11	8'-0	8'-0	30.26	4226	386	371	339	266	213	174	137	108	87	70	58
	20/18	6'-0	8'-1	8'-1	30.26	4226	392	371	339	266	213	173	137	108	87	70	58
	18/20	7'-8	9'-9	10'-1	30.26	4226	400	376	343	316	257	201	155	122	97	79	65
	18/18	7'-9	10'-5	10'-5	30.26	4226	400	376	343	316	257	201	155	122	97	79	65
	18/16	7'-9	10'-6	10'-6	30.26	4226	400	376	343	315	257	201	155	122	97	79	65
	16/18	9'-5	11'-6	11'-11	30.26	4226	400	369	341	311	244	203	171	135	108	88	72
	16/16	9'-6	11'-11	12'-4	30.26	4226	400	369	341	311	243	203	171	135	108	88	72
5.75 (t=4.25) 49 PSF	20/20	5'-7	7'-7	7'-7	36.99	5167	400	383	370	319	255	208	172	143	119	100	84
	20/18	5'-8	7'-8	7'-8	36.99	5167	400	382	369	318	255	208	171	142	119	100	84
	18/20	7'-2	9'-3	9'-7	36.99	5167	400	400	363	343	308	255	214	182	146	119	98
	18/18	7'-3	9'-10	9'-10	36.99	5167	400	400	363	343	308	255	214	182	146	119	98
	18/16	7'-4	9'-11	9'-11	36.99	5167	400	400	363	343	308	255	214	181	146	119	98
	16/18	8'-10	10'-11	11'-3	36.99	5167	400	400	368	326	291	243	206	176	152	131	108
	16/16	8'-11	11'-4	11'-8	36.99	5167	400	400	368	326	291	243	205	175	151	131	108

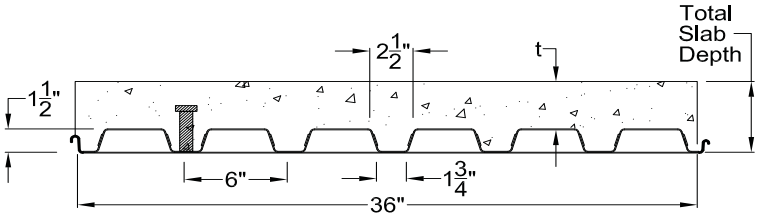
Notes:

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.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

1.5 VLP, VLPA

Stud Spacing - 36in C-C

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				A_s in²/ft	ΦV_n lbs/ft	N (Normal Wt. Concrete) studs/ft	N (Lightweight. Concrete) studs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft					
1.5VLP20/20	0.0358	0.0358	3.83	0.355	0.295	0.295	0.380	0.583	3182	0.612	0.656	33
1.5VLP20/18	0.0358	0.0474	4.36	0.383	0.300	0.352	0.414	0.583	3182	0.612	0.656	33
1.5VLP18/20	0.0474	0.0358	4.47	0.483	0.440	0.368	0.449	0.776	4175	0.811	0.868	33
1.5VLP18/18	0.0474	0.0474	5.00	0.526	0.449	0.424	0.533	0.776	4175	0.811	0.868	33
1.5VLP18/16	0.0474	0.0598	5.56	0.564	0.457	0.504	0.557	0.776	4175	0.811	0.868	33
1.5VLP16/18	0.0598	0.0474	5.68	0.669	0.623	0.503	0.633	0.983	5214	1.023	1.095	33
1.5VLP16/16	0.0598	0.0598	6.24	0.722	0.635	0.584	0.686	0.983	5214	1.023	1.095	33

(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

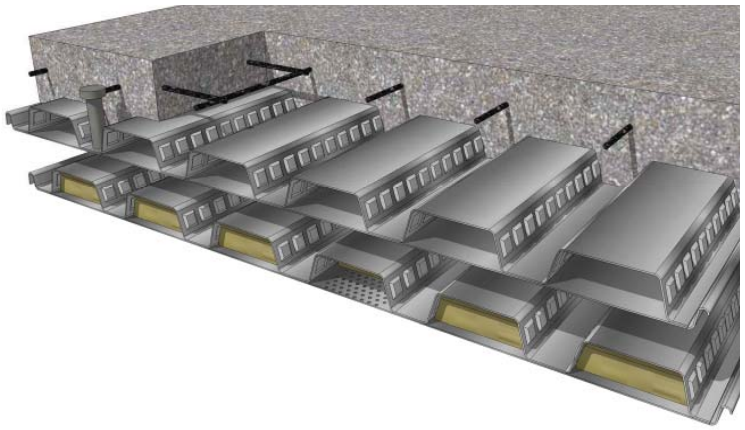
Total Slab Depth	1.5VLP/1.5VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in²/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 24 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.00 (t=2.50) 42 PSF	20/20	6'-0	8'-0	8'-0	22.16	4127	363	303	235	187	152	125	104	85	68	55	45
	20/18	6'-0	8'-1	8'-1	22.16	4127	363	303	235	187	151	125	104	85	68	55	45
	18/20	7'-8	9'-10	10'-2	22.16	4127	379	342	279	225	186	155	122	96	77	62	51
	18/18	7'-9	10'-5	10'-5	22.16	4127	379	342	279	225	185	155	122	96	77	62	51
	18/16	7'-10	10'-6	10'-6	22.16	4127	379	342	278	225	185	155	122	96	77	62	51
	16/18	9'-5	11'-6	11'-11	22.16	4127	376	333	286	237	181	153	130	107	85	69	57
	16/16	9'-6	11'-11	12'-4	22.16	4127	376	333	286	236	181	152	130	107	85	69	57
4.50 (t=3.00) 48 PSF	20/20	5'-8	7'-8	7'-8	26.08	4857	371	342	275	219	177	146	121	101	85	71	60
	20/18	5'-9	7'-9	7'-9	26.08	4857	371	342	274	218	177	146	121	101	85	71	60
	18/20	7'-3	9'-4	9'-8	26.08	4857	400	367	318	263	217	181	153	131	108	88	73
	18/18	7'-4	9'-11	9'-11	26.08	4857	400	367	318	263	216	181	153	130	108	88	73
	18/16	7'-5	10'-0	10'-0	26.08	4857	400	367	318	262	216	180	153	130	108	88	73
	16/18	8'-11	11'-0	11'-4	26.08	4857	400	362	326	254	210	177	151	130	112	97	81
	16/16	9'-0	11'-5	11'-9	26.08	4857	400	362	326	274	210	177	151	129	112	97	81
5.00 (t=3.50) 54 PSF	20/20	5'-5	7'-4	7'-4	30.26	5634	391	358	315	250	203	167	139	116	98	82	68
	20/18	5'-6	7'-5	7'-5	30.26	5634	391	358	315	250	203	167	139	116	98	82	68
	18/20	6'-11	8'-11	9'-3	30.26	5634	400	374	339	301	248	207	175	150	128	111	95
	18/18	7'-0	9'-6	9'-6	30.26	5634	400	393	338	301	248	207	175	149	128	110	95
	18/16	7'-1	9'-7	9'-7	30.26	5634	400	393	338	300	247	207	175	149	128	110	95
	16/18	8'-6	10'-6	10'-11	30.26	5634	400	392	352	290	240	202	172	148	128	111	97
	16/16	8'-7	10'-11	11'-4	30.26	5634	400	392	352	289	240	202	172	148	128	111	97
5.50 (t=4.00) 60 PSF	20/20	5'-2	7'-1	7'-1	34.68	6412	400	375	348	283	229	189	157	131	110	93	77
	20/18	5'-3	7'-1	7'-1	34.68	6412	400	375	348	282	229	188	157	131	110	93	77
	18/20	6'-8	8'-7	8'-11	34.68	6459	400	399	359	329	280	234	198	169	145	125	108
	18/18	6'-8	9'-1	9'-1	34.68	6459	400	398	359	329	279	234	197	169	145	125	108
	18/16	6'-9	9'-2	9'-2	34.68	6459	400	398	359	329	279	233	197	168	144	125	108
	16/18	8'-1	10'-2	10'-6	34.68	6459	400	400	378	318	271	228	194	167	144	125	109
	16/16	8'-2	10'-6	10'-10	34.68	6459	400	400	378	318	270	227	194	166	144	125	109
6.00 (t=4.50) 66 PSF	20/20	5'-0	6'-10	6'-10	39.37	6848	400	392	362	315	255	210	175	146	123	103	86
	20/18	5'-1	6'-10	6'-10	39.37	6848	400	392	362	315	255	210	175	146	123	103	87
	18/20	6'-5	8'-3	8'-7	39.37	7331	400	400	380	347	312	261	220	188	162	139	120
	18/18	6'-5	8'-9	8'-9	39.37	7331	400	400	380	347	311	260	220	188	161	139	120
	18/16	6'-6	8'-10	8'-10	39.37	7331	400	400	380	347	311	260	220	188	161	139	120
	16/18	7'-10	9'-9	10'-1	39.37	7331	400	400	376	338	301	254	216	186	161	140	122
	16/16	7'-10	10'-2	10'-6	39.37	7331	400	400	376	338	301	253	216	185	160	139	121

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.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
3 1/2	0.78	0.211	6x6 - W1.4xW1.4
4	0.94	0.253	6x6 - W1.4xW1.4
4 1/2	1.09	0.294	6x6 - W1.4xW1.4
4 3/4	1.17	0.315	6x6 - W1.4xW1.4
5	1.24	0.336	6x6 - W2.1xW2.1
5	1.40	0.378	6x6 - W2.1xW2.1
5 3/4	1.48	0.398	6x6 - W2.1xW2.1
6	1.55	0.419	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
1.5VLPA	0.09	0.11	0.25	0.14	0.16	0.28	0.15 W/O Insulation
	0.14	0.21	0.61	0.99	0.69	0.27	0.65 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

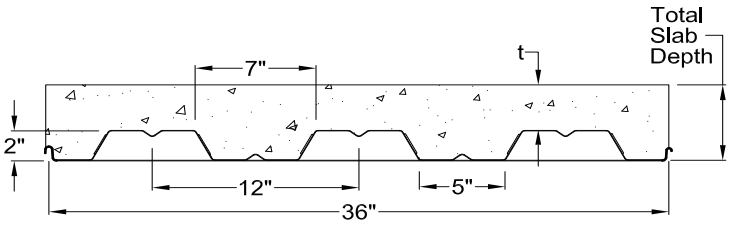
Total Slab Depth	1.5VLP/1.5VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in^2/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 36 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.00 (t=2.50) 33 PSF	20/20	6'-6	8'-8	8'-8	22.16	3096	342	290	226	168	123	92	71	56	45		
	20/18	6'-7	8'-9	8'-9	22.16	3096	342	290	226	168	123	92	71	56	45		
	18/20	8'-5	10'-7	11'-0	22.16	3096	352	318	271	191	139	104	80	63	51	41	
	18/18	8'-6	11'-4	11'-4	22.16	3096	352	318	271	191	139	104	80	63	51	41	
	18/16	8'-7	11'-5	11'-5	22.16	3096	352	318	271	191	139	104	80	63	51	41	
	16/18	10'-5	12'-5	12'-10	22.16	3096	346	307	266	212	155	116	90	70	56	46	
	16/16	10'-5	12'-11	13'-4	22.16	3096	346	307	266	212	155	116	90	70	56	46	
4.50 (t=3.00) 37 PSF	20/20	6'-3	8'-4	8'-4	26.08	3643	363	324	264	212	173	131	101	79	63	52	42
	20/18	6'-3	8'-5	8'-5	26.08	3643	363	323	264	211	173	131	101	79	63	52	42
	18/20	8'-0	10'-2	10'-6	26.08	3643	381	341	312	250	196	147	114	89	72	58	48
	18/18	8'-1	10'-10	10'-10	26.08	3643	381	341	312	249	196	147	114	89	72	58	48
	18/16	8'-2	10'-11	10'-11	26.08	3643	381	341	312	249	196	147	114	89	72	58	48
	16/18	9'-10	11'-11	12'-4	26.08	3643	378	333	301	255	199	164	126	99	79	65	53
	16/16	9'-11	12'-4	12'-9	26.08	3643	378	333	301	255	198	164	126	99	79	65	53
4.75 (t=3.25) 40 PSF	20/20	6'-1	8'-2	8'-2	28.14	3930	373	331	284	227	185	153	118	93	74	60	50
	20/18	6'-2	8'-3	8'-3	28.14	3930	373	331	283	227	185	153	118	93	74	60	50
	18/20	7'-10	10'-0	10'-4	28.14	3930	396	353	308	268	221	173	133	105	84	68	56
	18/18	7'-11	10'-8	10'-8	28.14	3930	396	353	307	267	221	173	133	105	84	68	56
	18/16	7'-11	10'-8	10'-8	28.14	3930	396	353	307	267	221	173	133	105	84	68	56
	16/18	9'-7	11'-9	12'-1	28.14	3930	395	347	312	273	213	180	148	116	93	76	62
	16/16	9'-8	12'-2	12'-6	28.14	3930	395	347	312	273	212	179	148	116	93	76	62
5.50 (t=3.50) 42 PSF	20/20	5'-11	8'-0	8'-0	30.26	4226	371	339	303	242	198	164	137	108	87	70	58
	20/18	6'-0	8'-1	8'-1	30.26	4226	384	339	303	242	198	164	137	108	87	70	58
	18/20	7'-8	9'-9	10'-1	30.26	4226	400	366	317	286	236	199	155	122	97	79	65
	18/18	7'-9	10'-5	10'-5	30.26	4226	400	366	317	285	236	198	155	122	97	79	65
	18/16	7'-9	10'-6	10'-6	30.26	4226	400	366	317	285	236	198	155	122	97	79	65
	16/18	9'-5	11'-6	11'-11	30.26	4226	400	361	324	291	227	192	164	135	108	88	72
	16/16	9'-6	11'-11	12'-4	30.26	4226	400	361	324	291	226	191	164	135	108	88	72
5.75 (t=4.25) 49 PSF	20/20	5'-7	7'-7	7'-7	36.99	5167	400	364	337	289	236	196	165	140	119	102	87
	20/18	5'-8	7'-8	7'-8	36.99	5167	400	364	337	289	236	196	164	139	119	102	87
	18/20	7'-2	9'-3	9'-7	36.99	5167	400	400	346	317	282	237	202	173	146	119	98
	18/18	7'-3	9'-10	9'-10	36.99	5167	400	400	346	317	282	237	201	173	146	119	98
	18/16	7'-4	9'-11	9'-11	36.99	5167	400	400	346	317	281	236	201	173	146	119	98
	16/18	8'-10	10'-11	11'-3	36.99	5167	400	400	360	305	270	228	195	169	147	129	108
	16/16	8'-11	11'-4	11'-8	36.99	5167	400	400	360	305	269	228	195	168	147	128	108

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.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

2 VLP, VLPA

No Studs

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				V_a lbs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft		
2VLP20/20	0.0358	0.0358	3.59	0.683	0.417	0.509	0.420	1622	33
2VLP20/18	0.0358	0.0474	4.10	0.732	0.424	0.591	0.437	1622	33
2VLP18/20	0.0474	0.0358	4.16	0.844	0.585	0.639	0.547	2138	33
2VLP18/18	0.0474	0.0474	4.67	0.907	0.595	0.726	0.568	2138	33
2VLP18/16	0.0474	0.0598	5.22	0.962	0.604	0.931	0.587	2138	33
2VLP16/18	0.0598	0.0474	5.28	1.088	0.742	0.866	0.704	2686	33
2VLP16/16	0.0598	0.0598	5.83	1.156	0.753	0.979	0.728	2686	33

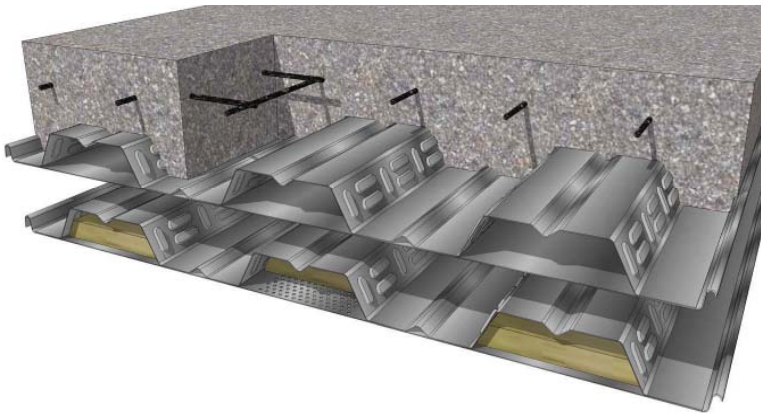
(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

Total Slab Depth	2VLP/2VLPA Hat/Pan Gauge	SDI Max. Unshored Clear Span			Superimposed Live Load (PSF) Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span	6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.50 (t=2.50) 47 PSF	20/20	7'-1	8'-9	9'-4	313	244	168	135	111	92	77	65	55	47	
	20/18	7'-1	8'-8	9'-6	313	244	168	135	111	92	77	65	55	47	
	18/20	8'-8	10'-4	10'-8	376	295	239	170	141	119	101	87	75	65	56
	18/18	8'-9	10'-5	10'-10	376	295	239	170	141	118	101	86	74	65	56
	18/16	8'-9	10'-7	10'-11	376	295	239	170	141	118	100	86	74	64	56
	16/18	9'-11	11'-7	12'-0	400	339	274	227	162	136	116	99	85	74	64
	16/16	10'-0	11'-9	12'-2	400	339	274	227	193	136	115	99	85	74	64
5.00 (t=3.00) 53 PSF	20/20	6'-9	8'-0	8'-11	356	245	192	155	127	105	89	75	64	54	46
	20/18	6'-9	8'-0	9'-1	356	245	192	154	127	105	88	75	63	54	46
	18/20	8'-3	9'-10	10'-2	400	336	273	194	161	136	115	99	86	74	64
	18/18	8'-4	10'-0	10'-4	400	336	273	194	161	135	115	99	85	74	64
	18/16	8'-4	10'-2	10'-6	400	336	273	194	161	135	115	98	85	74	64
	16/18	9'-5	11'-1	11'-6	400	386	312	259	185	156	132	113	98	85	74
	16/16	9'-6	11'-3	11'-8	400	386	312	259	185	155	132	113	97	85	74
5.50 (t=3.50) 59 PSF	20/20	6'-5	7'-5	8'-5	400	275	216	174	143	119	100	84	72	61	52
	20/18	6'-6	7'-4	8'-4	400	275	216	174	142	118	99	84	71	61	51
	18/20	7'-10	9'-6	9'-9	400	377	269	219	181	152	130	111	96	83	73
	18/18	7'-11	9'-7	9'-11	400	377	269	218	181	152	129	111	96	83	72
	18/16	8'-0	9'-9	10'-1	400	377	306	218	181	152	129	111	96	83	72
	16/18	9'-0	10'-8	11'-0	400	400	350	290	208	175	149	127	110	96	83
	16/16	9'-1	10'-10	11'-2	400	400	350	290	208	175	148	127	110	95	83
6.00 (t=4.00) 65 PSF	20/20	6'-2	6'-10	7'-10	400	306	240	193	158	132	111	94	80	68	57
	20/18	6'-3	6'-10	7'-9	400	305	239	193	158	131	110	93	79	68	57
	18/20	7'-7	9'-1	9'-5	400	400	298	243	201	169	144	124	107	93	81
	18/18	7'-7	9'-3	9'-7	400	400	298	242	201	169	144	124	107	93	81
	18/16	7'-8	9'-4	9'-8	400	400	298	242	201	169	144	123	107	92	80
	16/18	8'-8	10'-3	10'-8	400	400	388	280	231	194	165	142	122	106	93
	16/16	8'-8	10'-5	10'-9	400	400	388	280	231	194	165	141	122	106	92
6.50 (t=4.50) 71 PSF	20/20	6'-1	6'-5	7'-3	400	336	264	212	174	145	122	103	88	75	63
	20/18	6'-1	6'-5	7'-3	400	335	263	212	174	145	122	103	87	74	63
	18/20	7'-4	8'-10	9'-1	400	400	328	267	221	186	159	136	118	102	89
	18/18	7'-5	8'-11	9'-3	400	400	328	266	221	186	158	136	118	102	89
	18/16	7'-6	9'-1	9'-4	400	400	327	266	221	186	158	136	117	102	89
	16/18	8'-5	9'-11	10'-3	400	400	400	308	254	214	182	156	135	117	102
	16/16	8'-6	10'-1	10'-5	400	400	400	308	254	213	181	156	134	117	102

Notes:
1. Minimum exterior bearing length required is 2.00 inches. Minimum interior bearing length required is 4.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
4	0.93	0.250	6x6 - W1.4xW1.4
4 1/2	1.08	0.292	6x6 - W1.4xW1.4
5	1.23	0.333	6x6 - W1.4xW1.4
5 1/4	1.31	0.354	6x6 - W1.4xW1.4
5 1/2	1.39	0.375	6x6 - W2.1xW2.1
6	1.54	0.417	6x6 - W2.1xW2.1
6 1/4	1.62	0.438	6x6 - W2.1xW2.1
6 1/2	1.70	0.458	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
2VLPA	0.12	0.24	0.20	0.14	0.07	0.18	0.15 W/O Insulation
	0.31	0.41	0.94	0.88	0.56	0.44	0.70 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

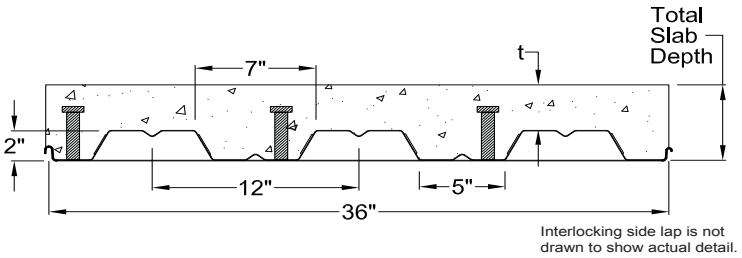
Total Slab Depth	2VLP/2VLPA Hat/Pan Gauge	SDI Max. Unshored Clear Span			Superimposed Live Load (PSF) Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span	6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.50 (t=2.50) 37 PSF	20/20	7'-9	9'-10	10'-2	312	243	174	141	116	97	83	71	61	53	46
	20/18	7'-10	10'-0	10'-4	312	243	173	140	116	97	82	71	61	53	46
	18/20	9'-7	11'-3	11'-7	376	294	238	199	147	124	106	92	80	71	62
	18/18	9'-8	11'-4	11'-9	376	294	238	199	146	124	106	92	80	70	62
	18/16	9'-8	11'-6	11'-11	376	294	238	199	146	124	106	92	80	70	62
	16/18	11'-0	12'-7	13'-0	400	340	273	227	192	166	121	105	91	80	69
	16/16	11'-0	12'-9	13'-2	400	340	273	227	192	166	121	105	91	80	69
5.00 (t=3.00) 42 PSF	20/20	7'-5	9'-6	9'-9	355	276	198	160	133	111	95	81	70	61	53
	20/18	7'-6	9'-6	9'-11	355	276	198	160	132	111	94	81	70	60	52
	18/20	9'-2	10'-9	11'-2	400	335	272	227	167	142	122	105	92	81	71
	18/18	9'-2	10'-11	11'-4	400	335	272	227	167	142	121	105	92	81	71
	18/16	9'-3	11'-1	11'-5	400	335	272	227	167	141	121	105	91	80	71
	16/18	10'-5	12'-2	12'-6	400	387	311	258	219	162	139	120	104	92	81
	16/16	10'-6	12'-3	12'-8	400	387	311	258	219	162	138	120	104	91	81
5.25 (t=3.25) 44 PSF	20/20	7'-3	9'-3	9'-7	377	293	210	170	141	118	100	86	74	64	56
	20/18	7'-4	9'-2	9'-9	377	293	210	170	141	118	100	86	74	64	56
	18/20	8'-11	10'-7	10'-11	400	355	288	213	178	151	129	112	98	86	76
	18/18	9'-0	10'-9	11'-1	400	355	288	241	177	150	129	112	98	86	76
	18/16	9'-1	10'-10	11'-3	400	355	288	241	177	150	129	111	97	85	75
	16/18	10'-3	11'-11	12'-4	400	400	330	274	232	172	147	127	111	97	86
	16/16	10'-3	12'-1	12'-6	400	400	330	274	232	172	147	127	111	97	86
5.50 (t=3.50) 46 PSF	20/20	7'-2	8'-11	9'-5	399	310	223	180	149	125	106	91	79	68	59
	20/18	7'-2	8'-10	9'-7	399	310	222	180	149	125	106	91	79	68	59
	18/20	8'-9	10'-5	10'-9	400	376	305	226	188	159	137	119	104	91	80
	18/18	8'-10	10'-7	10'-11	400	376	305	225	188	159	137	118	103	91	80
	18/16	8'-10	10'-8	11'-0	400	376	305	225	188	159	136	118	103	91	80
	16/18	10'-0	11'-8	12'-1	400	400	350	290	246	182	156	135	118	103	91
	16/16	10'-1	11'-10	12'-3	400	400	350	290	246	182	156	135	117	103	91
6.25 (t=4.25) 53 PSF	20/20	6'-9	8'-1	8'-11	400	328	259	210	174	146	124	107	92	80	69
	20/18	6'-10	8'-0	9'-1	400	328	259	210	174	146	124	106	92	80	69
	18/20	8'-3	9'-11	10'-2	400	400	355	263	219	186	160	138	121	106	94
	18/18	8'-4	10'-0	10'-4	400	400	355	263	219	186	159	138	121	106	94
	18/16	8'-4	10'-2	10'-6	400	400	355	262	219	185	159	138	120	106	93
	16/18	9'-5	11'-2	11'-6	400	400	400	337	252	213	182	157	137	121	107
	16/16	9'-6	11'-3	11'-8	400	400	400	337	251	212	182	157	137	120	106

Notes:
1. Minimum exterior bearing length required is 2.00 inches. Minimum interior bearing length required is 4.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.

2 VLP, VLPA

Stud Spacing - 12in C-C

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				A_s in²/ft	ΦV_n lbs/ft	N (Normal Wt. Concrete) studs/ft	N (Lightweight. Concrete) studs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft					
2VLP20/20	0.0358	0.0358	3.59	0.683	0.417	0.509	0.420	0.562	2465	0.452	0.556	33
2VLP20/18	0.0358	0.0474	4.10	0.732	0.424	0.591	0.437	0.562	2465	0.452	0.556	33
2VLP18/20	0.0474	0.0358	4.16	0.844	0.585	0.639	0.547	0.744	3250	0.598	0.736	33
2VLP18/18	0.0474	0.0474	4.67	0.907	0.595	0.726	0.568	0.744	3250	0.598	0.736	33
2VLP18/16	0.0474	0.0598	5.22	0.962	0.604	0.931	0.587	0.744	3250	0.598	0.736	33
2VLP16/18	0.0598	0.0474	5.28	1.088	0.742	0.866	0.704	0.939	4082	0.755	0.929	33
2VLP16/16	0.0598	0.0598	5.83	1.156	0.753	0.979	0.728	0.939	4082	0.755	0.929	33

(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

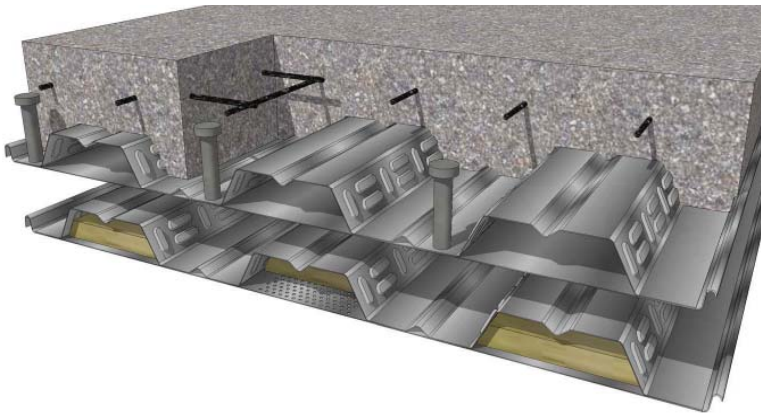
Total Slab Depth	2VLP/2VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in²/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 12 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.50 (t=2.50) 47 PSF	20/20	7'-1	8'-9	9'-4	32.33	5476	400	400	301	231	180	142	114	91	73	59	47
	20/18	7'-1	8'-8	9'-5	32.33	5476	400	400	301	230	180	142	113	91	73	59	46
	18/20	8'-8	10'-3	10'-7	32.33	6021	400	400	397	307	241	193	156	128	105	86	71
	18/18	8'-9	10'-5	10'-9	32.33	6021	400	400	397	306	241	193	156	127	104	86	71
	18/16	8'-9	10'-7	10'-11	32.33	6021	400	400	397	306	241	192	156	127	104	86	70
	16/18	9'-11	11'-7	12'-0	32.33	6021	400	400	397	306	241	193	156	127	104	86	71
	16/16	10'-0	11'-9	12'-1	32.33	6021	400	400	397	306	241	192	156	127	104	86	70
5.00 (t=3.00) 53 PSF	20/20	6'-9	8'-0	8'-11	37.14	5923	400	400	348	267	208	165	132	106	85	69	55
	20/18	6'-9	8'-0	9'-1	37.14	5923	400	400	348	266	208	165	132	106	85	68	54
	18/20	8'-3	9'-10	10'-2	37.14	6708	400	400	400	356	280	225	182	149	122	101	83
	18/18	8'-4	10'-0	10'-4	37.14	6708	400	400	400	355	280	224	182	148	122	100	83
	18/16	8'-4	10'-1	10'-5	37.14	6708	400	400	400	355	280	224	181	148	122	100	82
	16/18	9'-5	11'-1	11'-6	37.14	6916	400	400	400	355	280	224	182	148	122	100	83
	16/16	9'-6	11'-3	11'-7	37.14	6916	400	400	400	355	280	224	181	148	122	100	82
5.50 (t=3.50) 59 PSF	20/20	6'-5	7'-5	8'-5	42.18	6393	400	400	395	303	236	187	150	121	97	78	63
	20/18	6'-6	7'-4	8'-4	42.18	6393	400	400	394	302	236	187	150	121	97	78	62
	18/20	7'-10	9'-5	9'-9	42.18	7178	400	400	400	400	319	256	208	170	140	115	95
	18/18	7'-11	9'-7	9'-11	42.18	7178	400	400	400	400	319	255	207	170	139	115	95
	18/16	8'-0	9'-8	10'-0	42.18	7178	400	400	400	400	318	255	207	169	139	115	95
	16/18	9'-0	10'-8	11'-0	42.18	7856	400	400	400	400	319	256	207	170	139	115	95
	16/16	9'-1	10'-10	11'-2	42.18	7856	400	400	400	400	319	255	207	169	139	115	95
6.00 (t=4.00) 65 PSF	20/20	6'-2	6'-10	7'-10	47.48	6886	400	400	400	338	265	210	168	136	110	88	71
	20/18	6'-3	6'-10	7'-9	47.48	6886	400	400	400	338	264	210	168	135	109	88	70
	18/20	7'-7	9'-1	9'-5	47.48	7671	400	400	400	400	358	287	233	191	157	130	107
	18/18	7'-7	9'-3	9'-6	47.48	7671	400	400	400	400	358	287	233	191	157	130	107
	18/16	7'-8	9'-4	9'-8	47.48	7671	400	400	400	400	357	286	232	190	157	129	107
	16/18	8'-8	10'-3	10'-7	47.48	8503	400	400	400	400	358	287	233	191	157	130	107
	16/16	8'-8	10'-5	10'-9	47.48	8503	400	400	400	400	357	286	232	190	157	129	107
6.50 (t=4.50) 71 PSF	20/20	6'-1	6'-5	7'-3	53.01	7401	400	400	400	374	293	233	186	150	122	98	78
	20/18	6'-1	6'-5	7'-3	53.01	7401	400	400	400	374	293	232	186	150	121	98	78
	18/20	7'-4	8'-9	9'-1	53.01	8186	400	400	400	400	397	319	259	212	175	145	120
	18/18	7'-5	8'-11	9'-2	53.01	8186	400	400	400	400	397	318	258	212	174	144	119
	18/16	7'-6	9'-0	9'-4	53.01	8186	400	400	400	400	396	318	258	211	174	144	119
	16/18	8'-5	9'-11	10'-3	53.01	9018	400	400	400	400	397	318	258	212	175	144	119
	16/16	8'-6	10'-1	10'-5	53.01	9018	400	400	400	400	396	318	258	211	174	144	119

Notes:

1. Minimum exterior bearing length required is 2.00 inches. Minimum interior bearing length required is 4.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
4	0.93	0.250	6x6 - W1.4xW1.4
4 1/2	1.08	0.292	6x6 - W1.4xW1.4
5	1.23	0.333	6x6 - W1.4xW1.4
5 1/4	1.31	0.354	6x6 - W1.4xW1.4
5 1/2	1.39	0.375	6x6 - W2.1xW2.1
6	1.54	0.417	6x6 - W2.1xW2.1
6 1/4	1.62	0.438	6x6 - W2.1xW2.1
6 1/2	1.70	0.458	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
2VLPA	0.12	0.24	0.20	0.14	0.07	0.18	0.15 W/O Insulation
	0.31	0.41	0.94	0.88	0.56	0.44	0.70 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

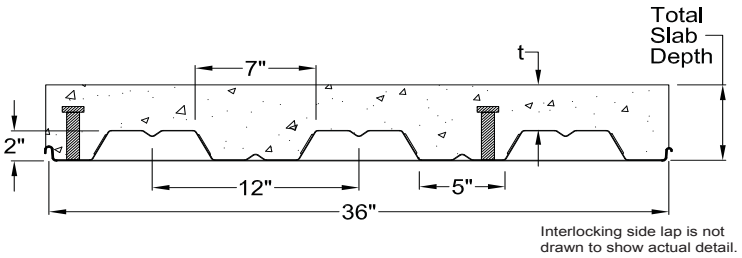
Total Slab Depth	2VLP/2VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in^2/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 12 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.50 (t=2.50) 37 PSF	20/20	7'-9	9'-10	10'-2	32.33	4516	400	400	309	238	188	150	122	100	82	66	55
	20/18	7'-10	10'-0	10'-4	32.33	4516	400	400	309	238	188	150	122	99	82	66	55
	18/20	9'-7	11'-2	11'-7	32.33	4516	400	400	400	314	249	190	146	115	92	75	62
	18/18	9'-8	11'-4	11'-9	32.33	4516	400	400	400	314	249	190	146	115	92	75	62
	18/16	9'-8	11'-6	11'-10	32.33	4516	400	400	400	314	249	190	146	115	92	75	62
	16/18	11'-0	12'-7	13'-0	32.33	4516	400	400	400	314	249	201	162	128	102	83	69
	16/16	11'-0	12'-9	13'-2	32.33	4516	400	400	400	314	249	200	162	128	102	83	69
5.00 (t=3.00) 42 PSF	20/20	7'-5	9'-5	9'-9	37.14	5059	400	400	357	276	217	174	141	116	95	78	65
	20/18	7'-6	9'-6	9'-11	37.14	5059	400	400	357	275	217	174	141	115	95	78	64
	18/20	9'-2	10'-9	11'-1	37.14	5187	400	400	400	365	289	234	191	154	123	100	82
	18/18	9'-2	10'-11	11'-3	37.14	5187	400	400	400	364	289	233	191	154	123	100	82
	18/16	9'-3	11'-0	11'-5	37.14	5187	400	400	400	364	289	233	190	154	123	100	82
	16/18	10'-5	12'-1	12'-6	37.14	5187	400	400	400	364	289	233	191	158	131	110	91
	16/16	10'-6	12'-3	12'-8	37.14	5187	400	400	400	364	289	233	190	157	131	110	91
5.25 (t=3.25) 44 PSF	20/20	7'-3	9'-3	9'-7	39.63	5233	400	400	381	294	232	186	151	123	102	84	69
	20/18	7'-4	9'-2	9'-9	39.63	5233	400	400	380	294	232	186	150	123	101	84	69
	18/20	8'-11	10'-7	10'-11	39.63	5535	400	400	400	390	309	250	205	169	141	114	94
	18/18	9'-0	10'-9	11'-1	39.63	5535	400	400	400	389	309	249	204	169	141	114	94
	18/16	9'-1	10'-10	11'-2	39.63	5535	400	400	400	389	309	249	204	168	140	114	94
	16/18	10'-3	11'-11	12'-3	39.63	5535	400	400	400	389	309	249	204	169	141	118	99
	16/16	10'-3	12'-0	12'-5	39.63	5535	400	400	400	389	309	249	204	168	140	117	99
5.50 (t=3.50) 46 PSF	20/20	7'-2	8'-11	9'-5	42.18	5411	400	400	400	313	247	198	160	131	108	89	74
	20/18	7'-2	8'-10	9'-6	42.18	5411	400	400	400	312	246	197	160	131	108	89	74
	18/20	8'-9	10'-4	10'-9	42.18	5892	400	400	400	400	329	266	218	180	150	126	106
	18/18	8'-10	10'-6	10'-10	42.18	5892	400	400	400	400	329	266	218	180	150	126	106
	18/16	8'-10	10'-8	11'-0	42.18	5892	400	400	400	400	329	265	217	180	150	125	106
	16/18	10'-0	11'-8	12'-1	42.18	5892	400	400	400	400	329	266	217	180	150	126	106
	16/16	10'-1	11'-10	12'-3	42.18	5892	400	400	400	400	329	265	217	179	150	125	105
6.25 (t=4.25) 53 PSF	20/20	6'-9	8'-1	8'-11	50.21	5972	400	400	400	368	291	233	189	155	128	106	88
	20/18	6'-10	8'-0	9'-1	50.21	5972	400	400	400	368	290	233	189	155	128	106	87
	18/20	8'-3	9'-10	10'-2	50.21	6757	400	400	400	400	389	315	258	214	178	150	126
	18/18	8'-4	10'-0	10'-4	50.21	6757	400	400	400	400	389	314	258	213	178	149	126
	18/16	8'-4	10'-1	10'-6	50.21	6757	400	400	400	400	389	314	257	213	178	149	126
	16/18	9'-5	11'-1	11'-6	50.21	7013	400	400	400	400	389	314	258	213	178	149	126
	16/16	9'-6	11'-3	11'-8	50.21	7013	400	400	400	400	389	314	257	213	178	149	126

Notes:
1. Minimum exterior bearing length required is 2.00 inches. Minimum interior bearing length required is 4.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

2 VLP, VLPA

Stud Spacing - 24in C-C

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				A_s in²/ft	ΦV_n lbs/ft	N (Normal Wt. Concrete) studs/ft	N (Lightweight. Concrete) studs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft					
2VLP20/20	0.0358	0.0358	3.59	0.683	0.417	0.509	0.420	0.562	2465	0.452	0.556	33
2VLP20/18	0.0358	0.0474	4.10	0.732	0.424	0.591	0.437	0.562	2465	0.452	0.556	33
2VLP18/20	0.0474	0.0358	4.16	0.844	0.585	0.639	0.547	0.744	3250	0.598	0.736	33
2VLP18/18	0.0474	0.0474	4.67	0.907	0.595	0.726	0.568	0.744	3250	0.598	0.736	33
2VLP18/16	0.0474	0.0598	5.22	0.962	0.604	0.931	0.587	0.744	3250	0.598	0.736	33
2VLP16/18	0.0598	0.0474	5.28	1.088	0.742	0.866	0.704	0.939	4082	0.755	0.929	33
2VLP16/16	0.0598	0.0598	5.83	1.156	0.753	0.979	0.728	0.939	4082	0.755	0.929	33

(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

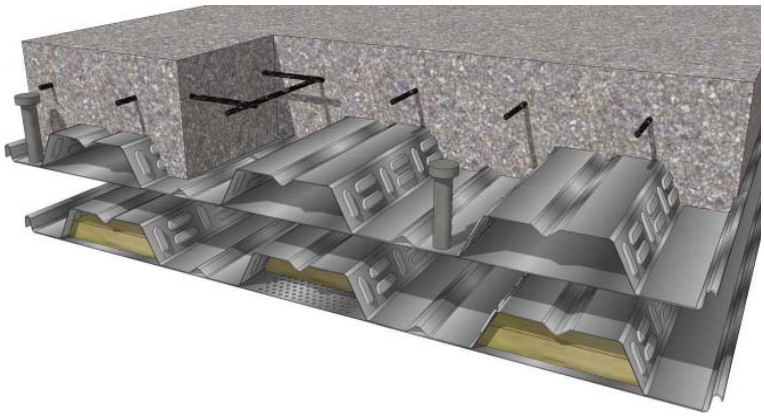
Total Slab Depth	2VLP/2VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in²/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 24 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.50 (t=2.50) 47 PSF	20/20	7'-1	8'-9	9'-4	32.33	5476	400	400	301	231	180	142	114	91	73	59	47
	20/18	7'-1	8'-8	9'-5	32.33	5476	400	400	301	230	180	142	113	91	73	59	46
	18/20	8'-8	10'-3	10'-7	32.33	6021	396	383	371	284	225	181	147	121	100	83	68
	18/18	8'-9	10'-5	10'-9	32.33	6021	396	383	371	284	225	181	147	121	100	82	68
	18/16	8'-9	10'-7	10'-11	32.33	6021	396	383	371	283	224	180	147	120	99	82	68
	16/18	9'-11	11'-7	12'-0	32.33	6021	400	379	356	280	215	174	142	118	98	82	68
	16/16	10'-0	11'-9	12'-1	32.33	6021	400	379	355	279	225	173	142	117	98	82	68
5.00 (t=3.00) 53 PSF	20/20	6'-9	8'-0	8'-11	37.14	5923	400	400	348	267	208	165	132	106	85	69	55
	20/18	6'-9	8'-0	9'-1	37.14	5923	400	400	348	266	208	165	132	106	85	68	54
	18/20	8'-3	9'-10	10'-2	37.14	6708	400	389	379	329	261	210	171	141	116	96	80
	18/18	8'-4	10'-0	10'-4	37.14	6708	400	389	379	329	260	210	171	140	116	96	80
	18/16	8'-4	10'-1	10'-5	37.14	6708	400	389	379	328	260	209	170	140	116	96	79
	16/18	9'-5	11'-1	11'-6	37.14	6916	400	395	370	323	248	201	165	137	114	95	80
	16/16	9'-6	11'-3	11'-7	37.14	6916	400	395	370	322	248	201	165	136	113	95	79
5.50 (t=3.50) 59 PSF	20/20	6'-5	7'-5	8'-5	42.18	6393	400	400	395	303	236	187	150	121	97	78	63
	20/18	6'-6	7'-4	8'-4	42.18	6393	400	400	394	302	236	187	150	121	97	78	62
	18/20	7'-10	9'-5	9'-9	42.18	7178	400	396	378	370	296	239	195	160	133	110	91
	18/18	7'-11	9'-7	9'-11	42.18	7178	400	396	378	370	296	238	194	160	132	110	91
	18/16	8'-0	9'-8	10'-0	42.18	7178	400	396	385	370	296	238	194	160	132	110	91
	16/18	9'-0	10'-8	11'-0	42.18	7856	400	400	383	363	282	228	187	155	130	109	91
	16/16	9'-1	10'-10	11'-2	42.18	7856	400	400	383	363	281	228	187	155	129	108	91
6.00 (t=4.00) 65 PSF	20/20	6'-2	6'-10	7'-10	47.48	6886	400	400	400	338	265	210	168	136	110	88	71
	20/18	6'-3	6'-10	7'-9	47.48	6886	400	400	400	338	264	210	168	135	109	88	70
	18/20	7'-7	9'-1	9'-5	47.48	7671	400	400	383	374	332	268	218	180	149	124	103
	18/18	7'-7	9'-3	9'-6	47.48	7671	400	400	383	374	332	267	218	180	149	124	103
	18/16	7'-8	9'-4	9'-8	47.48	7671	400	400	383	374	332	267	218	179	148	123	102
	16/18	8'-8	10'-3	10'-7	47.48	8503	400	400	396	360	315	256	210	174	145	122	102
	16/16	8'-8	10'-5	10'-9	47.48	8503	400	400	396	359	315	255	210	174	145	122	102
6.50 (t=4.50) 71 PSF	20/20	6'-1	6'-5	7'-3	53.01	7401	400	400	400	374	293	233	186	150	122	98	78
	20/18	6'-1	6'-5	7'-3	53.01	7401	400	400	400	374	293	232	186	150	121	98	78
	18/20	7'-4	8'-9	9'-1	53.01	8186	400	400	388	378	368	297	242	200	165	138	114
	18/18	7'-5	8'-11	9'-2	53.01	8186	400	400	388	378	368	296	242	199	165	137	114
	18/16	7'-6	9'-0	9'-4	53.01	8186	400	400	388	378	367	296	242	199	165	137	114
	16/18	8'-5	9'-11	10'-3	53.01	9018	400	400	400	369	349	283	232	193	161	135	114
	16/16	8'-6	10'-1	10'-5	53.01	9018	400	400	400	369	348	283	232	193	161	135	113

Notes:

1. Minimum exterior bearing length required is 2.00 inches. Minimum interior bearing length required is 4.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
4	0.93	0.250	6x6 - W1.4xW1.4
4 1/2	1.08	0.292	6x6 - W1.4xW1.4
5	1.23	0.333	6x6 - W1.4xW1.4
5 1/4	1.31	0.354	6x6 - W1.4xW1.4
5 1/2	1.39	0.375	6x6 - W2.1xW2.1
6	1.54	0.417	6x6 - W2.1xW2.1
6 1/4	1.62	0.438	6x6 - W2.1xW2.1
6 1/2	1.70	0.458	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
2VLPA	0.12	0.24	0.20	0.14	0.07	0.18	0.15 W/O Insulation
	0.31	0.41	0.94	0.88	0.56	0.44	0.70 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

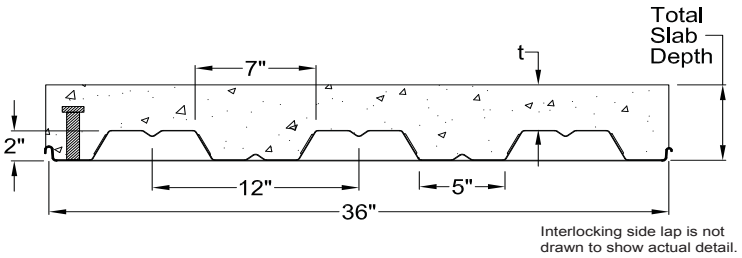
Total Slab Depth	2VLP/2VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in^2/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 24 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.50 (t=2.50) 37 PSF	20/20	7'-9	9'-10	10'-2	32.33	4516	391	384	295	229	181	145	118	97	80	66	55
	20/18	7'-10	10'-0	10'-4	32.33	4516	391	384	295	228	180	145	118	96	79	66	54
	18/20	9'-7	11'-2	11'-7	32.33	4516	392	366	348	277	216	176	146	115	92	75	62
	18/18	9'-8	11'-4	11'-9	32.33	4516	392	366	348	277	216	176	146	115	92	75	62
	18/16	9'-8	11'-6	11'-10	32.33	4516	392	366	348	277	216	176	145	115	92	75	62
	16/18	11'-0	12'-7	13'-0	32.33	4516	400	372	342	274	223	185	144	121	102	83	69
	16/16	11'-0	12'-9	13'-2	32.33	4516	400	372	342	274	223	184	144	121	102	83	69
5.00 (t=3.00) 42 PSF	20/20	7'-5	9'-5	9'-9	37.14	5059	395	388	341	264	209	168	136	112	93	77	63
	20/18	7'-6	9'-6	9'-11	37.14	5059	395	388	341	264	208	167	136	112	92	76	63
	18/20	9'-2	10'-9	11'-1	37.14	5187	400	379	359	320	250	204	169	141	119	100	82
	18/18	9'-2	10'-11	11'-3	37.14	5187	400	379	359	320	250	204	169	141	119	100	82
	18/16	9'-3	11'-0	11'-5	37.14	5187	400	379	359	320	249	203	168	140	118	100	82
	16/18	10'-5	12'-1	12'-6	37.14	5187	400	394	359	315	257	200	167	140	119	102	87
	16/16	10'-6	12'-3	12'-8	37.14	5187	400	394	359	315	256	200	166	140	119	101	87
5.25 (t=3.25) 44 PSF	20/20	7'-3	9'-3	9'-7	39.63	5233	398	389	364	282	223	179	146	120	99	82	68
	20/18	7'-4	9'-2	9'-9	39.63	5233	398	389	363	281	222	179	145	119	99	82	68
	18/20	8'-11	10'-7	10'-11	39.63	5535	400	386	364	333	267	218	180	151	127	108	92
	18/18	9'-0	10'-9	11'-1	39.63	5535	400	386	364	342	267	218	180	151	127	108	92
	18/16	9'-1	10'-10	11'-2	39.63	5535	400	386	364	341	266	217	180	150	127	107	91
	16/18	10'-3	11'-11	12'-3	39.63	5535	400	400	368	336	274	214	178	150	127	108	93
	16/16	10'-3	12'-0	12'-5	39.63	5535	400	400	368	336	273	213	178	149	127	108	93
5.50 (t=3.50) 46 PSF	20/20	7'-2	8'-11	9'-5	42.18	5411	400	391	382	299	237	190	155	127	105	87	72
	20/18	7'-2	8'-10	9'-6	42.18	5411	400	391	382	299	236	190	155	127	105	87	72
	18/20	8'-9	10'-4	10'-9	42.18	5892	400	392	369	344	284	232	192	160	135	115	98
	18/18	8'-10	10'-6	10'-10	42.18	5892	400	392	369	344	284	232	192	160	135	115	98
	18/16	8'-10	10'-8	11'-0	42.18	5892	400	392	369	344	283	231	191	160	135	114	97
	16/18	10'-0	11'-8	12'-1	42.18	5892	400	400	377	349	291	227	189	159	135	115	99
	16/16	10'-1	11'-10	12'-3	42.18	5892	400	400	377	349	290	227	189	159	135	115	99
6.25 (t=4.25) 53 PSF	20/20	6'-9	8'-1	8'-11	50.21	5972	400	393	386	352	279	224	183	150	124	103	86
	20/18	6'-10	8'-0	9'-1	50.21	5972	400	393	386	352	279	224	183	150	124	103	86
	18/20	8'-3	9'-10	10'-2	50.21	6757	400	400	385	356	335	273	226	189	160	136	116
	18/18	8'-4	10'-0	10'-4	50.21	6757	400	400	385	356	334	273	226	189	160	136	116
	18/16	8'-4	10'-1	10'-6	50.21	6757	400	400	385	356	334	273	226	189	159	135	115
	16/18	9'-5	11'-1	11'-6	50.21	7013	400	400	400	371	326	267	223	187	159	136	117
	16/16	9'-6	11'-3	11'-8	50.21	7013	400	400	400	371	325	267	222	187	159	136	117

Notes:
1. Minimum exterior bearing length required is 2.00 inches. Minimum interior bearing length required is 4.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

2 VLP, VLPA

Stud Spacing - 36in C-C

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				A_s in²/ft	ΦV_n lbs/ft	N (Normal Wt. Concrete) studs/ft	N (Lightweight. Concrete) studs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft					
2VLP20/20	0.0358	0.0358	3.59	0.683	0.417	0.509	0.420	0.562	2465	0.452	0.556	33
2VLP20/18	0.0358	0.0474	4.10	0.732	0.424	0.591	0.437	0.562	2465	0.452	0.556	33
2VLP18/20	0.0474	0.0358	4.16	0.844	0.585	0.639	0.547	0.744	3250	0.598	0.736	33
2VLP18/18	0.0474	0.0474	4.67	0.907	0.595	0.726	0.568	0.744	3250	0.598	0.736	33
2VLP18/16	0.0474	0.0598	5.22	0.962	0.604	0.931	0.587	0.744	3250	0.598	0.736	33
2VLP16/18	0.0598	0.0474	5.28	1.088	0.742	0.866	0.704	0.939	4082	0.755	0.929	33
2VLP16/16	0.0598	0.0598	5.83	1.156	0.753	0.979	0.728	0.939	4082	0.755	0.929	33

(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

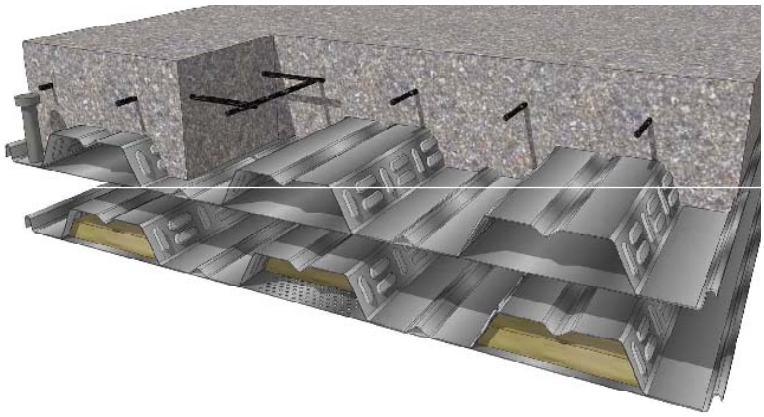
Total Slab Depth	2VLP/2VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in²/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 36 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.50 (t=2.50) 47 PSF	20/20	7'-1	8'-9	9'-4	32.33	5476	377	359	266	206	162	129	104	85	69	56	45
	20/18	7'-1	8'-8	9'-5	32.33	5476	377	359	266	205	162	129	104	84	68	55	45
	18/20	8'-8	10'-3	10'-7	32.33	6021	389	353	327	246	197	160	132	109	91	77	64
	18/18	8'-9	10'-5	10'-9	32.33	6021	389	353	327	246	197	160	132	109	91	76	64
	18/16	8'-9	10'-7	10'-11	32.33	6021	389	353	327	245	196	159	131	109	91	76	64
	16/18	9'-11	11'-7	12'-0	32.33	6021	400	366	328	262	197	161	133	112	94	79	67
	16/16	10'-0	11'-9	12'-1	32.33	6021	400	366	328	262	214	161	133	111	93	79	67
5.00 (t=3.00) 53 PSF	20/20	6'-9	8'-0	8'-11	37.14	5923	389	359	307	237	187	149	121	98	80	65	52
	20/18	6'-9	8'-0	9'-1	37.14	5923	389	359	307	237	187	149	120	98	79	65	52
	18/20	8'-3	9'-10	10'-2	37.14	6708	400	371	344	284	228	185	152	127	106	89	75
	18/18	8'-4	10'-0	10'-4	37.14	6708	400	371	344	284	227	185	152	126	106	89	75
	18/16	8'-4	10'-1	10'-5	37.14	6708	400	371	344	284	227	184	152	126	105	88	74
	16/18	9'-5	11'-1	11'-6	37.14	6916	400	392	351	301	227	186	154	129	108	92	78
	16/16	9'-6	11'-3	11'-7	37.14	6916	400	392	351	301	227	185	154	128	108	91	78
5.50 (t=3.50) 59 PSF	20/20	6'-5	7'-5	8'-5	42.18	6393	400	367	348	269	212	169	137	111	91	74	60
	20/18	6'-6	7'-4	8'-4	42.18	6393	400	367	347	268	211	169	137	111	90	74	59
	18/20	7'-10	9'-5	9'-9	42.18	7178	400	390	342	320	258	210	173	144	120	101	85
	18/18	7'-11	9'-7	9'-11	42.18	7178	400	390	342	319	258	210	173	144	120	101	85
	18/16	8'-0	9'-8	10'-0	42.18	7178	400	390	358	319	257	209	172	143	120	101	85
	16/18	9'-0	10'-8	11'-0	42.18	7856	400	400	372	339	257	211	174	146	123	104	88
	16/16	9'-1	10'-10	11'-2	42.18	7856	400	400	372	339	257	210	174	146	123	104	88
6.00 (t=4.00) 65 PSF	20/20	6'-2	6'-10	7'-10	47.48	6886	400	375	358	300	237	189	153	125	102	83	67
	20/18	6'-3	6'-10	7'-9	47.48	6886	400	375	358	300	236	189	153	124	101	83	67
	18/20	7'-7	9'-1	9'-5	47.48	7671	400	400	355	330	289	235	194	161	135	114	96
	18/18	7'-7	9'-3	9'-6	47.48	7671	400	400	355	330	288	235	193	161	135	113	95
	18/16	7'-8	9'-4	9'-8	47.48	7671	400	400	355	330	288	234	193	161	134	113	95
	16/18	8'-8	10'-3	10'-7	47.48	8503	400	400	393	333	287	235	195	163	138	117	99
	16/16	8'-8	10'-5	10'-9	47.48	8503	400	400	393	333	287	235	195	163	137	116	99
6.50 (t=4.50) 71 PSF	20/20	6'-1	6'-5	7'-3	53.01	7401	400	383	364	332	262	210	169	138	113	92	74
	20/18	6'-1	6'-5	7'-3	53.01	7401	400	383	364	331	261	209	169	138	112	92	74
	18/20	7'-4	8'-9	9'-1	53.01	8186	400	400	368	341	319	260	214	178	150	126	106
	18/18	7'-5	8'-11	9'-2	53.01	8186	400	400	368	341	319	260	214	178	149	126	106
	18/16	7'-6	9'-0	9'-4	53.01	8186	400	400	368	341	318	259	214	178	149	125	106
	16/18	8'-5	9'-11	10'-3	53.01	9018	400	400	400	349	317	260	216	181	152	129	110
	16/16	8'-6	10'-1	10'-5	53.01	9018	400	400	400	348	317	259	215	180	152	129	110

Notes:

1. Minimum exterior bearing length required is 2.00 inches. Minimum interior bearing length required is 4.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
4	0.93	0.250	6x6 - W1.4xW1.4
4 1/2	1.08	0.292	6x6 - W1.4xW1.4
5	1.23	0.333	6x6 - W1.4xW1.4
5 1/4	1.31	0.354	6x6 - W1.4xW1.4
5 1/2	1.39	0.375	6x6 - W2.1xW2.1
6	1.54	0.417	6x6 - W2.1xW2.1
6 1/4	1.62	0.438	6x6 - W2.1xW2.1
6 1/2	1.70	0.458	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
2VLPA	0.12	0.24	0.20	0.14	0.07	0.18	0.15 W/O Insulation
	0.31	0.41	0.94	0.88	0.56	0.44	0.70 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

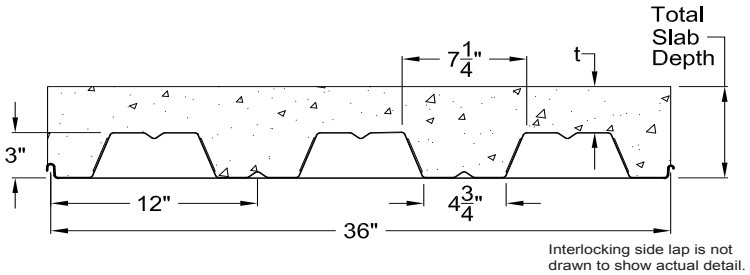
Total Slab Depth	2VLP/2VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in^2/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 36 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
4.50 (t=2.50) 37 PSF	20/20	7'-9	9'-10	10'-2	32.33	4516	365	337	255	199	159	129	106	88	74	62	52
	20/18	7'-10	10'-0	10'-4	32.33	4516	365	337	254	199	159	129	106	88	73	61	51
	18/20	9'-7	11'-2	11'-7	32.33	4516	387	342	312	251	193	159	133	112	92	75	62
	18/18	9'-8	11'-4	11'-9	32.33	4516	387	342	312	251	193	159	132	112	92	75	62
	18/16	9'-8	11'-6	11'-10	32.33	4516	387	342	312	251	192	158	132	111	92	75	62
	16/18	11'-0	12'-7	13'-0	32.33	4516	400	361	319	258	213	178	137	116	99	83	69
	16/16	11'-0	12'-9	13'-2	32.33	4516	400	361	319	258	212	178	136	115	99	83	69
5.00 (t=3.00) 42 PSF	20/20	7'-5	9'-5	9'-9	37.14	5059	382	351	293	229	183	149	123	102	85	71	60
	20/18	7'-6	9'-6	9'-11	37.14	5059	382	351	293	229	183	149	122	101	85	71	60
	18/20	9'-2	10'-9	11'-1	37.14	5187	400	364	330	289	223	183	153	129	110	94	81
	18/18	9'-2	10'-11	11'-3	37.14	5187	400	364	330	289	222	183	153	129	110	94	81
	18/16	9'-3	11'-0	11'-5	37.14	5187	400	364	330	289	222	183	152	129	109	94	80
	16/18	10'-5	12'-1	12'-6	37.14	5187	400	392	343	296	244	188	157	133	114	98	85
	16/16	10'-6	12'-3	12'-8	37.14	5187	400	392	343	296	244	187	157	133	114	98	85
5.25 (t=3.25) 44 PSF	20/20	7'-3	9'-3	9'-7	39.63	5233	391	357	313	245	195	159	131	109	91	76	64
	20/18	7'-4	9'-2	9'-9	39.63	5233	391	357	312	244	195	158	130	108	90	76	64
	18/20	8'-11	10'-7	10'-11	39.63	5535	400	376	339	293	237	196	163	138	117	101	87
	18/18	9'-0	10'-9	11'-1	39.63	5535	400	376	339	308	237	195	163	138	117	100	86
	18/16	9'-1	10'-10	11'-2	39.63	5535	400	376	339	308	237	195	163	137	117	100	86
	16/18	10'-3	11'-11	12'-3	39.63	5535	400	400	355	315	260	200	168	142	122	105	91
	16/16	10'-3	12'-0	12'-5	39.63	5535	400	400	355	315	260	200	167	142	121	104	90
5.50 (t=3.50) 46 PSF	20/20	7'-2	8'-11	9'-5	42.18	5411	399	364	329	260	208	169	139	115	96	81	68
	20/18	7'-2	8'-10	9'-6	42.18	5411	399	364	329	259	207	168	139	115	96	81	68
	18/20	8'-9	10'-4	10'-9	42.18	5892	400	387	348	305	252	208	174	147	125	107	92
	18/18	8'-10	10'-6	10'-10	42.18	5892	400	387	348	304	252	207	173	146	124	107	92
	18/16	8'-10	10'-8	11'-0	42.18	5892	400	387	348	304	251	207	173	146	124	106	92
	16/18	10'-0	11'-8	12'-1	42.18	5892	400	400	368	329	276	212	178	151	129	111	96
	16/16	10'-1	11'-10	12'-3	42.18	5892	400	400	368	329	275	212	178	151	129	111	96
6.25 (t=4.25) 53 PSF	20/20	6'-9	8'-1	8'-11	50.21	5972	400	371	344	305	244	198	163	136	114	95	80
	20/18	6'-10	8'-0	9'-1	50.21	5972	400	371	344	305	244	198	163	135	113	95	80
	18/20	8'-3	9'-10	10'-2	50.21	6757	400	400	375	325	296	244	204	172	147	126	109
	18/18	8'-4	10'-0	10'-4	50.21	6757	400	400	375	325	296	244	204	172	147	126	108
	18/16	8'-4	10'-1	10'-6	50.21	6757	400	400	375	325	296	244	203	172	146	125	108
	16/18	9'-5	11'-1	11'-6	50.21	7013	400	400	400	360	301	249	209	177	152	131	114
	16/16	9'-6	11'-3	11'-8	50.21	7013	400	400	400	360	301	249	209	177	152	131	113

Notes:
1. Minimum exterior bearing length required is 2.00 inches. Minimum interior bearing length required is 4.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

3 VLP, VLPA

No Studs

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				V_a lbs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft		
3VLP20/20	0.0358	0.0358	3.75	1.522	0.643	1.133	0.650	2019	33
3VLP20/18	0.0358	0.0474	4.26	1.637	0.640	1.305	0.677	2019	33
3VLP18/20	0.0474	0.0358	4.36	1.879	0.910	1.427	0.847	3215	33
3VLP18/18	0.0474	0.0474	4.88	2.012	0.926	1.610	0.879	3215	33
3VLP18/16	0.0474	0.0598	5.43	2.130	0.939	1.834	0.910	3215	33
3VLP16/18	0.0598	0.0474	5.54	2.413	1.153	1.935	1.091	4043	33
3VLP16/16	0.0598	0.0598	6.09	2.557	1.171	2.173	1.128	4043	33

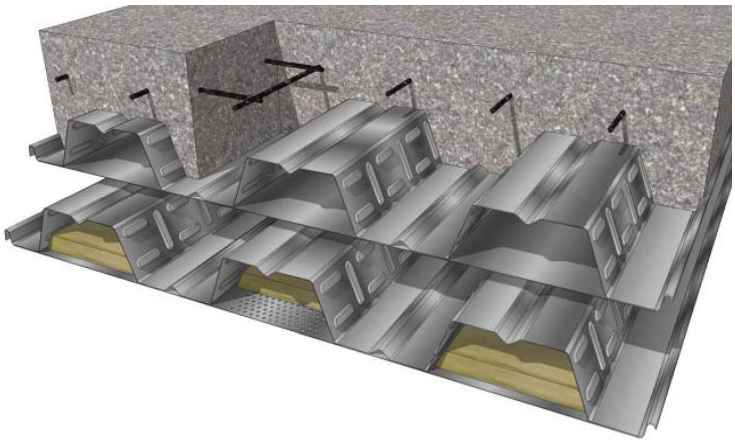
(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

Total Slab Depth	3VLP/3VLPA Hat/Pan Gauge	SDI Max. Unshored Clear Span			Superimposed Live Load (PSF) Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span	6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
5.50 (t=2.50) 53 PSF	20/20	8'-9	8'-10	10'-0	352	275	223	153	126	105	88	75	64	55	47
	20/18	8'-8	8'-9	10'-0	352	275	223	153	126	105	88	75	64	55	47
	18/20	10'-8	12'-4	12'-9	400	330	271	229	197	139	120	104	91	80	71
	18/18	10'-9	12'-6	12'-11	400	330	271	229	197	139	120	104	91	80	70
	18/16	10'-10	12'-8	13'-1	400	330	271	229	197	139	119	103	90	79	70
	16/18	12'-2	13'-10	14'-4	400	373	304	255	218	190	168	116	101	89	78
	16/16	12'-3	14'-1	14'-6	400	373	304	255	218	190	168	116	101	88	78
6.00 (t=3.00) 59 PSF	20/20	8'-4	8'-2	9'-3	395	309	250	172	142	118	99	84	72	62	53
	20/18	8'-4	8'-1	9'-2	395	309	250	172	141	118	99	84	72	62	53
	18/20	10'-2	11'-10	12'-3	400	370	304	257	221	157	135	117	103	90	80
	18/18	10'-3	12'-0	12'-5	400	370	304	257	221	156	135	117	102	90	79
	18/16	10'-4	12'-2	12'-7	400	370	304	257	221	156	134	117	102	90	79
	16/18	11'-7	13'-4	13'-9	400	400	341	286	245	213	151	130	114	100	88
	16/16	11'-8	13'-6	13'-11	400	400	341	286	245	213	150	130	114	100	88
6.50 (t=3.50) 65 PSF	20/20	8'-0	7'-7	8'-7	400	343	278	192	157	131	111	94	80	69	59
	20/18	8'-0	7'-6	8'-7	400	343	278	191	157	131	110	94	80	69	59
	18/20	9'-9	11'-5	11'-9	400	400	338	285	205	174	150	130	114	100	89
	18/18	9'-10	11'-7	11'-11	400	400	338	285	204	174	150	130	114	100	88
	18/16	9'-11	11'-9	12'-1	400	400	338	285	204	174	149	130	113	100	88
	16/18	11'-1	12'-10	13'-3	400	400	378	317	272	237	167	145	127	111	98
	16/16	11'-2	13'-0	13'-5	400	400	378	317	272	237	167	145	126	111	98
7.00 (t=4.00) 71 PSF	20/20	7'-10	7'-1	8'-0	400	377	261	211	173	144	122	103	88	76	65
	20/18	7'-9	7'-0	8'-0	400	377	261	210	173	144	121	103	88	76	65
	18/20	9'-6	11'-0	11'-4	400	400	371	313	225	192	165	143	125	110	98
	18/18	9'-7	11'-2	11'-6	400	400	371	313	225	191	165	143	125	110	97
	18/16	9'-8	11'-4	11'-8	400	400	371	313	225	191	164	143	125	110	97
	16/18	10'-10	12'-5	12'-10	400	400	400	348	298	215	184	160	140	123	108
	16/16	10'-11	12'-7	13'-0	400	400	400	348	298	214	184	159	139	122	108
7.50 (t=4.50) 77 PSF	20/20	7'-8	6'-7	7'-6	400	400	285	230	189	158	133	113	97	83	71
	20/18	7'-7	6'-7	7'-6	400	400	285	230	189	157	133	113	96	83	71
	18/20	9'-3	10'-8	11'-0	400	400	400	341	246	209	180	156	137	121	107
	18/18	9'-4	10'-10	11'-2	400	400	400	341	245	209	180	156	137	120	106
	18/16	9'-5	10'-10	11'-4	400	400	400	341	245	208	179	156	136	120	106
	16/18	10'-7	12'-0	12'-5	400	400	400	380	325	234	201	174	152	134	118
	16/16	10'-7	12'-2	12'-7	400	400	400	380	325	234	201	174	152	134	118

Notes:
1. Minimum exterior bearing length required is 2.50 inches. Minimum interior bearing length required is 5.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
5	1.08	0.292	6x6 - W1.4xW1.4
5 1/2	1.23	0.333	6x6 - W1.4xW1.4
6	1.39	0.375	6x6 - W1.4xW1.4
6 1/4	1.47	0.396	6x6 - W1.4xW1.4
6 1/2	1.54	0.417	6x6 - W2.1xW2.1
7	1.70	0.458	6x6 - W2.1xW2.1
7 1/4	1.77	0.479	6x6 - W2.1xW2.1
7 1/2	1.85	0.500	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
3VLPA	0.33	0.31	0.30	0.14	0.09	0.01	0.20 W/O Insulation
	0.40	0.56	1.07	0.78	0.57	0.35	0.75 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

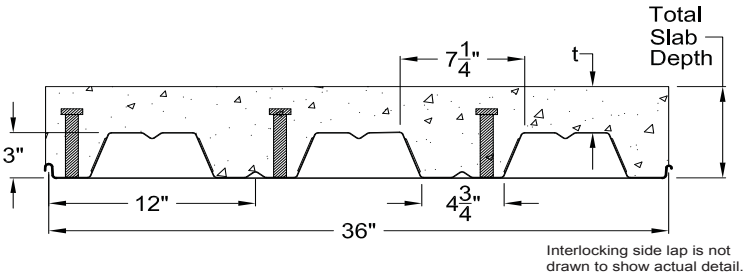
Total Slab Depth	3VLP/3VLPA Hat/Pan Gauge	SDI Max. Unshored Clear Span			Superimposed Live Load (PSF) Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span	6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
5.50 (t=2.50) 42 PSF	20/20	7'-9	9'-10	10'-2	312	243	174	141	116	97	83	71	61	53	46
	20/18	7'-10	10'-0	10'-4	312	243	173	140	116	97	82	71	61	53	46
	18/20	9'-7	11'-3	11'-7	376	294	238	199	147	124	106	92	80	71	62
	18/18	9'-8	11'-4	11'-9	376	294	238	199	146	124	106	92	80	70	62
	18/16	9'-8	11'-6	11'-11	376	294	238	199	146	124	106	92	80	70	62
	16/18	11'-0	12'-7	13'-0	400	340	273	227	192	166	121	105	91	80	69
	16/16	11'-0	12'-9	13'-2	400	340	273	227	192	166	121	105	91	80	69
6.00 (t=3.00) 46 PSF	20/20	7'-5	9'-6	9'-9	355	276	198	160	133	111	95	81	70	61	53
	20/18	7'-6	9'-6	9'-11	355	276	198	160	132	111	94	81	70	60	52
	18/20	9'-2	10'-9	11'-2	400	335	272	227	167	142	122	105	92	81	71
	18/18	9'-2	10'-11	11'-4	400	335	272	227	167	142	121	105	92	81	71
	18/16	9'-3	11'-1	11'-5	400	335	272	227	167	141	121	105	91	80	71
	16/18	10'-5	12'-2	12'-6	400	387	311	258	219	162	139	120	104	92	81
	16/16	10'-6	12'-3	12'-8	400	387	311	258	219	162	138	120	104	91	81
6.25 (t=3.25) 48 PSF	20/20	7'-3	9'-3	9'-7	377	293	210	170	141	118	100	86	74	64	56
	20/18	7'-4	9'-2	9'-9	377	293	210	170	141	118	100	86	74	64	56
	18/20	8'-11	10'-7	10'-11	400	355	288	213	178	151	129	112	98	86	76
	18/18	9'-0	10'-9	11'-1	400	355	288	241	177	150	129	112	98	86	76
	18/16	9'-1	10'-10	11'-3	400	355	288	241	177	150	129	111	97	85	75
	16/18	10'-3	11'-11	12'-4	400	400	330	274	232	172	147	127	111	97	86
	16/16	10'-3	12'-1	12'-6	400	400	330	274	232	172	147	127	111	97	86
6.50 (t=3.50) 51 PSF	20/20	7'-2	8'-11	9'-5	399	310	223	180	149	125	106	91	79	68	59
	20/18	7'-2	8'-10	9'-7	399	310	222	180	149	125	106	91	79	68	59
	18/20	8'-9	10'-5	10'-9	400	376	305	226	188	159	137	119	104	91	80
	18/18	8'-10	10'-7	10'-11	400	376	305	225	188	159	137	118	103	91	80
	18/16	8'-10	10'-8	11'-0	400	376	305	225	188	159	136	118	103	91	80
	16/18	10'-0	11'-8	12'-1	400	400	350	290	246	182	156	135	118	103	91
	16/16	10'-1	11'-10	12'-3	400	400	350	290	246	182	156	135	117	103	91
7.25 (t=4.25) 58 PSF	20/20	6'-9	8'-1	8'-11	400	328	259	210	174	146	124	107	92	80	69
	20/18	6'-10	8'-0	9'-1	400	328	259	210	174	146	124	106	92	80	69
	18/20	8'-3	9'-11	10'-2	400	400	355	263	219	186	160	138	121	106	94
	18/18	8'-4	10'-0	10'-4	400	400	355	263	219	186	159	138	121	106	94
	18/16	8'-4	10'-2	10'-6	400	400	355	262	219	185	159	138	120	106	93
	16/18	9'-5	11'-2	11'-6	400	400	400	337	252	213	182	157	137	121	107
	16/16	9'-6	11'-3	11'-8	400	400	400	337	251	212	182	157	137	120	106

Notes:
1. Minimum exterior bearing length required is 2.50 inches. Minimum interior bearing length required is 5.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.

3 VLP, VLPA

Stud Spacing - 12in C-C

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				A_s in²/ft	ΦV_n lbs/ft	N (Normal Wt. Concrete) studs/ft	N (Lightweight. Concrete) studs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft					
3VLP20/20	0.0358	0.0358	3.75	1.522	0.643	1.133	0.650	0.612	3069	0.497	0.611	33
3VLP20/18	0.0358	0.0474	4.26	1.637	0.640	1.305	0.677	0.612	3069	0.497	0.611	33
3VLP18/20	0.0474	0.0358	4.36	1.879	0.910	1.427	0.847	0.810	4887	0.658	0.809	33
3VLP18/18	0.0474	0.0474	4.88	2.012	0.926	1.610	0.879	0.810	4887	0.658	0.809	33
3VLP18/16	0.0474	0.0598	5.43	2.130	0.939	1.834	0.910	0.810	4887	0.658	0.809	33
3VLP16/18	0.0598	0.0474	5.54	2.413	1.153	1.935	1.091	1.023	6146	0.830	1.021	33
3VLP16/16	0.0598	0.0598	6.09	2.557	1.171	2.173	1.128	1.023	6146	0.830	1.021	33

(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

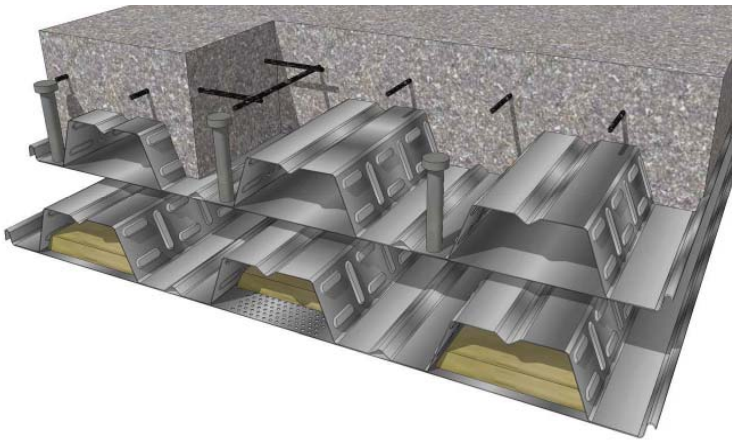
Total Slab Depth	3VLP/3VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in²/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 12 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
5.50 (t=2.50) 53 PSF	20/20	8'-9	8'-10	10'-0	38.73	6675	400	400	378	290	227	181	146	118	96	78	64
	20/18	8'-8	8'-9	10'-0	38.73	6675	400	400	377	290	227	181	145	118	96	78	63
	18/20	10'-8	12'-4	12'-8	38.73	7212	400	400	400	384	304	244	199	163	135	112	93
	18/18	10'-9	12'-6	12'-11	38.73	7212	400	400	400	384	303	244	198	163	135	112	93
	18/16	10'-10	12'-8	13'-1	38.73	7212	400	400	400	384	303	243	198	162	134	111	93
	16/18	12'-2	13'-10	14'-4	38.73	7212	400	400	400	384	303	244	198	163	134	112	93
	16/16	12'-3	14'-0	14'-6	38.73	7212	400	400	400	384	303	243	198	162	134	111	93
6.00 (t=3.00) 59 PSF	20/20	8'-4	8'-2	9'-3	43.50	7119	400	400	400	330	259	206	166	135	110	90	73
	20/18	8'-4	8'-1	9'-2	43.50	7119	400	400	400	329	258	206	166	134	109	89	73
	18/20	10'-2	11'-10	12'-2	43.50	8101	400	400	400	400	347	279	227	187	155	129	107
	18/18	10'-3	12'-0	12'-5	43.50	8101	400	400	400	400	346	278	227	186	154	128	107
	18/16	10'-4	12'-2	12'-7	43.50	8101	400	400	400	400	346	278	226	186	154	128	107
	16/18	11'-7	13'-4	13'-9	43.50	8101	400	400	400	400	346	278	226	186	154	128	107
	16/16	11'-8	13'-6	13'-11	43.50	8101	400	400	400	400	346	278	226	186	154	128	106
6.50 (t=3.50) 65 PSF	20/20	8'-0	7'-7	8'-7	48.48	7583	400	400	400	369	290	231	186	151	123	101	82
	20/18	8'-0	7'-6	8'-7	48.48	7583	400	400	400	369	289	231	186	151	123	101	82
	18/20	9'-9	11'-4	11'-9	48.48	9028	400	400	400	400	389	313	255	210	174	145	121
	18/18	9'-10	11'-7	11'-11	48.48	9028	400	400	400	400	389	313	255	210	174	145	121
	18/16	9'-11	11'-8	12'-1	48.48	9028	400	400	400	400	389	312	254	209	173	144	120
	16/18	11'-1	12'-10	13'-3	48.48	9028	400	400	400	400	389	313	255	210	174	145	121
	16/16	11'-2	13'-0	13'-5	48.48	9028	400	400	400	400	389	312	254	209	173	144	120
7.00 (t=4.00) 71 PSF	20/20	7'-10	7'-1	8'-0	53.67	8066	400	400	400	400	321	256	206	168	137	112	92
	20/18	7'-9	7'-0	8'-0	53.67	8066	400	400	400	400	321	256	206	167	137	112	91
	18/20	9'-6	11'-0	11'-4	53.67	9884	400	400	400	400	400	348	284	233	194	161	135
	18/18	9'-7	11'-2	11'-6	53.67	9884	400	400	400	400	400	347	283	233	193	161	135
	18/16	9'-8	11'-4	11'-8	53.67	9884	400	400	400	400	400	347	283	233	193	161	134
	16/18	10'-10	12'-5	12'-10	53.67	9994	400	400	400	400	400	347	283	233	193	161	135
	16/16	10'-11	12'-7	13'-0	53.67	9994	400	400	400	400	400	347	283	233	193	161	134
7.50 (t=4.50) 77 PSF	20/20	7'-7	6'-7	7'-6	59.06	8568	400	400	400	400	352	281	227	184	151	123	101
	20/18	7'-7	6'-7	7'-6	59.06	8568	400	400	400	400	352	281	226	184	150	123	101
	18/20	9'-3	10'-7	11'-0	59.06	10386	400	400	400	400	400	382	312	257	213	178	149
	18/18	9'-4	10'-9	11'-2	59.06	10386	400	400	400	400	400	382	312	257	213	178	149
	18/16	9'-5	10'-10	11'-4	59.06	10386	400	400	400	400	400	382	311	256	213	177	148
	16/18	10'-7	12'-0	12'-5	59.06	10999	400	400	400	400	400	382	311	256	213	177	148
	16/16	10'-7	12'-2	12'-7	59.06	10999	400	400	400	400	400	382	311	256	212	177	148

Notes:

1. Minimum exterior bearing length required is 2.50 inches. Minimum interior bearing length required is 5.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
5	1.08	0.292	6x6 - W1.4xW1.4
5 1/2	1.23	0.333	6x6 - W1.4xW1.4
6	1.39	0.375	6x6 - W1.4xW1.4
6 1/4	1.47	0.396	6x6 - W1.4xW1.4
6 1/2	1.54	0.417	6x6 - W2.1xW2.1
7	1.70	0.458	6x6 - W2.1xW2.1
7 1/4	1.77	0.479	6x6 - W2.1xW2.1
7 1/2	1.85	0.500	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
3VLPA	0.33	0.31	0.30	0.14	0.09	0.01	0.20 W/O Insulation
	0.40	0.56	1.07	0.78	0.57	0.35	0.75 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

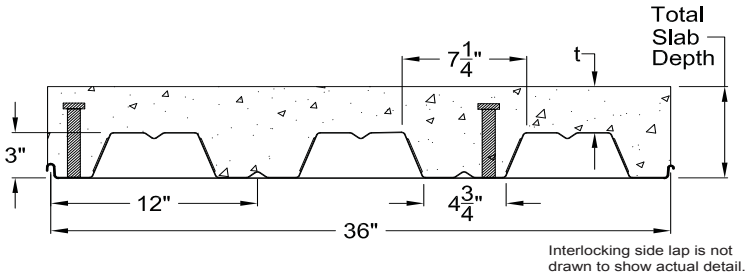
Total Slab Depth	3VLP/3VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in^2/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 12 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
5.50 (t=2.50) 42 PSF	20/20	9'-9	10'-6	12'-0	38.73	5409	400	400	386	299	236	190	155	127	105	88	73
	20/18	9'-8	10'-5	11'-11	38.73	5409	400	400	386	298	236	189	154	127	105	87	73
	18/20	11'-11	13'-5	13'-11	38.73	5409	400	400	400	393	313	253	208	172	144	120	99
	18/18	12'-0	13'-7	14'-1	38.73	5409	400	400	400	393	312	253	207	172	144	120	99
	18/16	12'-0	13'-10	14'-3	38.73	5409	400	400	400	393	312	252	207	171	143	120	99
	16/18	13'-7	15'-1	15'-7	38.73	5409	400	400	398	391	311	252	206	171	143	120	102
	16/16	13'-7	15'-4	15'-10	38.73	5409	400	400	398	390	310	251	206	171	143	120	102
6.00 (t=3.00) 46 PSF	20/20	9'-4	9'-10	11'-2	43.50	6076	400	400	400	340	269	216	176	145	120	100	83
	20/18	9'-3	9'-9	11'-1	43.50	6076	400	400	400	339	268	216	176	144	120	100	83
	18/20	11'-5	12'-11	13'-5	43.50	6076	400	400	400	400	357	289	237	197	165	139	118
	18/18	11'-5	13'-2	13'-7	43.50	6076	400	400	400	400	356	288	237	196	164	139	117
	18/16	11'-6	13'-4	13'-9	43.50	6076	400	400	400	400	356	288	236	196	164	138	117
	16/18	12'-11	14'-7	15'-1	43.50	6076	400	400	399	398	354	287	236	195	164	138	117
	16/16	13'-0	14'-9	15'-3	43.50	6076	400	400	399	398	354	287	235	195	163	138	117
6.25 (t=3.25) 48 PSF	20/20	9'-1	9'-6	10'-9	45.96	6279	400	400	400	360	285	229	187	154	127	106	89
	20/18	9'-1	9'-5	10'-8	45.96	6279	400	400	400	359	284	229	186	153	127	106	88
	18/20	11'-2	12'-9	13'-2	45.96	6420	400	400	400	400	379	307	252	209	175	148	125
	18/18	11'-3	12'-11	13'-4	45.96	6420	400	400	400	400	378	306	251	209	175	147	125
	18/16	11'-3	13'-1	13'-6	45.96	6420	400	400	400	400	378	306	251	208	174	147	124
	16/18	12'-8	14'-4	14'-10	45.96	6420	400	400	399	398	376	305	250	207	174	147	124
	16/16	12'-9	14'-6	15'-0	45.96	6420	400	400	399	398	376	304	250	207	173	146	124
6.50 (t=3.50) 51 PSF	20/20	8'-11	9'-2	10'-5	48.48	6454	400	400	400	380	301	242	197	162	135	112	94
	20/18	8'-11	9'-1	10'-4	48.48	6454	400	400	400	380	300	242	197	162	134	112	94
	18/20	10'-11	12'-6	12'-11	48.48	6771	400	400	400	400	400	324	266	221	185	156	133
	18/18	11'-0	12'-8	13'-1	48.48	6771	400	400	400	400	400	324	266	221	185	156	132
	18/16	11'-1	12'-10	13'-4	48.48	6771	400	400	400	400	400	324	266	221	185	156	132
	16/18	12'-5	14'-1	14'-7	48.48	6771	400	400	400	399	398	322	265	220	184	155	132
	16/16	12'-6	14'-3	14'-9	48.48	6771	400	400	400	399	397	322	265	219	184	155	132
7.25 (t=4.25) 58 PSF	20/20	8'-6	8'-4	9'-6	56.34	7003	400	400	400	400	349	281	229	189	157	131	110
	20/18	8'-5	8'-3	9'-5	56.34	7003	400	400	400	400	349	281	229	189	157	131	109
	18/20	10'-4	11'-11	12'-4	56.34	7869	400	400	400	400	400	378	311	258	216	183	155
	18/18	10'-5	12'-1	12'-6	56.34	7869	400	400	400	400	400	378	310	258	216	182	155
	18/16	10'-5	12'-3	12'-8	56.34	7869	400	400	400	400	400	377	310	257	216	182	154
	16/18	11'-9	13'-6	13'-11	56.34	7869	400	400	400	400	399	376	308	256	215	182	154
	16/16	11'-10	13'-8	14'-1	56.34	7869	400	400	400	400	399	375	308	256	215	181	154

Notes:
1. Minimum exterior bearing length required is 2.50 inches. Minimum interior bearing length required is 5.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

3 VLP, VLPA

Stud Spacing - 24in C-C

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				A_s in²/ft	ΦV_n lbs/ft	N (Normal Wt. Concrete) studs/ft	N (Lightweight. Concrete) studs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft					
3VLP20/20	0.0358	0.0358	3.75	1.522	0.643	1.133	0.650	0.612	3069	0.497	0.611	33
3VLP20/18	0.0358	0.0474	4.26	1.637	0.640	1.305	0.677	0.612	3069	0.497	0.611	33
3VLP18/20	0.0474	0.0358	4.36	1.879	0.910	1.427	0.847	0.810	4887	0.658	0.809	33
3VLP18/18	0.0474	0.0474	4.88	2.012	0.926	1.610	0.879	0.810	4887	0.658	0.809	33
3VLP18/16	0.0474	0.0598	5.43	2.130	0.939	1.834	0.910	0.810	4887	0.658	0.809	33
3VLP16/18	0.0598	0.0474	5.54	2.413	1.153	1.935	1.091	1.023	6146	0.830	1.021	33
3VLP16/16	0.0598	0.0598	6.09	2.557	1.171	2.173	1.128	1.023	6146	0.830	1.021	33

(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

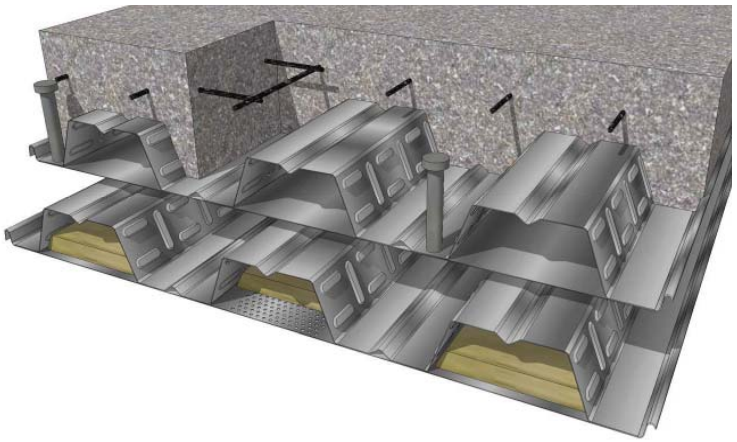
Total Slab Depth	3VLP/3VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in²/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 24 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
5.50 (t=2.50) 53 PSF	20/20	8'-9	8'-10	10'-0	38.73	6675	400	400	378	290	227	181	146	118	96	78	64
	20/18	8'-8	8'-9	10'-0	38.73	6675	400	400	377	290	227	181	145	118	96	78	63
	18/20	10'-8	12'-4	12'-8	38.73	7212	400	383	369	347	278	219	180	149	124	104	88
	18/18	10'-9	12'-6	12'-11	38.73	7212	400	383	369	347	278	219	179	149	124	104	88
	18/16	10'-10	12'-8	13'-1	38.73	7212	400	383	369	346	278	218	179	148	124	104	87
	16/18	12'-2	13'-10	14'-4	38.73	7212	400	389	362	333	270	222	186	144	121	103	87
	16/16	12'-3	14'-0	14'-6	38.73	7212	400	389	362	333	269	222	186	144	121	102	87
6.00 (t=3.00) 59 PSF	20/20	8'-4	8'-2	9'-3	43.50	7119	400	400	400	330	259	206	166	135	110	90	73
	20/18	8'-4	8'-1	9'-2	43.50	7119	400	400	400	329	258	206	166	134	109	89	73
	18/20	10'-2	11'-10	12'-2	43.50	8101	400	393	377	366	317	249	205	170	142	119	101
	18/18	10'-3	12'-0	12'-5	43.50	8101	400	393	377	366	316	249	204	170	142	119	100
	18/16	10'-4	12'-2	12'-7	43.50	8101	400	393	377	366	316	249	204	169	141	119	100
	16/18	11'-7	13'-4	13'-9	43.50	8101	400	400	377	355	306	252	196	164	138	117	99
	16/16	11'-8	13'-6	13'-11	43.50	8101	400	400	377	355	306	252	196	164	138	117	99
6.50 (t=3.50) 65 PSF	20/20	8'-0	7'-7	8'-7	48.48	7583	400	400	400	369	290	231	186	151	123	101	82
	20/18	8'-0	7'-6	8'-7	48.48	7583	400	400	400	369	289	231	186	151	123	101	82
	18/20	9'-9	11'-4	11'-9	48.48	9028	400	400	385	372	345	280	230	191	160	134	113
	18/18	9'-10	11'-7	11'-11	48.48	9028	400	400	385	372	345	280	230	191	159	134	113
	18/16	9'-11	11'-8	12'-1	48.48	9028	400	400	385	372	344	279	229	190	159	134	113
	16/18	11'-1	12'-10	13'-3	48.48	9028	400	400	391	367	342	283	220	184	155	131	112
	16/16	11'-2	13'-0	13'-5	48.48	9028	400	400	391	367	342	282	220	184	155	131	111
7.00 (t=4.00) 71 PSF	20/20	7'-10	7'-1	8'-0	53.67	8066	400	400	400	400	321	256	206	168	137	112	92
	20/18	7'-9	7'-0	8'-0	53.67	8066	400	400	400	400	321	256	206	167	137	112	91
	18/20	9'-6	11'-0	11'-4	53.67	9884	400	400	393	379	358	310	255	212	177	149	126
	18/18	9'-7	11'-2	11'-6	53.67	9884	400	400	393	379	358	310	255	212	177	149	126
	18/16	9'-8	11'-4	11'-8	53.67	9884	400	400	393	379	358	310	254	211	177	149	125
	16/18	10'-10	12'-5	12'-10	53.67	9994	400	400	400	380	360	295	244	204	172	146	124
	16/16	10'-11	12'-7	13'-0	53.67	9994	400	400	400	380	360	294	243	204	172	145	124
7.50 (t=4.50) 77 PSF	20/20	7'-7	6'-7	7'-6	59.06	8568	400	400	400	400	352	281	227	184	151	123	101
	20/18	7'-7	6'-7	7'-6	59.06	8568	400	400	400	400	352	281	226	184	150	123	101
	18/20	9'-3	10'-7	11'-0	59.06	10386	400	400	400	386	363	341	280	233	195	164	139
	18/18	9'-4	10'-9	11'-2	59.06	10386	400	400	400	386	363	340	280	232	195	164	138
	18/16	9'-5	10'-10	11'-4	59.06	10386	400	400	400	386	363	340	280	232	194	163	138
	16/18	10'-7	12'-0	12'-5	59.06	10999	400	400	400	392	370	323	268	224	189	160	136
	16/16	10'-7	12'-2	12'-7	59.06	10999	400	400	400	392	370	323	267	223	188	160	136

Notes:

1. Minimum exterior bearing length required is 2.50 inches. Minimum interior bearing length required is 5.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
5	1.08	0.292	6x6 - W1.4xW1.4
5 1/2	1.23	0.333	6x6 - W1.4xW1.4
6	1.39	0.375	6x6 - W1.4xW1.4
6 1/4	1.47	0.396	6x6 - W1.4xW1.4
6 1/2	1.54	0.417	6x6 - W2.1xW2.1
7	1.70	0.458	6x6 - W2.1xW2.1
7 1/4	1.77	0.479	6x6 - W2.1xW2.1
7 1/2	1.85	0.500	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
3VLPA	0.33	0.31	0.30	0.14	0.09	0.01	0.20 W/O Insulation
	0.40	0.56	1.07	0.78	0.57	0.35	0.75 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

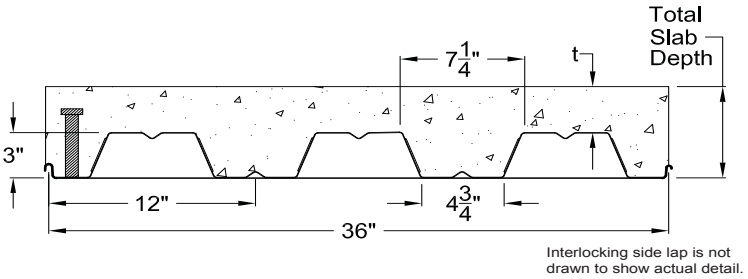
Total Slab Depth	3VLP/3VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in^2/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 24 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
5.50 (t=2.50) 42 PSF	20/20	9'-9	10'-6	12'-0	38.73	5409	384	370	350	272	211	170	139	114	94	78	65
	20/18	9'-8	10'-5	11'-11	38.73	5409	384	370	350	272	211	170	138	114	94	78	65
	18/20	11'-11	13'-5	13'-11	38.73	5409	400	378	353	332	269	222	176	148	126	107	92
	18/18	12'-0	13'-7	14'-1	38.73	5409	400	378	353	331	269	222	186	148	125	107	92
	18/16	12'-0	13'-10	14'-3	38.73	5409	400	378	353	331	268	222	186	147	125	107	91
	16/18	13'-7	15'-1	15'-7	38.73	5409	400	392	357	329	270	227	193	166	131	113	99
	16/16	13'-7	15'-4	15'-10	38.73	5409	400	392	357	328	270	226	193	166	131	113	98
6.00 (t=3.00) 46 PSF	20/20	9'-4	9'-10	11'-2	43.50	6076	391	376	365	309	240	193	158	130	107	89	75
	20/18	9'-3	9'-9	11'-1	43.50	6076	391	376	365	308	240	193	157	129	107	89	74
	18/20	11'-5	12'-11	13'-5	43.50	6076	400	394	366	347	305	252	201	169	143	122	105
	18/18	11'-5	13'-2	13'-7	43.50	6076	400	394	366	347	305	252	200	168	143	122	105
	18/16	11'-6	13'-4	13'-9	43.50	6076	400	394	366	347	305	252	200	168	142	121	104
	16/18	12'-11	14'-7	15'-1	43.50	6076	400	400	377	349	306	257	218	173	149	129	112
	16/16	13'-0	14'-9	15'-3	43.50	6076	400	400	377	349	306	256	218	188	148	129	112
6.25 (t=3.25) 48 PSF	20/20	9'-1	9'-6	10'-9	45.96	6279	395	378	367	327	255	205	167	138	114	95	79
	20/18	9'-1	9'-5	10'-8	45.96	6279	395	378	367	327	254	205	167	137	114	95	79
	18/20	11'-2	12'-9	13'-2	45.96	6420	400	400	373	352	324	267	213	179	152	130	111
	18/18	11'-3	12'-11	13'-4	45.96	6420	400	400	373	352	323	267	212	178	151	129	111
	18/16	11'-3	13'-1	13'-6	45.96	6420	400	400	373	352	323	267	212	178	151	129	111
	16/18	12'-8	14'-4	14'-10	45.96	6420	400	400	387	357	324	272	231	183	158	137	119
	16/16	12'-9	14'-6	15'-0	45.96	6420	400	400	387	357	324	272	231	183	157	136	119
6.50 (t=3.50) 51 PSF	20/20	8'-11	9'-2	10'-5	48.48	6454	398	381	369	340	269	217	177	145	121	100	84
	20/18	8'-11	9'-1	10'-4	48.48	6454	398	381	369	339	269	216	176	145	120	100	84
	18/20	10'-11	12'-6	12'-11	48.48	6771	400	400	379	358	341	270	225	189	160	137	118
	18/18	11'-0	12'-8	13'-1	48.48	6771	400	400	379	358	341	282	224	189	160	137	118
	18/16	11'-1	12'-10	13'-4	48.48	6771	400	400	379	358	341	282	224	188	160	136	117
	16/18	12'-5	14'-1	14'-7	48.48	6771	400	400	397	365	342	287	244	194	167	144	126
	16/16	12'-6	14'-3	14'-9	48.48	6771	400	400	397	365	342	287	244	193	166	144	126
7.25 (t=4.25) 58 PSF	20/20	8'-6	8'-4	9'-6	56.34	7003	400	389	376	360	312	251	205	169	140	117	98
	20/18	8'-5	8'-3	9'-5	56.34	7003	400	389	376	360	312	251	205	169	140	117	98
	18/20	10'-4	11'-11	12'-4	56.34	7869	400	400	399	374	355	314	261	220	186	160	137
	18/18	10'-5	12'-1	12'-6	56.34	7869	400	400	399	374	355	313	261	219	186	159	137
	18/16	10'-5	12'-3	12'-8	56.34	7869	400	400	399	374	355	313	260	219	186	159	137
	16/18	11'-9	13'-6	13'-11	56.34	7869	400	400	400	390	364	332	264	225	193	168	146
	16/16	11'-10	13'-8	14'-1	56.34	7869	400	400	400	390	364	332	263	224	193	167	146

Notes:
1. Minimum exterior bearing length required is 2.50 inches. Minimum interior bearing length required is 5.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

3 VLP, VLPA

Stud Spacing - 36in C-C

Vulcraft Cellular Units are approved by U.L. for use as Electrical Raceways.



Interlocking side lap is not drawn to show actual detail.

STEEL SECTION PROPERTIES

Deck type	Design Thickness (in.)		Weight psf	Section Properties				A_s in²/ft	ΦV_n lbs/ft	N (Normal Wt. Concrete) studs/ft	N (Lightweight. Concrete) studs/ft	F_y ksi
	Hat	Pan		I_p in⁴/ft	S_p in³/ft	I_n in⁴/ft	S_n in³/ft					
3VLP20/20	0.0358	0.0358	3.75	1.522	0.643	1.133	0.650	0.612	3069	0.497	0.611	33
3VLP20/18	0.0358	0.0474	4.26	1.637	0.640	1.305	0.677	0.612	3069	0.497	0.611	33
3VLP18/20	0.0474	0.0358	4.36	1.879	0.910	1.427	0.847	0.810	4887	0.658	0.809	33
3VLP18/18	0.0474	0.0474	4.88	2.012	0.926	1.610	0.879	0.810	4887	0.658	0.809	33
3VLP18/16	0.0474	0.0598	5.43	2.130	0.939	1.834	0.910	0.810	4887	0.658	0.809	33
3VLP16/18	0.0598	0.0474	5.54	2.413	1.153	1.935	1.091	1.023	6146	0.830	1.021	33
3VLP16/16	0.0598	0.0598	6.09	2.557	1.171	2.173	1.128	1.023	6146	0.830	1.021	33

(N=9.35) NORMAL WEIGHT CONCRETE (145 PCF)

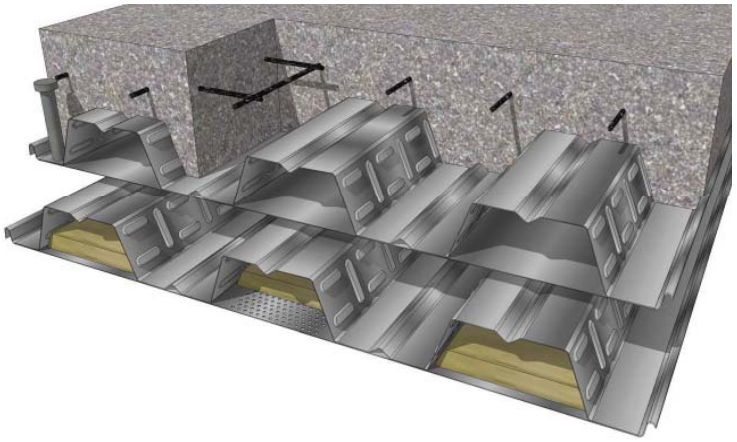
Total Slab Depth	3VLP/3VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in²/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 36 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
5.50 (t=2.50) 53 PSF	20/20	8'-9	8'-10	10'-0	38.73	6675	384	359	327	245	194	156	127	104	86	71	58
	20/18	8'-8	8'-9	10'-0	38.73	6675	384	359	326	245	194	156	126	104	85	70	58
	18/20	10'-8	12'-4	12'-8	38.73	7212	400	365	336	308	251	192	160	134	113	96	82
	18/18	10'-9	12'-6	12'-11	38.73	7212	400	365	336	307	251	192	159	134	113	96	82
	18/16	10'-10	12'-8	13'-1	38.73	7212	400	365	336	307	251	192	159	133	113	96	82
	16/18	12'-2	13'-10	14'-4	38.73	7212	400	384	342	307	252	212	180	135	115	98	84
	16/16	12'-3	14'-0	14'-6	38.73	7212	400	384	342	307	252	211	180	134	114	98	84
6.00 (t=3.00) 59 PSF	20/20	8'-4	8'-2	9'-3	43.50	7119	398	370	351	278	220	177	144	118	97	80	66
	20/18	8'-4	8'-1	9'-2	43.50	7119	398	370	351	277	220	177	144	118	97	80	66
	18/20	10'-2	11'-10	12'-2	43.50	8101	400	385	353	329	285	219	182	152	129	110	94
	18/18	10'-3	12'-0	12'-5	43.50	8101	400	385	353	329	285	218	181	152	129	109	93
	18/16	10'-4	12'-2	12'-7	43.50	8101	400	385	353	329	284	218	181	152	128	109	93
	16/18	11'-7	13'-4	13'-9	43.50	8101	400	400	365	332	286	239	181	153	130	111	96
	16/16	11'-8	13'-6	13'-11	43.50	8101	400	400	365	332	285	239	181	152	130	111	95
6.50 (t=3.50) 65 PSF	20/20	8'-0	7'-7	8'-7	48.48	7583	400	381	360	311	246	198	161	132	109	90	75
	20/18	8'-0	7'-6	8'-7	48.48	7583	400	381	360	310	246	198	161	132	109	90	74
	18/20	9'-9	11'-4	11'-9	48.48	9028	400	400	369	343	298	245	203	171	144	123	105
	18/18	9'-10	11'-7	11'-11	48.48	9028	400	400	369	343	298	244	203	170	144	123	105
	18/16	9'-11	11'-8	12'-1	48.48	9028	400	400	369	343	298	244	203	170	144	122	104
	16/18	11'-1	12'-10	13'-3	48.48	9028	400	400	387	350	319	267	203	171	146	125	107
	16/16	11'-2	13'-0	13'-5	48.48	9028	400	400	387	350	319	267	202	171	145	124	107
7.00 (t=4.00) 71 PSF	20/20	7'-10	7'-1	8'-0	53.67	8066	400	392	354	338	272	219	179	147	121	100	83
	20/18	7'-9	7'-0	8'-0	53.67	8066	400	392	354	338	272	219	178	146	121	100	83
	18/20	9'-6	11'-0	11'-4	53.67	9884	400	400	386	357	314	271	225	189	160	136	117
	18/18	9'-7	11'-2	11'-6	53.67	9884	400	400	386	357	314	270	225	189	160	136	116
	18/16	9'-8	11'-4	11'-8	53.67	9884	400	400	386	357	313	270	224	188	159	136	116
	16/18	10'-10	12'-5	12'-10	53.67	9994	400	400	400	369	339	268	224	189	161	138	119
	16/16	10'-11	12'-7	13'-0	53.67	9994	400	400	400	369	339	268	224	189	161	138	119
7.50 (t=4.50) 77 PSF	20/20	7'-7	6'-7	7'-6	59.06	8568	400	400	362	344	298	240	196	161	133	110	91
	20/18	7'-7	6'-7	7'-6	59.06	8568	400	400	362	344	298	240	195	160	133	110	91
	18/20	9'-3	10'-7	11'-0	59.06	10386	400	400	400	371	324	297	247	207	176	150	128
	18/18	9'-4	10'-9	11'-2	59.06	10386	400	400	400	371	324	297	246	207	175	149	128
	18/16	9'-5	10'-10	11'-4	59.06	10386	400	400	400	371	324	296	246	207	175	149	127
	16/18	10'-7	12'-0	12'-5	59.06	10999	400	400	400	388	355	294	245	207	177	151	130
	16/16	10'-7	12'-2	12'-7	59.06	10999	400	400	400	388	355	293	245	207	176	151	130

Notes:

1. Minimum exterior bearing length required is 2.50 inches. Minimum interior bearing length required is 5.00 inches. If these minimum lengths are not provided, web crippling must be checked.
2. Always contact Vulcraft when using loads in excess of 200 psf. Such loads often result from concentrated, dynamic, or long term load cases for which reductions due to bond breakage, concrete creep, etc. should be evaluated.
3. All fire rated assemblies are subject to an upper live load limit of 250 psf.
4. 3/4 in. diameter welded shear stud utilized for calculations.
5. Refer to AISC for further stud material and installation requirements.
6. When the deck thickness is greater than 16 gauge for single thickness, or 18 gauge for each sheet of double thickness, special precautions and procedures recommended by the stud manufacturer should be followed, to ensure proper stud attachment.

SLAB INFORMATION

Total Slab Depth, in.	Theoretical Concrete Volume		Recommended Welded Wire Fabric
	Yd^3 / 100 ft^2	ft^3 / ft^2	
5	1.08	0.292	6x6 - W1.4xW1.4
5 1/2	1.23	0.333	6x6 - W1.4xW1.4
6	1.39	0.375	6x6 - W1.4xW1.4
6 1/4	1.47	0.396	6x6 - W1.4xW1.4
6 1/2	1.54	0.417	6x6 - W2.1xW2.1
7	1.70	0.458	6x6 - W2.1xW2.1
7 1/4	1.77	0.479	6x6 - W2.1xW2.1
7 1/2	1.85	0.500	6x6 - W2.1xW2.1



ACOUSTICAL INFORMATION

Deck Type	Absorption Coefficient						Noise Reduction Coefficient[1]
	125	250	500	1000	2000	4000	
3VLPA	0.33	0.31	0.30	0.14	0.09	0.01	0.20 W/O Insulation
	0.40	0.56	1.07	0.78	0.57	0.35	0.75 W/ Insulation

Acoustical deck (Type 1.5VLPA) is particularly suitable in structures such as auditoriums, schools, and theatres where sound control is desirable. Acoustic perforations are located in the pan 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 80% of the sound striking the deck.

W/ Insulation indicates rigid insulation in the cells.

[1]Source: Riverbank Acoustical Laboratories.

(N=14.15) LIGHTWEIGHT CONCRETE (110 PCF)

Total Slab Depth	3VLP/3VLPA Hat/Pan Gauge (See Note: 6)	SDI Max. Unshored Clear Span			A_c in^2/ft	ΦV_{nt} lb/ft	Superimposed Live Load (PSF) - Shear Studs at 36 in. c/c Clear Span (ft.-in.)										
		1 Span	2 Span	3 Span			6'-0	7'-0	8'-0	9'-0	10'-0	11'-0	12'-0	13'-0	14'-0	15'-0	16'-0
5.50 (t=2.50) 42 PSF	20/20	9'-9	10'-6	12'-0	38.73	5409	360	326	295	232	175	141	115	94	78	65	54
	20/18	9'-8	10'-5	11'-11	38.73	5409	360	326	295	232	174	140	114	94	78	64	54
	18/20	11'-11	13'-5	13'-11	38.73	5409	400	366	328	299	245	205	159	135	116	100	86
	18/18	12'-0	13'-7	14'-1	38.73	5409	400	366	328	298	245	205	175	135	115	99	86
	18/16	12'-0	13'-10	14'-3	38.73	5409	400	366	328	298	245	205	174	134	115	99	86
	16/18	13'-7	15'-1	15'-7	38.73	5409	400	389	343	308	257	218	188	164	127	111	98
	16/16	13'-7	15'-4	15'-10	38.73	5409	400	389	343	308	257	218	188	164	127	111	97
6.00 (t=3.00) 46 PSF	20/20	9'-4	9'-10	11'-2	43.50	6076	378	339	313	262	198	159	130	107	89	74	61
	20/18	9'-3	9'-9	11'-1	43.50	6076	378	339	313	262	198	159	130	107	88	73	61
	18/20	11'-5	12'-11	13'-5	43.50	6076	400	391	348	318	278	233	181	153	131	113	98
	18/18	11'-5	13'-2	13'-7	43.50	6076	400	391	348	318	278	232	181	153	131	113	98
	18/16	11'-6	13'-4	13'-9	43.50	6076	400	391	348	318	277	232	180	153	131	113	97
	16/18	12'-11	14'-7	15'-1	43.50	6076	400	400	369	332	290	247	213	166	144	126	111
	16/16	13'-0	14'-9	15'-3	43.50	6076	400	400	369	332	290	246	213	186	144	126	110
6.25 (t=3.25) 48 PSF	20/20	9'-1	9'-6	10'-9	45.96	6279	387	346	319	278	210	169	138	113	94	78	65
	20/18	9'-1	9'-5	10'-8	45.96	6279	387	346	319	278	209	169	137	113	94	78	65
	18/20	11'-2	12'-9	13'-2	45.96	6420	400	400	358	326	294	246	192	162	139	120	104
	18/18	11'-3	12'-11	13'-4	45.96	6420	400	400	358	326	294	246	191	162	139	120	104
	18/16	11'-3	13'-1	13'-6	45.96	6420	400	400	358	326	294	246	191	162	138	119	103
	16/18	12'-8	14'-4	14'-10	45.96	6420	400	400	382	343	307	261	225	175	152	133	117
	16/16	12'-9	14'-6	15'-0	45.96	6420	400	400	382	343	307	261	225	175	152	133	117
6.50 (t=3.50) 51 PSF	20/20	8'-11	9'-2	10'-5	48.48	6454	395	352	324	279	221	178	146	120	99	83	69
	20/18	8'-11	9'-1	10'-4	48.48	6454	395	352	324	279	221	178	145	120	99	82	69
	18/20	10'-11	12'-6	12'-11	48.48	6771	400	400	368	335	310	241	202	172	147	127	110
	18/18	11'-0	12'-8	13'-1	48.48	6771	400	400	368	335	310	260	202	171	147	126	110
	18/16	11'-1	12'-10	13'-4	48.48	6771	400	400	368	335	310	259	202	171	146	126	109
	16/18	12'-5	14'-1	14'-7	48.48	6771	400	400	395	354	323	275	237	185	161	141	124
	16/16	12'-6	14'-3	14'-9	48.48	6771	400	400	395	354	323	275	237	185	160	140	124
7.25 (t=4.25) 58 PSF	20/20	8'-6	8'-4	9'-6	56.34	7003	400	372	339	301	256	207	169	139	115	96	80
	20/18	8'-5	8'-3	9'-5	56.34	7003	400	372	339	300	256	206	168	139	115	96	80
	18/20	10'-4	11'-11	12'-4	56.34	7869	400	400	399	360	331	279	234	199	170	147	128
	18/18	10'-5	12'-1	12'-6	56.34	7869	400	400	399	360	331	279	234	199	170	147	127
	18/16	10'-5	12'-3	12'-8	56.34	7869	400	400	399	360	331	279	234	198	170	146	127
	16/18	11'-9	13'-6	13'-11	56.34	7869	400	400	400	387	352	317	249	214	186	163	143
	16/16	11'-10	13'-8	14'-1	56.34	7869	400	400	400	387	352	317	249	214	186	163	143

Notes:
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ALABAMA

7205 Gault Avenue N.
Fort Payne, AL 35967
P.O. Box 680169
Fort Payne, AL 35968
256/845-2460
Fax: 256/845-2823

INDIANA

6610 County Road 60
P.O. Box 1000
St. Joe, IN 46785
260/337-1800
Fax: 260/337-1801

NEBRASKA

1601 West Omaha Avenue
Norfolk, NE 68701
P.O. Box 59
Norfolk, NE 68702
402/644-8500
Fax: 402/644-8528

SOUTH CAROLINA

1501 West Darlington Street
P.O. Box 100520
Florence, SC 29501
843/662-0381
Fax: 843/662-3132

TEXAS

175 County Road 2345
P.O. Box 186
Grapeland, TX 75844
936/687-4665
Fax: 936/687-4290

UTAH

1875 West Highway 13 South
P.O. Box 637
Brigham City, UT 84302
435/734-9433
Fax: 435/723-5423

VULCRAFT OF NEW YORK

5362 Railroad Street
P.O. Box 280
Chemung, NY 14825
607/529-9000
Fax: 607/529-9001

VULCRAFT NATIONAL ACCOUNTS

6230 Shiloh Road
Suite 140
Alpharetta, GA 30005
678/455-6553
Fax: 678/455-9216

STEEL DECK INSTITUTE sdi

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