



Steel deck Products

The Trusted Industry Leaders
for Quality Steel Deck





OEG BUILDING MATERIALS

THE INSIDE STORY





A REPUTATION FOR EXCELLENCE

In our early years, we at OEG Building Materials established the business through manufacturing a full line of steel building products. By listening to the needs of our customers and striving to provide high quality products, competitive pricing, and superior customer service, our company steadily developed a sterling reputation.

As the demand for OEG Building Materials

products grew, our company expanded its manufacturing machinery to include a full line of steel deck products.

As with all other products, OEG manufactures and supplies steel deck products quickly and efficiently. Our goal is to help developers and contractors craft projects that can boast strength, durability and precision.

The OEG Building Materials product showcase grew together with the industry standards. OEG products meet or exceed the industry standards established by AISI and ASTM through utilizing the highest level of technology and machinery. Our company runs an expansive manufacturing operations and distribution center, strategically located in Sayreville, NJ.

We implemented strict manufacturing and quality control standards





to continuously supply the full line of premium steel building products.

A HISTORY OF ACHIEVEMENT

At OEG Building Materials, our philosophy has always been to raise industry standards. With strong roots in the manufacturing and distribution of industrial steel building products, we have serviced lumber yards, construction suppliers and retail merchandisers to their greatest satisfaction. For decades, we have met and exceeded the expectations of our clients nationwide.

A PROMISE OF SATISFACTION

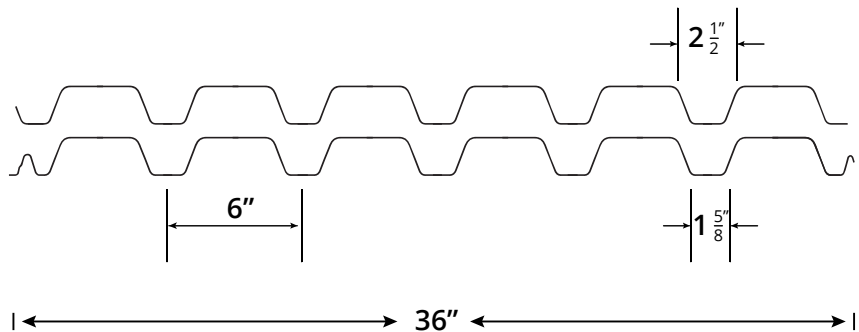
Over the years, we at OEG Building Materials have established ourselves as a business with expertise and reliability. We took the plunge and launched a division specializing in

steel deck products, boasting a wide range of steel deck profiles for roof, composite, and form decking in both standard and custom ordered lengths.

OEG Building Materials has acquired a first-rate reputation in the industry. Our hi-tech deck manufacturing machinery creates products with unparalleled precision. Our centralized distribution center facilitates rapid product delivery. Our fully-stocked warehouse has immediate available inventory on premises ready for your order.

OEG Building Materials stands ready to continue upholding a history of achievement and trustworthiness... one deck at a time.

1.5" B Deck



B Deck

- Type B wide-rib roof deck provides the great balance of strength and economy of all 1 1/2" deep roof decks
- A minimum 1" thickness is required where rigid roofing insulation is used in conjunction with B -Deck.
- Available with side laps or with interlocking side laps.
- Type B-Deck is SDI and UL approved



SECTION PROPERTIES (PER FOOT OF WIDTH)

Base Steel Thickness (in.)	Weight (psf)	Yield Stress (ksi)	Sec. Modulus		Deflection Moment of Inertia (in ⁴)		Allowable Bending		Allowable Web Crippling Data			
			Midspan	Support			M positive/ Ω inch-lbs per ft	M negative/ Ω inch-lbs per ft	P _{e1} End (lb)	P _{e2} End (lb)	P _{e1} Interior (lb)	P _{e2} Interior (lb)
			(in ³)	(in ³)	1-Span	2,3-Span						
0.0295	2.03	40	0.1713	0.1804	0.1473	0.1732	4103	4321	656	1039	631	1281
0.0358	2.46	40	0.2122	0.2247	0.1910	0.2104	5083	5382	937	1513	996	1887
0.0474	3.26	40	0.2883	0.2963	0.2741	0.2791	6905	7097	1593	2631	1797	3329
0.0598	4.11	40	0.3695	0.3722	0.3528	0.3528	8850	8915	2401	4026	2877	5138
0.0295	2.03	50	0.1713	0.1804	0.1473	0.1732	5129	5401	820	1298	789	1601
0.0358	2.46	50	0.2122	0.2247	0.1910	0.2104	6353	6728	1171	1891	1207	2359
0.0474	3.26	50	0.2883	0.2963	0.2741	0.2791	8632	8871	1991	3289	2247	4162
0.0598	4.11	50	0.3695	0.3722	0.3528	0.3528	11063	11144	3001	5033	3597	6422

1.5in B-DECK (40 ksi) ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf)

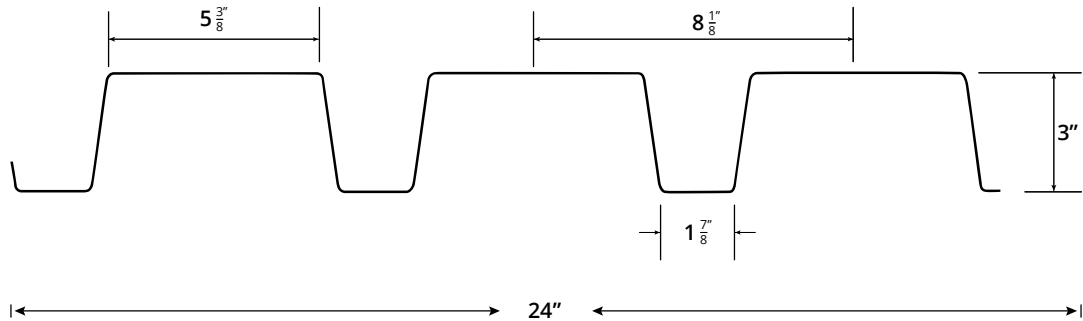
SPAN LENGTH (ft)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)			
		0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598
5.0	S	109	136	184	236	115	142	193	248	144	178	242	310
	D	77	100	144	185	186	242	347	446	146	189	271	349
5.5	S	90	112	152	195	95	118	160	205	119	147	200	256
	D	58	75	108	139	140	181	260	335	110	142	204	262
6.0	S	76	94	128	164	80	99	134	172	100	124	168	215
	D	45	58	83	107	108	140	201	258	84	109	157	202
6.5	S	65	80	109	140	68	84	114	147	85	105	143	183
	D	35	46	66	84	85	110	158	203	66	86	123	159
7.0	S	56	69	94	120	59	73	99	126	73	91	123	158
	D	28	37	52	68	68	88	126	163	53	69	99	127
7.5	S	49	60	82	105	51	63	86	110	64	79	107	138
	D	23	30	43	55	55	72	103	132	43	56	80	103
8.0	S	43	53	72	92	45	56	76	97	56	69	94	121
	D	19	24	35	45	45	59	85	109	36	46	66	85
8.5	S	38	47	64	82	40	49	67	86	50	62	84	107
	D	16	20	29	38	38	49	71	91	30	38	55	71
9.0	S	34	42	57	73	35	44	60	76	44	55	75	96
	D	13	17	25	32	32	41	59	76	25	32	47	60
9.5	S	30	38	51	65	32	39	54	69	40	49	67	86
	D	11	15	21	27	27	35	51	65	21	28	40	51
10.0	S	27	34	46	59	29	36	48	62	36	44	60	77
	D	10	13	18	23	23	30	43	56	18	24	34	44

1.5in B-DECK (50 ksi) ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf)

SPAN LENGTH (ft)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)			
		0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598
5.0	S	137	169	230	295	144	178	242	310	180	222	302	387
	D	77	100	144	185	186	242	347	446	146	189	271	349
5.5	S	113	140	190	244	119	147	200	256	148	184	250	320
	D	58	75	108	139	140	181	260	335	110	142	204	262
6.0	S	95	118	160	205	100	124	168	215	125	154	210	269
	D	45	58	83	107	108	140	201	258	84	109	157	202
6.5	S	81	100	136	175	85	105	143	183	106	132	179	229
	D	35	46	66	84	85	110	158	203	66	86	123	159
7.0	S	70	86	117	151	73	91	123	158	92	113	154	198
	D	28	37	52	68	68	88	126	163	53	69	99	127
7.5	S	61	75	102	131	64	79	107	138	80	99	134	172
	D	23	30	43	55	55	72	103	132	43	56	80	103
8.0	S	53	66	90	115	56	69	94	121	70	87	118	151
	D	19	24	35	45	45	59	85	109	36	46	66	85
8.5	S	47	59	80	102	50	62	84	107	62	77	105	134
	D	16	20	29	38	38	49	71	91	30	38	55	71
9.0	S	42	52	71	91	44	55	75	96	55	69	93	120
	D	13	17	25	32	32	41	59	76	25	32	47	60
9.5	S	38	47	64	82	40	49	67	86	50	62	84	107
	D	11	15	21	27	27	35	51	65	21	28	40	51
10.0	S	34	42	58	74	36	44	60	77	45	56	76	97
	D	10	13	18	23	23	30	43	56	18	24	34	44



N Deck



- Web crippling check for shoring is required if end bearing length is less than 1.5 in. or interior bearing length is less than 3.0 in.1.5"
- The composite loads given in the table are for uniformly distributed applications. If loads exceed 200 psf, contact OEG.2.
- The self-weight of the steel deck and concrete slab have already been accounted for in the composite slab load table.
- See Example for use of table.



SECTION PROPERTIES (PER FOOT OF WIDTH)

Base Steel Thickness (in.)	Weight (psf)	Yield Stress (ksi)	Sec. Modulus		Deflection Moment of Inertia (in ⁴)		Allowable Bending		Allowable Web Crippling Data			
			Midspan	Support	1-Span	2,3-Span	M positive/ Ω inch-lbs per ft	M negative/ Ω inch-lbs per ft	P _{e1} End (lb)	P _{e2} End (lb)	P _{e1} Interior (lb)	P _{e2} Interior (lb)
			(in ³)	(in ³)								
0.0295	2.03	40	0.3536	0.3988	0.777	0.804	8469	9552	471	472	1062	1255
0.0358	2.46	40	0.4643	0.5166	0.987	1.005	11120	12372	679	725	1512	1817
0.0474	3.26	40	0.6628	0.7268	1.367	1.37	15875	17408	1165	1353	2556	3137
0.0598	4.11	40	0.8595	0.9215	1.735	1.735	20587	22072	1767	2172	3837	4770
0.0295	2.03	50	0.3388	0.3686	0.737	0.783	10144	11034	589	590	1328	1569
0.0358	2.46	50	0.4432	0.4998	0.96	0.987	13268	14964	848	907	1889	2271
0.0474	3.26	50	0.6526	0.7137	1.35	1.358	19539	21367	1456	1692	3195	3921
0.0598	4.11	50	0.8466	0.921	1.735	1.735	25346	27573	2209	2715	4797	5962

3in N-DECK (40 ksi) ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf)

SPAN LENGTH (ft)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)			
		0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598
10.0	S	56	74	106	137	64	82	116	147	80	103	145	184
	D	67	85	118	149	168	210	287	363	131	164	224	283
10.5	S	51	67	96	124	58	75	105	133	72	94	132	167
	D	57	73	101	128	145	181	247	313	113	142	193	244
11.0	S	47	61	87	113	53	68	96	122	66	85	120	152
	D	50	63	88	111	126	157	215	272	98	123	168	212
11.5	S	43	56	80	104	48	62	88	111	60	78	110	139
	D	43	55	77	97	110	138	188	238	86	107	146	185
12.0	S	39	51	73	95	44	57	81	102	55	72	101	128
	D	38	48	67	85	97	121	165	209	75	94	129	163
12.5	S	36	47	68	88	41	53	74	94	51	66	93	118
	D	33	43	59	75	85	107	146	184	67	83	113	144
13.0	S	33	44	63	81	38	49	69	87	47	61	86	109
	D	30	38	52	66	76	95	129	164	59	74	101	128
13.5	S	31	41	58	75	35	45	64	81	44	57	80	101
	D	26	33	46	59	67	84	115	146	53	66	90	114
14.0	S	29	38	54	70	32	42	59	75	41	53	74	94
	D	23	30	41	53	60	76	103	131	47	59	80	102
14.5	S	27	35	50	65	30	39	55	70	38	49	69	87
	D	21	27	37	47	54	68	93	117	42	53	72	91
15.0	S	25	33	47	61	28	37	52	65	35	46	64	82
	D	19	24	33	42	49	61	83	106	38	47	65	82

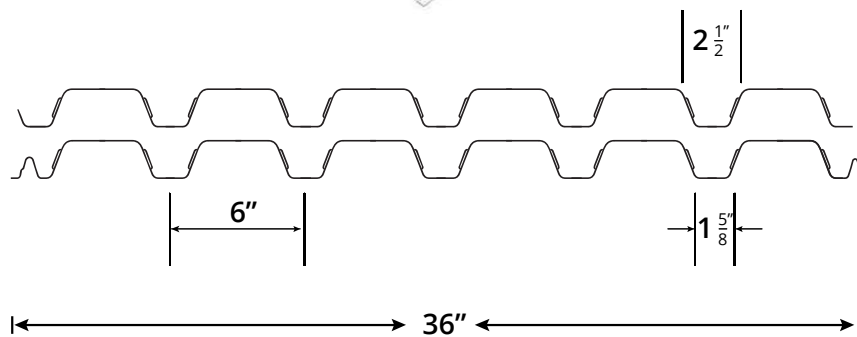
3in N-DECK (50 ksi) ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf)

SPAN LENGTH (ft)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)			
		0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598
10.0	S	68	88	130	169	74	100	142	184	92	125	178	230
	D	63	82	116	149	164	206	284	363	128	161	222	283
10.5	S	61	80	118	153	67	90	129	167	83	113	162	208
	D	54	71	100	128	141	178	245	313	110	139	191	244
11.0	S	56	73	108	140	61	82	118	152	76	103	147	190
	D	47	61	87	111	123	155	213	272	96	121	166	212
11.5	S	51	67	98	128	56	75	108	139	70	94	135	174
	D	41	54	76	97	107	135	186	238	84	105	145	185
12.0	S	47	61	90	117	51	69	99	128	64	87	124	160
	D	36	47	66	85	94	119	163	209	73	93	127	163
12.5	S	43	57	83	108	47	64	91	118	59	80	114	147
	D	32	41	58	75	83	105	144	184	65	82	113	144
13.0	S	40	52	77	100	44	59	84	109	54	74	105	136
	D	28	37	52	66	74	93	128	164	57	72	100	128
13.5	S	37	49	71	93	40	55	78	101	50	68	98	126
	D	25	33	46	59	66	83	114	146	51	64	89	114
14.0	S	35	45	66	86	38	51	73	94	47	64	91	117
	D	22	29	41	53	59	74	102	131	46	58	79	102
14.5	S	32	42	62	80	35	47	68	87	44	59	85	109
	D	20	26	37	47	53	67	92	117	41	52	71	91
15.0	S	30	39	58	75	33	44	63	82	41	55	79	102
	D	18	23	33	42	48	60	83	106	37	47	64	82



1.5"

Composite Deck



Composite Deck

OEG composite deck adds embossments in the vertical ribs that bond with the concrete slab which creates a composite floor system. Once the concrete cures, the resulting composite floor system provides superior strength and stiffness.

- Available with side laps or with interlocking side laps.
- 1.5" Composite Deck allows to space the structural members to over 11 feet on center without additional shoring.
- OEG Composite Decks are SDI and UL approved



STEEL DECK SECTION PROPERTIES (PER FOOT OF WIDTH)							COMPOSITE SLAB DATA (PER FOOT OF WIDTH)					
Base Steel Thickness (in.)	Area of Steel Deck (in²)	Weight (psf)	Section Modulus		Deflection Inertia (in⁴)	Yield Stress (ksi)	Overall Slab Depth (in.)					
			Midspan (in³)	Support (in³)			3.5	4.0	4.5	5.0	5.5	6.0
0.0295	0.468	1.65	0.183	0.184	0.167	40	Slab Weight (psf)					
0.0358	0.568	1.99	0.226	0.235	0.210	40	34.1	40.2	46.2	52.3	58.3	64.3
0.0474	0.752	2.62	0.304	0.311	0.286	40	Concrete Volume (yd³/100ft²)					
0.0598	0.949	3.29	0.386	0.388	0.359	40	0.79	0.94	1.10	1.25	1.41	1.56

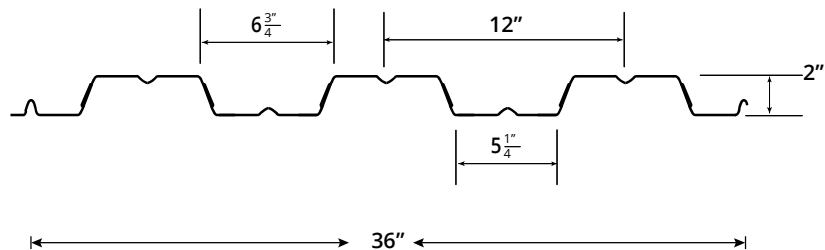
Base Steel Thickness (in.)	Overall Slab Depth (in.)	MAXIMUM UNSHORED DECK SPAN (ft-in.)			ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf) CLEAR SPAN (ft-in.)														
		1-SPAN	2-SPAN	3-SPAN	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
0.0295	3.5	6'-3"	7'-4"	7'-6"	361	304	259	225	197	174	156	140	127	115	106	97	84	74	65
	4.0	5'-11"	7'-0"	7'-2"	400	362	310	268	235	208	186	167	151	138	126	116	107	100	93
	4.5	5'-8"	6'-7"	6'-8"	400	400	360	312	273	242	216	194	176	160	147	135	125	116	108
	5.0	5'-5"	6'-4"	6'-5"	400	400	400	355	311	275	246	221	200	182	167	154	142	132	123
	5.5	5'-3"	6'-1"	6'-3"	400	400	400	398	349	309	276	248	225	205	187	172	159	148	138
	6.0	5'-0"	5'-10"	6'-0"	400	400	400	400	387	343	306	275	249	227	208	191	177	164	153
0.0358	3.5	7'-3"	8'-5"	8'-7"	400	350	304	267	237	212	192	174	160	140	120	104	90	79	70
	4.0	6'-10"	8'-0"	8'-1"	400	400	362	318	282	253	229	208	190	175	162	151	134	117	103
	4.5	6'-6"	7'-7"	7'-8"	400	400	400	370	328	294	266	242	221	204	189	175	163	153	144
	5.0	6'-2"	7'-3"	7'-5"	400	400	400	400	374	335	303	275	252	232	215	200	186	174	164
	5.5	6'-0"	6'-11"	7'-1"	400	400	400	400	400	376	340	309	283	261	241	224	209	196	184
	6.0	5'-9"	6'-8"	6'-9"	400	400	400	400	400	377	343	314	289	267	248	232	217	204	190
0.0474	3.5	8'-9"	9'-11"	10'-3"	400	400	384	342	309	281	257	219	185	157	135	116	101	88	78
	4.0	8'-3"	9'-4"	9'-8"	400	400	400	400	369	335	307	283	262	233	199	172	150	131	115
	4.5	7'-10"	8'-11"	9'-2"	400	400	400	400	400	389	357	328	304	283	265	244	212	186	163
	5.0	7'-6"	8'-6"	8'-9"	400	400	400	400	400	400	400	374	347	323	302	283	267	250	223
	5.5	7'-2"	8'-2"	8'-5"	400	400	400	400	400	400	400	400	389	362	339	318	299	283	259
	6.0	6'-11"	7'-10"	8'-1"	400	400	400	400	400	400	400	400	400	400	376	353	332	313	292
0.0598	3.5	9'-5"	11'-0"	11'-4"	400	400	383	342	308	280	256	236	203	172	148	128	111	97	86
	4.0	8'-11"	10'-5"	10'-9"	400	400	400	400	368	334	306	282	261	243	219	189	165	144	127
	4.5	8'-6"	9'-11"	10'-3"	400	400	400	400	400	389	356	328	304	283	264	248	233	204	179
	5.0	8'-2"	9'-5"	9'-9"	400	400	400	400	400	400	400	374	346	322	301	283	266	251	238
	5.5	7'-11"	9'-1"	9'-4"	400	400	400	400	400	400	400	400	389	362	338	317	299	282	267
	6.0	7'-8"	8'-9"	9'-0"	400	400	400	400	400	400	400	400	400	400	375	352	332	313	297

1. Web crippling check for shoring is required if end bearing length is less than 1.5 in. or interior bearing length is less than 3.0 in.
2. The composite loads given in the table are for uniformly distributed applications. If loads exceed 200 psf, contact OEG.
3. The self-weight of the steel deck and concrete slab have already been accounted for in the composite slab load table.
4. See Example for use of table.



2"

Composite Deck



Composite Deck

OEG composite deck adds embossments in the vertical ribs that bond with the concrete slab which creates a composite floor system. Once the concrete cures, the resulting composite floor system provides superior strength and stiffness.

- Available with interlocking side laps only.
- Available with rolled-in hanger tabs.
- 2" Composite Deck allows to space the structural members to over 16 feet on center without additional shoring
- OEG Composite Decks are SDI and UL approved



STEEL DECK SECTION PROPERTIES (PER FOOT OF WIDTH)						
Base Steel Thickness (in.)	Area of Steel Deck (in ²)	Weight (psf)	Section Modulus		Deflection Inertia (in ⁴)	Yield Stress (ksi)
			Midspan (in ³)	Support (in ³)		
0.0295	0.447	1.52	0.226	0.244	0.270	40
0.0358	0.553	1.88	0.302	0.321	0.350	40
0.0474	0.721	2.45	0.452	0.473	0.500	40
0.0598	0.902	3.07	0.63	0.654	0.670	40

COMPOSITE SLAB DATA (PER FOOT OF WIDTH)					
Overall Slab Depth (in.)					
4.0	4.5	5.0	5.5	6.0	6.5
Slab Weight (psf)					
39.0	45.0	51.0	57.0	63.0	69.0
Concrete Volume (yd ³ /100ft ²)					
0.93	1.08	1.23	1.39	1.54	1.70

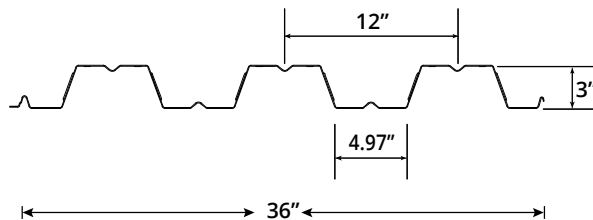
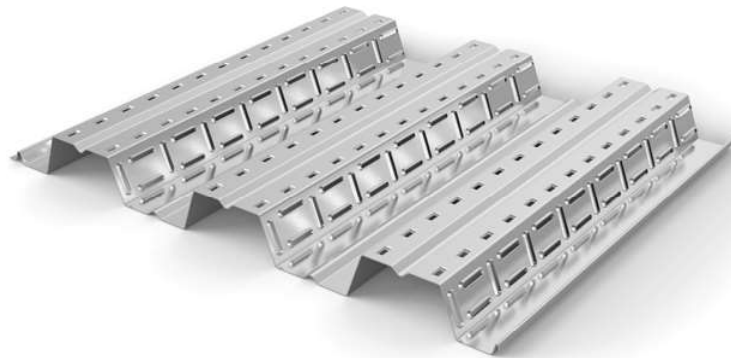
Base Steel Thickness (in.)	Overall Slab Depth (in.)	MAXIMUM UNSHORED DECK SPAN (ft-in.)			ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf) CLEAR SPAN (ft-in.)														
		1-SPAN	2-SPAN	3-SPAN	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"
0.0295	4	78	92	92	345	286	239	202	172	148	128	111	96	84	74	64	56	49	43
	4.5	75	87	88	400	351	294	249	212	182	158	137	120	105	92	81	71	62	55
	5	72	84	84	400	400	351	298	254	219	190	165	144	126	111	98	86	76	67
	5.5	69	81	81	400	400	400	348	298	257	222	194	170	149	131	116	102	90	80
	6	67	78	78	400	400	400	400	342	295	256	223	196	172	152	134	118	105	93
	6.5	65	75	76	400	400	400	400	388	335	291	254	222	196	173	153	135	120	107
0.0358	4	95	111	112	400	353	296	251	215	186	161	140	123	108	95	84	75	66	59
	4.5	91	106	106	400	400	364	309	265	229	199	174	152	134	119	105	93	83	74
	5	87	101	102	400	400	400	370	317	274	238	208	183	162	143	127	113	101	90
	5.5	83	97	98	400	400	400	400	371	321	280	245	215	190	168	150	133	119	106
	6	80	93	94	400	400	400	400	400	369	322	282	248	219	195	173	154	138	123
	6.5	78	90	91	400	400	400	400	400	400	365	320	282	249	221	197	176	157	141
0.0474	4	123	136	140	400	400	386	329	282	245	213	187	165	146	130	116	103	93	83
	4.5	117	129	134	400	400	400	400	347	301	262	230	203	180	160	143	128	115	103
	5	112	124	128	400	400	400	400	400	360	314	276	244	216	193	172	154	139	125
	5.5	107	119	123	400	400	400	400	400	400	368	324	286	254	226	203	182	163	147
	6	103	114	118	400	400	400	400	400	400	400	373	330	293	261	234	210	189	170
	6.5	99	111	114	400	400	400	400	400	400	400	400	374	333	297	266	239	215	194
0.0598	4	137	160	160	400	400	400	370	319	277	242	213	188	167	148	133	119	107	96
	4.5	131	152	155	400	400	400	400	390	339	296	261	231	205	183	163	147	132	119
	5	126	145	150	400	400	400	400	400	400	355	312	276	246	219	196	176	159	143
	5.5	121	140	144	400	400	400	400	400	400	400	366	324	288	257	231	207	187	169
	6	117	135	139	400	400	400	400	400	400	400	400	373	332	297	266	240	216	196
	6.5	114	130	134	400	400	400	400	400	400	400	400	400	377	338	303	273	246	223

1. Web crippling check for shoring is required if end bearing length is less than 1.5 in. or interior bearing length is less than 3.0 in.
2. The composite loads given in the table are for uniformly distributed applications. If loads exceed 200 psf, contact OEG.
3. The self-weight of the steel deck and concrete slab have already been accounted for in the composite slab load table.
4. See Example for use of table.



3"

Composite Deck



Composite Deck

OEG composite deck adds embossments in the vertical ribs that bond with the concrete slab which creates a composite floor system. Once the concrete cures, the resulting composite floor system provides superior strength and stiffness.

- Available with interlocking side laps only.
- Available with rolled-in hanger tabs.
- 3" Composite Deck allows to space the structural members to over 16 feet on center without additional shoring
- OEG Composite Decks are SDI and UL approved



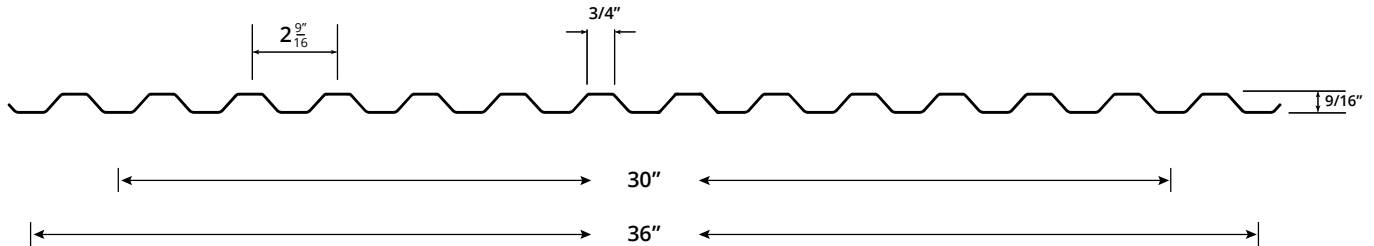
STEEL DECK SECTION PROPERTIES (PER FOOT OF WIDTH)						
Base Steel Thickness (in.)	Area of Steel Deck (in²)	Weight (psf)	Section Modulus		Deflection Inertia (in⁴)	Yield Stress (ksi)
			Midspan (in³)	Support (in³)		
0.0295	0.495	1.74	0.430	0.430	0.740	40
0.0358	0.601	2.10	0.556	0.556	0.931	40
0.0474	0.796	2.76	0.803	0.803	1.26	40
0.0598	1.00	3.47	1.04	1.04	1.59	40

COMPOSITE SLAB DATA (PER FOOT OF WIDTH)					
Overall Slab Depth (in.)					
5.0	5.5	6.0	6.5	7.0	7.5
Slab Weight (psf)					
47.2	53.5	59.7	66.0	72.2	78.5
Concrete Volume (yd³/100ft²)					
1.08	1.23	1.39	1.54	1.70	1.85

Base Steel Thickness (in.)	Overall Slab Depth (in.)	MAXIMUM UNSHORED DECK SPAN (ft-in.)			ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf) CLEAR SPAN (ft-in.)														
		1-SPAN	2-SPAN	3-SPAN	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"
0.0295	5.0	9'-10"	9'-7"	10'-3"	216	187	163	143	127	113	101	91	83	75	68	63	57	53	49
	5.5	9'-0"	8'-8"	9'-8"	247	213	186	164	145	129	116	104	94	86	78	71	66	60	56
	6.0	8'-0"	8'-0"	8'-11"	278	240	210	184	163	146	130	117	106	96	88	80	74	68	63
	6.5	7'-3"	7'-4"	8'-3"	309	267	233	205	182	162	145	131	118	107	98	89	82	76	70
	7.0	6'-7"	6'-10"	7'-7"	340	294	256	226	200	178	159	144	130	118	108	98	90	83	77
	7.5	6'-1"	6'-4"	7'-1"	370	321	280	246	218	194	174	157	142	129	117	107	99	91	84
0.0358	5.0	11'-6"	12'-0"	11'-8"	242	212	187	166	149	134	122	111	101	93	86	80	74	69	64
	5.5	10'-11"	11'-5"	11'-2"	277	242	214	190	170	153	139	127	116	107	98	91	84	79	73
	6.0	10'-5"	10'-11"	10'-9"	311	272	240	214	192	173	157	143	131	120	111	102	95	89	83
	6.5	10'-0"	10'-5"	10'-5"	346	303	267	238	213	192	174	159	145	133	123	114	106	98	92
	7.0	9'-7"	9'-8"	10'-1"	381	333	294	262	234	211	192	174	160	147	135	125	116	108	101
	7.5	9'-3"	9'-0"	9'-9"	400	364	321	286	256	231	209	190	174	160	148	137	127	118	110
0.0474	5.0	12'-7"	14'-4"	13'-11"	288	256	230	207	189	172	158	146	136	126	118	110	104	98	92
	5.5	12'-2"	13'-8"	13'-4"	330	293	263	237	216	197	181	167	155	144	135	126	119	112	106
	6.0	11'-10"	13'-1"	12'-10"	371	330	296	267	243	222	204	188	175	162	152	142	134	126	119
	6.5	11'-7"	12'-7"	12'-5"	400	367	329	297	270	247	227	209	194	181	169	158	149	140	132
	7.0	11'-3"	12'-2"	12'-0"	400	400	362	327	297	272	250	230	214	199	186	174	163	154	146
	7.5	11'-0"	11'-9"	11'-8"	400	400	395	357	324	296	272	251	233	217	203	190	178	168	159
0.0598	5.0	13'-3"	16'-3"	15'-6"	288	256	229	207	188	172	158	146	135	126	118	110	104	98	92
	5.5	12'-10"	15'-6"	14'-11"	329	293	262	237	215	197	181	167	155	144	135	126	119	112	106
	6.0	12'-6"	14'-10"	14'-5"	371	330	295	267	242	222	204	188	174	162	152	142	133	126	119
	6.5	12'-3"	14'-3"	13'-11"	400	367	328	297	270	246	226	209	194	180	169	158	148	140	132
	7.0	11'-11"	13'-9"	13'-6"	400	400	362	326	297	271	249	230	213	199	185	174	163	154	145
	7.5	11'-8"	13'-4"	13'-1"	400	400	395	356	324	296	272	251	233	217	202	190	178	168	159

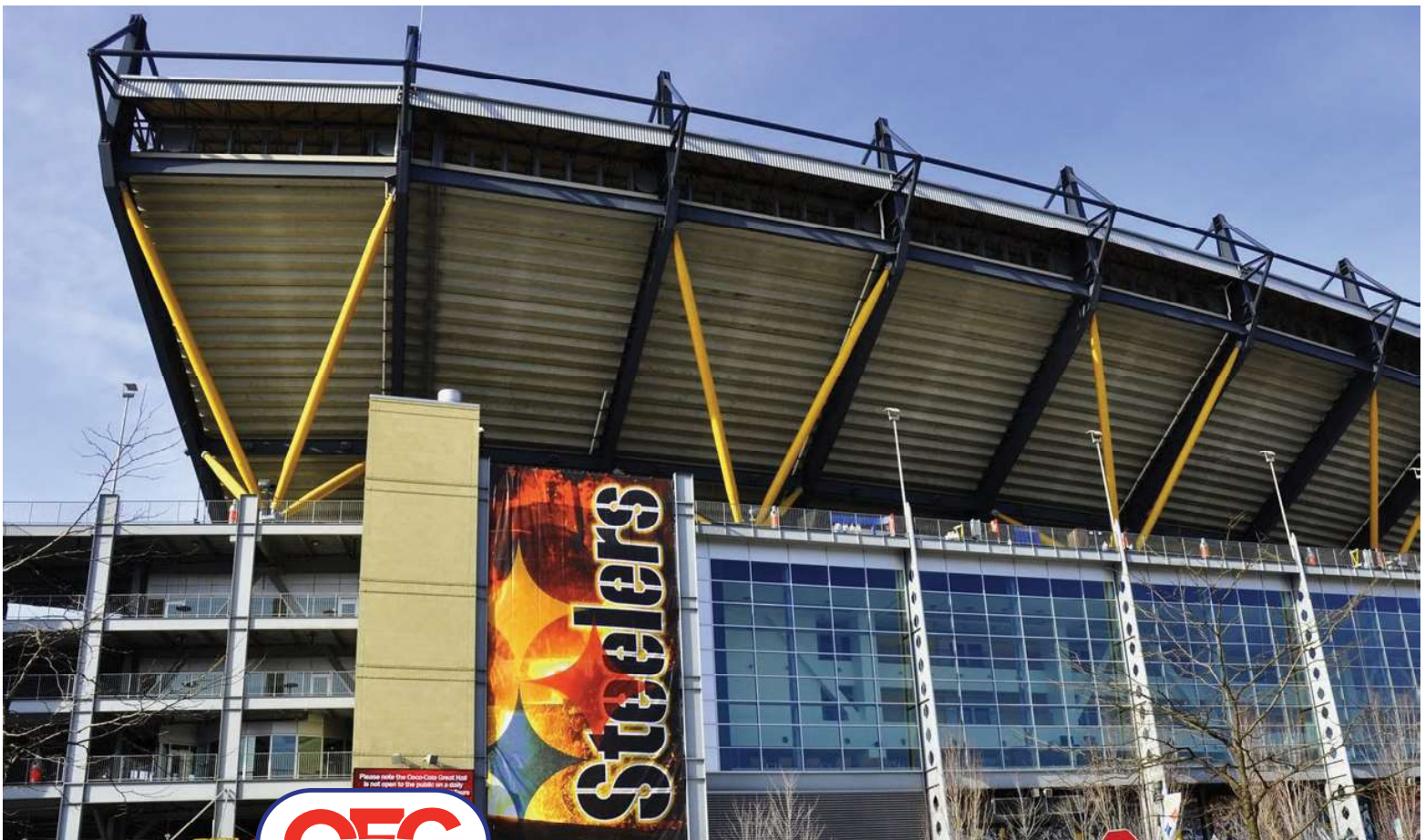
1. Web crippling check for shoring is required if end bearing length is less than 3.0 in. or interior bearing length is less than 6.0 in.
2. The composite loads given in the table are for uniformly distributed applications. If loads exceed 200 psf, contact OEG.
3. The self-weight of the steel deck and concrete slab have already been accounted for in the composite slab load table.
4. See Example for use of table.

9/16" Form Deck



9/16" Form Deck

- 9/16" form deck is used for reinforced concrete slabs and as a roof or lightweight insulating concrete roof deck system.
- OEG Form Deck products meet required steel deck certifications in accordance with the specifications of the Steel Deck Institute and conforms to ASTM A1008/A1008M for uncoated and painted deck, A653/A653M for galvanized deck
- 9/16" Form Deck are SDI and UL approved



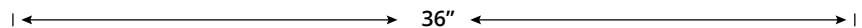
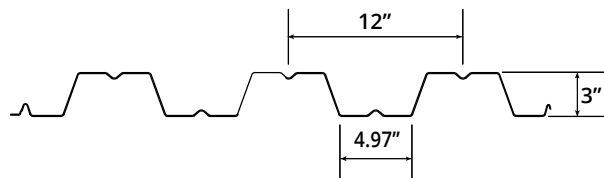
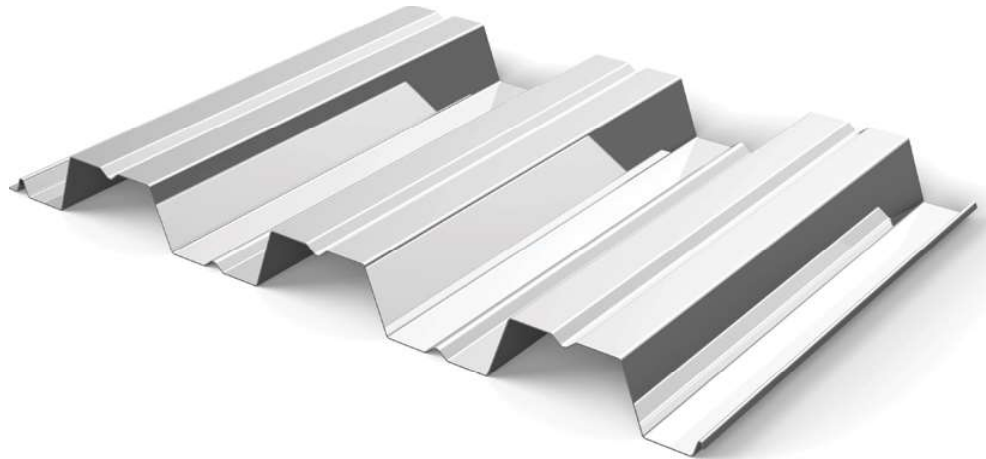
SECTION PROPERTIES (PER FOOT OF WIDTH)									
Base Steel Thickness (in.)	Weight (psf)	Yield Stress (ksi)	Sec. Modulus		Deflection Moment of Inertia (in ⁴)	Allowable Web Crippling Data			
			Midspan	Support		P _{e1} End (lb)	P _{e2} End (lb)	P _{i1} Interior (lb)	P _{i2} Interior (lb)
			(in ³)	(in ³)					
0.0150	0.78	40	0.0366	0.0363	0.0115	109	27.2	198	33.6
0.0180	0.92	40	0.0456	0.0451	0.0137	161	40.3	296	50.2
0.0240	1.21	40	0.0600	0.0600	0.0182	298	74.4	552	93.9
0.0300	1.50	40	0.0740	0.0740	0.0227	478	119	892	152
0.0360	1.79	40	0.0876	0.0876	0.0272	701	175	1315	224

ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf)																
SPAN LENGTH (ft)		1-SPAN					2-SPAN					3-SPAN				
		BASE STEEL THICKNESS (in.)					BASE STEEL THICKNESS (in.)					BASE STEEL THICKNESS (in.)				
		0.0150	0.0180	0.0240	0.0300	0.0360	0.0150	0.0180	0.0240	0.0300	0.0360	0.0150	0.0180	0.0240	0.0300	0.0360
1.5	S	257	323	426	525	622	260	320	426	525	622	324	400	532	656	778
	D	297	355	472	589	704	712	853	1134	1412	1690	561	672	893	1112	1331
2.0	S	145	182	239	295	350	146	180	239	295	350	183	225	299	369	437
	D	125	150	199	248	297	300	360	478	596	713	236	283	377	469	561
2.5	S	93	116	153	189	224	93	115	153	189	224	117	144	192	236	280
	D	64	77	102	127	152	154	184	245	305	365	121	145	193	240	287
3.0	S	64	81	106	131	156	65	80	106	131	156	81	100	133	164	194
	D	37	44	59	74	88	89	107	142	177	211	70	84	112	139	166
3.5	S	47	59	78	96	114	48	59	78	96	114	60	74	98	121	143
	D	23	28	37	46	55	56	67	89	111	133	44	53	70	88	105
4.0	S	36	45	60	74	87	37	45	60	74	87	46	56	75	92	109
	D	16	19	25	31	37	38	45	60	74	89	30	35	47	59	70
4.5	S	29	36	47	58	69	29	36	47	58	69	36	44	59	73	86
	D	11	13	17	22	26	26	32	42	52	63	21	25	33	41	49
5.0	S	23	29	38	47	56	23	29	38	47	56	29	36	48	59	70
	D	8	10	13	16	19	19	23	31	38	46	15	18	24	30	36
5.5	S	19	24	32	39	46	19	24	32	39	46	24	30	40	49	58
	D	6	7	10	12	14	14	17	23	29	34	11	14	18	23	27
6.0	S		20	27	33	39	16	20	27	33	39	20	25	33	41	49
	D		6	7	9	11	11	13	18	22	26	9	10	14	17	21

1. Based on ASTM A 653 structural steel.
2. Values in row "S" are based on strength.
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculations. See Example.
5. Allowable Strength Design principles were used in accordance with AISI S100-12.



3" Form Deck



3" Form Deck

- 3" form deck is used for reinforced concrete slabs and as a roof or lightweight insulating concrete roof deck system.
- Using 3" Form Deck deck allows to space the structural members to over 16 feet on center without additional shoring.
- OEG Form Deck products meet required steel deck certifications in accordance with the specifications of the Steel Deck Institute and conforms to ASTM A1008/A1008M for uncoated and painted deck, A653/A653M for galvanized
- 3" Form Deck are SDI and UL approved



SECTION PROPERTIES (PER FOOT OF WIDTH)									
Base Steel Thickness (in.)	Weight (psf)	Yield Stress (ksi)	Sec. Modulus		Deflection Moment of Inertia (in ⁴)	Allowable Web Crippling Data			
			Midspan	Support		P _{e1} End (lb)	P _{e2} End (lb)	P _{i1} Interior (lb)	P _{i2} Interior (lb)
			(in ³)	(in ³)					
0.0295	1.74	40	0.430	0.430	0.740	105	26.3	225	38.2
0.0358	2.10	40	0.556	0.556	0.931	161	40.3	341	57.9
0.0474	2.77	40	0.803	0.803	1.26	297	74.2	619	105
0.0598	3.47	40	1.04	1.04	1.59	490	122	1012	172

ALLOWABLE UNIFORMLY DISTRIBUTED LOADS (psf)													
SPAN LENGTH (ft)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)			
		0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598	0.0295	0.0358	0.0474	0.0598
6.0	S	191	247	356	460	191	247	356	460	239	309	445	575
	D	299	377	509	642	718	904	1222	1540	566	712	963	1213
6.5	S	163	210	303	392	163	210	303	392	203	263	379	490
	D	235	296	401	505	565	711	961	1211	445	560	757	954
7.0	S	140	181	262	338	140	181	262	338	175	227	327	422
	D	188	237	321	404	452	570	770	970	356	448	606	764
7.5	S	122	158	228	294	122	158	228	294	153	197	285	368
	D	153	193	261	329	368	463	626	788	290	365	493	621
8.0	S	107	139	200	259	107	139	200	259	134	174	250	323
	D	126	159	215	271	303	382	516	650	239	300	406	512
8.5	S	95	123	177	229	95	123	177	229	119	154	222	286
	D	105	133	179	226	253	318	430	542	199	250	339	427
9.0	S	85	110	158	204	85	110	158	204	106	137	198	255
	D	89	112	151	190	213	268	362	456	168	211	285	359
9.5	S	76	98	142	183	76	98	142	183	95	123	178	229
	D	75	95	128	162	181	228	308	388	142	179	243	306
10.0	S	69	89	128	166	69	89	128	166	86	111	160	207
	D	65	81	110	139	155	195	264	333	122	154	208	262
10.5	S	62	81	116	150	62	81	116	150	78	101	145	188
	D	56	70	95	120	134	169	228	287	106	133	180	226
11.0	S	57	73	106	137	57	73	106	137	71	92	132	171
	D	49	61	83	104	117	147	198	250	92	116	156	197
11.5	S	52	67	97	125	52	67	97	125	65	84	121	156
	D	43	54	72	91	102	128	174	219	80	101	137	172
12.0	S	48	62	89	115	48	62	89	115	60	77	111	144
	D	37	47	64	80	90	113	153	192	71	89	120	152
12.5	S	44	57	82	106	44	57	82	106	55	71	103	132
	D	33	42	56	71	79	100	135	170	63	79	106	134
13.0	S	41	53	76	98	41	53	76	98	51	66	95	122
	D	29	37	50	63	71	89	120	151	56	70	95	119
13.5	S	38	49	70	91	38	49	70	91	47	61	88	114
	D	26	33	45	56	63	79	107	135	50	63	85	106
14.0	S	35	45	65	84	35	45	65	84	44	57	82	106
	D	24	30	40	51	57	71	96	121	45	56	76	95

1. Based on ASTM A 653 structural steel.
2. Values in row "S" are based on strength.
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculations. See Example.
5. Allowable Strength Design principles were used in accordance with AISI S100-12.

GENERAL INFORMATION

AND USE OF LOAD TABLES

General

Presented in the OEG steel deck load tables are allowable uniformly distributed loads.

Steel

Specification – Conforms to ASTM A653 Grade 40; Yield stress 40 ksi and tensile stress of 55 ksi.

Finishes – G60 or G90. For heavier galvanizing, refer to ASTM A653.

Design Considerations

Strength – Allowable Strength Design (ASD) principles were used in the development of the allowable loads in accordance with AISI S100–12, North American Specification for the Design of Cold Formed Steel Structural Members.

The allowable uniformly distributed strength load (S) in the table must be equal to or greater than

(Dead load, DL, + Live load, LL)

Web Crippling Check—The allowable web crippling load must be checked for the bearing length under consideration (see example).

Serviceability (Deflection) – The effective moment of inertia for deflection determination has been calculated based on an assumed live load stress of $0.6F_y$.

The allowable uniformly distributed deflection load (D) in the table must be equal to or greater than

(Live load, LL).

Example:

(Use of Load Tables)

1.5" ROOF DECK

Given:

- 3-SPAN continuous, L = 8 ft each span
- Deck thickness, t = 0.0295 in.
- L/240 deflection limit
- Bearing length, N = 2 in.
- Nominal loads
 - 1) Dead loads (DL)
 - a) deck 2.0 psf
 - b) superimposed 8.2 psfDL = 10.2 psf
 - 2) Live load (LL) LL = 40 psf

Solution:

STRENGTH

1) Total load

$$[LL + DL]$$

$$[40 + 10.2] = 50.2 \text{ psf}$$

2) Allowable load (from Table under "S")

is **57 psf**

Since **57 > 50.2** OK

3) Check end web crippling (N = 2 in.)

a) End reaction

$$0.400(50.2)8.0 = 161 \text{ lb/ft}$$

b) Allowable end reaction (from Section Property Table)

$$P_e = P_{e1} + P_{e2} \sqrt{N/t}$$

$$P_e = 220 + 55.0 \sqrt{2/0.0295} = 673 \text{ lb/ft}$$

Since **673 > 161** OK

4) Check interior web crippling (N = 2 in.)

a) Interior reaction

$$1.10(50.2)8.0 = 442 \text{ lb/ft}$$

b) Allowable interior reaction (from Section Property

Table)

$$\sqrt{N/t}$$

$$P_i = P_{i1} + P_{i2} \sqrt{2/0.0295}$$

$$P_i = 377 + 64.1 = 905 \text{ lb/ft}$$

Since **905 > 442** OK

DEFLECTION

From Table under "D" (L/180) = 54 psf

For L/240, multiply 54 by $180/240 = 40.5$ psf.

Since **40.5 > 40** OK



TECHNICAL NOTES

1.5" and 3" OEG COMPOSITE FLOOR SLABS

Material Properties

1. The two OEG composite steel decks are the 1.5" and 3" decks with embossments rolled into the web elements to achieve the composite interlocking capacity between the steel deck and concrete.
2. Steel conforms to ASTM A653 SS Grade 40 with G60 or G90 surface coating.
3. Steel deck section properties were calculated in accordance with AISI S100-12.
4. Concrete is based on normal weight of 145 pcf with a minimum compressive strength of 3 ksi.

Load Tables

1. Loads are allowable uniformly distributed loads resulting from human occupancy. Load and Resistance Factor Design (LRFD) principles were used in the establishment of the load tables in accordance with SDI C-2011.
2. Loads greater than **200 psf** are commonly the result of large concentrated dynamic loads. In such cases, contact OEG for additional design information.
3. The steel deck provides the positive reinforcement for the simply supported composite slab and no additional reinforcing steel is required. To control shrinkage and temperature cracking, a minimum steel wire mesh of 6 x 6 - 10/10 is recommended.
4. Shoring requirements were established in accordance with SDI C-2011.

For the 1.5" composite slab

- a) Minimum end bearing length = 1.5 in.
- b) Minimum interior bearing length = 3.0 in.

For the 3" composite slab

- a) Minimum end bearing length = 3 in.
- b) Minimum interior bearing length = 6.0 in.

5. To establish the shear-bond capacity of both composite slab systems, laboratory tests were carried out at the Structural Testing and Research laboratory, Cambridge, Ontario, Canada.
6. All technical information and load tables were prepared by Dr. R.M. Schuster, Professor Emeritus of Structural Engineering, University of Waterloo, Ontario, Canada.

Example:

Determine the uniformly distributed live load that can be placed on the 1.5" OEG composite floor slab, given the following information:

Given: 1.5" Composite Floor Slab

- Base steel deck thickness = 0.0295 in.
- Yield stress = 40 ksi
- Normal weight concrete = 145 lb/ft³
- Overall slab depth = 4.5 in.
- 2-Span deck, each = 11.0 ft
- Nominal superimposed dead load, DL = 38.0 psf

Solution:

The allowable load in (psf) from the load table must be $\geq [LL + (1.20/1.60)DL] = [LL + 0.75(DL)]$

where

LL = nominal live load

DL = nominal superimposed dead load

From the load table under a 11.0 ft span, the allowable load is **125 psf**, therefore,

$125 \geq [LL + 0.75(38.0)]$ and solving for LL,

$$LL = 125 - 0.75(38.0) = \mathbf{96.5 \text{ psf}}$$

Since the maximum unshored 2-SPAN deck is

6'-7", **one** shore support is required at mid-span in each span.

Note:

The self-weight of the steel deck and concrete slab have been accounted for in the allowable uniformly distributed loads given in the composite slab load tables.

The information contained herein is intended as a general guide to the design professional. Anyone making use of the information contained herein assumes any and all liability arising from such use. If the user requires clarification or additional information, do not hesitate to contact OEG directly.

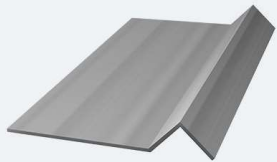
Deck Accessories



Side Closure



Channel Closure



Filler Strip



Bent Plate



Z Closure



Finish Strip





Pour Stop



End Closure



Ridge Plate



Valley Plate



J Closure



Deck Plate



J Channel



Column Closure



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