

OPTIONAL – SL (SIDING LAP)

S-15 ROOF DECK METRIC

STEEL DECK SECTION PROPERTIES (Per foot of width)

Base Steel Thickness (mm)	Coated Steel Thickness (Z275) (mm)	Coated Weight (kg/m ²)	Section Modulus (10 ³ mm ³)		Deflection Inertia (10 ⁶ mm ⁴)	Specified Web Crippling Data			
			Midspan	Support		P _{e1} End (kN)	P _{e2} End (kN)	P _{i1} Interior (kN)	P _{i2} Interior (kN)
0.762	0.802	8.25	10.3	10.2	0.239	2.74	0.686	5.21	0.886
0.914	0.954	9.85	12.6	13.0	0.300	4.05	1.01	7.69	1.31
1.22	1.26	13.0	17.2	17.7	0.414	7.46	1.87	14.1	2.40
1.52	1.56	16.2	21.6	21.8	0.516	11.9	2.98	22.6	3.84

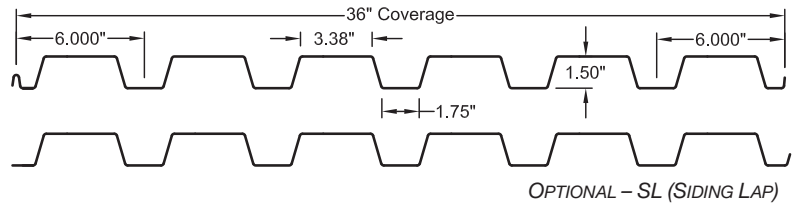
MAXIMUM SPECIFIED UNIFORMLY DISTRIBUTED LOADS (psf)

SPAN LENGTH (m)		1 - SPAN BASE STEEL THICKNESS (mm)				2 SPAN BASE STEEL THICKNESS (mm)				3 - SPAN BASE STEEL THICKNESS (mm)			
		0.762	0.914	1.22	1.52	0.762	0.914	1.22	1.52	0.762	0.914	1.22	1.52
		1.0	S	11.3	13.9	19.0	23.9	11.3	14.4	19.5	24.1	14.1	17.9
	D	20.7	26.0	35.9	44.7	49.8	62.4	86.1	107	39.2	49.1	67.8	84.5
1.2	S	7.86	9.67	13.2	16.6	7.83	9.96	13.5	16.7	9.79	12.5	16.9	20.9
	D	12.0	15.0	20.8	25.9	28.8	36.1	49.8	62.1	22.7	28.4	39.2	48.9
1.4	S	5.78	7.10	9.67	12.2	5.75	7.32	9.94	12.3	7.19	9.15	12.4	15.4
	D	7.56	9.47	13.1	16.3	18.1	22.7	31.4	39.1	14.3	17.9	24.7	30.8
1.6	S	4.42	5.44	7.4	9.33	4.40	5.60	7.61	9.41	5.50	7.01	9.51	11.8
	D	5.06	6.34	8.76	10.9	12.2	15.2	21.0	26.2	9.57	12.0	16.6	20.6
1.8	S	3.50	4.30	5.85	7.38	3.48	4.43	6.01	7.43	4.35	5.54	7.52	9.29
	D	3.56	4.45	6.15	7.67	8.53	10.69	14.8	18.4	6.72	8.42	11.6	14.5
2.0	S	2.83	3.48	4.74	5.97	2.82	3.59	4.87	6.02	3.52	4.48	6.09	7.53
	D	2.59	3.25	4.48	5.59	6.22	7.79	10.8	13.4	4.90	6.14	8.47	10.6
2.2	S	2.34	2.88	3.91	4.94	2.33	2.96	4.03	4.98	2.91	3.71	5.03	6.22
	D	1.95	2.44	3.37	4.20	4.67	5.86	8.08	10.1	3.68	4.61	6.37	7.94
2.4	S	1.97	2.42	3.29	4.15	1.96	2.49	3.38	4.18	2.45	3.11	4.23	5.23
	D	1.50	1.88	2.59	3.23	3.60	4.51	6.23	7.76	2.83	3.55	4.90	6.11
2.6	S	1.68	2.06	2.80	3.53	1.67	2.12	2.88	3.56	2.08	2.65	3.60	4.45
	D	1.18	1.48	2.04	2.54	2.83	3.55	4.90	6.11	2.23	2.79	3.86	4.81
2.8	S	1.44	1.78	2.42	3.05	1.44	1.83	2.49	3.07	1.80	2.29	3.11	3.84
	D	0.94	1.18	1.63	2.04	2.27	2.84	3.92	4.89	1.79	2.24	3.09	3.85
3.0	S	1.26	1.55	2.11	2.66	1.25	1.59	2.17	2.68	1.57	1.99	2.71	3.34
	D	0.77	0.96	1.33	1.66	1.84	2.31	3.19	3.97	1.45	1.82	2.51	3.13
3.2	S	1.11	1.36	1.85	2.33	1.10	1.40	1.90	2.35	1.38	1.75	2.38	2.94
	D	0.63	0.79	1.09	1.36	1.52	1.90	2.63	3.27	1.20	1.50	2.07	2.58
3.4	S	0.98	1.20	1.64	2.07	0.98	1.24	1.69	2.08	1.22	1.55	2.11	2.60
	D	0.53	0.66	0.91	1.14	1.27	1.59	2.19	2.73	1.00	1.25	1.72	2.15
3.6	S	0.87	1.07	1.46	1.84	0.87	1.11	1.50	1.86	1.09	1.38	1.88	2.32
	D	0.44	0.56	0.77	0.96	1.07	1.34	1.85	2.30	0.84	1.05	1.45	1.81
3.8	S	0.78	0.96	1.31	1.65	0.78	0.99	1.35	1.67	0.98	1.24	1.69	2.08
	D	0.38	0.47	0.65	0.81	0.91	1.14	1.57	1.96	0.71	0.89	1.24	1.54
4.0	S	0.71	0.87	1.18	1.49	0.70	0.90	1.22	1.51	0.88	1.12	1.52	1.88
	D	.032	0.41	0.56	0.70	0.78	0.97	1.35	1.68	0.61	0.77	1.06	1.32

- Notes:**
1. Based on ASTM A 653 Grade 33 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.

Limit States Design principles were used in accordance with CSA Standard S136-01





S-15 ROOF DECK IMPERIAL

STEEL DECK SECTION PROPERTIES (Per foot of width)

Base Steel Thickness (in.)	Coated Steel Thickness (G90) (in.)	Coated Weight (psf)	Section Modulus (in ³)		Deflection Inertia (in ⁴)	Specified Web Crippling Data			
			Midspan	Support		P _{e1} End (lb)	P _{e2} End (lb)	P _{i1} Interior (lb)	P _{i2} Interior (lb)
0.030	0.0315	1.69	0.191	0.190	0.176	186	46.5	353	60.1
0.036	0.0375	2.02	0.235	0.242	0.220	275	68.6	521	88.6
0.048	0.0495	2.67	0.319	0.328	0.303	506	126	959	163
0.060	0.0615	3.32	0.403	0.406	0.378	809	202	1532	260

MAXIMUM SPECIFIED UNIFORMLY DISTRIBUTED LOADS (psf)

SPAN LENGTH (ft)		1 - SPAN BASE STEEL THICKNESS (INCHES)				2 SPAN BASE STEEL THICKNESS (INCHES)				3 - SPAN BASE STEEL THICKNESS (INCHES)			
		0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060
		3.0	S	281	344	468	591	279	355	481	595	349	444
	D	567	711	980	1221	1361	1705	2352	2931	1072	1343	1852	2308
3.5	S	206	253	344	434	205	261	354	437	256	326	442	546
	D	357	447	617	769	857	1074	1481	1846	675	846	1166	1454
4.0	S	158	194	263	332	157	200	271	335	196	250	339	418
	D	239	300	413	515	574	719	992	1237	452	567	781	974
4.5	S	125	153	208	263	124	158	214	264	155	197	267	331
	D	168	211	290	362	403	505	697	869	318	398	549	684
5.0	S	101	124	169	213	100	128	173	214	126	160	217	268
	D	122	153	212	264	294	368	508	633	232	290	400	499
5.5	S	83	102	139	176	83	106	143	177	104	132	179	221
	D	92	115	159	198	221	277	382	476	174	218	301	375
6.0	S	70	86	117	148	70	89	120	149	87	111	150	186
	D	71	89	123	153	170	213	294	366	134	168	232	289
6.5	S	60	73	100	126	59	76	103	127	74	95	128	158
	D	56	70	96	120	134	168	231	288	105	132	182	227
7.0	S	52	63	86	108	51	65	88	109	64	82	111	137
	D	45	56	77	96	107	134	185	231	84	106	146	182
7.5	S	45	55	75	95	45	57	77	95	56	71	96	119
	D	36	45	63	78	87	109	151	188	69	86	119	148
8.0	S	39	48	66	83	39	50	68	84	49	62	85	105
	D	30	37	52	64	72	90	124	155	57	71	98	122
8.5	S	35	43	58	74	35	44	60	74	43	55	75	93
	D	25	31	43	54	60	75	103	129	47	59	81	101
9.0	S	31	38	52	66	31	39	53	66	39	49	67	83
	D	21	26	36	45	50	63	87	109	40	50	69	85
9.5	S	28	34	47	59	28	35	48	59	35	44	60	74
	D	18	22	31	38	43	54	74	92	34	42	58	73
10.0	S	25	31	42	53	25	32	43	54	31	40	54	67
	D	15	19	26	33	37	46	64	79	29	36	50	62
10.5	S	23	28	38	48	23	29	39	49	28	36	49	61
	D	13	17	23	28	32	40	55	68	25	31	43	54
11.0	S	21	26	35	44	21	26	36	44	26	33	45	55
	D	12	14	20	25	28	35	48	59	22	27	38	47

- Notes:**
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