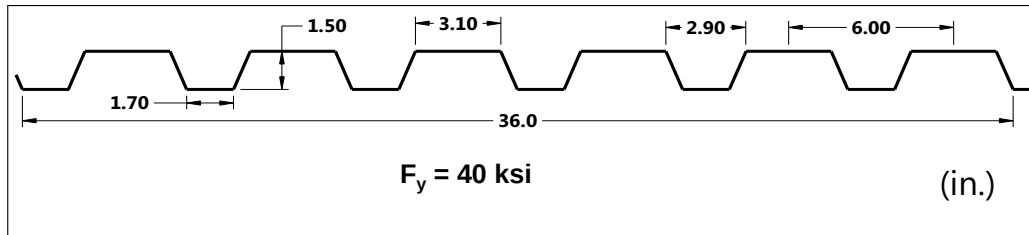


ACCUFORM METAL LTD.

AFRD 15-36 ROOF DECK



SECTION PROPERTIES (PER FOOT OF WIDTH)

IMPERIAL	Base Steel Thickness (in.)	Weight G90 (psf)	Yield Stress, F_y (ksi)	Sec. Modulus		Deflection Moment of Inertia (in ⁴)	Factored Web Crippling Data			
				Midspan	Support		P_{e1} End (lb/ft)	P_{e2} End (lb/ft)	P_{i1} Interior (lb/ft)	P_{i2} Interior (lb/ft)
				(in ³)	(in ³)					
	0.030	1.69	40	0.182	0.183	0.168	326	81.4	624	106
	0.036	2.02	40	0.231	0.233	0.212	481	120	921	156
	0.048	2.67	40	0.314	0.325	0.294	887	222	1691	288
	0.060	3.32	40	0.397	0.402	0.367	1419	355	2702	459

FACTORED STRENGTH AND SPECIFIED DEFLECTION UNIFORMLY DISTRIBUTED LOADS (psf)

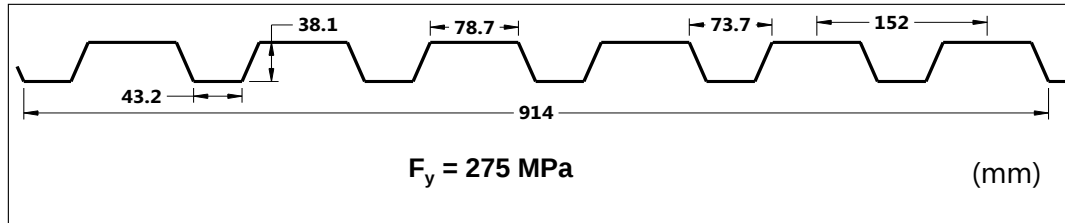
SPAN LENGTH (ft)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)			
		0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060
4.0	S	273	346	471	596	274	350	487	602	343	437	609	753
	D	172	216	300	375	413	519	720	900	325	409	567	709
4.5	S	215	273	373	471	217	276	385	476	271	345	481	595
	D	121	152	211	263	290	364	506	632	229	287	398	498
5.0	S	175	221	302	381	176	224	312	385	219	280	390	482
	D	88	111	154	192	212	266	369	461	167	209	290	363
5.5	S	144	183	249	315	145	185	258	319	181	231	322	398
	D	66	83	115	144	159	200	277	346	125	157	218	273
6.0	S	121	154	210	265	122	155	217	268	152	194	271	335
	D	51	64	89	111	122	154	213	267	96	121	168	210
6.5	S	103	131	179	226	104	132	184	228	130	166	231	285
	D	40	50	70	87	96	121	168	210	76	95	132	165
7.0	S	89	113	154	195	90	114	159	197	112	143	199	246
	D	32	40	56	70	77	97	134	168	61	76	106	132
7.5	S	78	98	134	169	78	99	139	171	98	124	173	214
	D	26	33	46	57	63	79	109	137	49	62	86	108
8.0	S	68	86	118	149	69	87	122	151	86	109	152	188
	D	22	27	38	47	52	65	90	113	41	51	71	89
8.5	S	60	77	104	132	61	77	108	133	76	97	135	167
	D	18	23	31	39	43	54	75	94	34	43	59	74
9.0	S	54	68	93	118	54	69	96	119	68	86	120	149
	D	15	19	26	33	36	46	63	79	29	36	50	62
9.5	S	48	61	84	106	49	62	86	107	61	77	108	133
	D	13	16	22	28	31	39	54	67	24	30	42	53
10.0	S	44	55	75	95	44	56	78	96	55	70	97	120
	D	11	14	19	24	26	33	46	58	21	26	36	45
10.5		40	50	68	86	40	51	71	87	50	63	88	109
		10	12	17	21	23	29	40	50	18	23	31	39
11.0		36	46	62	79	36	46	64	80	45	58	81	100
		8	10	14	18	20	25	35	43	16	20	27	34

Notes:

- 1 Based on ASTM A653 Grade 40 structural steel.
- 2 Values in row "S" are based on factored strength.
- 3 Values in row "D" are based on deflection of $L/240$.
- 4 For $L/180$, multiply values in row "D" by 1.33.
- 5 Web crippling not included in strength calculations. See Example.
- 6 Limit States Design principles were used in accordance with CSA Standard S136-16.
- 7 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.

ACCUFORM METAL LTD.

AFRD 15-36 ROOF DECK



SECTION PROPERTIES (PER METRE OF WIDTH)

METRIC	Base Steel Thickness (mm)	Mass Z275 (kg/m ²)	Yield Stress, F_y (MPa)	Sec. Modulus		Deflection Moment of Inertia (x10 ⁶ mm ⁴)	Factored Web Crippling Data			
				Midspan	Support		P_{e1} End (kN/m)	P_{e2} End (kN/m)	P_{i1} Interior (kN/m)	P_{i2} Interior (kN/m)
				(x10 ³ mm ³)	(x10 ³ mm ³)					
	0.762	8.25	275	9.78	9.84	0.230	4.74	1.19	9.08	1.54
	0.914	9.85	275	12.4	12.5	0.289	7.00	1.75	13.4	2.28
	1.219	13.0	275	16.9	17.5	0.401	12.9	3.23	24.6	4.18
	1.524	16.2	275	21.4	21.6	0.501	20.6	5.16	39.3	6.68

FACTORED STRENGTH AND SPECIFIED DEFLECTION UNIFORMLY DISTRIBUTED LOADS (kPa)

SPAN LENGTH (mm)		1-SPAN					2-SPAN					3-SPAN				
		BASE STEEL THICKNESS (mm)					BASE STEEL THICKNESS (mm)					BASE STEEL THICKNESS (mm)				
		0.762	0.914	1.219	1.524		0.762	0.914	1.219	1.524		0.762	0.914	1.219	1.524	
1200	S	13.5	17.0	23.2	29.4		13.5	17.2	24.0	29.7		16.9	21.6	30.0	37.1	
	D	8.65	10.9	15.1	18.8		20.8	26.1	36.2	45.2		16.3	20.5	28.5	35.6	
1400	S	9.88	12.5	17.1	21.6		9.94	12.7	17.6	21.8		12.4	15.8	22.1	27.3	
	D	5.45	6.84	9.49	11.9		13.1	16.4	22.8	28.5		10.3	12.9	17.9	22.4	
1600	S	7.56	9.59	13.1	16.5		7.61	9.70	13.5	16.7		9.51	12.1	16.9	20.9	
	D	3.65	4.58	6.36	7.95		8.76	11.0	15.3	19.1		6.90	8.66	12.0	15.0	
1800	S	5.98	7.58	10.3	13.1		6.01	7.66	10.7	13.2		7.52	9.58	13.3	16.5	
	D	2.56	3.22	4.47	5.58		6.15	7.72	10.7	13.4		4.84	6.08	8.44	10.6	
2000	S	4.84	6.14	8.37	10.6		4.87	6.21	8.64	10.7		6.09	7.76	10.8	13.4	
	D	1.87	2.35	3.26	4.07		4.48	5.63	7.81	9.76		3.53	4.43	6.15	7.69	
2200	S	4.00	5.07	6.91	8.74		4.02	5.13	7.14	8.83		5.03	6.41	8.93	11.0	
	D	1.40	1.76	2.45	3.06		3.37	4.23	5.87	7.34		2.65	3.33	4.62	5.78	
2400	S	3.36	4.26	5.81	7.34		3.38	4.31	6.00	7.42		4.23	5.39	7.50	9.28	
	D	1.08	1.36	1.88	2.35		2.59	3.26	4.52	5.65		2.04	2.57	3.56	4.45	
2600	S	2.86	3.63	4.95	6.26		2.88	3.67	5.11	6.32		3.60	4.59	6.39	7.90	
	D	0.85	1.07	1.48	1.85		2.04	2.56	3.56	4.44		1.61	2.02	2.80	3.50	
2800	S	2.47	3.13	4.27	5.39		2.48	3.17	4.41	5.45		3.11	3.96	5.51	6.81	
	D	0.68	0.85	1.19	1.48		1.63	2.05	2.85	3.56		1.29	1.62	2.24	2.80	
3000	S	2.15	2.73	3.72	4.70		2.16	2.76	3.84	4.75		2.71	3.45	4.80	5.94	
	D	0.55	0.69	0.96	1.21		1.33	1.67	2.32	2.89		1.05	1.31	1.82	2.28	
3200	S	1.89	2.40	3.27	4.13		1.90	2.42	3.38	4.17		2.38	3.03	4.22	5.22	
	D	0.46	0.57	0.79	0.99		1.09	1.37	1.91	2.38		0.86	1.08	1.50	1.88	
3400	S	1.68	2.12	2.90	3.66		1.69	2.15	2.99	3.70		2.11	2.68	3.74	4.62	
	D	0.38	0.48	0.66	0.83		0.91	1.15	1.59	1.99		0.72	0.90	1.25	1.57	
3600	S	1.49	1.89	2.58	3.26		1.50	1.92	2.67	3.30		1.88	2.39	3.33	4.12	
	D	0.32	0.40	0.56	0.70		0.77	0.97	1.34	1.67		0.61	0.76	1.06	1.32	
3800	S	1.34	1.70	2.32	2.93		1.35	1.72	2.39	2.96		1.69	2.15	2.99	3.70	
	D	0.27	0.34	0.47	0.59		0.65	0.82	1.14	1.42		0.51	0.65	0.90	1.12	
4000	S	1.21	1.53	2.09	2.64		1.22	1.55	2.16	2.67		1.52	1.94	2.70	3.34	
	D	0.23	0.29	0.41	0.51		0.56	0.70	0.98	1.22		0.44	0.55	0.77	0.96	

Notes:

- Based on ASTM A653M Grade 275 structural steel.
- Values in row "S" are based on factored strength.
- Values in row "D" are based on deflection of L/240.
- For L/180, multiply values in row "D" by 1.33.
- Web crippling not included in strength calculations. See Example.
- Limit States Design principles were used in accordance with CSA Standard S136-16.
- Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.