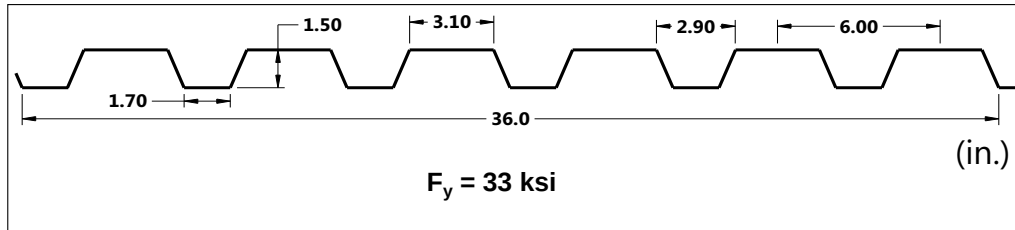


ACCUFORM METAL LTD.

AFRD 15-36AC 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)	P _{e2} End (lb)	P _{i1} Interior (lb)	P _{i2} Interior (lb)
				(in ³)	(in ³)					
	0.030	1.69	33	0.190	0.189	0.173	269	67.2	515	87.5
	0.036	2.02	33	0.233	0.241	0.216	397	99.2	759	129
	0.048	2.67	33	0.318	0.325	0.295	731	183	1395	237
	0.060	3.32	33	0.400	0.402	0.367	1171	293	2229	379

FACTORED STRENGTH AND SPECIFIED DEFLECTION UNIFORMLY DISTRIBUTED LOADS (psf)

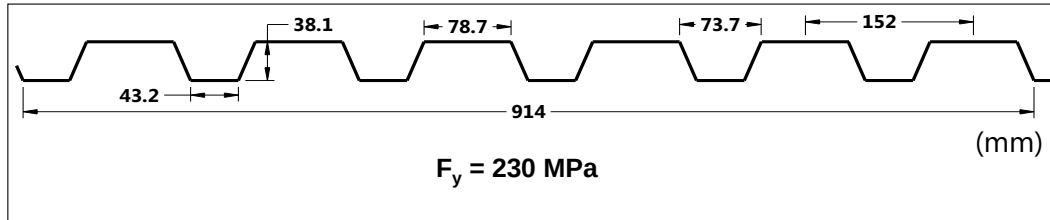
SPAN LENGTH (ft)		1-SPAN					2-SPAN					3-SPAN				
		BASE STEEL THICKNESS (in.)					BASE STEEL THICKNESS (in.)					BASE STEEL THICKNESS (in.)				
		0.030	0.036	0.048	0.060		0.030	0.036	0.048	0.060		0.030	0.036	0.048	0.060	
4.0	S	224	274	373	471		222	283	382	472		278	353	477	590	
	D	177	220	301	375		424	529	723	900		334	417	569	709	
4.5	S	177	217	295	372		176	223	302	373		220	279	377	466	
	D	124	155	212	263		298	371	508	632		235	293	400	498	
5.0	S	143	175	239	301		142	181	244	302		178	226	305	378	
	D	90	113	154	192		217	271	370	461		171	213	292	363	
5.5	S	118	145	197	249		118	150	202	250		147	187	252	312	
	D	68	85	116	144		163	203	278	346		128	160	219	273	
6.0	S	99	122	166	209		99	126	170	210		124	157	212	262	
	D	52	65	89	111		126	157	214	267		99	123	169	210	
6.5	S	85	104	141	178		84	107	145	179		105	134	181	223	
	D	41	51	70	87		99	123	168	210		78	97	133	165	
7.0	S	73	90	122	154		73	92	125	154		91	115	156	193	
	D	33	41	56	70		79	99	135	168		62	78	106	132	
7.5	S	64	78	106	134		63	80	109	134		79	101	136	168	
	D	27	33	46	57		64	80	110	137		51	63	86	108	
8.0	S	56	69	93	118		56	71	95	118		70	88	119	148	
	D	22	28	38	47		53	66	90	113		42	52	71	89	
8.5	S	50	61	83	104		49	63	85	105		62	78	106	131	
	D	18	23	31	39		44	55	75	94		35	43	59	74	
9.0	S	44	54	74	93		44	56	75	93		55	70	94	117	
	D	16	19	26	33		37	46	63	79		29	37	50	62	
9.5	S	40	49	66	83		39	50	68	84		49	63	85	105	
	D	13	16	22	28		32	39	54	67		25	31	43	53	
10.0	S	36	44	60	75		36	45	61	76		44	57	76	94	
	D	11	14	19	24		27	34	46	58		21	27	36	45	
10.5	S	32	40	54	68		32	41	55	69		40	51	69	86	
	D	10	12	17	21		23	29	40	50		18	23	31	39	
11.0	S	30	36	49	62		29	37	50	62		37	47	63	78	
	D	8	11	14	18		20	25	35	43		16	20	27	34	

Notes:

- Based on ASTM A653 Grade 33 structural steel.
- Values in row "S" are based on strength.
- Values in row "D" are based on deflection of 1/240th span.
- Bending strength and stiffness considerations were based on CSSBI Sheet Steel Facts 27, September 2010.
- Web crippling strength consideration was based on CSSBI Sheet Steel Facts 30, September 2010.
- 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.

ACCUFORM METAL LTD.

AFRD 15-36AC 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 ($\times 10^6 \text{ mm}^4$)	Factored Web Crippling Data			
				Midspan	Support		P_{e1} End (kN)	P_{e2} End (kN)	P_{i1} Interior (kN)	P_{i2} Interior (kN)
				($\times 10^3 \text{ mm}^3$)	($\times 10^3 \text{ mm}^3$)					
	0.762	8.25	230	10.2	10.2	0.236	3.96	0.991	7.60	1.29
	0.914	9.85	230	12.5	12.9	0.294	5.86	1.46	11.2	1.91
	1.22	13.0	230	17.1	17.5	0.402	10.8	2.70	20.6	3.50
	1.52	16.2	230	21.5	21.6	0.501	17.3	4.32	32.9	5.59

FACTORED STRENGTH AND SPECIFIED DEFLECTION UNIFORMLY DISTRIBUTED LOADS (kPa)

SPAN LENGTH (m)		1-SPAN					2-SPAN					3-SPAN				
		BASE STEEL THICKNESS (mm)					BASE STEEL THICKNESS (mm)					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	
1.2	S	11.2	13.7	18.6	23.5		11.1	14.1	19.1	23.6		13.9	17.6	23.8	29.5	
	D	8.86	11.1	15.1	18.8		21.3	26.5	36.3	45.2		16.8	20.9	28.6	35.6	
1.4	S	8.19	10.1	13.7	17.3		8.15	10.4	14.0	17.3		10.2	13.0	17.5	21.7	
	D	5.58	6.96	9.53	11.9		13.4	16.7	22.9	28.5		10.6	13.2	18.0	22.4	
1.6	S	6.27	7.70	10.5	13.2		6.24	7.93	10.7	13.3		7.80	9.92	13.4	16.6	
	D	3.74	4.66	6.38	8.0		8.97	11.2	15.3	19.1		7.06	8.82	12.1	15.0	
1.8	S	4.96	6.08	8.28	10.4		4.93	6.27	8.48	10.5		6.16	7.84	10.6	13.1	
	D	2.63	3.28	4.48	5.58		6.30	7.86	10.8	13.4		4.96	6.19	8.47	10.6	
2.0	S	4.02	4.93	6.71	8.46		3.99	5.08	6.87	8.49		4.99	6.35	8.58	10.6	
	D	1.91	2.39	3.27	4.07		4.59	5.73	7.84	9.76		3.62	4.51	6.18	7.69	
2.2	S	3.32	4.07	5.55	6.99		3.30	4.20	5.68	7.02		4.13	5.24	7.09	8.77	
	D	1.44	1.79	2.45	3.06		3.45	4.31	5.89	7.34		2.72	3.39	4.64	5.78	
2.4	S	2.79	3.42	4.66	5.87		2.77	3.53	4.77	5.90		3.47	4.41	5.96	7.37	
	D	1.11	1.38	1.89	2.35		2.66	3.32	4.54	5.65		2.09	2.61	3.57	4.45	
2.6	S	2.38	2.92	3.97	5.01		2.36	3.00	4.06	5.02		2.95	3.76	5.08	6.28	
	D	0.87	1.09	1.49	1.85		2.09	2.61	3.57	4.44		1.65	2.05	2.81	3.50	
2.8	S	2.05	2.51	3.42	4.32		2.04	2.59	3.50	4.33		2.55	3.24	4.38	5.41	
	D	0.70	0.87	1.19	1.48		1.67	2.09	2.86	3.56		1.32	1.64	2.25	2.80	
3.0	S	1.78	2.19	2.98	3.76		1.78	2.26	3.05	3.77		2.22	2.82	3.82	4.72	
	D	0.57	0.71	0.97	1.21		1.36	1.70	2.32	2.89		1.07	1.34	1.83	2.28	
3.2	S	1.57	1.93	2.62	3.30		1.56	1.98	2.68	3.32		1.95	2.48	3.35	4.15	
	D	0.47	0.58	0.80	0.99		1.12	1.40	1.91	2.38		0.88	1.10	1.51	1.88	
3.4	S	1.39	1.71	2.32	2.93		1.38	1.76	2.38	2.94		1.73	2.20	2.97	3.67	
	D	0.39	0.49	0.67	0.83		0.93	1.17	1.60	1.99		0.74	0.92	1.26	1.57	
3.6	S	1.24	1.52	2.07	2.61		1.23	1.57	2.12	2.62		1.54	1.96	2.65	3.28	
	D	0.33	0.41	0.56	0.70		0.79	0.98	1.34	1.67		0.62	0.77	1.06	1.32	
3.8	S	1.11	1.37	1.86	2.34		1.11	1.41	1.90	2.35		1.38	1.76	2.38	2.94	
	D	0.28	0.35	0.48	0.59		0.67	0.84	1.14	1.42		0.53	0.66	0.90	1.12	
4.0	S	1.00	1.23	1.68	2.11		1.00	1.27	1.72	2.12		1.25	1.59	2.15	2.65	
	D	0.24	0.30	0.41	0.51		0.57	0.72	0.98	1.22		0.45	0.56	0.77	0.96	

Notes:

- Based on ASTM A653M Grade 230 structural steel.
- Values in row "S" are based on strength.
- Values in row "D" are based on deflection of 1/240th span.
- Bending strength and stiffness considerations were based on CSSBI Sheet Steel Facts 27, September 2010.
- Web crippling strength consideration was based on CSSBI Sheet Steel Facts 30, September 2010.
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