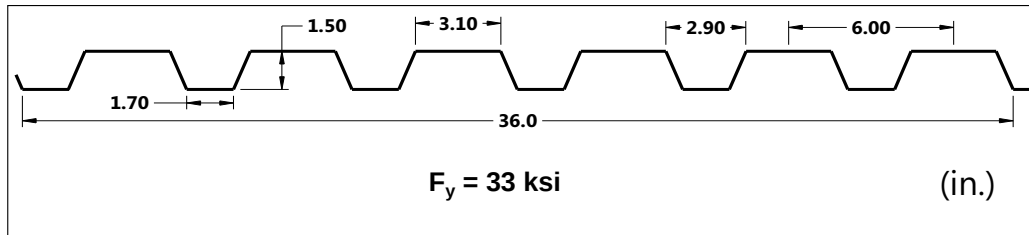


ACCUFORM METAL LTD.

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	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)

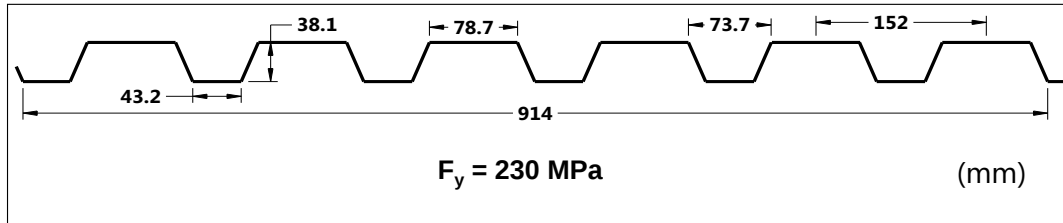
SPAN LENGTH (ft)		1-SPAN					2-SPAN					3-SPAN				
		BASE STEEL THICKNESS (in.)					BASE STEEL THICKNESS (in.)					BASE STEEL THICKNESS (in.)				
		0.030	0.036	0.048	0.060		0.030	0.036	0.048	0.060		0.030	0.036	0.048	0.060	
4.0	S	236	289	393	495		234	298	402	497		293	372	502	621	
	D	177	220	301	375		424	529	723	900		334	417	569	709	
4.5	S	186	228	310	391		185	235	318	393		231	294	397	491	
	D	124	155	212	263		298	371	508	632		235	293	400	498	
5.0	S	151	185	251	317		150	190	257	318		187	238	322	398	
	D	90	113	154	192		217	271	370	461		171	213	292	363	
5.5	S	125	153	208	262		124	157	213	263		155	197	266	329	
	D	68	85	116	144		163	203	278	346		128	160	219	273	
6.0	S	105	128	175	220		104	132	179	221		130	165	223	276	
	D	52	65	89	111		126	157	214	267		99	123	169	210	
6.5	S	89	109	149	188		89	113	152	188		111	141	190	235	
	D	41	51	70	87		99	123	168	210		78	97	133	165	
7.0	S	77	94	128	162		76	97	131	162		96	121	164	203	
	D	33	41	56	70		79	99	135	168		62	78	106	132	
7.5	S	67	82	112	141		67	85	114	141		83	106	143	177	
	D	27	33	46	57		64	80	110	137		51	63	86	108	
8.0	S	59	72	98	124		59	74	100	124		73	93	126	155	
	D	22	28	38	47		53	66	90	113		42	52	71	89	
8.5	S	52	64	87	110		52	66	89	110		65	82	111	138	
	D	18	23	31	39		44	55	75	94		35	43	59	74	
9.0	S	47	57	78	98		46	59	79	98		58	73	99	123	
	D	16	19	26	33		37	46	63	79		29	37	50	62	
9.5	S	42	51	70	88		42	53	71	88		52	66	89	110	
	D	13	16	22	28		32	39	54	67		25	31	43	53	
10.0	S	38	46	63	79		37	48	64	80		47	60	80	99	
	D	11	14	19	24		27	34	46	58		21	27	36	45	
10.5		34	42	57	72		34	43	58	72		42	54	73	90	
		10	12	17	21		23	29	40	50		18	23	31	39	
11.0		31	38	52	65		31	39	53	66		39	49	66	82	
		8	11	14	18		20	25	35	43		16	20	27	34	

Notes:

- 1 Based on ASTM A653 Grade 33 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	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
	1.219	13.0	230	17.1	17.5	0.402	10.8	2.70	20.6	3.50
	1.524	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 (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	11.7	14.4	19.6	24.7		11.7	14.9	20.1	24.8		14.6	18.6	25.1	31.0	
	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	
1400	S	8.63	10.6	14.4	18.2		8.58	10.9	14.8	18.2		10.7	13.6	18.4	22.8	
	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	
1600	S	6.60	8.11	11.0	13.9		6.57	8.35	11.3	14.0		8.21	10.4	14.1	17.5	
	D	3.74	4.66	6.38	7.95		8.97	11.2	15.3	19.1		7.06	8.82	12.1	15.0	
1800	S	5.22	6.40	8.72	11.0		5.19	6.60	8.92	11.0		6.49	8.25	11.2	13.8	
	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	
2000	S	4.23	5.19	7.06	8.90		4.20	5.34	7.23	8.94		5.26	6.68	9.04	11.2	
	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	
2200	S	3.49	4.29	5.84	7.36		3.47	4.42	5.97	7.39		4.34	5.52	7.47	9.23	
	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	
2400	S	2.94	3.60	4.90	6.18		2.92	3.71	5.02	6.21		3.65	4.64	6.27	7.76	
	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	
2600	S	2.50	3.07	4.18	5.27		2.49	3.16	4.28	5.29		3.11	3.95	5.35	6.61	
	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	
2800	S	2.16	2.65	3.60	4.54		2.15	2.73	3.69	4.56		2.68	3.41	4.61	5.70	
	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	
3000	S	1.88	2.31	3.14	3.96		1.87	2.38	3.21	3.97		2.34	2.97	4.02	4.97	
	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	
3200	S	1.65	2.03	2.76	3.48		1.64	2.09	2.82	3.49		2.05	2.61	3.53	4.36	
	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	
3400	S	1.46	1.80	2.44	3.08		1.45	1.85	2.50	3.09		1.82	2.31	3.13	3.87	
	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	
3600	S	1.30	1.60	2.18	2.75		1.30	1.65	2.23	2.76		1.62	2.06	2.79	3.45	
	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	
3800	S	1.17	1.44	1.96	2.47		1.16	1.48	2.00	2.48		1.46	1.85	2.50	3.09	
	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	
4000	S	1.06	1.30	1.77	2.23		1.05	1.34	1.81	2.23		1.31	1.67	2.26	2.79	
	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 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.