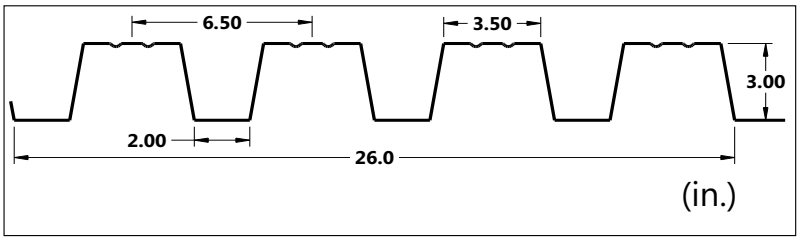
ACCUFORM METAL LTD. AFRD 3-26 ROOF DECK



F_y = 40 ksi

SECTION PROPERTIES (PER FOOT OF WIDTH)

IMPERIAL

Base Steel Thickness (in.)	Weight G90 (psf)	Yield Stress, F_y (ksi)	Sec. Modulus Midspan (in^3)	Sec. Modulus Support (in^3)	Deflection Moment of Inertia (in^4)	Factored Web Crippling Data P_{e1} End (lb/ft)	P_{e2} End (lb/ft)	P_{I1} Interior (lb/ft)	P_{I2} Interior (lb/ft)
0.030	2.32	40	0.431	0.449	0.781	293	73.1	605	103
0.036	2.77	40	0.554	0.567	0.981	436	109	893	152
0.048	3.68	40	0.776	0.813	1.38	814	204	1644	279
0.060	4.58	40	0.988	1.02	1.76	1313	328	2628	447

FACTORED STRENGTH AND SPECIFIED DEFLECTION UNIFORMLY DISTRIBUTED LOADS (psf)

SPAN LENGTH (ft)		1-SPAN BASE STEEL THICKNESS (in.)				2-SPAN BASE STEEL THICKNESS (in.)				3-SPAN 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
6.0	S	288	369	517	659	299	378	542	677	374	472	678	846
	D	237	297	419	532	568	713	1005	1276	447	562	791	1005
6.5	S	245	315	441	561	255	322	462	577	319	402	577	721
	D	186	234	329	418	446	561	790	1004	352	442	622	790
7.0	S	211	271	380	484	220	278	398	497	275	347	498	622
	D	149	187	264	335	357	449	633	804	281	354	498	633
7.5	S	184	236	331	421	191	242	347	433	239	302	434	542
	D	121	152	214	272	291	365	514	653	229	288	405	515
8.0	S	162	208	291	370	168	212	305	381	210	266	381	476
	D	100	125	177	224	239	301	424	538	189	237	334	424
8.5	S	143	184	258	328	149	188	270	337	186	235	338	422
	D	83	105	147	187	200	251	353	449	157	198	278	353
9.0	S	128	164	230	293	133	168	241	301	166	210	301	376
	D	70	88	124	158	168	211	298	378	132	166	234	298
9.5	S	115	147	206	263	119	151	216	270	149	188	270	338
	D	60	75	105	134	143	180	253	322	113	142	199	253
10.0	S	104	133	186	237	108	136	195	244	135	170	244	305
	D	51	64	90	115	123	154	217	276	97	121	171	217
10.5	S	94	121	169	215	98	123	177	221	122	154	221	276
	D	44	55	78	99	106	133	187	238	83	105	148	188
11.0	S	86	110	154	196	89	112	161	201	111	140	202	252
	D	38	48	68	86	92	116	163	207	73	91	128	163
11.5	S	78	100	141	179	81	103	148	184	102	129	184	230
	D	34	42	59	76	81	101	143	181	63	80	112	143
12.0	S	72	92	129	165	75	94	136	169	93	118	169	212
	D	30	37	52	66	71	89	126	160	56	70	99	126
12.5	S	66	85	119	152	69	87	125	156	86	109	156	195
	D	26	33	46	59	63	79	111	141	49	62	87	111
13.0	S	61	79	110	140	64	80	115	144	80	101	144	180
	D	23	29	41	52	56	70	99	125	44	55	78	99
13.5	S	57	73	102	130	59	75	107	134	74	93	134	167
	D	21	26	37	47	50	63	88	112	39	49	69	88
14.0	S	53	68	95	121	55	69	100	124	69	87	124	155
	D	19	23	33	42	45	56	79	100	35	44	62	79

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.

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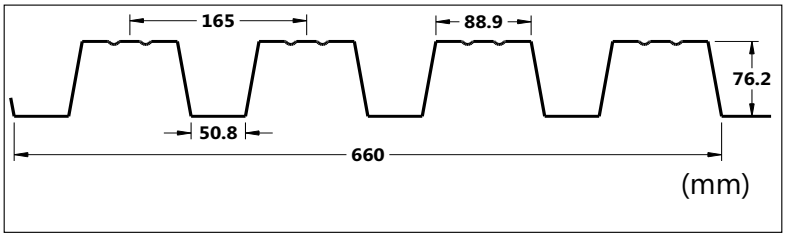

F_y = 275 MPa

SECTION PROPERTIES (PER METRE OF WIDTH)

METRIC

Base Steel Thickness (mm)	Mass Z275 (kg/m^2)	Yield Stress, F_y (MPa)	Sec. Modulus Midspan (x10^3 mm^3)	Sec. Modulus Support (x10^3 mm^3)	Deflection Moment of Inertia (x10^{6}mm^4)	Factored Web Crippling Data P_{e1} End (kN/m)	P_{e2} End (kN/m)	P_{I1} Interior (kN/m)	P_{I2} Interior (kN/m)
0.762	12.0	275	23.2	24.1	1.07	4.26	1.06	8.80	1.50
0.914	14.3	275	29.8	30.5	1.34	6.35	1.59	13.0	2.21
1.219	19.0	275	41.7	43.7	1.89	11.8	2.96	23.9	4.07
1.524	23.7	275	53.1	54.6	2.40	19.1	4.78	38.2	6.50

FACTORED STRENGTH AND SPECIFIED DEFLECTION UNIFORMLY DISTRIBUTED LOADS (kPa)

SPAN LENGTH (mm)		1-SPAN BASE STEEL THICKNESS (mm)				2-SPAN BASE STEEL THICKNESS (mm)				3-SPAN 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
2000	S	11.5	14.8	20.7	26.3	11.9	15.1	21.7	27.0	14.9	18.9	27.1	33.8
	D	8.66	10.9	15.3	19.5	20.8	26.1	36.8	46.7	16.4	20.6	29.0	36.8
2200	S	9.49	12.2	17.1	21.7	9.87	12.5	17.9	22.3	12.3	15.6	22.4	27.9
	D	6.51	8.18	11.5	14.6	15.6	19.6	27.6	35.1	12.3	15.5	21.8	27.6
2400	S	7.98	10.2	14.3	18.3	8.29	10.5	15.0	18.8	10.4	13.1	18.8	23.5
	D	5.01	6.30	8.87	11.3	12.0	15.1	21.3	27.0	9.47	11.9	16.8	21.3
2500	S	7.35	9.44	13.2	16.8	7.64	9.66	13.9	17.3	9.55	12.1	17.3	21.6
	D	4.43	5.57	7.85	9.97	10.6	13.4	18.8	23.9	8.38	10.5	14.8	18.8
2600	S	6.80	8.73	12.2	15.6	7.07	8.93	12.8	16.0	8.83	11.2	16.0	20.0
	D	3.94	4.95	6.98	8.86	9.46	11.9	16.7	21.3	7.45	9.36	13.2	16.8
2800	S	5.86	7.52	10.5	13.4	6.09	7.70	11.1	13.8	7.62	9.62	13.8	17.2
	D	3.16	3.97	5.59	7.09	7.58	9.52	13.4	17.0	5.97	7.50	10.6	13.4
3000	S	5.10	6.55	9.18	11.7	5.31	6.71	9.62	12.0	6.64	8.38	12.0	15.0
	D	2.57	3.22	4.54	5.77	6.16	7.74	10.9	13.8	4.85	6.09	8.58	10.9
3200	S	4.49	5.76	8.07	10.3	4.67	5.89	8.46	10.6	5.83	7.37	10.6	13.2
	D	2.11	2.66	3.74	4.75	5.07	6.38	8.98	11.4	4.00	5.02	7.07	8.98
3400	S	3.97	5.10	7.15	9.10	4.13	5.22	7.49	9.35	5.17	6.53	9.36	11.7
	D	1.76	2.22	3.12	3.96	4.23	5.32	7.49	9.51	3.33	4.19	5.90	7.49
3500	S	3.75	4.82	6.74	8.59	3.90	4.93	7.07	8.83	4.87	6.16	8.84	11.0
	D	1.62	2.03	2.86	3.63	3.88	4.87	6.86	8.72	3.05	3.84	5.40	6.87
3600	S	3.54	4.55	6.37	8.12	3.69	4.66	6.68	8.34	4.61	5.82	8.35	10.4
	D	1.49	1.87	2.63	3.34	3.56	4.48	6.31	8.01	2.81	3.53	4.97	6.31
3800	S	3.18	4.08	5.72	7.28	3.31	4.18	6.00	7.49	4.14	5.22	7.50	9.36
	D	1.26	1.59	2.23	2.84	3.03	3.81	5.36	6.81	2.39	3.00	4.22	5.36
4000	S	2.87	3.69	5.16	6.57	2.99	3.77	5.41	6.76	3.73	4.71	6.77	8.45
	D	1.08	1.36	1.92	2.43	2.60	3.27	4.60	5.84	2.05	2.57	3.62	4.60

Notes:

1. Based on ASTM A653M Grade 275 structural steel.
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4. For L/180, multiply values in row "D" by 1.33.
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