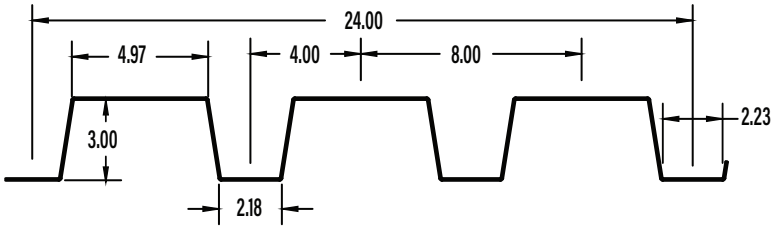
WF-324 ROOF DECK



All dimensions are in inches

SECTION PROPERTIES (PER FOOT OF WIDTH)										
				Sec. Modulus			Specified Web Crippling Data			
IMPERIAL	Base Steel Thickness (in.)	Weight G90 (psf)	Yield Stress (ksi)	Midspan (in^3)	Support (in^3)	Deflection Moment of Inertia (in^4)	P_{e1} End (lb)	P_{e2} End (lb)	P_{i1} Interior (lb)	P_{i2} Interior (lb)
	0.030	2.15	40	0.366	0.391	0.656	156	39.1	308	52.3
	0.036	2.57	40	0.472	0.494	0.856	234	58.4	458	77.8
	0.048	3.40	40	0.661	0.710	1.24	436	109	850	145
	0.060	4.24	40	0.845	0.894	1.62	705	176	1368	232

Live load factor = 1.5; Importance factor = 0.90; Importance Category = 1.0

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (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	163	210	294	375	174	219	315	397	217	274	394	497
	D	221	288	416	544	530	692	998	1305	418	545	786	1027
6.5	S	139	179	250	320	148	187	269	339	185	234	336	423
	D	174	227	327	428	417	544	785	1026	328	428	618	808
7.0	S	120	154	216	276	128	161	232	292	160	202	290	365
	D	139	181	262	342	334	436	629	822	263	343	495	647
7.5	S	104	134	188	240	111	140	202	254	139	176	252	318
	D	113	148	213	278	271	354	511	668	214	279	402	526
8.0	S	92	118	165	211	98	123	177	224	122	154	222	279
	D	93	122	175	229	224	292	421	550	176	230	332	433
8.5	S	81	105	146	187	87	109	157	198	108	137	196	248
	D	78	101	146	191	186	243	351	459	147	192	276	361
9.0	S	72	93	131	167	77	98	140	177	97	122	175	221
	D	65	85	123	161	157	205	296	387	124	161	233	304
9.5	S	65	84	117	150	69	88	126	159	87	109	157	198
	D	56	73	105	137	134	174	251	329	105	137	198	259
10.0	S	59	76	106	135	63	79	114	143	78	99	142	179
	D	48	62	90	117	115	149	216	282	90	118	170	222
10.5	S	53	68	96	123	57	72	103	130	71	90	129	162
	D	41	54	78	101	99	129	186	243	78	102	147	192
11.0	S	48	62	87	112	52	65	94	118	65	82	117	148
	D	36	47	67	88	86	112	162	212	68	88	128	167
11.5	S	44	57	80	102	47	60	86	108	59	75	107	135
	D	31	41	59	77	75	98	142	185	59	77	112	146
12.0	S	41	52	73	94	43	55	79	99	54	69	99	124
	D	28	36	52	68	66	86	125	163	52	68	98	128
12.5	S	38	48	68	86	40	51	73	92	50	63	91	114
	D	24	32	46	60	59	76	110	144	46	60	87	114
13.0	S	35	45	63	80	37	47	67	85	46	58	84	106
	D	22	28	41	53	52	68	98	128	41	54	77	101
13.5	S	32	41	58	74	34	43	62	79	43	54	78	98
	D	19	25	37	48	47	61	88	115	37	48	69	90
14.0	S	30	39	54	69	32	40	58	73	40	50	72	91
	D	17	23	33	43	42	54	79	103	33	43	62	81

Notes:

1. Based on ASTM A 653 Grade 40 structural steel.
2. Values in row "S" are based on 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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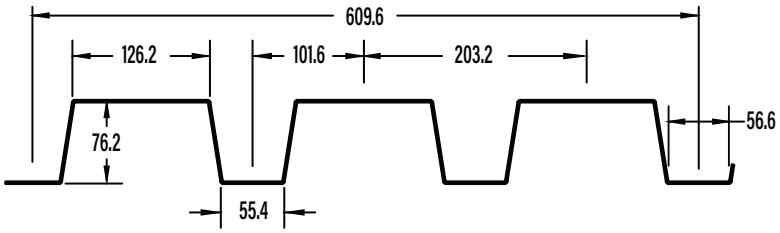
WF-324 ROOF DECK



All dimensions are in millimeters

SECTION PROPERTIES (PER METRE OF WIDTH)

METRIC	Base Steel Thickness (mm)	Mass Z275 (kg/m^2)	Yield Stress (MPa)	Sec. Modulus Midspan (x10^3 mm^3)	Sec. Modulus Support (x10^3 mm^3)	Deflection Moment of Inertia (x10^{6}mm^4)	Specified Web Crippling Data P_{e1} End (kN)	P_{e2} End (kN)	P_{i1} Interior (kN)	P_{i2} Interior (kN)
	0.762	10.5	275	19.7	21.0	0.897	2.28	0.569	4.48	0.762
	0.914	12.5	275	25.4	26.6	1.17	3.40	0.849	6.66	1.13
	1.22	16.6	275	35.6	38.2	1.69	6.35	1.59	12.4	2.10
	1.52	20.7	275	45.4	48.1	2.21	10.3	2.57	19.9	3.38

Live load factor = 1.5; Importance factor = 0.90; Importance Category = 1.0

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (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	1.22	1.52		0.762	0.914	1.22	1.52		0.762	0.914	1.22	1.52	
2000	S	6.50	8.38	11.7	15.0		6.94	8.77	12.6	15.9		8.68	11.0	15.7	19.8	
	D	8.09	10.6	15.2	19.9		19.4	25.3	36.6	47.8		15.3	19.9	28.8	37.6	
2200	S	5.37	6.92	9.70	12.4		5.74	7.24	10.4	13.1		7.17	9.06	13.0	16.4	
	D	6.08	7.93	11.4	15.0		14.6	19.0	27.5	35.9		11.5	15.0	21.6	28.3	
2400	S	4.52	5.82	8.15	10.4		4.82	6.09	8.74	11.0		6.03	7.61	10.9	13.8	
	D	4.68	6.11	8.81	11.5		11.2	14.7	21.2	27.7		8.85	11.5	16.7	21.8	
2500	S	4.16	5.36	7.51	9.59		4.44	5.61	8.06	10.2		5.55	7.01	10.1	12.7	
	D	4.14	5.40	7.80	10.2		9.94	13.0	18.7	24.5		7.83	10.2	14.7	19.3	
2600	S	3.85	4.96	6.94	8.87		4.11	5.19	7.45	9.39		5.13	6.48	9.31	11.7	
	D	3.68	4.80	6.93	9.06		8.84	11.5	16.6	21.7		6.96	9.08	13.1	17.1	
2800	S	3.32	4.27	5.99	7.65		3.54	4.47	6.42	8.10		4.43	5.59	8.03	10.1	
	D	2.95	3.85	5.55	7.25		7.08	9.23	13.3	17.4		5.57	7.27	10.5	13.7	
3000	S	2.89	3.72	5.22	6.66		3.09	3.90	5.60	7.05		3.86	4.87	7.00	8.82	
	D	2.40	3.13	4.51	5.90		5.75	7.50	10.8	14.2		4.53	5.91	8.53	11.2	
3200	S	2.54	3.27	4.58	5.85		2.71	3.42	4.92	6.20		3.39	4.28	6.15	7.75	
	D	1.98	2.58	3.72	4.86		4.74	6.18	8.92	11.7		3.73	4.87	7.03	9.18	
3400	S	2.25	2.90	4.06	5.19		2.40	3.03	4.36	5.49		3.00	3.79	5.45	6.86	
	D	1.65	2.15	3.10	4.05		3.95	5.16	7.44	9.72		3.11	4.06	5.86	7.66	
3500	S	2.12	2.74	3.83	4.89		2.27	2.86	4.11	5.18		2.83	3.58	5.14	6.48	
	D	1.51	1.97	2.84	3.71		3.62	4.73	6.82	8.91		2.85	3.72	5.37	7.02	
3600	S	2.01	2.59	3.62	4.63		2.14	2.71	3.89	4.90		2.68	3.38	4.86	6.12	
	D	1.39	1.81	2.61	3.41		3.33	4.34	6.27	8.19		2.62	3.42	4.94	6.45	
3800	S	1.80	2.32	3.25	4.15		1.92	2.43	3.49	4.40		2.40	3.04	4.36	5.49	
	D	1.18	1.54	2.22	2.90		2.83	3.69	5.33	6.96		2.23	2.91	4.20	5.48	
4000	S	1.63	2.09	2.93	3.75		1.74	2.19	3.15	3.97		2.17	2.74	3.94	4.96	
	D	1.01	1.32	1.90	2.49		2.43	3.17	4.57	5.97		1.91	2.49	3.60	4.70	

Notes:

1. Based on ASTM A 653M Grade 275 structural steel.
2. Values in row "S" are based on 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.
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