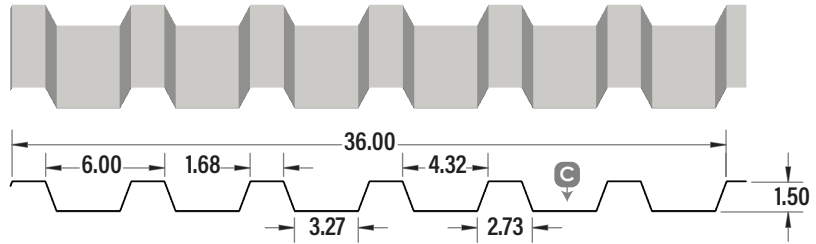
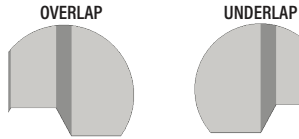




# WF-636R ROOF



All dimensions are in inches

## SECTION PROPERTIES (PER FOOT OF WIDTH)

IMPERIAL	Base Steel Thickness (in.)	Weight G90 (psf)	Yield Stress (ksi)	Sec. Modulus		Deflection Moment of Inertia (in <sup>4</sup> )	Specified Web Crippling Data			
				Midspan	Support		P <sub>e1</sub> End (lb)	P <sub>e2</sub> End (lb)	P <sub>i1</sub> Interior (lb)	P <sub>i2</sub> Interior (lb)
				(in <sup>3</sup> )	(in <sup>3</sup> )					
	0.018	1.06	33	0.0958	0.0917	0.103	58.5	14.6	105	17.8
	0.024	1.39	33	0.141	0.138	0.143	110	27.5	199	33.8
	0.030	1.72	33	0.189	0.185	0.180	178	44.6	325	55.2
	0.036	2.06	33	0.238	0.226	0.216	264	65.9	482	82.0
	0.048	2.72	33	0.314	0.307	0.286	487	122	894	152

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

## MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOADS (PSF)

SPAN LENGTH (ft)		1-SPAN			2-SPAN			3-SPAN		
		BASE STEEL THICKNESS (in.)			BASE STEEL THICKNESS (in.)			BASE STEEL THICKNESS (in.)		
		0.018	0.024	0.030	0.018	0.024	0.030	0.018	0.024	0.030
4.0	S	79	116	156	76	114	153	95	142	191
	D	156	217	273	376	521	655	296	410	516
4.5	S	62	92	123	60	90	121	75	113	151
	D	110	153	192	264	366	460	208	288	362
5.0	S	51	74	100	48	73	98	61	91	122
	D	80	111	140	192	267	335	151	210	264
5.5	S	42	61	82	40	60	81	50	75	101
	D	60	84	105	144	200	252	114	158	198
6.0	S	35	52	69	34	51	68	42	63	85
	D	46	64	81	111	154	194	88	122	153
6.5	S	30	44	59	29	43	58	36	54	72
	D	36	51	64	88	121	153	69	96	120
7.0	S	26	38	51	25	37	50	31	47	62
	D	29	41	51	70	97	122	55	77	96
7.5	S	22	33	44	22	32	43	27	41	54
	D	24	33	41	57	79	99	45	62	78
8.0	S	20	29	39	19	28	38	24	36	48
	D	20	27	34	47	65	82	37	51	64
8.5	S	18	26	34	17	25	34	21	32	42
	D	16	23	28	39	54	68	31	43	54
9.0	S	16	23	31	15	23	30	19	28	38
	D	14	19	24	33	46	57	26	36	45
9.5	S	14	21	28	13	20	27	17	25	34
	D	12	16	20	28	39	49	22	31	38
10.0	S	13	19	25	12	18	24	15	23	31
	D	10	14	17	24	33	42	19	26	33
10.5	S	11	17	23	11	17	22	14	21	28
	D	9	12	15	21	29	36	16	23	29
11.0	S	10	15	21	10	15	20	13	19	25
	D	8	10	13	18	25	31	14	20	25

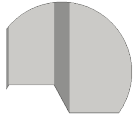
- Notes:**
- 1 Based on ASTM A 653 structural steel. Coating can also be AZ50.
  - 2 Values in row "S" are based on strength.
  - 3 Values in row "D" are based on deflection of L/180.
  - 4 For L/240, multiply values in row "D" by 0.75.
  - 5 Web crippling not included in strength calculations. See Example.
  - 6 Limit States Design principles were used in accordance with CSA S136-16.
  - 7 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.





# WF-636R ROOF

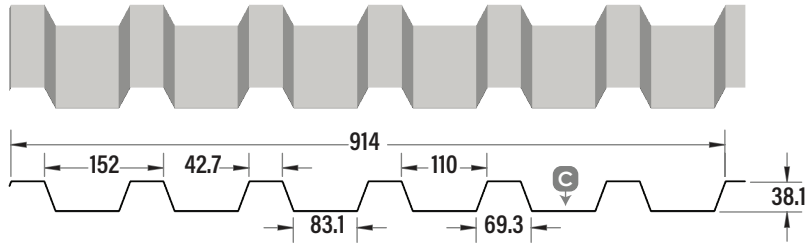
OVERLAP



UNDERLAP



All dimensions are in millimeters



## SECTION PROPERTIES (PER METRE OF WIDTH)

METRIC	Base Steel Thickness (mm)	Mass Z275 (kg/m <sup>2</sup> )	Yield Stress (MPa)	Sec. Modulus		Deflection Moment of Inertia (x10 <sup>6</sup> mm <sup>4</sup> )	Specified Web Crippling Data			
				Midspan	Support		P <sub>e1</sub> End (kN)	P <sub>e2</sub> End (kN)	P <sub>i1</sub> Interior (kN)	P <sub>i2</sub> Interior (kN)
				(x10 <sup>3</sup> mm <sup>3</sup> )	(x10 <sup>3</sup> mm <sup>3</sup> )					
	0.457	5.16	230	5.14	4.92	0.141	0.863	0.216	1.54	0.262
	0.610	6.79	230	7.55	7.41	0.196	1.62	0.405	2.93	0.499
	0.762	8.42	230	10.1	9.95	0.246	2.63	0.658	4.79	0.814
	0.914	10.1	230	12.8	12.1	0.295	3.89	0.973	7.11	1.21
	1.22	13.3	230	16.9	16.5	0.391	7.18	1.80	13.2	2.24

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

## MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOADS (kPa)

SPAN LENGTH (mm)		1-SPAN			2-SPAN			3-SPAN		
		BASE STEEL THICKNESS (mm)			BASE STEEL THICKNESS (mm)			BASE STEEL THICKNESS (mm)		
		0.457	0.610	0.762	0.457	0.610	0.762	0.457	0.610	0.762
1200	S	3.94	5.78	7.76	3.77	5.68	7.62	4.71	7.10	9.53
	D	7.85	10.9	13.7	18.8	26.2	32.9	14.8	20.6	25.9
1400	S	2.90	4.25	5.70	2.77	4.17	5.60	3.46	5.22	7.00
	D	4.94	6.86	8.63	11.9	16.5	20.7	9.34	13.0	16.3
1600	S	2.22	3.25	4.37	2.12	3.20	4.29	2.65	3.99	5.36
	D	3.31	4.60	5.78	7.95	11.0	13.9	6.26	8.69	10.9
1800	S	1.75	2.57	3.45	1.68	2.52	3.39	2.10	3.16	4.24
	D	2.33	3.23	4.06	5.58	7.75	9.74	4.40	6.10	7.67
2000	S	1.42	2.08	2.79	1.36	2.05	2.74	1.70	2.56	3.43
	D	1.70	2.35	2.96	4.07	5.65	7.10	3.21	4.45	5.59
2200	S	1.17	1.72	2.31	1.12	1.69	2.27	1.40	2.11	2.84
	D	1.27	1.77	2.22	3.06	4.24	5.33	2.41	3.34	4.20
2400	S	0.99	1.45	1.94	0.94	1.42	1.91	1.18	1.78	2.38
	D	0.98	1.36	1.71	2.36	3.27	4.11	1.85	2.57	3.24
2600	S	0.84	1.23	1.65	0.80	1.21	1.62	1.00	1.51	2.03
	D	0.77	1.07	1.35	1.85	2.57	3.23	1.46	2.03	2.55
2800	S	0.72	1.06	1.43	0.69	1.04	1.40	0.87	1.30	1.75
	D	0.62	0.86	1.08	1.48	2.06	2.59	1.17	1.62	2.04
3000	S	0.63	0.93	1.24	0.60	0.91	1.22	0.75	1.14	1.52
	D	0.50	0.70	0.88	1.21	1.67	2.10	0.95	1.32	1.66
3200	S	0.55	0.81	1.09	0.53	0.80	1.07	0.66	1.00	1.34
	D	0.41	0.57	0.72	0.99	1.38	1.73	0.78	1.09	1.37
3400	S	0.49	0.72	0.97	0.47	0.71	0.95	0.59	0.88	1.19
	D	0.35	0.48	0.60	0.83	1.15	1.45	0.65	0.91	1.14
3600	S	0.44	0.64	0.86	0.42	0.63	0.85	0.52	0.79	1.06
	D	0.29	0.40	0.51	0.70	0.97	1.2	0.55	0.76	0.96
3800	S	0.39	0.58	0.77	0.38	0.57	0.76	0.47	0.71	0.95
	D	0.25	0.34	0.43	0.59	0.82	1.04	0.47	0.65	0.82
4000	S	0.35	0.52	0.70	0.34	0.51	0.69	0.42	0.64	0.86
	D	0.21	0.29	0.37	0.51	0.71	0.89	0.40	0.56	0.70

- Notes:
- 1 Based on ASTM A 653M structural steel. Coating can also be AZM150.
  - 2 Values in row "S" are based on strength.
  - 3 Values in row "D" are based on deflection of L/180.
  - 4 For L/240, multiply values in row "D" by 0.75.
  - 5 Web crippling not included in strength calculations. See Example.
  - 6 Limit States Design principles were used in accordance with CSA S136-16.
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