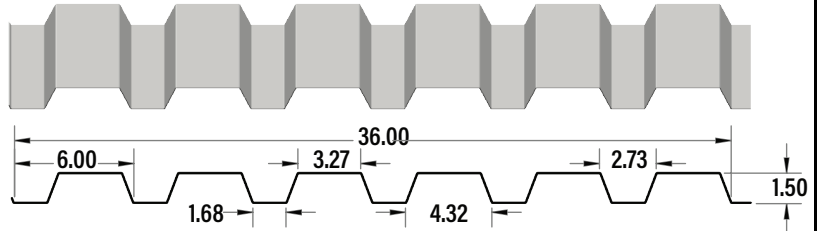
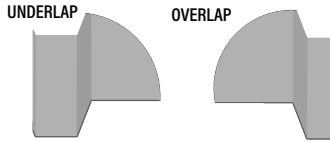




# WF-636 ROOF DECK LAP A



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> )					
	0.030	1.72	33	0.185	0.189	0.168	178	44.6	325	55.2
	0.036	2.06	33	0.226	0.238	0.210	264	65.9	482	82.0
	0.048	2.72	33	0.307	0.314	0.286	487	122	894	152
	0.060	3.39	33	0.386	0.388	0.356	780	195	1437	244

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

## MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (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	153	186	253	319	156	196	259	320	195	245	323	400
	D	255	318	434	540	612	762	1041	1295	482	600	820	1020
4.5	S	121	147	200	252	123	155	204	253	154	194	255	316
	D	179	223	305	379	430	535	731	910	338	421	576	716
5.0	S	98	119	162	204	100	126	166	205	125	157	207	256
	D	130	163	222	276	313	390	533	663	247	307	420	522
5.5	S	81	98	134	169	82	104	137	169	103	130	171	211
	D	98	122	167	208	235	293	400	498	185	231	315	392
6.0	S	68	83	112	142	69	87	115	142	86	109	144	178
	D	76	94	128	160	181	226	308	384	143	178	243	302
6.5	S	58	71	96	121	59	74	98	121	74	93	122	151
	D	59	74	101	126	143	178	243	302	112	140	191	238
7.0	S	50	61	83	104	51	64	84	104	64	80	106	130
	D	48	59	81	101	114	142	194	242	90	112	153	190
7.5	S	43	53	72	91	44	56	74	91	55	70	92	114
	D	39	48	66	82	93	116	158	197	73	91	124	155
8.0	S	38	47	63	80	39	49	65	80	49	61	81	100
	D	32	40	54	67	76	95	130	162	60	75	102	128
8.5	S	34	41	56	71	34	43	57	71	43	54	72	89
	D	27	33	45	56	64	79	108	135	50	63	85	106
9.0	S	30	37	50	63	31	39	51	63	38	48	64	79
	D	22	28	38	47	54	67	91	114	42	53	72	90
9.5	S	27	33	45	56	28	35	46	57	34	43	57	71
	D	19	24	32	40	46	57	78	97	36	45	61	76
10.0	S	24	30	40	51	25	31	41	51	31	39	52	64
	D	16	20	28	35	39	49	67	83	31	38	52	65
10.5	S	22	27	37	46	23	28	38	46	28	36	47	58
	D	14	18	24	30	34	42	58	72	27	33	45	56
11.0	S	20	25	33	42	21	26	34	42	26	32	43	53
	D	12	15	21	26	29	37	50	62	23	29	39	49

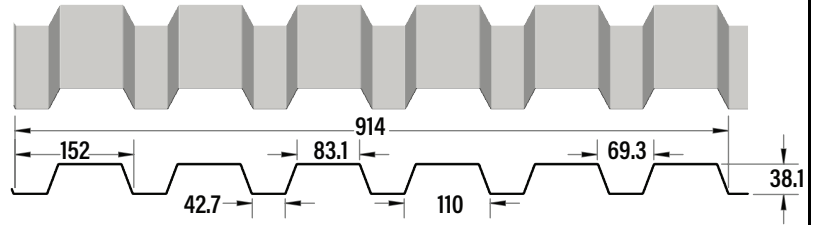
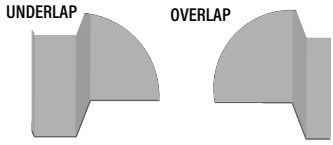
- Notes:**
- 1 Based on ASTM A 653 Grade 33 structural steel.
  - 2 Values in row "S" are based on strength.
  - 3 Values in row "D" are based on deflection of L/180.
  - 4 For L/240, multiply values in row "D" by 0.75.
  - 5 Web crippling not included in strength calculations. See Example.
  - 6 Limit States Design principles were used in accordance with CSA Standard S136-16.
  - 7 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.



Canadian Sheet Steel Building Institute  
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# WF-636 ROOF DECK LAP A



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> )					
	0.762	8.42	230	9.95	10.1	0.230	2.63	0.658	4.79	0.814
	0.914	10.1	230	12.1	12.8	0.286	3.89	0.973	7.11	1.21
	1.22	13.3	230	16.5	16.9	0.391	7.18	1.80	13.2	2.24
	1.52	16.6	230	20.8	20.8	0.487	11.5	2.88	21.2	3.60

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

## MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (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	1.22	1.52	0.762	0.914	1.22	1.52	0.762	0.914	1.22	1.52
1200	S	7.62	9.30	12.6	15.9	7.76	9.80	12.9	16.0	9.70	12.3	16.2	20.0
	D	12.8	15.9	21.8	27.1	30.7	38.2	52.3	65.1	24.2	30.1	41.2	51.2
1400	S	5.60	6.83	9.28	11.7	5.70	7.20	9.49	11.7	7.13	9.00	11.9	14.7
	D	8.05	10.0	13.7	17.1	19.3	24.1	32.9	41.0	15.2	19.0	25.9	32.3
1600	S	4.29	5.23	7.11	8.95	4.37	5.51	7.27	8.99	5.46	6.89	9.09	11.2
	D	5.39	6.72	9.19	11.4	12.9	16.1	22.1	27.4	10.2	12.7	17.4	21.6
1800	S	3.39	4.13	5.62	7.07	3.45	4.36	5.74	7.10	4.31	5.44	7.18	8.87
	D	3.79	4.72	6.45	8.03	9.09	11.3	15.5	19.3	7.16	8.92	12.2	15.2
2000	S	2.74	3.35	4.55	5.73	2.79	3.53	4.65	5.75	3.49	4.41	5.82	7.19
	D	2.76	3.44	4.70	5.85	6.63	8.26	11.3	14.1	5.22	6.50	8.89	11.1
2200	S	2.27	2.77	3.76	4.74	2.31	2.92	3.84	4.75	2.89	3.64	4.81	5.94
	D	2.07	2.58	3.53	4.40	4.98	6.20	8.48	10.6	3.92	4.89	6.68	8.31
2400	S	1.91	2.32	3.16	3.98	1.94	2.45	3.23	3.99	2.43	3.06	4.04	4.99
	D	1.60	1.99	2.72	3.39	3.83	4.78	6.53	8.13	3.02	3.76	5.14	6.40
2600	S	1.62	1.98	2.69	3.39	1.65	2.09	2.75	3.40	2.07	2.61	3.44	4.25
	D	1.26	1.57	2.14	2.66	3.02	3.76	5.14	6.40	2.37	2.96	4.05	5.04
2800	S	1.40	1.71	2.32	2.92	1.43	1.80	2.37	2.93	1.78	2.25	2.97	3.67
	D	1.01	1.25	1.71	2.13	2.41	3.01	4.11	5.12	1.90	2.37	3.24	4.03
3000	S	1.22	1.49	2.02	2.55	1.24	1.57	2.07	2.56	1.55	1.96	2.58	3.19
	D	0.82	1.02	1.39	1.73	1.96	2.45	3.34	4.16	1.55	1.93	2.63	3.28
3200	S	1.07	1.31	1.78	2.24	1.09	1.38	1.82	2.25	1.36	1.72	2.27	2.81
	D	0.67	0.84	1.15	1.43	1.62	2.02	2.76	3.43	1.27	1.59	2.17	2.70
3400	S	0.95	1.16	1.57	1.98	0.97	1.22	1.61	1.99	1.21	1.53	2.01	2.49
	D	0.56	0.70	0.96	1.19	1.35	1.68	2.30	2.86	1.06	1.32	1.81	2.25
3600	S	0.85	1.03	1.40	1.77	0.86	1.09	1.44	1.77	1.08	1.36	1.79	2.22
	D	0.47	0.59	0.81	1.00	1.14	1.42	1.94	2.41	0.89	1.12	1.52	1.90
3800	S	0.76	0.93	1.26	1.59	0.77	0.98	1.29	1.59	0.97	1.22	1.61	1.99
	D	0.40	0.50	0.69	0.85	0.97	1.20	1.65	2.05	0.76	0.95	1.30	1.61
4000	S	0.69	0.84	1.14	1.43	0.70	0.88	1.16	1.44	0.87	1.10	1.45	1.80
	D	0.35	0.43	0.59	0.73	0.83	1.03	1.41	1.76	0.65	0.81	1.11	1.38

### Notes:

- 1 Based on ASTM A 653M Grade 230 structural steel.
- 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 Standard S136-16.
- 7 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.



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