

Design Criteria:
 Roof pressures are as per AS1170.2-2011
 Region A, Importance Level 2,
 Probability of Exceedance = 1/500
 Building height = 5m to 10m
 Enclosed building with dominant opening
 $V_{strength} = 45 \text{ m/s}$
 $V_{serviceability} = 37 \text{ m/s}$
 $M_s = 1.0, M_t = 1.0, C_{dyn} = 1.0$
 $M_{z,cat}$ as per table below:

Terrain Category			
Height (m)	1 & 2	2.5	3 & 4
for ≤ 5.0	1.05	0.87	0.83
for ≤ 10	1.12	0.92	0.83

$k_{ce} = k_{ci} = 0.9$
 $k_a = 1.0$
 $k_p = 1.0$

$C_{pe} = 0.9$
 $C_{pi} = 0.7$

Steel material should have minimum yield strength of 550 MPa
 for both 0.42 and 0.48 BMT

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 CYCLONIC AREA DESIGN GUIDE (FOR REGION "A" AS PER AS1170.2-2011)

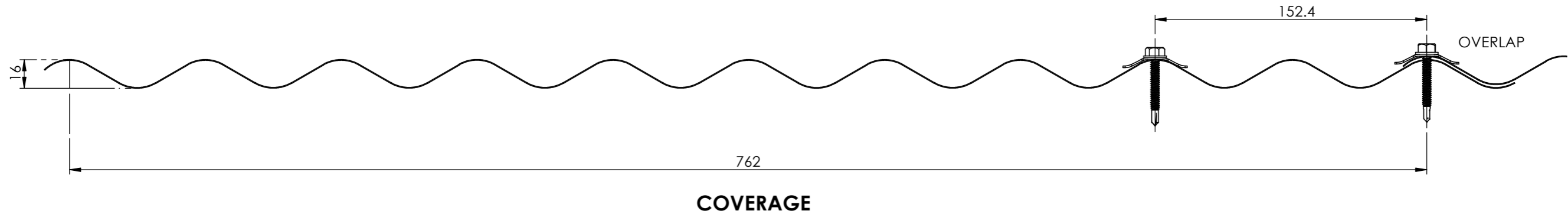
MAXIMUM ALLOWABLE SPANS (mm) REGION "A" WINDS																		
TERRAIN CATEGORY	LOCAL PRESSURE FACTOR (kl)	BUILDING HEIGHT UP TO 5m									BUILDING HEIGHT UP TO 10m							
		PRESSURE		SPAN (mm)						PRESSURE		SPAN (mm)						
		SERVICE (kPa)	ULTIMATE (kPa)	BMT 0.42mm			BMT 0.48mm			SERVICE (kPa)	ULTIMATE (kPa)	BMT 0.42mm			BMT 0.48mm			
				SINGLE	END	INTERNAL	SINGLE	END	INTERNAL			SINGLE	END	INTERNAL	SINGLE	END	INTERNAL	
1 & 2	1	0.90	1.33	750	800	950	800	850	1000	1.02	1.51	750	800	950	800	850	1000	
	1.5	1.26	1.87	750	800	950	800	850	1000	1.44	2.13	750	800	950	800	850	1000	
	2	1.63	2.41	750	800	950	800	850	1000	1.85	2.74	750	800	950	800	850	1000	
	3	2.36	3.50	750	800	950	800	850	1000	2.69	3.98	750	800	950	800	850	1000	
2.5	1	0.62	0.91	750	800	950	800	850	1000	0.69	1.02	750	800	950	800	850	1000	
	1.5	0.87	1.28	750	800	950	800	850	1000	0.97	1.43	750	800	950	800	850	1000	
	2	1.12	1.66	750	800	950	800	850	1000	1.25	1.85	750	800	950	800	850	1000	
	3	1.62	2.40	750	800	950	800	850	1000	1.81	2.68	750	800	950	800	850	1000	
3 & 4	1	0.56	0.83	750	800	950	800	850	1000	0.56	0.83	750	800	950	800	850	1000	
	1.5	0.79	1.17	750	800	950	800	850	1000	0.79	1.17	750	800	950	800	850	1000	
	2	1.02	1.51	750	800	950	800	850	1000	1.02	1.51	750	800	950	800	850	1000	
	3	1.48	2.18	750	800	950	800	850	1000	1.48	2.18	750	800	950	800	850	1000	

NOTES:

- SINGLE = SINGLE SPANS.
- INTERNAL = CONTINUOUS CLADDING (MINIMUM 3 SPANS), WITH END SPANS AT LEAST 20% SHORTER THAN INTERMEDIATE SPANS.
- END = CONTINUOUS CLADDING (MINIMUM 2 SPANS) ALL SPANS EQUAL.

THE VALUES ABOVE ARE CALCULATED IN ACCORDANCE WITH AS 4600 "COLD FORMED STEEL STRUCTURES" AND WERE DERIVED FROM BEAM MOMENT AND DEFLECTION FORMULAS. SPANS ARE DESIGNED TO LIMIT MAXIMUM DEFLECTION OF SPAN/150 UNDER SERVICE LOAD. CALCULATION OF ROOF FIXING CAPACITY IS BASED ON FIVE - 12G - 11 TPI BUILDDEX TEKSCREWS (OR EQUIVALENT) FASTENERS PER SHEET FIXED INTO MINIMUM STEEL SUPPORT OF 0.75mm BMT G550 AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.





Design Criteria:
 Roof pressures are as per AS1170.2-2011
 Region B, Importance Level 2,
 Probability of Exceedance = 1/500
 Building height = 5m to 10m
 Enclosed building with dominant opening
 $V_{strength} = 57 \text{ m/s}$
 $V_{serviceability} = 39 \text{ m/s}$
 $M_s = 1.0, M_t = 1.0, C_{dyn} = 1.0$
 $M_{z,cat}$ as per table below:

Terrain Category			
Height (m)	1 & 2	2.5	3 & 4
for ≤ 5.0	1.05	0.87	0.83
for ≤ 10	1.12	0.92	0.83

$k_{ce} = k_{ci} = 0.9$
 $k_a = 1.0$
 $k_p = 1.0$

$C_{pe} = 0.9$
 $C_{pi} = 0.7$

Steel material should have minimum yield strength of 550 MPa
 for both 0.42 and 0.48 BMT

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CYCLONIC AREA DESIGN GUIDE (FOR REGION "B" AS PER AS1170.2-2011)

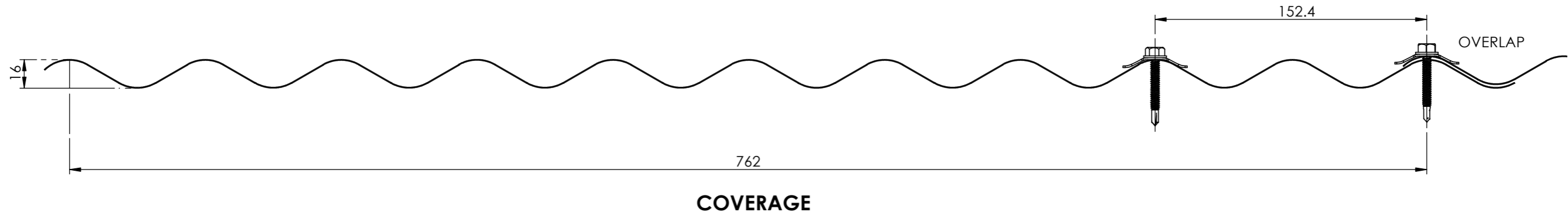
MAXIMUM ALLOWABLE SPANS (mm) REGION "B" WINDS																	
TERRAIN CATEGORY	LOCAL PRESSURE FACTOR (kl)	BUILDING HEIGHT UP TO 5m									BUILDING HEIGHT UP TO 10m						
		PRESSURE		SPAN (mm)						PRESSURE		SPAN (mm)					
		SERVICE	ULTIMATE	BMT 0.42mm			BMT 0.48mm			SERVICE	ULTIMATE	BMT 0.42mm			BMT 0.48mm		
		(kPa)	(kPa)	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL	(kPa)	(kPa)	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
1 & 2	1	1.0	2.13	750	800	950	800	850	1000	1.13	2.42	750	800	950	800	850	1000
	1.5	1.40	3.00	750	800	950	800	850	1000	1.60	3.41	750	800	950	800	850	1000
	2	1.81	3.87	750	800	950	800	850	1000	2.06	4.40	750	800	950	800	850	1000
	3	2.63	5.61	750	800	950	800	850	950	2.99	6.38	750	750	850	800	750	850
2.5	1	0.68	1.46	750	800	950	800	850	1000	0.76	1.63	750	800	950	800	850	1000
	1.5	0.96	2.06	750	800	950	800	850	1000	1.08	2.30	750	800	950	800	850	1000
	2	1.24	2.66	750	800	950	800	850	1000	1.39	2.97	750	800	950	800	850	1000
	3	1.80	3.85	750	800	950	800	850	1000	2.02	4.31	750	800	950	800	850	1000
3 & 4	1	0.62	1.33	750	800	950	800	850	1000	0.62	1.33	750	800	950	800	850	1000
	1.5	0.88	1.87	750	800	950	800	850	1000	0.88	1.87	750	800	950	800	850	1000
	2	1.13	2.42	750	800	950	800	850	1000	1.13	2.42	750	800	950	800	850	1000
	3	1.64	3.51	750	800	950	800	850	1000	1.64	3.51	750	800	950	800	850	1000

NOTES:

- SINGLE = SINGLE SPANS.
- INTERNAL = CONTINUOUS CLADDING (MINIMUM 3 SPANS), WITH END SPANS AT LEAST 20% SHORTER THAN INTERMEDIATE SPANS.
- END = CONTINUOUS CLADDING (MINIMUM 2 SPANS) ALL SPANS EQUAL.

THE VALUES ABOVE ARE CALCULATED IN ACCORDANCE WITH AS 4600 "COLD FORMED STEEL STRUCTURES" AND WERE DERIVED FROM BEAM MOMENT AND DEFLECTION FORMULAS. SPANS ARE DESIGNED TO LIMIT MAXIMUM DEFLECTION OF SPAN/150 UNDER SERVICE LOAD. CALCULATION OF ROOF FIXING CAPACITY IS BASED ON FIVE - 12G - 11 TPI BUILDDEX TEKSCREWS (OR EQUIVALENT) FASTENERS PER SHEET FIXED INTO MINIMUM STEEL SUPPORT OF 0.75mm BMT G550 AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.





Design Criteria:
 Roof pressures are as per AS1170.2-2011
 Region C, Importance Level 2,
 Probability of Exceedance = 1/500
 Building height = 5m to 10m
 Enclosed building with dominant opening
 $V_{strength} = 69.3 \text{ m/s}$
 $V_{serviceability} = 47 \text{ m/s}$
 $M_s = 1.0, M_t = 1.0, C_{dyn} = 1.0$
 $M_{z,cat}$ as per table below:

Terrain Category			
Height (m)	1 & 2	2.5	3 & 4
for ≤ 5.0	1.05	0.87	0.83
for ≤ 10	1.12	0.92	0.83

$k_{ce} = k_{ci} = 0.9$
 $k_a = 1.0$
 $k_p = 1.0$

Steel material should have minimum yield strength of 550 MPa
 for both 0.42 and 0.48 BMT

**CMI - CORRUGATED
 CYCLONIC AREA DESIGN GUIDE (FOR REGION "C" AS PER AS1170.2-2011)**

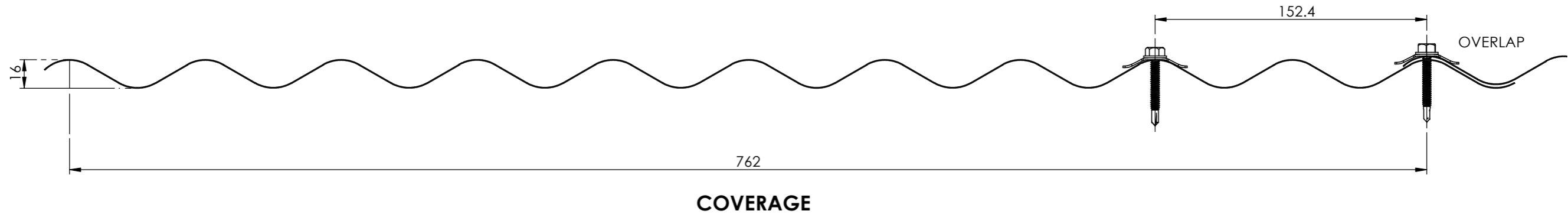
MAXIMUM ALLOWABLE SPANS (mm) REGION "C" WINDS																	
TERRAIN CATEGORY	LOCAL PRESSURE FACTOR (kl)	BUILDING HEIGHT UP TO 5m									BUILDING HEIGHT UP TO 10m						
		PRESSURE		SPAN (mm)							PRESSURE		SPAN (mm)				
		SERVICE	ULTIMATE	BMT 0.42mm			BMT 0.48mm			SERVICE	ULTIMATE	BMT 0.42mm			BMT 0.48mm		
		(kPa)	(kPa)	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL	(kPa)	(kPa)	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
1 & 2	1	2.07	4.57	850	1000	1100	900	1100	1200	2.35	5.2	800	950	1050	850	950	1050
	1.5	2.65	5.86	800	850	900	800	850	900	3.02	6.67	750	750	800	750	750	800
	2	3.23	7.15	700	700	750	750	700	750	3.68	8.13	700	600	650	700	600	650
	3	4.4	9.72	650	500	550	700	500	550	5.00	11.06	600	450	450	650	450	450
2.5	1	1.42	3.14	950	1200	1300	1000	1250	1350	1.59	3.51	900	1150	1250	950	1200	1300
	1.5	1.82	4.02	900	1100	1200	900	1150	1250	2.03	4.5	850	1050	1100	900	1100	1200
	2	2.22	4.91	800	1000	1050	850	1000	1100	2.48	5.49	800	900	1000	850	900	1000
	3	3.02	6.67	750	750	800	750	750	800	3.37	7.46	700	650	700	750	650	700
3 & 4	1	1.29	2.86	1000	1250	1350	1050	1300	1400	1.29	2.86	1000	1250	1350	1050	1300	1400
	1.5	1.66	3.66	900	1150	1250	950	1200	1300	1.66	3.66	900	1150	1250	950	1200	1300
	2	2.02	4.47	850	1050	1100	900	1100	1200	2.02	4.47	850	1050	1100	900	1100	1200
	3	2.75	6.07	750	800	900	800	800	900	2.75	6.07	750	800	900	800	800	900

NOTES:

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Design Criteria:
 Roof pressures are as per AS1170.2-2011
 Region D, Importance Level 2,
 Probability of Exceedance = 1/500
 Building height = 5m to 10m
 Enclosed building with dominant opening
 $V_{strength} = 88 \text{ m/s}$
 $V_{serviceability} = 53 \text{ m/s}$
 $M_s = 1.0, M_t = 1.0, C_{dyn} = 1.0$
 $M_{z,cat}$ as per table below:

Terrain Category			
Height (m)	1 & 2	2.5	3 & 4
for ≤ 5.0	1.05	0.87	0.83
for ≤ 10	1.12	0.92	0.83

$k_{ce} = k_{ci} = 0.9$
 $k_a = 1.0$
 $k_p = 1.0$

Steel material should have minimum yield strength of 550 MPa for both 0.42 and 0.48 BMT

CMI - CORRUGATED
 CYCLONIC AREA DESIGN GUIDE (FOR REGION "D" AS PER AS1170.2-2011)

MAXIMUM ALLOWABLE SPANS (mm) REGION "D" WINDS																	
TERRAIN CATEGORY	LOCAL PRESSURE FACTOR (k)	BUILDING HEIGHT UP TO 5m									BUILDING HEIGHT UP TO 10m						
		PRESSURE		SPAN (mm)						PRESSURE		SPAN (mm)					
		SERVICE	ULTIMATE	BMT 0.42mm			BMT 0.48mm			SERVICE	ULTIMATE	BMT 0.42mm			BMT 0.48mm		
		(kPa)	(kPa)	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL	(kPa)	(kPa)	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
1 & 2	1	2.68	7.38	750	650	700	800	650	700	3.04	8.38	750	600	650	758	600	650
	1.5	3.43	9.45	700	500	550	750	500	550	3.9	10.75	650	450	500	700	450	500
	2	4.18	11.53	650	400	450	700	400	450	4.76	13.11	600	350	400	650	350	400
	3	5.69	15.68	550	300	350	600	300	350	6.47	17.84	500	250	300	550	250	300
2.5	1	1.84	5.06	900	950	1050	900	950	1050	2.05	5.66	850	850	950	900	850	950
	1.5	2.35	6.49	800	750	800	850	750	800	2.63	7.26	800	650	750	800	650	750
	2	2.87	7.91	750	600	650	800	600	650	3.21	8.85	750	550	600	750	550	600
	3	3.90	10.76	650	450	500	700	450	500	4.37	12.03	600	400	450	700	400	450
3 & 4	1	1.67	4.61	900	1000	1100	950	1050	1150	1.67	4.61	900	1000	1100	950	1050	1150
	1.5	2.14	5.91	850	850	900	850	850	900	2.14	5.91	850	850	900	850	850	900
	2	2.61	7.2	800	650	750	800	650	750	2.61	7.2	800	650	750	800	650	750
	3	3.55	9.79	700	500	550	750	500	550	3.55	9.79	700	500	550	750	500	550

NOTES:

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