

APPENDIX B – GLAZING CALCULATORS AND FAÇADE SCHEDULE

BCA SECTION J – RETAIL/HOTEL GLAZING CALCS

**GROUND FLOOR
RETAIL & HOTEL FOYER**

	Area of solid façade	Area of glazing	Overhang	H value
N1	24 x 4.3	16.1 x 4.3	16.1 x 1.5	4.3
N2		12 x 4.3	12 x 1.5	4.3
N3		1.8 x 4.3	1.8 x 2.5	4.3
N4		6.0 x 4.3	6 x 0.22	4.3
N5		10.8 x 4.3	10.8 x 0.7	4.3
N6		8.3 x 4.4	8.3 x 2.45	4.4
N7		4.0 x 4.3	4 x 4	4.3
N8		2.7 x 4.3	0	4.3
N9		2.7 x 4.3	0	4.3
E1		10.2 x 4.3	10.2 x 1.2	4.3
E2		15.3 x 4.3	15.3 x 4.2	4.3
E3		18.6 x 4.5	Under podium – see plan	4.3
E4		18.5 x 4.5	0	4.3
W1		19.7 x 4.3	19.7 x 0.6	4.3
W2		11.8 x 4.3	11.8 x 0.6	4.3
W3		9.6 x 4.3	9.6 x 0.75	4.3
W4		6.4 x 4.3	6.4 x 0.75	4.3
W5	2.6 x 4.3	14.2 x 4.3	14.2 x 1.6	4.3
W6		9.5 x 4.5	0	4.5
W7		16.9 x 4.5	Under podium – see plan	
S1		16.1 x 4.3	16.1 x 0.8	4.3
S2		7.5 x 4.3	7.5 x 0.6	4.3
S3		14.4 x 4.7	14.4 x 1.2	4.7
S4		15.1 x 4.7	15.1 x 1.2	4.7
S5	5 x 4.7	10.5 x 4.7	10.5 x 1.2	4.7

**33 CROSS, ST DOUBLE BAY
PPR SUBMISSION**

**LEVEL 1, 2 & 3 (identical)
HOTEL**

	Area of glazing	Overhang
N1	11.2 x 2.75	11.2 x 1.5
N2	2.7 x 2.75	0
N3	4.0 x 2.75	0
N4	0	-
W1	16.3 x 2.75	16.3 x 0.6
W2	0	-
W3	0	-
E1	24.7 x 2.75	24.7 x 1.5
E2	0	-
E3	0	-
E4	9.7 x 2.75	0
S1	2.7 x 2.75	0
S2	28.3 x 2.75	28.3 x 0.6
S3	4.0 x 2.75	0
S4	17.7 x 2.75	17.7 x 0.6

**LEVEL 4
HOTEL**

	Area of glazing	Overhang
N1	13.8 x 3.15	13.8 x 2.7
N2	2.7 x 2.7	0
N3	0	-
N4	0	-
N5	1.2 x 2.7	1.2 x 2.7
W1	8.1 x 3.15 5 x 2.7	8.1 x 2.7 5 x 2.7
W2	0	-
E1	10.3 x 3.15 13.6 x 2.7	10.3 x 3.1 13.6 x 3.1
E2	15.1 x 2.7	15.1 x 1.3
E3	0	-
S1	21.8 x 2.7	21.8 x 2.4

GLAZING CALCULATOR FOR USE WITH CLAUSE J2.4, BCA VOLUME ONE (METHOD 2)

Building name/description

33 Cross St, Double Bay

Climate zone

5

Storey

GF

Facade areas

Option A

Option B

Glazing area (A)

	N	NE	E	SE	S	SW	W	NW
Option A	298m ²	83m ²	65.8m ²	211m ²	169m ²	144m ²	68.8m ²	327m ²
Option B								
Glazing area (A)	195m ²	83m ²	65.8m ²	211m ²	169m ²	120m ²	68.8m ²	315m ²

Number of rows preferred in table below

25 (as currently displayed)

GLAZING ELEMENTS, ORIENTATION, SIZE and PERFORMANCE CHARACTERISTICS								SHADING		CALCULATED OUTCOMES - OK (if inputs are valid)						
Glazing element		Sector faced		Size			Performance		P&H or device		Shading		Multipliers		Size	Element share of % of allowance used
ID	Description (optional)	Option A facades	Option B facades	Height (m)	Width (m)	Area (m ²)	Total U-Value (NFRC)	SHGC (NFRC)	P (m)	H (m)	P/H	G (m)	Heating (S _H)	Cooling (S _C)	Area used (m ²)	
1	North Façade 1	N		4.30	16.10		3.5	0.25	1.50	4.30	0.35	0.00	0.89	0.66	69.23	32% of 45%
2	North Façade 2	N		4.30	12.00		3.5	0.25	1.50	4.30	0.35	0.00	0.89	0.66	51.60	24% of 45%
3	North Façade 3	N		4.30	1.80		3.5	0.25	2.50	4.30	0.58	0.00	0.68	0.47	7.74	2% of 45%
4	North Façade 4	N		4.30	6.00		3.5	0.25	0.22	4.30	0.05	0.00	0.99	0.95	25.80	20% of 45%
5	North Façade 5	NE		4.30	10.80		3.5	0.25	0.70	4.30	0.16	0.00	0.96	0.88	46.44	68% of 91%
6	North Façade 6	NE		4.40	8.30		3.5	0.25	2.45	4.40	0.56	0.00	0.69	0.57	36.52	32% of 91%
7	North Façade 7	N		4.30	4.00		3.5	0.25	4.00	4.30	0.93	0.00	0.10	0.30	17.20	2% of 45%
8	North Façade 8	N		4.30	2.70		3.5	0.25				0.00	1.00	1.00	11.61	10% of 45%
9	North Façade 9	N		4.30	2.70		3.5	0.25				0.00	1.00	1.00	11.61	10% of 45%
10	East Façade 1	SE		4.30	10.20		3.5	0.30	1.20	4.30	0.28	0.00	0.85	0.80	43.86	21% of 97%
11	East Façade 2	E		4.30	15.30		3.5	0.30	4.20	4.30	0.98	0.00	0.24	0.43	65.79	100% of 61%
12	East Façade 3	SE		4.50	18.60		3.5	0.30	4.00	4.50	0.89	0.00	0.59	0.50	83.70	35% of 97%
13	East Façade 4	SE		4.50	18.50		3.5	0.30				0.00	1.00	1.00	83.25	44% of 97%
14	West Façade 1	NW		4.30	19.70		3.5	0.25	0.60	4.30	0.14	0.00	0.97	0.89	84.71	33% of 73%
15	West Façade 2	NW		4.30	11.80		3.5	0.25	0.60	4.30	0.14	0.00	0.97	0.89	50.74	20% of 73%
16	West Façade 3	W		4.30	9.60		3.5	0.25	0.75	4.30	0.17	0.00	0.93	0.89	41.28	60% of 100%
17	West Façade 4	W		4.30	6.40		3.5	0.25	0.75	4.30	0.17	0.00	0.93	0.89	27.52	40% of 100%
18	West Façade 5	NW		4.30	14.20		3.5	0.25	1.60	4.30	0.37	0.00	0.86	0.69	61.06	17% of 73%
19	West Façade 6	NW		4.50	9.50		3.5	0.25				0.00	1.00	1.00	42.75	19% of 73%
20	West Façade 7	NW		4.50	16.90		3.5	0.25	4.00	4.50	0.89	0.00	0.33	0.38	76.05	11% of 73%
21	South Façade 1	S		4.30	16.10		3.5	0.60	0.80	4.30	0.19	0.00	0.94	0.91	69.23	41% of 79%
22	South Façade 2	S		4.30	7.50		3.5	0.60	0.60	4.30	0.14	0.00	0.96	0.93	32.25	19% of 79%
23	South Façade 3	S		4.70	14.40		3.5	0.60	1.20	4.70	0.26	0.00	0.92	0.88	67.68	40% of 79%
24	South Façade 4	SW		4.70	15.10		3.5	0.60	1.20	4.70	0.26	0.00	0.90	0.84	70.97	59% of 94%
25	South Façade 5	SW		4.70	10.50		3.5	0.60	1.20	4.70	0.26	0.00	0.90	0.84	49.35	41% of 94%

GLAZING ELEMENTS, ORIENTATION, SIZE and PERFORMANCE CHARACTERISTICS								SHADING		CALCULATED OUTCOMES - OK (if inputs are valid)					
Glazing element		Sector faced		Size			Performance		P&H or device		Shading		Multipliers		Size
ID	Description (optional)	Option A facades	Option B facades	Height (m)	Width (m)	Area (m ²)	Total U-Value (NFRC)	SHGC (NFRC)	P (m)	H (m)	P/H	G (m)	Heating (S _H)	Cooling (S _C)	Area used (m ²)
Element share of % of allowance used															

IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE GLAZING CALCULATOR

The Glazing Calculator has been developed by the ABCB to assist in developing a better understanding of glazing energy efficiency parameters. While the ABCB believes that the Glazing Calculator, if used correctly, will produce accurate results, it is provided "as is" and without any representation or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all. Your use of the Glazing Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.

if inputs are valid



GLAZING CALCULATOR FOR USE WITH CLAUSE J2.3, BCA VOLUME ONE (METHOD 1)

Climate zone: **5** Building name/description: **33 Cross St, Double Bay**

Unit no.: **1** Storey: **1**
 Area of floor: **1234m²**
 Glazing area: ##### (27% of area of floor - Storey: 1)

CONSTANTS and ALLOWANCES (per storey)	
	1 not used
C _U / C _{SHGC}	1.9 / 0.14
C _U x Area	2344.6
C _{SHGC} x Area	172.8

Number of rows preferred in table below: **15** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION, SIZE and PERFORMANCE CHARACTERISTICS							SHADING		CALCULATION DATA			CALCULATED OUTCOMES - OK (if inputs are valid)					
Glazing element		Sector faced		Size			Performance		P&H or device		Exposure		Size	Conductance - PASSED		Solar heat gain - PASSED	
ID	Description (optional)	Storey: 1	Storey: not used	Height (m)	Width (m)	Area (m ²)	Total U-Value (NFRC)	SHGC (NFRC)	P (m)	H (m)	P/H	E factor	Area used (m ²)	U x area	Element share of % of allowance used	SHGC x E x area	Element share of % of allowance used
1	North Façade 1	NE		2.75	11.20		7.0	0.65	1.50	2.75	0.55	0.49	30.80	215.6	9% of 100%	9.9	6% of 99%
2	North Façade 2	N		2.75	2.70		7.0	0.65				0.82	7.43	52.0	2% of 100%	4.0	2% of 99%
3	North Façade 3	NE		2.75	4.00		7.0	0.65				1.09	11.00	77.0	3% of 100%	7.8	5% of 99%
4	North Façade 4																
5	West Façade 1	W		2.75	16.30		7.0	0.65	0.60	2.75	0.22	0.98	44.83	313.8	13% of 100%	28.4	17% of 99%
6	West Façade 2																
7	West Façade 3																
8	East Façade 1	E		2.75	24.70		7.0	0.65	1.50	2.75	0.55	0.62	67.93	475.5	20% of 100%	27.3	16% of 99%
9	East Façade 2																
10	East Façade 3																
11	East Façade 4	E		2.75	9.70		7.0	0.65				1.19	26.68	186.7	8% of 100%	20.6	12% of 99%
12	South Façade 1	SW		2.75	2.70		7.0	0.65				1.04	7.43	52.0	2% of 100%	5.0	3% of 99%
13	South Façade 2	SW		2.75	28.30		7.0	0.65	0.60	2.75	0.22	0.75	77.83	544.8	23% of 100%	37.7	22% of 99%
14	South Façade 3	SW		2.75	4.00		7.0	0.65				1.04	11.00	77.0	3% of 100%	7.4	4% of 99%
15	South Façade 4	SW		2.75	17.70		7.0	0.65	0.60	2.75	0.22	0.75	48.68	340.7	15% of 100%	23.6	14% of 99%

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if inputs are valid



GLAZING CALCULATOR FOR USE WITH CLAUSE J2.3, BCA VOLUME ONE (METHOD 1)

Climate zone: **5** Building name/description: **33 Cross St, Double Bay**

Unit no.: **1** Storey: **2**

Area of floor: **1234m²**

Glazing area: ##### (27% of area of floor - Storey: 2)

CONSTANTS and ALLOWANCES (per storey)	
	2 not used
C _U / C _{SHGC}	1.9 / 0.14
C _U x Area	2344.6
C _{SHGC} x Area	172.8

Number of rows preferred in table below: **15** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION, SIZE and PERFORMANCE CHARACTERISTICS							SHADING		CALCULATION DATA			CALCULATED OUTCOMES - OK (if inputs are valid)					
Glazing element		Sector faced		Size			Performance		P&H or device		Exposure		Size	Conductance - PASSED		Solar heat gain - PASSED	
ID	Description (optional)	Storey: 2	Storey: not used	Height (m)	Width (m)	Area (m ²)	Total U-Value (NFRC)	SHGC (NFRC)	P (m)	H (m)	P/H	E factor	Area used (m ²)	U x area	Element share of % of allowance used	SHGC x E x area	Element share of % of allowance used
1	North Façade 1	NE		2.75	11.20		7.0	0.65	1.50	2.75	0.55	0.49	30.80	215.6	9% of 100%	9.9	6% of 99%
2	North Façade 2	N		2.75	2.70		7.0	0.65				0.82	7.43	52.0	2% of 100%	4.0	2% of 99%
3	North Façade 3	NE		2.75	4.00		7.0	0.65				1.09	11.00	77.0	3% of 100%	7.8	5% of 99%
4	North Façade 4																
5	West Façade 1	W		2.75	16.30		7.0	0.65	0.60	2.75	0.22	0.98	44.83	313.8	13% of 100%	28.4	17% of 99%
6	West Façade 2																
7	West Façade 3																
8	East Façade 1	E		2.75	24.70		7.0	0.65	1.50	2.75	0.55	0.62	67.93	475.5	20% of 100%	27.3	16% of 99%
9	East Façade 2																
10	East Façade 3																
11	East Façade 4	E		2.75	9.70		7.0	0.65				1.19	26.68	186.7	8% of 100%	20.6	12% of 99%
12	South Façade 1	SW		2.75	2.70		7.0	0.65				1.04	7.43	52.0	2% of 100%	5.0	3% of 99%
13	South Façade 2	SW		2.75	28.30		7.0	0.65	0.60	2.75	0.22	0.75	77.83	544.8	23% of 100%	37.7	22% of 99%
14	South Façade 3	SW		2.75	4.00		7.0	0.65				1.04	11.00	77.0	3% of 100%	7.4	4% of 99%
15	South Façade 4	SW		2.75	17.70		7.0	0.65	0.60	2.75	0.22	0.75	48.68	340.7	15% of 100%	23.6	14% of 99%

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if inputs are valid



GLAZING CALCULATOR FOR USE WITH CLAUSE J2.3, BCA VOLUME ONE (METHOD 1)

Climate zone: **5** Building name/description: **33 Cross St, Double Bay**

Unit no.: **1** Storey: **3**

Area of floor: **1234m²**

Glazing area: ##### (27% of area of floor - Storey: 3)

CONSTANTS and ALLOWANCES (per storey)	
	3 not used
C _U / C _{SHGC}	1.9 / 0.14
C _U x Area	2344.6
C _{SHGC} x Area	172.8

Number of rows preferred in table below **15** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION, SIZE and PERFORMANCE CHARACTERISTICS							SHADING		CALCULATION DATA			CALCULATED OUTCOMES - OK (if inputs are valid)					
Glazing element		Sector faced		Size			Performance		P&H or device		Exposure		Size	Conductance - PASSED		Solar heat gain - PASSED	
ID	Description (optional)	Storey: 3	Storey: not used	Height (m)	Width (m)	Area (m ²)	Total U-Value (NFRC)	SHGC (NFRC)	P (m)	H (m)	P/H	E factor	Area used (m ²)	U x area	Element share of % of allowance used	SHGC x E x area	Element share of % of allowance used
1	North Façade 1	NE		2.75	11.20		7.0	0.65	1.50	2.75	0.55	0.49	30.80	215.6	9% of 100%	9.9	6% of 99%
2	North Façade 2	N		2.75	2.70		7.0	0.65				0.82	7.43	52.0	2% of 100%	4.0	2% of 99%
3	North Façade 3	NE		2.75	4.00		7.0	0.65				1.09	11.00	77.0	3% of 100%	7.8	5% of 99%
4	North Façade 4																
5	West Façade 1	W		2.75	16.30		7.0	0.65	0.60	2.75	0.22	0.98	44.83	313.8	13% of 100%	28.4	17% of 99%
6	West Façade 2																
7	West Façade 3																
8	East Façade 1	E		2.75	24.70		7.0	0.65	1.50	2.75	0.55	0.62	67.93	475.5	20% of 100%	27.3	16% of 99%
9	East Façade 2																
10	East Façade 3																
11	East Façade 4	E		2.75	9.70		7.0	0.65				1.19	26.68	186.7	8% of 100%	20.6	12% of 99%
12	South Façade 1	SW		2.75	2.70		7.0	0.65				1.04	7.43	52.0	2% of 100%	5.0	3% of 99%
13	South Façade 2	SW		2.75	28.30		7.0	0.65	0.60	2.75	0.22	0.75	77.83	544.8	23% of 100%	37.7	22% of 99%
14	South Façade 3	SW		2.75	4.00		7.0	0.65				1.04	11.00	77.0	3% of 100%	7.4	4% of 99%
15	South Façade 4	SW		2.75	17.70		7.0	0.65	0.60	2.75	0.22	0.75	48.68	340.7	15% of 100%	23.6	14% of 99%

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if inputs are valid



GLAZING CALCULATOR FOR USE WITH CLAUSE J2.3, BCA VOLUME ONE (METHOD 1)

Climate zone: **5** Building name/description: **33 Cross St, Double Bay**

Unit no.: **1** Storey: **4**

Area of floor: **741m²**

Glazing area: ##### (35% of area of floor - Storey: 4)

CONSTANTS and ALLOWANCES (per storey)	
	4 not used
C _U / C _{SHGC}	1.9 / 0.14
C _U x Area	1407.9
C _{SHGC} x Area	103.7

Number of rows preferred in table below: **15** (as currently displayed)

GLAZING ELEMENTS, ORIENTATION, SIZE and PERFORMANCE CHARACTERISTICS							SHADING		CALCULATION DATA			CALCULATED OUTCOMES - OK (if inputs are valid)					
Glazing element		Sector faced		Size			Performance		P&H or device		Exposure		Size	Conductance - PASSED		Solar heat gain - PASSED	
ID	Description (optional)	Storey: 4	Storey: not used	Height (m)	Width (m)	Area (m ²)	Total U-Value (NFRC)	SHGC (NFRC)	P (m)	H (m)	P/H	E factor	Area used (m ²)	U x area	Element share of % of allowance used	SHGC x E x area	Element share of % of allowance used
1	North Façade 1	N		3.15	13.80		5.3	0.88	2.70	3.15	0.86	0.29	43.47	230.4	17% of 99%	11.0	11% of 99%
2	North Façade 2	N		2.70	2.70		5.3	0.88				0.82	7.29	38.6	3% of 99%	5.3	5% of 99%
3	North Façade 3																
4	North Façade 4																
5	North Façade 5	N		2.70	1.20		5.3	0.88	2.70	2.70	1.00	0.26	3.24	17.2	1% of 99%	0.7	1% of 99%
6	West Façade 1.1	W		3.15	8.10		5.3	0.88	2.70	3.15	0.86	0.50	25.52	135.2	10% of 99%	11.3	11% of 99%
7	West Façade 1.2	W		2.70	5.00		5.3	0.88	2.70	2.70	1.00	0.46	13.50	71.6	5% of 99%	5.5	5% of 99%
8	West Façade 2																
9	East Façade 1.1	E		3.15	10.30		5.3	0.88	3.10	3.15	0.98	0.43	32.45	172.0	12% of 99%	12.2	12% of 99%
10	East Façade 1.2	E		2.70	13.60		5.3	0.88	3.10	2.70	1.15	0.38	36.72	194.6	14% of 99%	12.1	12% of 99%
11	East Façade 2	E		2.70	15.10		5.3	0.88	1.30	2.70	0.48	0.66	40.77	216.1	16% of 99%	23.7	23% of 99%
12	East Façade 3																
13	South Façade 1	SW		2.70	21.80		5.3	0.88	2.40	2.70	0.89	0.40	58.86	312.0	22% of 99%	20.9	20% of 99%
14																	
15																	

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if inputs are valid

