BCA BC 15.0.3 Vol 11

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## See Distribution List

Dear Sir

# NEW MINIMUM BUILDABILITY SCORE FROM 1 AUGUST 2002

I refer to my earlier circular of 14 June 2002.

2 We have detected an error in the N value of Table 3: "Other Buildable Design Features". It is to be corrected as follows.

BUILDABLE FEATURES	MODULE	UNIT OF COVERAGE	N VALUE PERCENTAGE OF COVERAGE
	moboll	e e v Entrol	$\geq 65\% \text{ to } < 80\%$
2.2 Repetition of floor-to-floor height	0.5M	no.	1
			(value in the last circular was 1.5)

3 The erroneous value also appeared in the related forms for submission and are amended accordingly as shown in the attachments.

4 Kindly disseminate the information to your members. Thank you.

Yours faithfully

YAP GUAN HWA MANAGER BUILDING PLAN DEPARTMENT for COMMISSIONER OF BUIDLING CONTROL

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Registrar Board of Architects, Singapore 5 Maxwell Road 1<sup>st</sup> Storey Tower Block MND Complex Singapore 069110

#### Table 1 Structural Systems - Ss Value

Slab/beam system		L	Precast concrete slab	Cast in-situ slab				
		Cast-in-place slab on steel decking		Flat plate	Flat slab	slab/beam <sup>(3)</sup> > 10		
						l-way banded beam	2-way beam	slab/beam ≤ 10
Staal haam	Steel beam and column sprayed fire proofed	0.95	0.90					
Steel beam	Steel beam and column encased in concrete	0.85	0.80					
Precast concrete	With precast column/wall		1.00					
beam	With cast in-situ column/wall		0.90					
No internal beam	With precast column/wall			0.95/0.90 <sup>(1)</sup>				
	With cast in-situ column/wall			0.90/0.85 <sup>(1)</sup>	0.85/0.80 <sup>(1)</sup>			
Cast in-situ beam	With cast in-situ column/wall (without transfer beams)		0.75/ 0.70 <sup>(1)(2)</sup>			0.75/ 0.70 <sup>(1)</sup>	0.70/0.65 <sup>(1)</sup>	0.55/0.50 <sup>(1)</sup>
	With cast in-situ column/wall (with transfer beams) <sup>(4)</sup>					0.40		

<sup>(1)</sup> The higher index refers to cast in-situ post-tensioned or prestressed slabs/beams.

(2) Both indices will apply where the value of slab area over number of beams is greater than 10. If the value of slab area over number of beams is less than or equal to 10, the index shall be 0.65 for post-tensioned/prestressed and 0.60 for non post-tensioned/prestressed.

<sup>(3)</sup> Slab/beam refers to the value of slab area over number of beams.

#### <sup>(4)</sup> The index of 0.40 is to be applied to the entire cast in-situ floor area with transfer beams, except area with ramp access.

\* Indices for other systems not shown in this table shall be determined by BCA on a case by case basis. For such cases, the QPs

are advised to seek BCA's comments before proceeding with the designs.

Table 1A	Roof Syste	ms - Ss	Value
10010 111	10001 0 1000		

No.	Types of Roof	S <sub>S</sub> Value
a.	Integrated metal roof on steel truss	0.90
b.	Metal roof on steel truss	0.85
c.	Tiled roof on steel beam or precast concrete beam or timber beam	0.75
d.	Tiled roof with cast in-situ beam	0.55

<u>Note:</u> All changes are highlighted in **bold**.

Table 2 Wall Systems - Sw Value

Finishes							
Wall		No finishes/Pre-finished	Paint finish	Skim coat and paint finish	Plaster and paint finish	Tiled/stone finish	Metal/ Plasterboard Cladding
Curtain wall/full height glass partition		1.00					
Precast concrete panel/wall <sup>(1)</sup>		0.95	0.85	0.80		0.95 <sup>(4)</sup>	
Dry internal walls <sup>(2)</sup>		1.00	0.90			0.65	
PC formwork <sup>(3)</sup>		0.80	0.70	0.60		0.50	
Precision block	wall			0.60		0.50	0.80
Cast in-situ RC wall		0.75	0.65	0.55	0.50	0.45	0.70
Brickwall	Brickwall				0.40	0.35	0.50
	Half fair-faced	0.40					
	Full fair-faced/ glass block	0.30					

<sup>(1)</sup> Precast concrete panel/walls includes nominal weight concrete panels, lightweight concrete panels, autoclaved aerated concrete panels.

<sup>(2)</sup> Dry internal walls include sandwich panel wall system, stud and sheet partition wall systems, demountable wall systems.

<sup>(3)</sup> PC formwork refer to precast formwork panel with concrete infill.

<sup>(4)</sup> Tile/stone is pre-stalled in factory. For tile/stone installed at site, LSI is 0.60

\* Indices for other systems not shown in this table shall be determined by BCA on a case-by-case basis.

\* Index for windows/doors/prefabricated railings = 1

### Note:

All changes are highlighted in bold.

#### Table 3: Other Buildable Design Features - N value

Buildable Features         Module         Unit of coverage <sup>(4)</sup> Percentage of coverage <sup>(4)</sup> 1         Standardication         265% to < 80%         >260%           1         Columns (3 most common sizes)         0.5% <sup>(4)</sup> no.         2.0           1.2         Beams (3 most common sizes)         0.5% <sup>(4)</sup> no.         2.0           1.3         (8) Standard do net genings (with) (3most common sizes)         0.5% <sup>(4)</sup> no.         1.0         2.0           0         R         (1.0)         Standard door led openings (with) and standard structural openings (xind) (3most common sizes) (see Table 3A)         no.         1.0         2.0           0         R         (1.0)         1.0         2.0         1.0         2.0           1.4         Windows (3most common sizes) (see Table 3A)         no.         0.5         1.0			Module		N value Percentage of coverage <sup>(4)</sup>		
Image: standardisation         image: standardisation           1         Columns (3 most common sizes)         0.5M <sup>(2)</sup> no.         2.0           1.2         Beams (3 most common sizes)         0.5M <sup>(2)</sup> no.         0.5         1.0           1.3         (a) Elandard dor viet of pennings (width) (3most common sizes)         0.5M <sup>(2)</sup> no.         0.5         1.0           0.8         Common sizes (100 rs sizes on twitch the range stipulated in Table SA)         no.         1.0         2.0           1.4         Windows (3most common sizes) (0° rs sizes not within the range stipulated in Table SA)         no.         0.5         1.0           2.0         Gride	Buildable Features			Unit of coverage			
1         Standardization         0.5M <sup>20</sup> no.         2.0           1.1         Columns (3 most common sizes)         0.5M <sup>20</sup> no.         2.0           1.3         (a) Standard door lead openings (width) (3most common sizes)         0.5M <sup>20</sup> no.         2.0           1.3         (a) Standard door lead openings (width) (3most common sizes)         0.5M <sup>20</sup> no.         0.5         1.0           0.4         (b) Standard door lead openings (width) and standard drockural openings (3most common sizes) (see Table 3A)         no.         1.0         2.0           0.4         (c) Standard structural openings for doors (3 most common sizes) (see Table 3A)         no.         0.5         1.0           1.4         Windows (Bmost common sizes) ("         1.0 MitM <sup>10</sup> no.         0.5         1.0           1.4         Windows (Bmost common sizes) ("         1.0 MitM <sup>10</sup> no.         0.5         1.0           2.1         Repetition of fortoch-door height         0.5M         no.         1.5         2.0           2.3         Vertical repetition of structural foor layout         area         1.0         1.5         2.0           3.3         Beam caga         no.         1.5         2.0         3.0         1.5         2.0						≥65% to < 80%	≥80%
1.1         Columns (2) most common sizes)         0.5M <sup>PC</sup> no.         2.0           1.2         Resems (3) mast common sizes)         0.5M <sup>PC</sup> no.         2.0           1.3         (a) Standard door leaf openings (width) (3most common sizes) (see Table 3A)         no.         0.5         1.0           0.5         (b) Standard door leaf openings (width) and standard distocural openings (3most common sizes) (see Table 3A)         no.         1.0         2.0           CR         (c) Standard structural openings for doors (3 most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (and to common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not within the range structural openings (3most common sizes) (for sizes not siz	1	Standa	rdisation				
12         Beams (3 most common sizes)         0.5M <sup>ID</sup> no.         2.0           1.3         (a) Standard dor largerpring (width) (3most common sizes) (see Table 3A)         no.         0.5         1.0           OR		1.1	Columns (3 most common sizes)	0.5M <sup>(2)</sup>	no.		2.0
1.3         (a) Standard door lad openings (width) (3most common sizes) (see Table 3A)         no.         0.5         1.0           QR         (b) Standard door lad openings (width) and standard structural openings (most common sizes) (see Table 3A)         no.         1.0         2.0           QR         (c) Standard structural openings for doors (3 most common sizes) (for sizes not within the range stipulated in Table 3A)         2M or 3M         no.         0.5         1.0           1.4         Windows (3most common sizes) (for sizes not within the range stipulated in Table 3A)         1M/ 1M <sup>(0)</sup> no.         0.5         1.0           2         Grids		1.2	Beams (3 most common sizes)	0.5M <sup>(2)</sup>	no.		2.0
OR         C         C           (b) Standard door leaf openings (width) and standard structural openings (structural openings for doors (3 most common sizes) (for sizes not within the range structural openings for doors (3 most common sizes) (for sizes not within the range structural openings for doors (3 most common sizes) (for sizes not within the range structural openings for doors (3 most common dimensions)         2M or 3M         no.         0.5         1.0           2         Grads         2M or 3M         no.         0.5         1.0           2         Grads         1M         no.         0.5         1.0           2         Grads         1M         no.         0.5         1.0           2.1         Repetition of horizontal grids (between supports) (3 most common dimensions)         1M         no.         1.5         2.0           2.3         Vectoral registion of structural floor layout         3M         no.         1.5         2.0           3         Prefabricated Reliferorement         area         1.0         1.5         2.0           4         Others         0         area         1.0         1.5         2.0           4         In Prefabricated bathroomholiet complete with piping/wring: (b) Prefabricated bathroomholiet complete with piping/wring: (b) Prefabricated bathroomholiet complete with piping/wring: (b) Prefabricated vectored stafar(see) ereceast 0.5M		1.3	(a) Standard door leaf openings (width) (3most common sizes) (see Table 3A)		no.	0.5	1.0
Image: Problem Standard door leaf openings (windth) and standard down of structural openings (3most common sizes) (see Table 3A)         no.         1.0         2.0           OR         Image: Common sizes) (See Table 3A)         no.         0.5         1.0           OR         Image: Common sizes) (See Table 3A)         no.         0.5         1.0           I.4         Windows (Smost common sizes) ( <sup>Im</sup> 1Mr1M <sup>IM</sup> no.         0.5         1.0           2         Grids         Image: Common disces) ( <sup>Im</sup> 1Mr1M <sup>IM</sup> no.         0.5         1.0           2         Grids         Image: Common disces) ( <sup>Im</sup> 1Mr1M <sup>IM</sup> no.         0.5         1.0           2         Repetition of horizontal grids (between supports) (3 most common disces) ( <sup>Im</sup> 3M         no.         1.5         2.0           2.1         Repetition of floor-to-floor height         0.5M         no.         4.1         1.5         2.0           3.1         Floor         area         1.0         1.5         2.0         1.5         2.0           3.1         Floor         area         1.0         1.5         2.0         1.5         2.0           4         Others         Image: Color height         0.5M         no.			OR				
OR         OR         OR           (c) Standard structural openings for doors (3 most common sizes) (for sizes not within the range stipulated in Table 3A)         2M or 3M         no.         0.5         1.0           14         Windows (3most common sizes) <sup>(1)</sup> 1M/1M <sup>(3)</sup> no.         0.5         1.0           2         Grids         1         11/1M <sup>(3)</sup> no.         0.5         1.0           2.1         Repetition of horizontal grids (between supports) (3 most common dimensions)         1M         no.         1.0         1.5           2.2         Repetition of floor-to-floor height         0.5M         no.         1.5         2.0           2.3         Vertical repetition of structural floor layout         area         1.5         2.0         2.0           3.1         Floor         area         1.0         1.5         2.0           3.1         Floor         area         1.0         1.5         2.0           3.4         Column cage         no.         1.5         2.0         0           4.1         (a) Prefabricated bathroom/tollet complete with piping/wiring: thip perfabricated bathroom/tollet complete with piping/wiring: thip perfabricated bathroom/tollet complete with piping/wiring: thip perfabricated bathroom/tollet complete with finished wall and floor         0.5M			(b) Standard door leaf openings (width) and standard structural openings (3most common sizes) (see Table 3A)		no.	1.0	2.0
Image: triangle in the second structural openings for doors (3 most common sizes) (for sizes not within the range stipulated in Table 3A)         Image: triangle in the second structural openings for doors (3 most common direct) (3 most common			OR				
14         Windows (3most common sizes) <sup>(1)</sup> 1M/1M <sup>(3)</sup> no.         0.5         1.0           2         Grids         Repetition of horizontal grids (between supports) (3 most common dimensions)         1M         no.         1.0         1.5           2.1         Repetition of foor-to-floor height         0.5M         no.         1.0         1.5         2.0           2.2         Repetition of foor-to-floor height         0.5M         no.         1.0         2.0         2.0           2.3         Vertical repetition of structural floor layout         area         1.0         1.5         2.0           3         Prefabricated Reinforcement			(c) Standard structural openings for doors (3 most common sizes)(for sizes not within the range stipulated in Table 3A)	2M or 3M	no.	0.5	1.0
2         Grids         Image: control of the control o		1.4	Windows (3most common sizes) <sup>(1)</sup>	1M/1M <sup>(3)</sup>	no.	0.5	1.0
2.1         Repetition of horizontal grids (between supports) (3 most common dimensions)         1M         no.         1.0         1.5           2.2         Repetition of floor-to-floor height         0.5M         no.         0.0         2.0         2.0           2.3         Vertical repetition of floor-to-floor height         0.5M         no.         0.0         2.0         2.0           3         Floor         area         1.5         2.0         2.0           3.1         Floor         area         1.0         1.5         2.0           3.2         Wall         area         1.0         1.5         2.0           3.4         Column cage         no.         1.5         2.0           4         Others         no.         1.5         2.0           4         (a) Prefabricated bathroom/toilet complete with piping/wiring: prefabricated wall panels and floor tray separately assembled         0.5M         no.         1.5         2.0           0R         (b) Prefabricated bathroom/toilet complete with piping/wiring: full prefabricated cell completed with finished wall and floor         0.5M         no.         2.0         3.0           4.2         (a) Standard precast staircase (see Table 3B)         no.         2.0         0R         0R      <	2	Grids		·			
Image: Image		21	Repetition of horizontal grids (between supports) (3 most	1M	no	1.0	15
2.2         Repetition of floor-to-floor height         0.5M         no.         4.0         1.0         1.0         2.0         2.0           2.3         Vertical repetition of structural floor layout         area         1.5         2.0           3         Prefabricated Reinforcement         area         1.5         2.0           3.1         Floor         area         1.0         1.5           3.2         Wall         area         1.0         1.5           3.3         Beam cage         no.         1.5         2.0           4         Column cage         no.         1.5         2.0           4         Others         0.5M         no.         1.5         2.0           4         (a) Prefabricated bathroom/toilet complete with piping/wiring: prefabricated wall panels and floor tray separately assembled         0.5M         no.         1.5         2.0           OR         (b) Prefabricated bathroom/toilet complete with piping/wiring: full prefabricated wall panels and floor         0.5M         no.         2.0         3.0           4.2         (a) Standard precast staircase (see Table 3B)         no.         2.0         3.0           OR         OR         OR         OR         OR         OR         OR		2.1	common dimensions)	214	10.	1.0	1.0
LinkColumn CalculationColumnThe columnColum		22	Repetition of floor-to-floor beight	0.5M	no.	1.5	2.0
Let         Let <thlet< th=""> <thlet< th=""> <thlet< th=""></thlet<></thlet<></thlet<>		2.2	Vertical repetition of structural floor layout	0.011	area	15	2.0
3.1         Floor         area         1.0         1.5           3.2         Wali         area         1.0         1.5           3.3         Beam cage         no.         1.5         2.0           3.4         Column cage         no.         1.5         2.0           4         Others         no.         1.5         2.0           4         (a) Prefabricated bathroom/toilet complete with piping/wiring: prefabricated wall panels and floor tray separately assembled         0.5M         no.         1.5         2.0           QR         0.5M         no.         1.5         2.0         3.0           4.2         (a) Standard precast staircase (see Table 3B)         0.5M         no.         2.0         3.0           4.3         Prefabricated vertical shafts (e.g. refuse chutes <sup>(5)</sup> )         no.         2.0         3.0           4.4.         Multi-fier precast columns         no.         2.0         3.0           A.3         Prefabricated vertical shafts (e.g. refuse chutes <sup>(5)</sup> )         no.         1.0         1.0           4.4.         Multi-fier precast CD Shelters, minimum 2 panels precast         0.5M         no.         1.0         1.5           OR         0         0         0         0	3	Prefab	ricated Reinforcement		uidu	1.0	2.0
32 32 33Wall areaarea area1.01.5 1.53.3Beam cage 3.4no.1.52.04Othersno.1.52.04Others0.5Mno.1.52.04.1(a) Prefabricated bathroom/toilet complete with piping/wiring: prefabricated wall panels and floor tray separately assembled OR0.5Mno.1.52.000.70.5Mno.1.52.00.5M0.80.5Mno.1.52.00.5M0.90.5Mno.2.03.00.5M4.2(a) Standard precast staircase (see Table 3B)no.2.03.00.80.5Mno.2.03.04.3Prefabricated vertical shafts (e.g. refuse chutes <sup>(5)</sup> )no.1.01.54.4Multi-tier precast columnsno.1.01.54.5(a) Precast CD Shelters, minimum 2 panels precast0.5Mno.1.04.6Non-screed floor0.5Mno.1.01.54.6Non-screed floor0.5Mno.0.53.04.6Non-screed floor0.5Mno.0.53.04.7Columns sol ti drectly on top of pilesno.0.53.04.8Ground beams on top of pilecapsno.0.53.04.9Diabrizon wall constructionarea1.53.0		3.1	Floor		area	1.0	1.5
3.4Beam cageno.1.52.03.4Column cageno.1.52.04Othersno.1.52.04Others $no.$ 1.52.04.1(a) Prefabricated bathroom/toilet complete with piping/wiring: prefabricated wall panels and floor tray separately assembled0.5Mno.1.52.0 $OR$ 4.2(a) Standard precast staircase (see Table 3B) $O.5M$ no.2.0 $3.0$ $3.0$ $A.2$ (a) Standard precast staircase (see Table 3B) $OR$ $OR$ $OR$ $OR$ $OR$ $A.3$ Prefabricated vertical shafts (e.g. refuse chules <sup>(5)</sup> ) $OR$ $OR$ $OR$ $OR$ $A.4$ Multi-tier precast columns $OR$ $OR$ $OR$ $OR$ $A.5$ (a) Precast CD Shelters, minimum 2 panels precast $0.5M$ $OR$ $OR$ $A.5$ (b) Precast CD Shelters, full precast cell $0.5M$ $OR$ $OR$ $A.5$ (b) Precast CD Shelters, full precast cell $0.5M$ $OR$ $OR$ $A.6$ Non-screed floor $A$ $A$ $OR$ $OR$ $A.6$ Non-screed floor $OR$ $OR$ $OR$ $A.7$ Columns sit directly on top of piles $OR$ $OR$ $OR$ $A.8$ Ground beams on top of pilecaps $OR$ $OR$ $OR$ $A.9$ Diaphram wall construction $A$ $A$ $OS$		3.2	Wall		area	10	1.5
3.4         Column cage         no.         1.5         2.0           4         Others         no.         1.5         2.0           4         Others         0.5M         no.         1.5         2.0           4.1         (a) Prefabricated bathroom/toilet complete with piping/wiring: prefabricated wall panels and floor tray separately assembled         0.5M         no.         1.5         2.0           0R         0R         0.5M         no.         1.5         2.0           4.1         (a) Prefabricated bathroom/toilet complete with piping/wiring: full prefabricated cell completed with finished wall and floor         0.5M         no.         2.0         3.0           4.2         (a) Standard precast staircase (see Table 3B)         no.         2.0         3.0           0R         0R         0R         0R         0R         0R           4.3         Prefabricated vertical shafts (e.g. refuse chutes <sup>(6)</sup> )         no.         1.0         1.0           4.4         Multi-tier precast columns         no.         2.0         3.0           4.5         (a) Precast CD Shelters, minimum 2 panels precast         0.5M         no.         1.0         1.5           0R         (b) Precast CD Shelters, full precast cell         0.5M         no.         <		3.3	Beam cage		no.	1.5	2.0
4       Others         4.1       (a) Prefabricated bathroom/toilet complete with piping/wiring: prefabricated wall panels and floor tray separately assembled       0.5M       no.       1.5       2.0         OR       0R       0.5M       no.       1.5       2.0         (b) Prefabricated bathroom/toilet complete with piping/wiring: full prefabricated cell completed with finished wall and floor       0.5M       no.       2.0       3.0         4.2       (a) Standard precast staircase (see Table 3B)       no.       2.0       3.0         OR       0R       0R       0R       0.5M       no.       2.0         4.3       Prefabricated vertical shafts (e.g. refuse chutes <sup>(5)</sup> )       no.       1.0       1.0         4.4       Multi-tier precast columns       no.       2.0       3.0         4.5       (a) Precast CD Shelters, minimum 2 panels precast       0.5M       no.       1.0       1.5         OR       0R       0       0.5M       no.       1.0       1.5         4.5       (a) Precast CD Shelters, full precast cell       0.5M       no.       1.0       1.5         OR       0       0       0       0       0       0       0       0         4.6       Non-screed floor <td< td=""><td></td><td>3.4</td><td>Column cage</td><td></td><td>no.</td><td>1.5</td><td>2.0</td></td<>		3.4	Column cage		no.	1.5	2.0
4.1       (a) Prefabricated bathroom/toilet complete with piping/wiring: prefabricated wall panels and floor tray separately assembled       0.5M       no.       1.5       2.0         OR       0	4	Others					
OR         OR         OR           (b) Prefabricated bathroom/toilet complete with piping/wiring: full prefabricated cell completed with finished wall and floor         0.5M         no.         2.0         3.0           4.2         (a) Standard precast staircase (see Table 3B)         no.         2.0         3.0           OR         0         0         0         0         0           (b) Pre-assembled/metal staircase         no.         2.0         0           (a) Standard precast staircase (see Table 3B)         no.         2.0         0           OR         0         0         0         0         0           (b) Pre-assembled/metal staircase         no.         2.0         0         0         0           4.3         Prefabricated vertical shafts (e.g. refuse chutes <sup>(6)</sup> )         no.         1.0         1.0           4.4         Multi-tier precast columns         no.         1.0         1.5           OR         0         0.5M         no.         1.0         1.5           OR         0         0.5M         no.         2.0         3.0           4.5         (a) Precast CD Shelters, full precast cell         0.5M         no.         2.0         3.0           4.6         Non-s		4.1	(a) Prefabricated bathroom/toilet complete with piping/wiring: prefabricated wall panels and floor tray separately assembled	0.5M	no.	1.5	2.0
(b) Prefabricated bathroom/toilet complete with piping/wiring: full prefabricated cell completed with finished wall and floor         0.5M         no.         2.0         3.0           4.2         (a) Standard precast staircase (see Table 3B)         no.         2.0         2.0           OR         0         2.0         2.0         2.0           4.3         Prefabricated vertical shafts (e.g. refuse chutes <sup>(6)</sup> )         no.         1.0           4.4         Multi-tier precast columns         no.         2.0           4.3         Prefabricated vertical shafts (e.g. refuse chutes <sup>(6)</sup> )         no.         1.0           4.4         Multi-tier precast columns         no.         2.0           4.5         (a) Precast CD Shelters, minimum 2 panels precast         0.5M         no.         1.0           0R         0         0.5M         no.         1.0         1.5           0R         0         0.5M         no.         1.0         1.5           0R         0         0.5M         no.         2.0         3.0           4.6         Non-screed floor         area         1.0         3.0           4.7         Columns sit directly on top of piles         no.         0.5         3.0           4.9         Diaphraam w			OR				
4.2       (a) Standard precast staircase (see Table 3B)       no.       2.0         OR       0R       0         (b) Pre-assembled/metal staircase       no.       2.0         4.3       Prefabricated vertical shafts (e.g. refuse chutes <sup>(6)</sup> )       no.       1.0         4.4       Multi-tier precast columns       no.       2.0         4.5       (a) Precast CD Shelters, minimum 2 panels precast       0.5M       no.       1.0         4.5       (b) Precast CD Shelters, full precast cell       0.5M       no.       1.0         0R       0       0.5M       no.       1.0         4.5       (b) Precast CD Shelters, full precast cell       0.5M       no.       1.0         0.6       Non-screed floor       area       1.0       1.0         4.6       Non-screed floor       0.5M       no.       0.5         4.8       Ground beams on top of piles       no.       0.5       0.5         4.9       Diaphraom wall construction       area       1.5			(b) Prefabricated bathroom/toilet complete with piping/wiring: full prefabricated cell completed with finished wall and floor	0.5M	no.	2.0	3.0
OR         no.         2.0           4.3         Prefabricated vertical shafts (e.g. refuse chutes <sup>(5)</sup> )         no.         1.0           4.4         Multi-tier precast columns         no.         2.0           4.5         (a) Precast CD Shelters, minimum 2 panels precast         0.5M         no.         1.0           0R         0         1.0         1.5         0.5M         no.         1.0           4.6         Non-screed floor         0.5M         no.         1.0         1.5           4.6         Non-screed floor         area         1.0         0.5           4.8         Ground beams on top of piles         no.         0.5         0.5           4.9         Diaphraom wall construction         area         1.5		4.2	(a) Standard precast staircase (see Table 3B)		no.		2.0
(b) Pre-assembled/metal staircase         no.         2.0           4.3         Prefabricated vertical shafts (e.g. refuse chutes <sup>(5)</sup> )         no.         1.0           4.4         Multi-tier precast columns         no.         2.0           4.5         (a) Precast CD Shelters, minimum 2 panels precast         0.5M         no.         1.0           0R         0         1.0         1.5         0           0A         Non-screed floor         0.5M         no.         1.0           4.6         Non-screed floor         0.5M         no.         2.0           4.7         Columns sit directly on top of piles         no.         0.5           4.8         Ground beams on top of pilecaps         no.         0.5           4.9         Diaphraom wall construction         area         1.5			OR				
4.3       Prefabricated vertical shafts (e.g. refuse chutes <sup>(5)</sup> )       no.       1.0         4.4       Multi-tier precast columns       no.       2.0         4.5       (a) Precast CD Shelters, minimum 2 panels precast       0.5M       no.       1.0         4.5       (a) Precast CD Shelters, full precast cell       0.5M       no.       1.0       1.5         OR			(b) Pre-assembled/metal staircase		no.		2.0
4.4       Multi-tier precast columns       no.       2.0         4.5       (a) Precast CD Shelters, minimum 2 panels precast       0.5M       no.       1.0       1.5         OR       0       0       0       0       0       0       0         (b) Precast CD Shelters, full precast cell       0.5M       no.       2.0       3.0         4.6       Non-screed floor       area       1.0       1.0         4.7       Columns sit directly on top of piles       no.       0.5         4.8       Ground beams on top of pilecaps       no.       0.5         4.9       Diaphraom wall construction       area       1.5		4.3	Prefabricated vertical shafts (e.g. refuse chutes <sup>(5)</sup> )		no.		1.0
4.5       (a) Precast CD Shelters, minimum 2 panels precast       0.5M       no.       1.0       1.5         OR       0       0       0       0       0       0         (b) Precast CD Shelters, full precast cell       0.5M       no.       2.0       3.0         4.6       Non-screed floor       area       1.0       1.0         4.7       Columns sit directly on top of piles       no.       0.5         4.8       Ground beams on top of pilecaps       no.       0.5         4.9       Diaphraom wall construction       area       1.5		4.4	Multi-tier precast columns		no.		2.0
OR     International production       0R     0.5M       (b) Precast CD Shelters, full precast cell     0.5M       4.6     Non-screed floor       4.7     Columns sit directly on top of piles       4.8     Ground beams on top of pilecaps       4.9     Diaphraom wall construction		4.5	(a) Precast CD Shelters, minimum 2 panels precast	0.5M	no.	1.0	1.5
Image: construction     Image: construction     Image: construction       0     Precast CD Shelters, full precast cell     0.5M     no.     2.0     3.0       4.6     Non-screed floor     area     1.0       4.7     Columns sit directly on top of piles     no.     0.5       4.8     Ground beams on top of pilecaps     no.     0.5       4.9     Diaphraom wall construction     area     1.5			OR				
4.6     Non-screed floor     area     1.0       4.7     Columns sit directly on top of piles     no.     0.5       4.8     Ground beams on top of pilecaps     no.     0.5       4.9     Diaphraom wall construction     area     1.5			(b) Precast CD Shelters, full precast cell	0.5M	no	2.0	3.0
4.7     Columns sit directly on top of piles     no.     0.5       4.8     Ground beams on top of pilecaps     no.     0.5       4.9     Diaphragm wall construction     area     1.5		4.6	Non-screed floor	0.000	area	2.0	10
4.8     Ground beams on top of pilecaps     no.     0.5       4.9     Diaphragm wall construction     area     1.5		4 7	Columns sit directly on top of piles		no		0.5
4.9 Diaphragm wall construction area 15		4.8	Ground beams on top of pilecaps		no.		0.5
	<u> </u>	4.9	Diaphragm wall construction		area		1.5

Note:

 $^{\left( 1\right) }$  Sizes based on dimensions of frames

<sup>(2)</sup> The module of 0.5M does not apply to steel structures.
 <sup>(3)</sup> 1M for width and 1M for height

(4) The percentage of coverage is to be based on total floor area or on total number of components such as columns, beams, doors, windows, etc.

<sup>(5)</sup> Points will be awarded for use of fully precast refuse chutes which have an external dimension of 850mm x 850mm or 1000mm x 1000mm.

### Note:

All changes are highlighted in bold.