

Your Ref :

Our Ref : SMAH 2012/01/0002

Special Functions Division (#05-00)  
Fax : 6325 7482  
DID : 6325 7392  
Email : clement\_tseng@bca.gov.sg

20 Jan 2012

See Circulation List

Dear Sir/Madam

## **CIRCULAR ON PERIODIC STRUCTURAL INSPECTION (PSI) OF CRITICAL COLUMNS IN VOID DECKS OF OLD RESIDENTIAL BUILDINGS**

The current 'Guidelines for Structural Engineers' recommends critical structures such as slender columns to be identified during PSI. We would like to advise Professional Engineers (PEs) carrying out PSI to pay special attention to the inspection of **small-size/narrow (i.e. those with dimension of 300mm or less) or slender RC columns in void deck of residential buildings built before 1989 and using grade 20 concrete**. For such structural elements, lack of maintenance, natural deterioration, accuracy of rebar placement, differential support settlement, or accidental impact force (eg. from vehicles in void deck carparks) could significantly affect the load capacity.

2 During the inspection of such critical columns, PEs are to be thorough in identifying early signs of deterioration or distress and seriously consider **recommending full structural investigation** in order to ascertain the structural integrity of the columns as well as the need for strengthening or protection.

3 To assist PEs in carrying out the inspection and proper reporting of their findings, we have introduced the 'Supplementary Checklist' for Critical Columns in Residential Buildings built before 1 Jan 1989' as part of the Guidelines. With immediate effect, the inspection report should address all the items in this supplementary checklist for PSI of all residential buildings built before 1 Jan 1989. The complete updated checklists, which can also be downloaded from BCA's website [http://www.bca.gov.sg/PeriodicStructuralInspection/others/PSI\\_PE.pdf](http://www.bca.gov.sg/PeriodicStructuralInspection/others/PSI_PE.pdf) are enclosed for reference.

4 If you require any clarification, please contact the undersigned at tel: 6325 7392 or e-mail: clement\_tseng@bca.gov.sg.

Thank you.

Yours faithfully,



CLEMENT TSENG  
DEPUTY DIRECTOR  
ENFORCEMENT & STRUCTURAL INSPECTION DEPARTMENT  
for COMMISSIONER OF BUILDING CONTROL

Encl.

- Checklist for Periodic Structural Inspection of Existing Building
- Supplementary Checklist for Critical Columns in Residential Buildings built before 1 Jan 1989

Circulation list:

- (1) President  
Institution of Engineers, Singapore  
70, Bukit Tinggi Road  
(Off Swiss Club Road)  
Singapore 289758
- (2) President  
Association of Consulting Engineers Singapore  
18 Sing Ming Lane  
#06-01 Midview City  
Singapore 573960
- (3) Corenet subscribers