

Your Ref :

Our Ref: CD/FSSD/12/02/03/01

Date : 11 Aug 2016

Registrar, Board of Architects
Registrar, Professional Engineers Board
President, Singapore Institute of Architects
President, Institution of Engineers, Singapore
President, Association of Consulting Engineers, Singapore

Dear Sir/Mdm

AMENDMENTS TO THE FIRE CODE 2013 – ALARM AUDIBILITY FOR PURPOSE GROUP II MIXED OCCUPANCY

Currently, for mixed commercial-cum-residential usage and residential developments located over car parks, the fire alarm system at the residential floors shall be provided in accordance with Cl.6.3.1(b) of the Fire Code. In addition, the electrical fire alarm system shall also comply with SS CP 10, which stipulates under Cl.2.5.1 that the audible alarm sounders shall be sufficient to produce a minimum sound level of either 65dBA, or 5dBA above the ambient noise level throughout the floor(s) in which they are installed.

2. SCDF has received feedback from the building industry on the challenges of achieving the required alarm sound level within the residential occupied space due to the installation of sound-proof or solid timber door(s). Such doors attenuate exterior noise effectively resulting in some parts of the units being not able to achieve the required alarm sound level, even with the provision of maximum allowable alarm sound level of 120dBA at the common lobby areas.



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3. The Fire Code Review Committee has deliberated the issue and agreed that Cl.6.3.1(b) shall be revised as shown in Annex A. The revision took into account floor-to-floor compartmentation between residential units and the non-residential floor and compartmentation of each individual unit. From a risk-based perspective, the life safety risk posed to residents is minimal. The provision of compartmentation would also minimise the possibility of fire spreading to residential units.

4. In addition, the related clauses Cl.6.3.7 and Cl.6.4.1(c) are also revised (see attached).

5. Please convey the contents of this circular to members of your Board/ Institution/ Association. The changes to Cl.6.3.1(b) and all the attached related clauses shall be applicable to all plans submitted for approval on or after 1st Nov 2016. This circular is also available in CORENET-e-Info: <http://www.corenet.gov.sg/einfo>. For any clarification, please contact Mr Randy Tan at DID: 68481461 or Email: Randy_Tan@scdf.gov.sg.

Yours faithfully

(transmitted via email)

MAJ Tan Chung Yee
Fire Safety & Shelter Department
for Commissioner
Singapore Civil Defence Force

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SINGAPORE CIVIL DEFENCE FORCE

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Fire Code Review Committee



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HQ SINGAPORE CIVIL DEFENCE FORCE, 91 UBI AVENUE 4, SINGAPORE 408827
TEL: 68481461 FAX: 68481490 EMAIL: Randy_TAN@scdf.gov.sg

AMENDMENTS TO THE FIRE CODE

| Existing Clause | Revised/New Clause |
|--|---|
| <p>Cl.6.3.1(b) (i) For a building of mixed commercial-cum-residential usage, the residential floors located on the upper storeys of the building shall be provided with manual alarm system at the common area. If the habitable height of the building does not exceed 24m, only the alarm bell of the fire alarm system need be extended to the common lobby area of each residential floor.</p> <p>Cl.6.3.1(b)(ii) For residential developments which are located over car parks (irrespective of whether the car parks are in the basement) where fire alarm system is required under Table 6.3A, the alarm bells of the fire alarm system shall be extended to the common lobby area of each residential floor, irrespective of the height of the building.</p> | <p><i>Cl.6.3.1(b) Purpose Group II mixed occupancy</i></p> <p><i>For Purpose Group II mixed occupancy buildings where an automatic sprinkler system and/or electrical fire alarm system is provided to the non-residential part of the building:</i></p> <p><i>(i) alarm sounders shall be installed within the non-residential units, at the common areas of the non-residential floors and extended to the immediate 2 residential floors above the non-residential floor;</i></p> <p><i>(ii) the alarm sounders shall be able to produce a minimum sound level of 65dBA or 5dBA above the ambient noise level in all parts of such areas; and</i></p> <p><i>(iii) connection of the fire alarm system to an approved alarm monitoring station stipulated under Cl.6.3.7 is not required.</i></p> |

| Existing Clause | Revised/New Clause |
|--|--|
| <p>Cl.6.4.1 The following shall be provided with an automatic sprinkler system:</p> <p>(c) In the case of Purpose Group II occupancy forming the upper storeys of a building of mixed occupancy with habitable height exceeding 24m, every storey of the non-residential portion only, shall be provided with an automatic sprinkler system.</p> | <p><i>Cl.6.4.1 The following shall be provided with an automatic sprinkler system:</i></p> <p><i>(c) (i) For Purpose Group II mixed occupancy buildings exceeding 24m in habitable height, the non-residential parts shall be protected by an automatic sprinkler system if they</i></p> <p style="padding-left: 40px;"><i>(1) comprise more than one storey,</i> <i>or</i></p> <p style="padding-left: 40px;"><i>(2) are located above the first storey.</i></p> <p><i>(ii) For Purpose Group II mixed occupancy buildings regardless of habitable height, the non-residential parts shall be protected by an automatic sprinkler system if they are not compartmented from the basement level.</i></p> <p><i>(iii) For non-residential parts where sprinkler protection is not required under sub-clauses (i) & (ii) above, automatic fire alarm system shall be provided to the non-residential parts in accordance with Cl.6.3.1(b).</i></p> |

| Existing Clause | Revised/New Clause |
|---|---|
| <p>Cl.6.3.7 The electrical fire alarm system required to be installed in a building or premises under this clause shall be connected to a fire station through an approved alarm monitoring station when the building or premises is</p> <p>(a) Health care occupancy, hotel or other such like occupancy,</p> <p>(b) An oil refinery, oil depot, general warehouse, chemical plant or other high hazard factory or premises,</p> <p>(c) A theatre, cinema or concert hall as specified in Cl.6.3.5, or</p> <p>(d) (i) A building required under the provisions of this code to be protected by an automatic fire alarm or fire extinguishing system.</p> <p>(ii) Notwithstanding the provision in Cl.6.3.3(d) if a car park in a building is provided with both manual and automatic fire alarm system, then the manual fire alarm need not be connected to the fire station through an approved alarm monitoring company.</p> | <p><i>Cl.6.3.7 The electrical fire alarm system installed in a building or premises under this clause shall be connected to the Relevant Authority's Operations Centre through an approved alarm monitoring station when the building or premises is</i></p> <p><i>(a) a health care occupancy, hotel or other similar occupancies, or</i></p> <p><i>(b) an oil refinery, oil depot, general warehouse, chemical plant or other high hazard factories or premises, or</i></p> <p><i>(c) a theatre, cinema or concert hall as specified in Cl.6.3.5, or</i></p> <p><i>(d) a building required under the provisions of this code to be protected by an automatic fire alarm (except those exempted under Cl.6.3.1(b)) or fire extinguishing system.</i></p> |