



# FPAA101D Automatic fire sprinkler system design and installation

***This industry bulletin has been issued to provide information on new deemed-to-satisfy (DTS) provisions for fire sprinkler systems. The DTS provisions have been included in the 2019 National Construction Code, Volume Three, the Plumbing Code of Australia (PCA), and may be used as a solution to meet new requirements for fire sprinkler systems, in buildings where they were previously not required.***

The new requirements for fire sprinkler systems are included in the 2019 National Construction Code, Volume One, Building Code of Australia, and are for new Class 2 and 3 residential accommodation buildings exceeding three (3) storeys but less than 25 metres in height.

The new DTS provisions are contained in the technical specification FPAA101D which has been referenced by the PCA. This technical specification was compiled by the Fire Protection Association of Australia to provide cost effective fire sprinkler systems to meet the new requirements. FPAA101D permits fire sprinkler systems in such buildings to be directly connected to the potable water supply riser, for example the vertical water supply pipe that supplies plumbing fixtures with potable water within a multi-storey building.

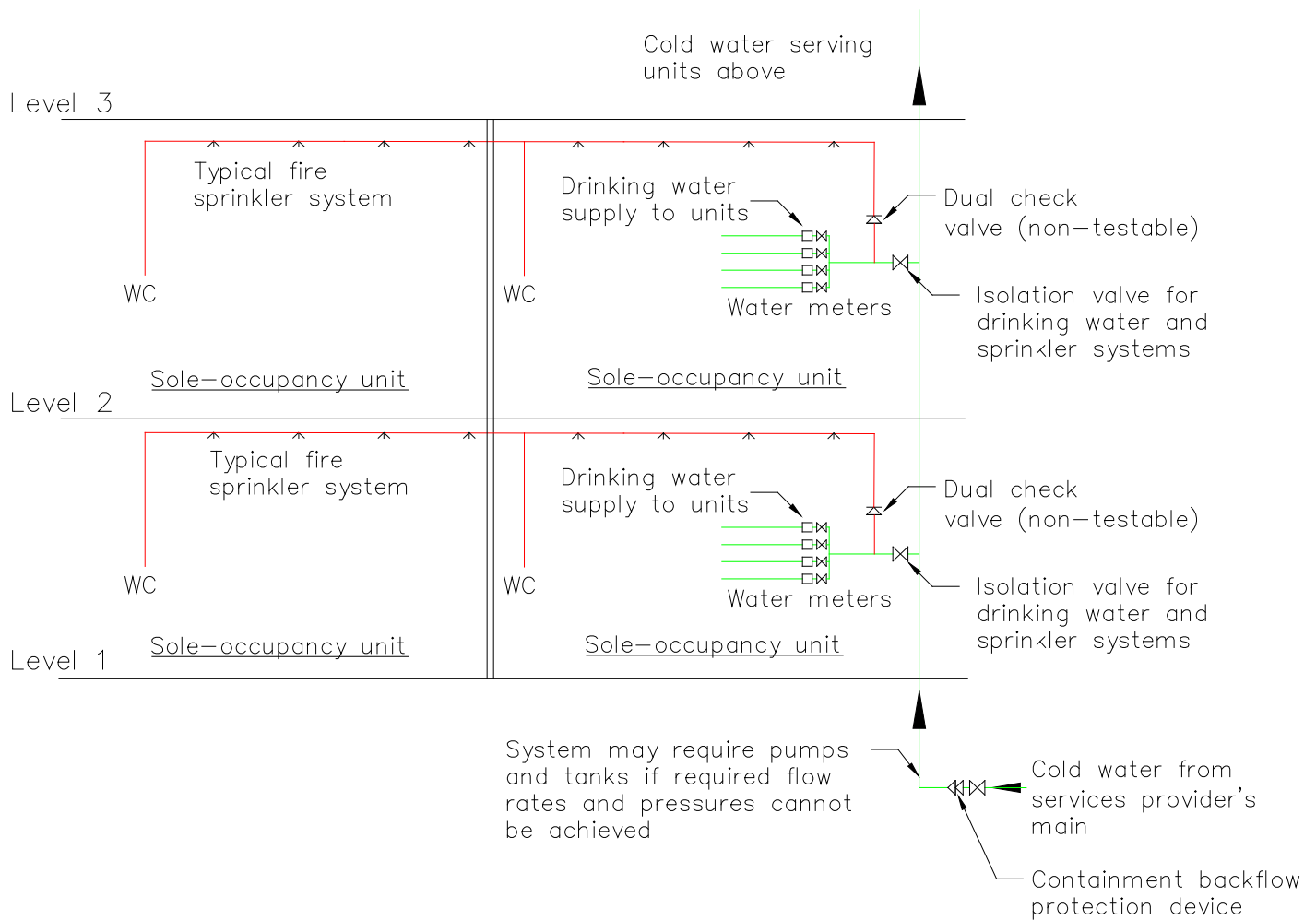
Also required is the incorporation of a dual check valve for backflow prevention at the point where the fire sprinkler system connects to the potable water supply riser. Further, the fire sprinkler system must terminate at a toilet cistern for the purposes of monitoring the system to ensure it is constantly charged with water. All products and materials within the system including the fire sprinklers are to be certified in accordance with the WaterMark Certification Scheme.

In order to clarify any demarcation issues between water supply plumbing work and sprinkler fitting work, Building and Energy obtained a legal determination in accordance with the definition of water supply plumbing work in Regulation 4 of the Plumbers Licensing and Plumbing Standards Regulations 2000 (the Regulations). The result is a determination of the following:

- Installation of the potable water supply including the WaterMarked backflow protection device is plumbing work and must be carried out by licensed plumbers in accordance with the Regulations.
- Installation of the fire sprinkler system downstream of the backflow protection device including the water service pipe work serving the toilet cisterns is not considered plumbing work under the Regulations.

Operationally the sizing of pipework, required flow rates and pressures for both systems should be completed by hydraulic designers, and may include provision of pumps and tanks if necessary. Licensed plumbing contractors are reminded that direct pumping from the mains is not possible without permission from the water services provider. It is expected that hydraulic designers and licensed plumbing contractors will liaise with sprinkler fitters to ensure efficient installation practices.

The diagram below shows a schematic example of how pipework may be installed in accordance with the technical specification.



Copies of the FPAA101D specification and other information is available from the FPAA website at the following link:  
[www.fpaa.com.au/technical/technical-specifications.aspx](http://www.fpaa.com.au/technical/technical-specifications.aspx)

**Disclaimer** – The information contained in this fact sheet is provided as general information and a guide only. It should not be relied upon as legal advice or as an accurate statement of the relevant legislation provisions. If you are uncertain as to your legal obligations, you should obtain independent legal advice.

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