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29 October 2026

To: Recipients of FSD Circular Letters

Dear Sir/Madam,

**FSD Circular Letter No. 9/2026**
**Fire Safety Measures required under**
**the Fire Safety (Commercial Premises) Ordinance, Cap. 502,**
**the Fire Safety (Buildings) Ordinance, Cap. 572, and**
**the Fire Safety (Industrial Buildings) Ordinance, Cap. 636**

**Part I: Improvised Fire Hydrant / Hose Reel System (Direct Pumping Design)**
**Part II: Improvised Sprinkler System (Direct Pumping Design)**

This Circular Letter serves to announce the acceptance, with immediate effect, of improvised fire hydrant / hose reel system ("FH/HR") (direct pumping design) ("DPD") and improvised sprinkler system (DPD) for commercial premises/buildings, composite/domestic buildings and industrial buildings (hereafter collectively referred to as "target buildings") regulated under the Fire Safety (Commercial Premises) Ordinance, Cap. 502, the Fire Safety (Buildings) Ordinance, Cap. 572, and the Fire Safety (Industrial Buildings) Ordinance, Cap. 636 (hereafter collectively referred to as "Ordinances") respectively. This Circular Letter should be read in conjunction with FSD Circular Letters No. 3/2007 and No. 4/2023.

## Background

Following the successful introduction of improvised hose reel ("HR") system (DPD) and improvised FH/HR system (DPD) for composite/domestic buildings regulated under the Fire Safety (Buildings) Ordinance, Cap. 572 in 2023, the Fire Services Department ("FSD") has been working closely with the Water Supplies Department ("WSD"), to further explore the feasibility of expanding the use of DPD to facilitate the implementation of fire safety improvement works by owners of target buildings.

Currently, the FH/HR system and/or automatic sprinkler system are a mandatory requirement for certain types of target buildings in accordance with the Ordinances. Quite often, however, building owners may encounter spatial or structural difficulties when trying to accommodate the water tanks of these systems, hence failing to comply with the statutory requirements.

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**Part I: Improvised Fire Hydrant / Hose Reel System (DPD)**

To address the issue in relation to the fire service tank of FH/HR system, the FSD now accepts the application of improvised FH/HR system (DPD) in all target buildings regulated under the Ordinances. This alternative solution allows fixed fire pumps to be connected directly to government mains such that the installation of a fire service tank is not required. This arrangement is, of course, subject to the conditions that no contamination will be caused to the fresh water supply system and that measures against unlawful water consumption are in place. Please refer to FSD Circular Letter No. 4/2023 for details of the design and specification of improvised FH/HR system (DPD).

**Part II: Improvised Sprinkler System (DPD)**

As for the sprinkler system requirement under the Ordinances, the FSD, in collaboration with the WSD, has expanded the application of DPD to allow the use of improvised sprinkler system (DPD) in target buildings with difficulties in providing sprinkler tanks. This alternative solution allows the installation of an automatic sprinkler system without the need to install a sprinkler tank, provided that the connection point to government mains is at least 80mm in diameter, so as to ensure adequate flow and pressure of water supply for the improvised sprinkler system (DPD).

In determining the feasibility of installing an improvised sprinkler system (DPD), authorised consultants / Registered Fire Service Installation Contractors ("RFSIC") should first obtain an advisory letter from the WSD specifying: (i) the minimum water supply pressure for the building concerned; (ii) the diameter of the connection point; and (iii) the location of the connection point. With this information in hand, they can then submit proposals of improvised sprinkler system (DPD) to the FSD for approval accordingly.

***Application of improvised sprinkler system (DPD)***

If an improvised sprinkler system (DPD) is to be installed, it must be designed in accordance with the required Hazard Group as far as practicable. Please refer to Appendix I for specific requirements based on the diameter of the connection point.

Should the diameter of the connection point be less than 80mm, improvised sprinkler system (DPD) is not a viable option. Instead, the authorised consultants / RFSIC should contact the FSD Building Improvement Support Centre for other solutions.

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***Design and Specification***

The design and specification of improvised sprinkler system (DPD) are illustrated in Appendix II to IV for reference.

**Inspection and Maintenance**

Owners of the FSI are required to maintain such installations in efficient working order at all times and ensure they are inspected by an RFSIC at least once every 12 months. The inspection and maintenance requirements for the improvised FH/HR system (DPD) and improvised sprinkler system (DPD) are similar to those for the conventional FH/HR system and sprinkler systems respectively. Information regarding inspection and work carried out on the improvised FH/HR system (DPD) and improvised sprinkler system (DPD) shall therefore be provided in Part 1, Part 2 and Part 3 of the Certificate of Fire Service Installation and Equipment (F.S. 251), where appropriate.

Should you need further amplification, please approach the FSD Building Improvement Support Centre at 2272 9112 (email: fsdbisc@hkfsd.gov.hk).

Yours faithfully,

( YUNG Kam-hung, Michael )
*for* Director of Fire Services

## General Principle for Adopting Improvised Sprinkler System (DPD)

***For premises classified as Hazard Group OH3***

| Diameter of WSD Connection Point (D) | Type of Sprinkler System | Required Hazard Group of Sprinkler System |
|---|---|---|
| ≥150mm | Improvised Sprinkler System (DPD) with:<br>• Connection of system alarm to the Fire Services Communications Centre ("FSCC") by direct telephone line | OH3 |
| 80 mm ≤ D < 150 mm | Improvised Sprinkler System (DPD) with:<br>• Application of fast response type sprinkler heads; and<br>• Connection of system alarm to the FSCC by direct telephone line | OH1 |

***For premises classified as Hazard Group OH1***

| Diameter of WSD Connection Point (D) | Type of Sprinkler System | Required Hazard Group of Sprinkler System |
|---|---|---|
| ≥80mm | Improvised Sprinkler System (DPD) with:<br>• Connection of system alarm to the FSCC by direct telephone line | OH1 |

**Appendix II**

## Design and Specifications of Improvised Sprinkler System (DPD) for Target Buildings regulated under the Ordinances

(1) For target buildings regulated under the Fire Safety (Commercial Premises) Ordinance, Cap. 502, and the Fire Safety (Buildings) Ordinance, Cap. 572, the sprinkler installation shall be designed to conform to the Loss Prevention Council Rules for Automatic Sprinkler Installations (except the requirement of installation of sprinkler tank), and the installation of a backflow preventer and pressure reducing valves in the mentioned system is mandatory.

(2) For target buildings regulated under the Fire Safety (Industrial Buildings) Ordinance, Cap. 636, the sprinkler installation shall be designed to conform to the Loss Prevention Council Rules for Automatic Sprinkler Installations incorporating BS EN 12845 with suitable modification pertinent to Hong Kong (except the requirement of installation of sprinkler tank), and the installation of a backflow preventer and pressure reducing valves in the mentioned system is also mandatory.

(3) Primary and secondary source of electricity supply shall be provided for the system.

(4) The gate valve of the water supply shall be properly secured and locked in an open position at all times to prevent unauthorised tampering.

(5) A backflow preventer complying with BS EN 12729:2002 – *"Devices to prevent pollution by backflow of potable water - Controllable backflow preventer with reduced pressure zone - Family B - Type A"* and BS EN 1717 or its latest revised edition/replacement; or other standard/certification accepted by the WSD shall be fitted as per Schematic Piping Diagram in this Appendix to prevent contamination of the government fresh water supply system. The backflow preventer shall be approved by the WSD prior to construction of the direct pumping system.

(6) The pressure reducing valves (pilot-operated type) shall be of FSD-approved type and fitted as per Schematic Piping Diagrams in Appendices III and IV to stabilise the water pressure from the government mains and to maintain steady pump suction pressure for the sprinkler pumps. The pressure reducing valves (pilot-operated type) shall be approved by the WSD and FSD prior to construction of the direct pumping system.

(7) The installation, maintenance, repair or inspection of the backflow preventer and pressure reducing valves shall conform to the WSD's requirements. Notwithstanding, the latter shall comply with the requirements as stipulated in FSD Circular Letter No. 9/2020.

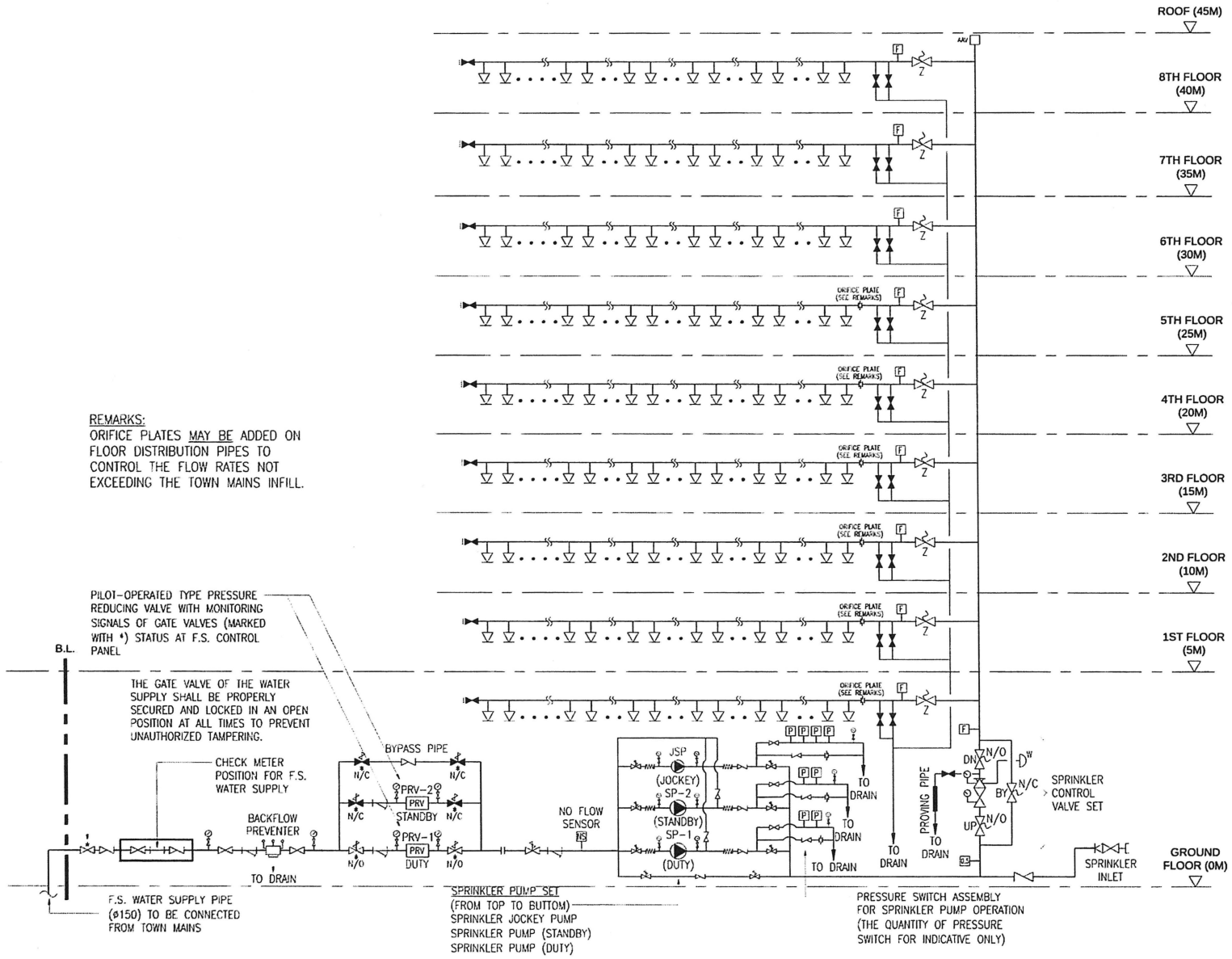
(8) The testing and inspection of the pressure reducing valves shall be carried out in accordance with manufacturer's recommended procedure during the testing, commissioning and annual inspection by RFSIC.

(9) A flow switch shall be fitted to the system. In case a flow is detected through the flow switch, a visual indication shall be shown on the fire alarm panel and the alarm bell/sounder should be actuated. The flow signal as indicated on the fire alarm panel shall be independent from the fire alarm signal actuated by manual fire alarm call point(s).

(10) The improvised sprinkler system (DPD) shall be designed to operate correctly within the range of the minimum residual pressure to the maximum pressure of the government mains as advised by the WSD.

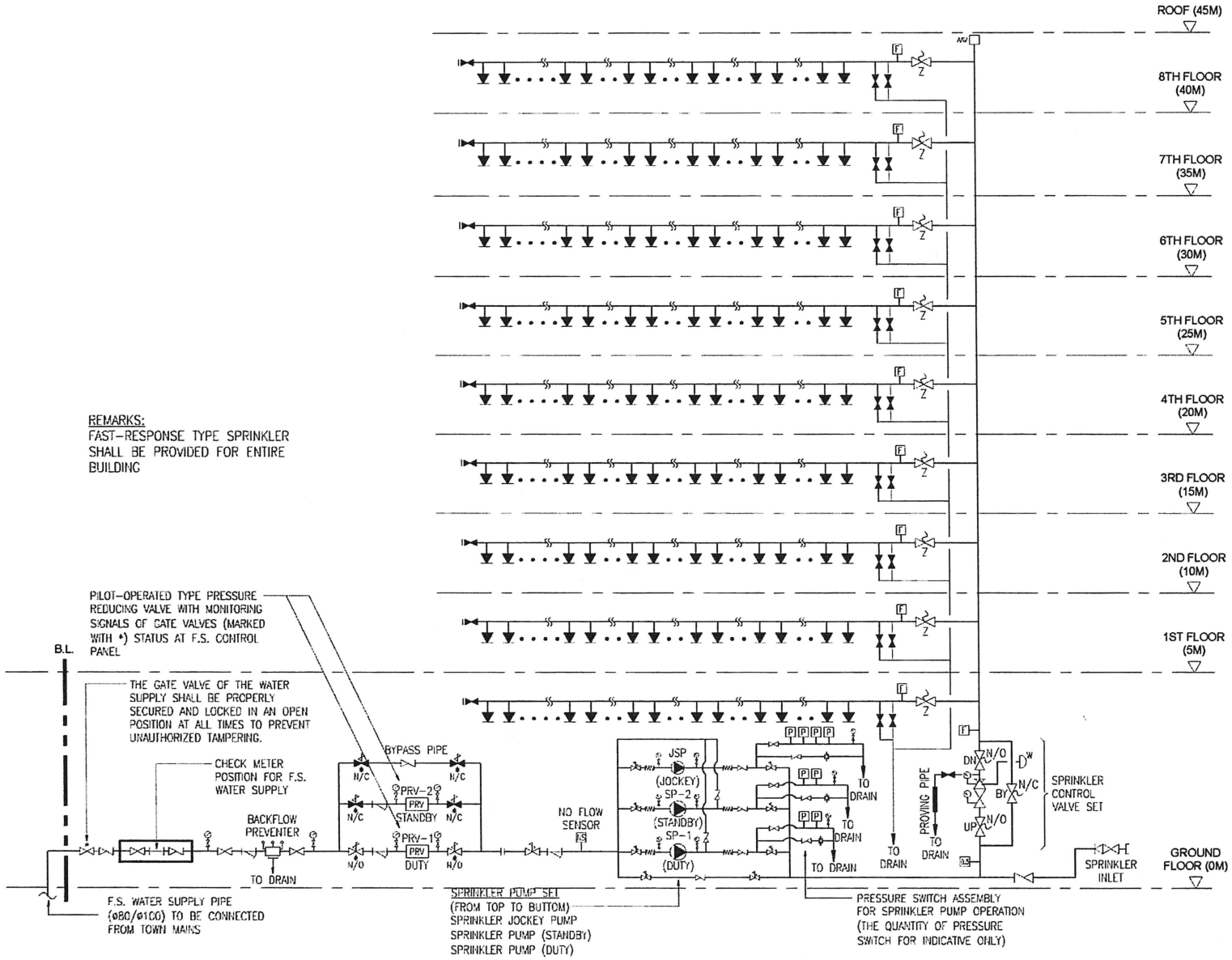
(11) The following information shall be included in the submission of Fire Service Installations or Equipment Drawing:

- the specifications of the backflow preventer and pressure reducing valves which may be provided in the form of product catalogue; and
- the hydraulic calculation for the improvised sprinkler system.




Schematic Piping Diagram for Improvised Sprinkler System (DPD) for Target Buildings classified as Ordinary Hazard Group III

Appendix III




Schematic Piping Diagram for Improvised Sprinkler System (DPD) for Target Buildings classified as Ordinary Hazard Group I

Appendix IV