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Bureau of Fire Prevention

Bureau of Fire Prevention Bulletin # 2025-02

Issued by:	Thomas Currao, Chief of Fire Prevention
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Subject:	Supplementary Water Supply for UL-300 Fire Extinguishing Systems in Commercial Cooking Operations

I. History

UL-300 commercial kitchen fire extinguishing systems were initially listed and installed as stand-alone wet-chemical systems for rapid flame knockdown, surface cooling, and re-ignition prevention. As cooking hazards evolved, manufacturers introduced designs with a supplementary water supply to enhance cooling and reliability. Effective June 2, 2019, pursuant to Local Law 195 of 2018, responsibility for the review and approval of special-hazard fire extinguishing systems—including UL-300—was transferred from the Department of Buildings (DOB) to the Fire Department (FDNY), consolidating Authority Having Jurisdiction (AHJ) oversight. These UL-300 systems are water-supplemented and therefore require interface with the building's water supply infrastructure. As a result, DOB must coordinate with current FDNY procedures and remain involved to verify the available water supply by requiring the appropriate filings and permits needed under the Construction Codes and ensuring that such submissions and installations are performed by licensed professionals and contractors.

II. Scope

This bulletin clarifies certain requirements for the design, installation, filing, and acceptance testing of UL-300 listed commercial kitchen fire extinguishing systems that require a supplementary water supply. It applies to all ne-w installations and alterations to previously approved systems, thereby ensuring consistency with the NYC Fire Code, Construction Codes, and applicable standards.

III. Purpose

- Ensure compliance with the NYC Fire Code, Construction Codes, and applicable standards.
- Define FDNY procedures and filing requirements, including coordination with DOB for construction code-compliant supplementary water supply connection.
- Establish uniform criteria for the design, installation, and acceptance testing of UL-300 systems requiring a supplementary water supply.
- Promote fire and life safety by ensuring that supplementary water supplies strengthen—rather than adversely compromise—existing fire protection and domestic water systems.

IV. Applicability

These procedures apply to all new installations and alterations of UL-300 commercial kitchen fire extinguishing systems requiring a supplementary water supply. This bulletin is intended for Registered Design Professionals, manufacturers, and licensed contractors, who are responsible for preparing fire extinguishing system plans, calculations, and documentation in accordance with FDNY requirements and applicable codes, and for performing installation work under FDNY-approved applications.

V. FDNY Filing Requirements

V.1 Water Source Requirements

FDNY review is limited to operational compatibility and performance of the UL-300 system. The supplementary water supply connection—including compliance with the Construction Codes and permitting—is subject to the review and approval by the DOB.

For purposes of this bulletin, the term supplementary water supply refers to the piping, valving, and point of connection between the UL-300 system and the building's water source.

V.1.1 New Installations

For all new installations of UL-300 commercial kitchen fire extinguishing systems requiring a supplementary water connection, such supplementary water supply shall be connected to the building's fire protection system having a dedicated water supply. Acceptable sources are limited to:

- An automatic wet sprinkler system
- A combination sprinkler/standpipe system

Connections to a domestic water line or to a limited-area sprinkler system supplied from a domestic service are not permitted for new installations.

V.1.2 Alterations — No Change to Connection (Grandfathered)

If the FDNY application for an existing UL-300 system and its associated supplementary water connection were both approved prior to this Bulletin's date of issuance, and the currently proposed scope of work is limited to minor modifications of such UL-300 system, i.e. changing out or modifying the location and layout of spray nozzles, or changing out or modifying the location of appliances, and such changes do not require the modification, relocation, upsizing, or otherwise affect the existing supplementary water connection, such previously approved water supply connection may remain in design, whether indicated as being tapped off an automatic wet sprinkler system, combination sprinkler/standpipe system, or a domestic water service.

No additional DOB filing is required if the supplementary water supply connection remains unchanged and complies with the Construction Codes in effect at the time of original DOB approval, provided that:

- A specific note is included in the FDNY application and on the submitted fire extinguishing system plans indicating the existence of a previously approved, unchanged supplementary water supply connection;
- The Technical Submittal Checklist (V.2 Items 1–7) is updated to reflect current demand and current supply data, with RDP/EOR certification (Item 6);
- Operating pressures remain within listed component ratings and manufacturer limits; and
- All components of the supplementary water connection—including piping, valves, and associated fittings—shall be maintained in proper working condition and consistent with the originally DOB-approved design and manufacturer specifications.

Any operational concerns regarding the retained supplementary water connection may result in FDNY requiring DOB verification or submission of a modified design pursuant to Section VI.

V.1.3 Alterations — Connection Modified or Demand Increased

If the alteration results in any changes to the previously approved water supply connection (including PRV or valving changes, interconnection alterations, or similar modifications), or if the required water demand increases (e.g., through additional appliances or added Pollution Control Device), the water supply connection shall be designed in compliance with current Construction Codes requirements and subsequently filed with DOB for permitting in accordance with Section VI.

V.2 Technical Submittal Checklist (applies to V.1.1–V.1.3)

1) Connection

Specify the type of system that supplies water (automatic wet sprinkler or combination sprinkler/standpipe system) and the floor and location (on the plan) of the tap-in point on the fire extinguishing system plans.

If retaining a previously approved domestic-service connection under V.1.2, or if a domestic-service connection is proposed for modification under V.1.3, the fire extinguishing system plans shall specify the floor and descriptor of the nearest shutoff and the tap-in point of the domestic branch.

2) Control Valves, Pressure-Regulating Devices, and Supervision

Indicate the type, size, and location (on the floor plan) of all control valves (e.g., indicating/OS&Y, solenoid, zone) and any PRVs/PRDs required to meet manufacturer inlet-pressure limits.

- *Listing/compatibility:* Listed for fire protection; compatible with the host system.
- *Settings & details:* Show set pressure (psi), orientation, upstream/downstream gauges, and test/drain where required.
- *Supervision/annunciation:* Provide tamper supervision for applicable valves and identify local audible/visual notification; show PRV supervisory/position indication if listed.

For domestic water service connections under V.1.2 or V.1.3, the fire extinguishing system plans shall identify the location and arrangement of the diverter valve, if such valve is required by the Construction Codes.

3) Hydraulic Calculations (Required Supply)

On the fire extinguishing system plans, specify the required flow rate (gpm) and pressure (psig), and the maximum allowable inlet pressure (psig).

Support this with the fire extinguishing system manufacturer’s hydraulic calculations for the layout (include elevation/static head). The hydraulic calculations shall have the manufacturer's letterhead, and the address and floor of the proposed installation, which is consistent with the entire Rangehood Application package.

4) Pipe Size and Materials

Specify the nominal diameter, schedule, and material of the interconnecting piping and fittings on the fire extinguishing system plans. Piping and fittings shall be compliant with the fire extinguishing system’s specifications.

5) Water Supply Data (Available Supply)

Provide a Water Supply Summary, as a cover letter, specifying:

1. The type of system that supplies water (automatic wet sprinkler or combination sprinkler/standpipe system) and the floor and location of the tap-in point.

If a previously approved domestic-service connection is retained under V.1.2, or if a domestic-service connection is proposed for modification under V.1.3, specify the floor and descriptor of the nearest shutoff and the tap-in point of the domestic branch, total boosters or regulators if applicable, and a note for a fire pump/tank if applicable.

2. The static pressure (psig), residual pressure (psig), and flow rate (gpm) at the tap-in point.

   If a previously approved domestic-service connection is retained under V.1.2, or if a domestic-service connection is proposed for modification under V.1.3, show the pressure range under typical conditions and any booster/regulator settings.

3. Maximum static pressure (psig) at the connection (for component ratings/PRVs).

6) Engineer's Verification — Registered Design Professional (RDP) / Engineer of Record (EOR)

Provide a brief certification letter prepared, signed, and sealed by a Registered Design Professional, as defined by the NYC Fire Code, certifying that—based on Item 3 (required supply) and Item 5 (available supply) — the proposed connection requires a flow rate of X gpm and a pressure of Y psig at the point of connection, and that the existing fire protection system and available water supply are capable of supporting the proposed demand.

The RDP shall certify that all resulting system pressures are within the applicable listing, design, and manufacturer limitations, and that the proposed interconnection, including all valves, controls, supervision, and monitoring components, does not adversely affect the hydraulic performance, reliability, supervision, or operation of the existing fire protection system.

The certification shall explicitly reference the supporting hydraulic calculations and water supply data relied upon, including test dates and sources.

7) Backflow and Pressure Supervision (domestic-service only under V.1.2 or V.1.3)

Where a previously approved domestic-service connection under V.1.2 is retained, or a modification is proposed under V.1.3, the fire extinguishing system plans shall show the location (on a floor plan) and configuration of any required backflow prevention device (e.g., RPZ, DCVA, or listed vacuum breaker), including make, model, size, and orientation. If pressure supervision or low/high pressure monitoring is required by the manufacturer, the fire extinguishing system plans shall also indicate the type of supervision and any local audible/visual notification.

Upon FDNY application approval, any work requiring modification of the supplementary water connection shall proceed in accordance with DOB permitting procedures described in Section VI.

VI. DOB Filing Requirements

The following requirements apply after FDNY application approval and prior to installation or modification of any previously approved supplementary water connection and shall be coordinated with DOB permitting in accordance with applicable Construction Code requirements.

Once the application for the UL-300 commercial kitchen fire extinguishing systems requiring a supplementary water connection has been filed with and approved by FDNY, a separate DOB Limited Alteration Application (LAA) or filing for work types PL, SP or SD shall be submitted. It shall be the responsibility of the master plumber to get FDNY approval prior to filing with DOB. See Section IX of this bulletin for gas authorization requirements.

DOB Job Filing — DOB Limited Alteration Application (LAA)

If applicable, the applicant shall submit an application for limited plumbing alterations, limited sprinkler alterations or limited standpipe alterations pursuant to exception 1 of Section 28-104.6. The applicant shall indicate the approved FDNY application number, shall upload all fire extinguishing system plans and supporting documents including the FDNY-approved application for fire extinguishing systems requiring a supplementary water connection.

DOB Job Filing — Work Types PL, SD and/or SP

If the scope of work qualifies as Work Type PL, SP or SD, the applicant shall submit a filing corresponding to the appropriate work type and shall indicate the approved FDNY application number in the DOB filing. The applicant shall upload all fire extinguishing system plans and supporting documents including the FDNY-approved application for fire extinguishing systems requiring a supplementary water connection

VII. Installation of Fire Extinguishing System and Supplementary Water Connection

Fire extinguishing system. Installation may commence only after the FDNY Project Authorization has been issued. Work shall be performed by a Certificate of Fitness (COF) holder employed by a company identified on the Project Authorization and trained/certified by the manufacturer for the specific UL-300 system.

Supplementary water connection. Installation of the supplementary water supply line and its connection to the UL-300 system may commence only after the required DOB work permit has been issued. This work shall be performed by a Licensed Fire Suppression Contractor authorized under DOB regulations for sprinkler/standpipe (SP/SD) work, and completed in full compliance with the approved DOB filing and all applicable code requirements.

VIII. Scheduling of Acceptance Test for Fire Extinguishing System

Upon completion of the UL-300 installation, the supplementary water connection, and a successful pre-test, the authorized contractor shall submit a request for an FDNY acceptance test to the FDNY Rangehood Inspection Unit as per established procedures.

A copy of the approved DOB work permit for the supplementary water supply work—whether for a new installation or an alteration to an existing installation—shall be included as supporting documentation.

As part of FDNY acceptance, the supplementary water supply connection and the adequacy of the available water supply will be verified and documented.

IX. Final DOB Sign-Off for Supplementary Water Supply Work

Prior to DOB's plumbing inspection of the water connection work, per filing described in Section VI above, a gas inspection number, as required, must be obtained and uploaded as required documentation for such DOB filing. An FDNY inspection shall occur prior to the DOB permit sign-off, as gas cannot be authorized without FDNY letter of approval for the commercial kitchen fire extinguishing systems.

Following a successful FDNY acceptance test, the Fire Department will issue a Letter of Approval (LOA) for the fire extinguishing system. The LOA shall reference the corresponding DOB job number for the supplementary water supply work and must be submitted to DOB as part of the request for final sign-off, confirming that both agency requirements have been satisfied prior to system authorization.

X. Code References (NYC Fire Code)

FC §105.4 — Plan submittal and approval requirements (project authorization/permits and associated documentation).

FC §904.1 — General requirements for alternative automatic fire extinguishing systems.

FC §904.3.8 — Supervision/monitoring and related system interface requirements for alternative automatic fire extinguishing systems.

FC §904.4 — Acceptance testing requirements for alternative automatic fire extinguishing systems.

XI. Code References (NYC Building Code)

BC §903 – Automatic sprinkler systems. General and installation requirements for automatic sprinkler systems used as acceptable supplementary water supplies.

BC §904.1, §904.1.1, §904.12 – Alternative automatic fire extinguishing systems; commercial cooking operations.

BC §905 – Standpipe systems. General requirements for standpipe systems, including combination sprinkler/standpipe systems.

BC Appendix Q (Sections Q101–Q107 – Modified National Standards for Automatic Sprinkler, Standpipe, Fire Pump, Fire Alarm and Smoke Control Systems).

AC §28-104.2; AC §28-104.6 and Exception 1; BC §106.10 – Construction documents, applicants, and Limited Alteration Applications (LAA).

NYC Plumbing Code §608.1, §608.6 – Backflow prevention and cross-connection control.