For savvy building owners the time to comply with the high-rise sprinkler system code is now!

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As 2019 quickly approaches, I can see the trend that the vast majority of building owners of business occupancies have already jumped in feet first to comply with NYC administrative code 27-929. Savvy building owners realize that this is an opportune time economically to invest in the implementation. As the deadline approaches and there is more demand, pricing may not be as competitive as it is now.

This code found in Local Law 26 basically states all office buildings 100 feet in height or higher must have sprinklers installed throughout the building, and a final report prepared by an architect or engineer certifying to the installation must be submitted to the Department of Buildings by July 1, 2019.

Unless all of the work has been completed and the final report has been submitted, interim reports are required as follows:

1. An affidavit acknowledging that sprinklers are required and indicating the owner's intention to comply with the law must have been submitted by July 1, 2005. For buildings that already have sprinklers installed throughout the building (common for buildings constructed after 1984), a letter must be submitted by the owner by July 1, 2005, stating that sprinklers are installed, along with a copy of the final Certificate of Occupancy (front and back) showing the marked checkbox for "automatic sprinkler system."
2. A seven-year report must be filed no earlier than January 1, 2011 and no later than July 1, 2011 The report must indicate the percentage of work done and provide an implementation plan telling how the remaining portion of the building will be made fully compliant. This report must be certified by a PE/RA
3. A 14-year report similar to the seven-year report must be filed no earlier than January 1, 2018 and no later than July 1, 2018.

Generally, most building owners have been approaching the compliance of the installation from the same perspective. While all business occupancies falling under this requirement have existing standpipe risers, the plan is to convert the existing standpipe system into a combination sprinkler/standpipe system. The building owners have taken the financial responsibility of the "core" or system riser infrastructure and passed the installation costs associated with the floor branch piping and sprinklers to new tenants as they move in and "build out" the space.

The core infrastructure consists of the conversion of the existing standpipe riser to a sprinkler/standpipe system. Floor control valve assemblies consisting of an OS&Y or butterfly valve, valve tamper alarm switch, waterflow alarm switch and "test and drain" rig are installed at every floor landing. A new drain riser must also be installed which provides the waterflow switch to activate via the inspectors test valve. The water source including the systems pressure requirements as well as

fire reserve capacity must then be hydraulically calculated and engineered for performance.

The most typical roof tank compliance modification is to relocate the height of the fire supply line to increase the capacity of the system reserve. In some cases where there is simply not enough capacity to fulfill the requirements, the tank may have to be replaced with one of a larger capacity.

Under the new construction codes, fire reserve capacity has also been changed from 20 to 30 minutes of flow time. In many cases the installation of a pressure reducing valve (PRV) will be required to be installed at the floor control valve assembly. The pressure regulation adjustments will be determined from the individual floor hydraulic calculations.

Another installation challenge is the lack of pressure to the sprinkler system at the upper most floors. Many buildings will find the need to add special service pumps to boost system pressure to these floors. The pump will typically be located at an upper level mechanical room or roof level. A booster sprinkler riser separate from the standpipe riser will then be installed to service the floors required by the pump. It is important to note that requirements for energy sources differ from "special service booster pumps" to "fire pumps" and special attention should be given to how these pumps are represented on drawings and filings.

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