

Media Release

Disparities in the Mayor's Proposal for High Rise Safety and the recommended practices from the National Fire Protection Association.

Our findings indicate a distinct difference in the levels of value assigned to the life safety systems that can be upgraded by building owners. The disparity in available options for compliance between the LSES (Mayor's Proposal) and the FSES (the NFPA model) were dramatic.

It is our recommendation that the City Council enact Alderman Burke's proposal and join the largest cities in the country that have mandated similar requirements over the last thirty years. If the Council should pass the Mayor's proposal, it is our recommendation that the Codes, Standards, and Guides of the NFPA be mandated as is being done throughout the country. The issues of liability to the City in the event of a death in a high rise fire cannot be ignored and would not diminish if you were to mandate the Life Safety Evaluation System currently found in the Mayor's proposal.

The average point scores for an existing building in the City of Chicago by both models were not far apart in recognizing the need to upgrade the life safety systems for this building. After considering which system, or systems, to upgrade, dramatic differences in the two models were apparent.

We chose to examine upgrading five life safety systems in various combination. The order of importance was nearly reversed between the two models of evaluation.

The NFPA appears to recognize this order of importance:

- Automatic Fire Sprinklers
- Fire Rated Shafts (Vertical Openings)
- Smoke Detection and Alarms
- Two-Way Fire Department Communications Systems
- Miscellaneous Storage (Auxiliary Hazards)

When we used the Mayor's proposed system (LSE), the order of importance nearly reversed for these five systems. The order of importance for these systems in the Mayor's proposed model (LSE) appeared to be as follows:

- Two-Way Fire Department Communications Systems
- Miscellaneous Storage (Auxiliary Hazards)
- Smoke Detection and Alarms
- Fire Rated Shafts (Vertical Openings)
- Automatic Fire Sprinklers

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When we added Fire Sprinklers to the analysis of a building in Chicago, the average score for the building increased 14% using the Mayor's Proposal. The average score increased nearly 44% using the NFPA model. A big reason for this dramatic difference is the change in requirements that the Mayor's proposed model imposes on buildings having sprinkler systems.

Mayor's Proposed System (LSE) –Fire Sprinkler System Point Values

Scoring Categories	Fire Safety (FS)	Means of Egress (ME)	General Safety (GS)
A. Minimum Requirement for Unsprinklered Buildings	33	37	37
B. Minimum Requirement for a Sprinklered Building	68	62	77
C. Point Difference	-35	-25	-40

The mayor's model increases the minimum safety level required in a building having a Fire Sprinkler System.

It actually negates the overall direct benefit of installing fire sprinklers.

However, the NFPA model does not increase the requirements for an existing apartment building when installing a fire sprinkler system. Rather, it gives full credit for the points assigned to the Fire Sprinkler System in the model.

Total Cost of Ownership (ROI)

There are other considerations when considering life safety upgrades. These considerations include: direct and indirect costs, direct and indirect benefits of upgrades, potential liability of not upgrading, risks associated with not upgrading.

▪ Direct and Indirect Costs

Direct costs are the costs associated with the installation, repair, or upgrade of the proposed life safety system. Here are the costs for a building in the City of Chicago (Skewed due to 20 units of 4,000-7,000 square feet each):

Total Fire Sprinkler System Costs	\$686,000
Detection and Alarm System Complete	\$458,000
Two-Way Communications Systems	<u>326,000</u>
Total Cost of Detection, Alarm and Communications	\$784,000
Upgrade Vertical Openings to 30-Minute Fire Rating	\$102,000

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▪ Direct and Indirect Benefits

- Benefits of Sprinkler System Installation in a Chicago Apartment Building (20 Units)
 - Up to 60% reduction in rates for Association Insurance
(Estimated current premium.....\$35,000.00)
50%(Conservative) \$ 17,500.00 (7 year analysis) \$122,500.00
 - Up to 20% reduction in Individual Homeowner Insurance
18% conservative savings on 800.00 per year (7 years) 20,160.00
 - Homestead Tax Exemption (IL SB 2466)
 - First year of Installation 50,000.00
 - \$100.00 every year thereafter (7 year analysis) 14,000.00
 - Fire Sprinkler Incentive Act (US HR 1824)
 - Accelerated Amortization of Ownership for income taxes
(50% of cost as a deduction to individual tenants first year)
\$17,150.00 deduction first year at 24% tax rate 82,320.00
 - Total Direct Benefits of Sprinkler System Installation **\$288,980.00**

- Indirect Benefits of Sprinkler System Installation
 - Increased Property Values (+/- 5%)
 - Increased Resale Advantage (Market Leverage)
 - Decreased Liability exposure

▪ Total Cost of Ownership (TCO) for Installing a Fire Sprinkler System

- Direct Costs (Installation) \$586,000.00
- Indirect Costs (Estimated \$2,000/yr over 7 years) 14,000.00
- Total Costs** \$600,000.00

- Direct and Indirect Benefits (\$288,980.00)

- Total Cost of Ownership **\$311,020.00**

- Cost per Square Foot (137,000 square feet) **\$2.27 per Square Foot**
 TCO for Typical 1,200 sq ft Apartment **\$ 2,724.00**

Using the Total Cost of Ownership as the ROI model, the costs of owning a sprinkler system for the average apartment owner in the City of Chicago appears to be less than \$400.00 per year.

We have contacted financial institutions that have indicated funds are available to Home Owner's Associations (HOA's) in the Chicago High-Rise Residential market. The funds are available without collateral and are structured on HOA assessments.

If they do not install fire sprinkler systems, they must install detection and alarm systems to avoid being placed in the high-risk insurance rating pool.

If there is a fire event in their building and there are no fire sprinklers present, they face the potential loss of any insurance coverage whatsoever.

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Large US Cities High Rise Retrofit Ordinances

New York	1973
Boston	1986
Los Angeles	1988
Atlanta	1989
San Jose (Silicon Valley)	1990
Phoenix	1991
Philadelphia	1991
San Francisco	1993
Louisville	1993
Chicago	2004
Huston	2005