

Tall Building Tactical Considerations Commercial & Residential Structures





Presented by: FDNY Battalion Chief - Frank Leeb

4th International Tall Building Fire Safety Conference
Excel, London

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Introduction



Battalion Chief - Frank Leeb

- Fire Department City of New York (FDNY) Battalion 46 - 24 Years
- BA Fire Service Administration, SUNY
- MA Security Studies, Naval Postgraduate School

Note - This Presentation and any statements made during this presentation are not made in an official capacity of the FDNY. These statements represent the opinions of the presenter and not necessarily those of the FDNY.

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Evolution of Fire Safety in NYC

Milestone Fires

Triangle Shirtwaist Factory Fire (1911)
NYS Labor Law and the creation of the FDNY's Bureau of Fire Prevention

Equitable Building Fire (1912)
Scientific research into fireproof construction, fire rating of material, Fire Tower and building code requirements for sprinklers and standpipes

One New York Plaza Fire (1970)
Local Law 5 of 1973, created the Fire Safety Plan, Fire Safety Team, and the Fire Safety Director

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Construction in New York City

- 6,154 high-rise structures
- 113 structures 600 feet (183 m) or taller
- Since 2003, 24 buildings 600 feet or more have been built
- As of April 2016 there were 494 high-rise buildings under construction or proposed for construction

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One World Trade



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One World Trade

- 1,776 feet (541 m)
- 104 floors
- Tallest building in the United States

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432 Park Avenue



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432 Park Avenue

- 1,396 feet (426 m)
- Second tallest building in NYC
- Residential/Commercial

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Strategic Operating Plan

Commercial or residential ? (dictates tactics)

- Locate and verify fire location (floor)
- Evacuation (control)
- Hose line placement
- Command – sectors and branches

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Incident Priorities

- Control building systems
- Communications
- HVAC
- Elevators
- Fire pumps

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Access and Egress

- Attack stairs
- Evacuation stairs
- Access stairs
- Elevators – use and control

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Special Considerations

- Wind
- Smoke control
- Stack effect

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High-rise Fire Proof Multiple Dwellings

Critical Incident Command Considerations

- Wind
- Smoke control

Alternate strategies

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Vandalia Ave Brooklyn

Door Control is everyone's job!

- Close the door and save a Firefighters Life!

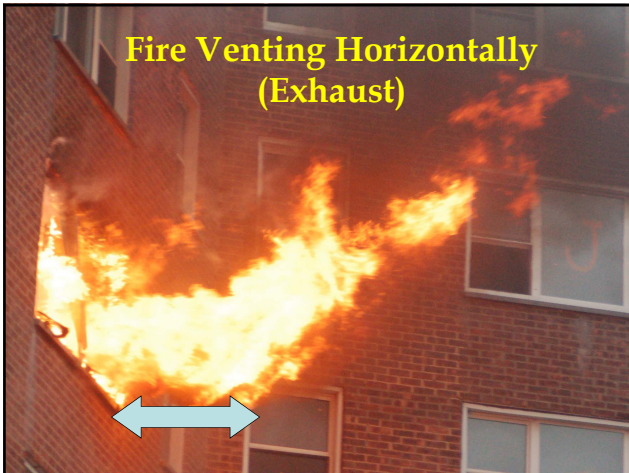


Joseph P. Cavallieri, Lieutenant,
James F. Bohan, Firefighter
Christopher M. Bopp, Firefighter

Vandalia Ave, NYC - December 18, 1998

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2008 Governors Island, NY

Wind effect studied
Alternate tactics developed



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Fire Window Blanket



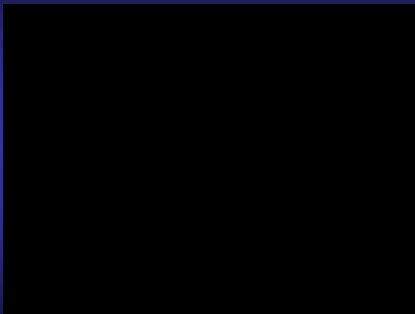
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KO-Curtain



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Curtain Deployment



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High-rise Nozzle



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Positive Pressure Ventilation Priorities

- Pressurize the attack stair
- Pressurize the evacuation stair
- Sequential ventilation

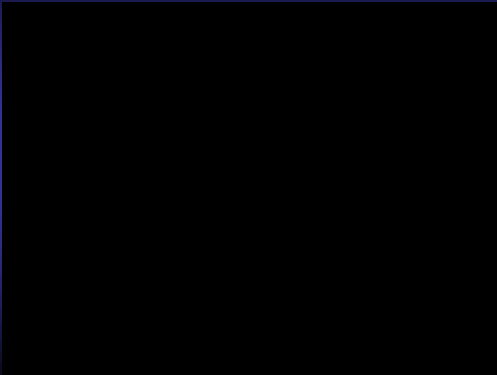
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Positive Pressure Ventilation



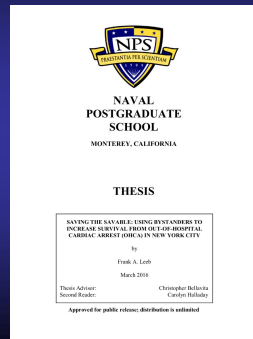
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Manhattan (11/2016)



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Medical / EMS Related Tall Building Concerns



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Medical / EMS Related Tall Building Concerns

- ‡ Cardiac arrest
- ‡ Height as a predictor of survival
- ‡ Elevator construction
- ‡ Ability to make a difference
- ‡ Response



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Questions?

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