TO: Fr. Gary Sharky and Fr. Mike Hovsepian of Engine 70 and all the other members of Engine 70 and Ladder 53 for organizing the plaque dedication for Fr. John J. Daly who died from injuries sustained on October 1, 1954 at Bronx Box 4526. He died on June 12, 1955. Also honored was Fr. Peter J. Bradley of Ladder 53. He died in the line-of-duty on July 18, 1955 of a heart attack.

TO: Fr. Brian Hennelly, Mike Hettwer, and Dominic Dimino of Engine 42 who organized the Mass at the quarters of Engine 42 to commemorate the 10th anniversary of the fire that claimed the lives of Fr. Michael Reilly, Engine 75 and Lieutenant Howard Carpluk of Engine 42.

TO: Engine 90 and Ladder 41 for hosting the annual Memorial Day collation. There was an excellent turnout for Memorial Day.

TO: Those who stepped up and participated in the annual Mutual Aid Drill with Westchester County Fire Departments.
101 Chrystie Street was a 7-story Multiple Dwelling at the corner of Chrystie and Grand Streets. It was constructed of brick and wood joist and it was 80 foot x 80 foot. In the center of the building, there was an air and light shaft.

The night tour of January 24, 1998 started innocently enough in the Chinatown section of Lower Manhattan. It was the time of year when the Chinese New Year was being celebrated. Fireworks could be heard going off all over the neighborhood.
It was a cold night; the Officer in Engine 9 was Lieutenant Bob Burns. His Nozzleman was Nick Lucenti, the Back-up Firefighter was Anthony Aapagni, the Door Firefighter was Mike Carlin on a detail from Ladder 11, the Control Firefighter was John Tedesco and the Chauffeur was Pete Bosco.

Working in Ladder 6 that night was Probationary Firefighter Bill Leahy. This was Fr. Leahy’s first tour in the firehouse coming out of Proby School. The Roof position was being filled by Fr. Tom McBreen who was assigned to Ladder 6 on the Rotation Program. The Senior man in Ladder 6 was Mike Meldrum and he was the Chauffeur. Fr. Gary Mazalatis was the Tillerman and Fr. Tom Lane was the Irons Man. Captain Jay Jonas was the Officer.

At 2237 hours, a telephone alarm for Manhattan Box 226 was transmitted for a structural fire at 101 Chrystie Street, at the corner of Grand Street. Engines 9, 55, Ladder 6 and Battalion 1 were dispatched. At 2238 hours, the Manhattan Fire Dispatchers “filled out the alarm” due to a second source. Ladder 8, Engine 15
and Rescue 1 were dispatched. At 2239 hours, as Engine 9 made the turn onto Chrystie Street from Canal Street, Lieutenant Bob Burns could see a column of fire and smoke rapidly rising over the roof and smoke showing on the Chrystie Street side. Fire was showing out of several windows on the Grand Street side. Lieutenant Burns transmitted a 10-75.

Ladder 6’s inside team ran up the stairs to the 5th floor. Upon arrival at apartment 14, fire was coming out of the peep hole in the apartment door for about a distance of one foot. The door was forced open, but controlled. Fire was on the other side of the door. Engine 9 advancing the first hose line would be required before entry into the apartment could be made. Ladder 6 forced open the adjoining apartment doors and performed primary searches in those apartments.

At 2240 hours, Engine 55 arrived at the fire. They responded to the fire from the Grand Street side. They saw a rapidly expanding fire from the rear of the multiple dwelling. They hooked up to a hydrant and assisted the first due Engine in stretching their hose line.
Engine 9 started their hose line stretch to the fire floor. When they made it to the floor below the fire, the members of Engine 9 saw the heavy fire condition on the 5th floor. Lieutenant Bob Burns of Engine 9 and Captain Jonas from Ladder 6 coordinated their efforts in getting the first hose line into operation. Fr. Nick Lucenti and Fr. Anthony Papagni started the advance of the hose line. They were knocking down fire wherever they saw it. The entire apartment was on fire. They saw what they thought was a doorway with fire in it. No matter how much they played water at the fire, it would not go out. It was around that time they realized that what they thought was a door was really a window that led to the air and light shaft in the interior of the building. They continued operating until they were out of air. Fr. John Tedesco and Fr. Mike Carlin moved up on the hose line to relieve them. Fire started wrapping around Engine 9’s hose line.

Battalion Chief Joe Pfeifer was working in the 1st Battalion. B.C. Pfeifer arrived and took command of the fire. He saw that, in addition to the heavy fire condition, this building was fully occupied and had a severe life hazard. B.C. Pfeifer special called an additional Engine Company and Ladder Company at 2243 hours. Engine 33 and Ladder 18 responded. Engine 15 and Ladder 8 arrived at the fire at 2243 hours.

Fr. Tom McBreen started climbing Ladder 6’s aerial ladder. Upon arriving at the roof position, he found a female occupant of the roof. Heavy fire was coming from an air and light shaft in the interior of the building. He told the female to stay put as he went to open the stairway bulkhead and investigate.
conditions in the rear of the building. Fr. McBreen radioed to his officer that fire
had jumped the air shaft and we had fire in the rear on the top three floors. He
opened the roof bulkhead and started back to where the female was. Knowing
that this was one of Fr. McBreen’s first fires having the Roof position, Fr. Mike
Meldrum (Chauffeur) was paying close attention to how Fr. McBreen was doing.
As Fr. McBreen walked back to the front of the building, the roof deck started to
ignite. As the second due Roof firefighter from Ladder 8 arrived at the roof via
aerial ladder, he saw the fire starting to ignite the roof deck. He yelled to Fr.
McBreen to get off the roof. Fr. McBreen grabbed the woman who was still on
the roof and walked her to the aerial ladder. The Roof Firefighter from Ladder 8
mounted the aerial ladder so the trapped woman could be walked down in
relative safety. Fr. McBreen followed, as the roof was evacuated.

Fr. Gary Mazalatis of Ladder 6 saw people trapped on the fire escape on the
Grand Street side of the building. He placed a portable ladder on the 2nd floor
balcony and climbed to the upper floors. He assisted several civilians
down the fire escape and then climbed the fire escape and
performed vent, entry and search operations on the fifth, sixth
and seventh floors.

Ladder 8 was led by Lieutenant Vincent Ungaro. They
climbed the stairs of the multiple dwelling to the fire floor.
He made contact with Captain Jonas of Ladder 6 to grasp the
conditions on the fire floor. He saw that apartment doors
were forced but intact. Ladder 8 then went to the floor
above the fire (6th floor) to perform searches of the floors
above the fire.

Engine 15 was led by Lieutenant Victor Harris. Engine 15
started the second hose line. Members of
Engine 55 assisted in the stretch of the second line.
Engine 15’s hose line went to the 5th floor to back-up the
first hose line.
At 2245 hours, Deputy Chief Richard DeSimone of the 1st Division arrived at the fire. The 10-75 Battalion Chief, B.C. Ronald Spadafora of the 4th Battalion, arrived at the box as well. After a quick size-up and consultation with B.C. Joe Pfeifer, a 2nd alarm was transmitted at 2247 hours.

Ladder 18 arrived at the fire and positioned their Tower Ladder on the Chrystie Street side. Their members went to the upper floors to perform primary searches. There were many occupants fleeing the building. Ladder 9 arrived at the fire. Their Tower Ladder was positioned on the Grand Street side of the building.

The fire was expanding. The fire in the interior air and light shaft was spreading the fire to all areas of the upper floors. Water had to be applied to the shaft to stop the advance of the fire. Engine 33 performed a fire escape stretch with an 1 ¾ inch hose line to the fourth floor and made access to the air and light shaft. They deployed their hose stream up the air and light shaft to try and cool the convection currents and the effects of radiant heat within the shaft.

Other hose lines were being stretched via fire escape. Engines 6 and 28 stretched to the 7th floor. Engine 7 stretched to the 6th floor. Engine 10 stretched an 1 ¾ inch hose line to the ground floor of the building because fire was dropping down into the shaft from above. Engine 24 stretched 3 ½ inch hose to Tower Ladder 18’s apparatus. They then stretched a 2 ½ inch hose to the 6th floor via fire escape.

An arduous fire fight was now underway in a fully occupied building. The fire was a dreaded air and light shaft fire. The fire had spread to the top three floors in every apartment. At 2307 hours, Deputy Chief DeSimone transmitted a 3rd alarm for Manhattan Box 226. He was preparing for a change of strategy. Hose lines were now stretched to the Tower Ladders at the fire. At 2309 hours, Assistant Chief Edward Butler, Car 4A, arrived at the fire. It was decided to change strategy and go to an outside attack. An “Urgent” message was transmitted over the handi-talkie for all members to leave the building. It was a slow evacuation due to the amount of Firefighters trying to negotiate the narrow stairway. Once it was determined that the 5th, 6th and 7th floors were clear of
Firefighters, the Tower Ladders opened their streams. This caused thick smoke to bank down to the lower floors enveloping evacuating Firefighters.

Prior to going to an outside attack, 6 1 ¾ inch hand lines were stretched and operating. Eventually, there would be 5 Tower Ladders operating at this fire. The fire was placed “Probably will Hold” at 0048 hours. Four Firefighters from Engine 9 were taken to Beekman Hospital. At 0120, the fire was placed “Under Control”. There were 38 civilians evacuated from this building and 13 civilians were injured. There were 15 Firefighters who were injured and placed on Medical Leave.

Also responding the scene were two famous members of Fire Department lore, Chief of Operations Peter Ganci and Deputy Fire Commissioner William Feehan. Both of these high-ranking Officers had previously been assigned to this area of Lower Manhattan. Peter Ganci was formerly a Captain in Ladder 18. William Feehan was formerly a Captain in Engine 28 and a Lieutenant in Ladder 6. In a moment of levity, he approached Captain Jay Jonas of Ladder 6 and said “I had a fire in this building when I was in Ladder 6 too. I guess your Can Man needed a 2nd can.”

Photo by Philip Greenberg
Starting in the 1840s, waves of immigrants, mostly Irish fleeing the Great Famine in Ireland and Germans fleeing the Revolution of 1848, started coming to New York City. By 1864, 500,000 of New York City’s 800,000 residents were living in tenements. *(Historical Note: In 1864, New York City was just Manhattan. Most of the population was located below 42nd Street.)* Prior to 1867, there were no laws governing tenement housing. In 1867, New York State passed the Tenement House Act. This 1867 law required fire escapes and at least one outhouse for every 20 occupants.

In 1879, another law was passed by New York State. “The Tenement House Act of 1879” was passed in an attempt to stem the tide of disease that was ravaging the tenement areas. This law required that every tenement constructed after this law was enacted, to have an openable window to the street, rear yard, or an air and light shaft in every room in the apartment. This would provide fresh air and light into every room in an apartment. The “dumbbell-shaped” tenement was born.

Tenements built before 1879 are referred to as “pre-law tenements.” Tenements built between 1879 and 1901 are considered “old-law tenements.” Tenements built after April 12, 1901 are considered “new-law tenements.”
Old-law tenements were equipped with air and light shafts. These shafts could be open at the rear of the building between two buildings, they could be diamond shaped and enclosed between two buildings, or they could be enclosed within the building itself, as was the case with 101 Chrystie Street. The bottom of the shaft could be the roof of a store on the ground floor of the building, it could be the roof of a cellar, or the bottom of the shaft could go to ground.

The 1879 Tenement House Act did not stop the spread of disease. It created new sanitation problems. Tenants in the tenements equipped with air and light shafts would throw garbage, bilge water, and waste water into the shaft. The air and light shaft also gave rise to the problem of air and light shaft fires. These fires transmitted fire to apartments having windows opening into the air and light shaft.

Every room having a window opening to the air and light shaft in an old law tenement is in danger if there is an air and light shaft fire. The shafts of old law tenements are usually less than 6 feet wide.

Fires in air and light shafts can be communicated via convection currents and radiation.
Convection is the most common method of heat transfer that Firefighters encounter. This method involves either some sort of fluid, either liquid or gas. What we encounter as firefighters, is that the heated gases expand and become lighter than air. As the heated gases from a fire come in contact with materials, they transmit heat to these materials. Unstopped, these materials will ignite if combustible.

Radiant heat is transmitted by electromagnetic waves. It is invisible and travels in straight lines. These radiant heat waves may pre-heat a fuel to the point of ignition without being detected.

Radiant heat waves are either: 1) Reflected, 2) Absorbed, or 3) Transmitted. Rough surfaces absorb radiant heat at a higher rate than polished or smooth surfaces. Clear objects, such as window glass, or water, or gases transmit radiant heat waves. In order for water to be effective in stopping radiant heat waves, the water must be applied to the surface of the exposed surface. A water curtain will not stop radiant heat waves because it is clear.

Fire coming out a window in an air and light shaft is a point source. A window directly across the shaft from the point source will receive 100 percent of the radiant heat waves coming from the fire. The further away from the point source an exposed
window is, the less radiant heat waves will be received. The closer a fire source is to an exposed combustible exposure, the greater the chance of ignition from radiant heat waves.

In brick and wood joist tenements, the exposure problem due to radiant heat waves of an air and light shaft fire is dependent on the size and arrangement of windows.

“The ease of ignition of exposed material by radiated heat is dependent upon:

1) The distance between the ignition source and the exposure, 2) the absolute temperature of the ignition source, 3) the thickness of the exposed material, 4) the surface (rough or smooth) of the exposed material, 5) the color of the exposed material, 6) the moisture content of the exposed material.” “Strategic Concepts in Fire Fighting”, Edward P. McAniff

Any covering over the air and light shaft must be removed to allow the heat from convection currents from banking down on the top floor. The top floor and all floors above must be checked for fire extension.

Exposed windows at an air and light shaft fire can be protected by removing any curtains or drapes. Pots of water can be applied to combustible surfaces as a rapid method of extinguishing spreading fire.
Hose lines must be stretched to the original fire apartment. As soon as possible, direct the hose stream up the air and light shaft to cool any convection currents and any exposed surfaces to the radiant heat waves. As was the case at 101 Chrystie Street, all rooms on the upper three floors that had a window facing the air and light shaft became involved in fire. A delayed alarm to the fire department for the fire at 101 Chrystie Street facilitated this condition. The sooner a hose stream can be directed up the shaft, the better the fire will be contained. Due to the amount of fire in the original fire apartment at 101 Chrystie Street, the third hose line was operated into the air and light shaft via the floor below the original fire floor.

The base of the air and light shaft must be examined as well. Fire may drop down and ignite material at the base of the shaft. As mentioned earlier the bottom of the shaft may be the roof of the cellar or the roof of a store on the ground floor.

Deputy Chief Jay Jonas, Division 7


Special Thanks to the following people who contributed to this essay: Assistant Chief Joe Pfeifer, Fr. John Tedesco (Ret.), Lieutenant Nick Lucenti, Lieutenant Bill Leahy, Lieutenant Tom McBreen, Deputy Chief Vincent Dunn (Ret.), Leslie Ifill (Fire Records Unit), Katy Clements (FDNY Photo Unit), Members of Ladder 6, and Fr. Chris Roberto E48.
Sunday August 27th 2006, at 1230hrs, Bronx CO received a telephone alarm reporting a store fire at 1575 Walton Ave. Box 2797 was transmitted. Eng.42 transmitted the 10-75 at 1233hrs, heavy smoke venting from the front of a 99¢ Store. The store suffered severe damage in 2000 when it had a 3rd Alarm fire. Since then, it underwent extensive alteration that was not consistent with the architectural plans filed. The fire originated on the 1st floor rear and quickly extended to the ceiling. 21 minutes after their arrival, the failure of a cellar column caused a V-shaped collapse. Of the five firefighters that were trapped and pulled from the rubble three firefighters were rescued within minutes, but Michael and Howard were trapped for more than an hour. FF. Michael C. Reilly succumbed to his injuries that day. He was appointed to the FDNY on April 11th, 2006. Lt Howard J. Carpluk Jr. succumbed to his injuries 1 day later, August 28th, 2006. He was appointed to the FDNY August 2nd 1986, promoted to Lieutenant March 6th 1999 assigned to Engine 42. He was working in Engine 75 for this fire.