In November and December of 1960, the New York City Fire Department (FDNY) worked at some horrific fires. On November 18\textsuperscript{th}, a Lieutenant and two Firefighters were killed at a cellar fire at 463 Broadway in Manhattan. On December 16\textsuperscript{th}, there was a mid-air collision over Staten Island where two planes crashed, one on Miller Field on Staten Island, the other into the Park Slope neighborhood in Brooklyn. In Brooklyn, 84 people were killed in the airplane, and six people on the ground were killed. In Staten Island, 44 people were killed. Little did the Firefighters know who were working at the site of the plane crashes, that another major incident was about to occur on December 19\textsuperscript{th}. At 1030 hours, Brooklyn Fire Alarm Dispatchers would transmit Brooklyn Box 308 for a pull station at Building 213 at Kent and Clymer Streets at the Brooklyn Navy Yard. The alarm was for a fire on a Naval Ship under construction at the Brooklyn Navy Yard. This fire would forever be known as “The USS Constellation Fire.”
**The Ship:** The USS Constellation was an aircraft carrier and was the second ship in the Kitty Hawk class of ships. It was built at the Brooklyn Navy Yard. Its keel was laid on September 14, 1957. The ship had four steam turbine engines. It had four catapults to launch planes and had four aircraft elevators. The ship was 1062.5 feet long (5 city blocks), 252 feet wide, and its height was compared to that of a 22 story building. There was room for 85 planes on board.
**The Fire:** On December 19, 1960, the temperature was 11 degrees and the wind was howling. The USS Constellation was at the Brooklyn Navy Yard being outfitted for its future duties. There were 3,200 workers on the ship. The decks were filled with supplies and equipment for the construction process. There were wooden sheds and scaffolding. There was so much wood on the ship that it has been stated that it was a fair sized lumber yard. There was welding equipment scattered throughout.

On December 19th, at around 1030 hours, a fork lift was maneuvering around on the hanger deck of the ship. The fork lift was moving a trash dumpster. The dumpster moved a metal plate which clipped a valve on a 1,200 gallon diesel fuel tank which was approximately half full. The fuel ran out of the tank and went towards the stern of the ship. The fuel was spread over a wide area and was ignited by an unknown source, probably from the torch work that was going on.
throughout the area. The fire engulfed the materials that were stored on the deck. Fire dropped down to lower decks and ignited material there as well.

There were thousands of workers that were now trying to make their escape. A crane on the dock lifted a gangway that allowed many of the Navy Yard workers to escape. Some 200 workers climbed down ropes onto barges and were later removed via tug boats. Some workers jumped into the icy waters below. The lights went out on the ship as it filled with thick smoke. Workers that were towards the forward part of the ship were trapped.

As FDNY units arrived, they saw heavy smoke coming from the ship. There was heavy fire on the hanger deck from amidships to the bow of the ship. Fire was coming from openings on the flight deck.

Multiple alarms were quickly transmitted. Within a half hour, a 5th alarm was transmitted by the Chief of Department George David. At 1326 hours, a second alarm was transmitted for Manhattan Box 277 at Clinton and Delancey Streets to send manpower and equipment to the Navy Yard. By 1406 hours, a 5th alarm was transmitted for Manhattan Box 277.

As ladder companies arrived, they raised their aerial ladders to the hull of the ship to attempt rescue of trapped workers showing at port holes. Many rescues were made by using aerial ladders to portholes
and openings on the inboard side of the ship. Trapped workers would try to catch the attention of anyone who could rescue them.

Hose lines were stretched up stairways from the dock to the hanger deck. The fire area on the hanger deck was 120 feet x 300 feet x 50 feet high. A fireboat provided 3 ½ inch hose lines to be pulled up the outboard side of the ship via rope. Due to the nature of the USS Constellation, there were no openings for the fireboats to use their large master streams. All extinguishing efforts had to be done via hand lines and distributors.

A call was placed to have all Probationary Firefighters at the Proby School to respond to the scene of the fire. The “Progies” were used to stretch hose lines. They were raised by cranes to bring hose lines onto the ship.

The fires on the flight deck were similar to open-air fires. However, below decks were much more challenging. There were limited areas for ventilation. The metal on the decks and bulkheads was so hot that water turned to steam upon contact making visibility difficult. It was reported that the heat from the metal decks was melting the rubber on the boots of firefighters. Self-contained breathing apparatus (SCBA) had to be used below decks. Fires had engulfed the ship four decks down.

Dozens of workers were trapped below decks. Some of the workers were fatally burned. Some of the workers took in fatal doses of
carbon monoxide. However, there were workers that were still alive and in need of rescue. They had to be found and removed.

Some trapped workers began tapping on the hull of the ship. This caused Firefighters and Navy Yard workers to cut the side of the area with torches to free the trapped workers.

Firefighters rigged portable ladders on the exterior of the ship to perform bridging operations from an opening in the side of the ship to an exterior stairway. This was a highly visible rescue to those watching the dramatic events unfolding.

Rescue 2 was called to the scene of the USS Constellation fire from operating at the site of the plane crash from a few days earlier at Park Slope. They were led by Lieutenant Richard Hamilton.

Upon arrival, Lieutenant Hamilton, Fr. Henry Zuercher, and Fr. Tony Motti made their way to the flight deck. They made their way down to the hanger deck. It is there that they found trapped and endangered workers. Lieutenant Hamilton sent a Firefighter to show them the way through the smoke to the exit to the flight deck. They came upon a foreman walking around in the smoke.

He told Lieutenant Hamilton that four of his men were
trapped four decks below. Lieutenant Hamilton dispatched Fr. Motti to get a rope and a charged hose line to assist them in the rescue. The metal on the decks was hot. When Lieutenant Hamilton and Firefighter Zuercher made it to the bottom of the ladder, the foreman’s four friends were found quickly. They were all semi-conscious. The two rescuers tied a bowline on a bight on the rope that was dropped down from Fr. Motti. One by one, the trapped workmen were raised to the upper decks of the ship. Lieutenant Hamilton had taken off his SCBA facepiece to give one of the trapped workers some fresh air. By the time the last worker was raised, Lieutenant Hamilton began to suffer from the effects of carbon monoxide poisoning. His body was failing. Fr. Zuercher was able to position Lieutenant Hamilton’s body on top of his shoulders and climb the vertical ladder. Both Firefighters were hospitalized.

Rescue 1 was dispatched from their quarters in Manhattan. They were led by Lieutenant William M. McMahon. They started searching the hangar deck. They
came upon 22 trapped workers. Lieutenant McMahon, Firefighter Thomas Bonamo and Firefighter Timothy Costello helped evacuate the trapped workers to safety.

Ladder 108 responded on the second alarm. They were led by Lieutenant Gebhart. Firefighters Fogarty, Laghezza, Magnuson and Marshall made their way to the hangar deck. It is there that Ladder 108 advanced a hose line with another company moving a hose line next to them. Steam was being generated from the water hitting the hot metal.
Loud banging sounds could be heard as water struck the hot metal. After a while, Ladder 108 was relieved on their hose line and was assigned to help remove victims.

There were 65 hand lines stretched to extinguish this massive fire. So much water was being applied inside the ship that it started to list toward the inboard (starboard) side. Rear Admiral Schuyler N. Pyne and Chief of Department George David met and agreed that a list of 5 degrees would make firefighting on board the ship too dangerous. The list on the ship reached 4 degrees. It was then that seacocks were opened on the outboard (port) side to bring river water into ship to equalize the ship. Forty minutes later, the list was reduced to 2 degrees.
The fire was placed “Under Control” by Chief of Department George David at 2245 hours, more than 12 hours after the original alarm was sounded. 580 Firefighters had responded to the fire on the USS Constellation. 640 SCBA cylinders were used to extinguish the fire. Mutual Aid was used from the Yonkers Fire Department and Nassau County. 50 workers on the ship were killed. 336 workers were injured. 40 Firefighters were injured.
USS Constellation History

On sea trials, on November 6, 1961, there was a fire in a boiler room due to a broken oil pipe. 4 crewmen died and 9 were injured. The ship had to return to the Brooklyn Navy Yard for repairs.

On January 15, 1963, while operating in the Pacific Ocean, a fighter jet snapped an arresting cable injuring 11 sailors.

On July 10, 1971, the ship had a one-hour machinery room fire while docked at San Diego.

On August 2, 1988, the ship had an engine room fire which forced the ship to return to San Diego.

The USS Constellation saw duty off the coast of Vietnam and the Persian Gulf.

The USS Constellation was decommissioned on August 7, 2003.
Land units are called to a rendezvous location with Fireboats to provide staffing for the Fireboat when they are going to fight a fire on a ship mid-stream. When boarding the Fireboat, do not wear your Bunker Gear, carry it instead. Firefighters wearing Bunker Gear, with or without an SCBA, will quickly become submerged. The higher the fall from the dock or pier, the less likely that the firefighter will remain at the surface of the water. “Bunker gear does not float.”

“Prior to operating on or around water, Marine units must be notified.”

“Members operating at waterfront operations, piers or bulkheads should exercise extreme caution. Personal flotation devices where available, should be used. Safety lines should be used, particularly if no floatation devices are available.”

At waterfront operations, at least one 20 foot portable ladder should be readied to be deployed in the event a firefighter falls into the water.

We must have permission to board domestic and foreign flag ships. This is maritime law.

Whenever we need to use water on a ship, we must make provisions to remove the water. The use of water on a ship can cause stability problems with the ship. The SS Normandie Fire occurred on February 9, 1942, at 1430 hours. It burned for over twelve hours.
The ship was docked in New York Harbor and was being retrofitted as a Troop Transport for World War II. At 0235 hours, the fire was extinguished. With little warning, the ship rolled over on its side. It almost crushed a Fireboat when it rolled over. It rolled over due to the weight of the water that had poured into it during the fire fight.

When a fire occurs on a ship, isolate and confine the fire. Utilize the ship’s fire extinguishing systems, such as Carbon Dioxide (CO2). Temperatures inside the hold that is on fire should be monitored. Refrain from opening the hold for 24 hours after the hole is sealed and CO2 is applied.

If extinguishment on a ship is going to be attempted with hand lines, consider the following:

1. Bring a copy of the ship’s fire plan to the FDNY Command Post. One copy of the ship’s fire plan will be located near the gangway and one copy will be in the bridge.
2. Supply the international hose connection 3-inch connection. Special fittings are needed to do this. (Shore Battalions and the Marine Battalion have the fittings). Deploy a manifold on-deck and supply it with water from an FDNY pumper.
3. Communications on-board a ship will be difficult. 50-watt Post Radios will be needed at the Command Post and at multiple locations on the ship. Handi-talkies will not work well.
4. Stage all equipment on-board ship before operations begin (on top deck). Marine 1 or Marine 9’s davit (or crane) can be used to raise the equipment. Each Firefighter boarding the ship should bring a spare SCBA cylinder.
5. All FDNY Members need a Personal Floatation Device (PFD) on board and on land. If a Firefighter falls into the water, the firefighter will sink.
6. A Firefighter Assist and Search Team (FAST) is required to be on the ship, not on the dock.
7. Two hand lines should be charged and ready to move before anyone enters a lower deck of a ship for fire operations. 1 ¾ inch hose lines work better than the 2 ½ inch hose lines due to maneuverability.
8. There are large quantities of flammable liquids on-board ships. Evaluate if a foam operation is called for.
9. The use of search ropes and Thermal Imaging Cameras (TIC) is necessary. Remember, you may not need the search rope going into the ship, but you may need it trying to make your escape.
10. Engine Companies advance their hoselines one hose line at a time. The Engine Company takes the lead. Ladder Companies open hatches to assist in extinguishment and search task.
11. It may take more than a first alarm assignment just to get the hose line into position due to SCBA air limitations. An “Attack Chief” should move in with the hose line and be Post Radio equipped.
FDNY Fireboat 343: Launched on September 11, 2009, Cost: 27 million dollars; 50,000 gallons per minute pumping capacity; the fireboat is 140 feet long. It has a maximum speed of 18 knots. It is capable of monitoring for Chemical, biological, radiological, nuclear, and explosive agents.; A forward ballast tank allows the “343” to lower itself to the same level as the Staten Island Ferries; a small rescue boat can be deployed from the stern on the fireboat.; a decontamination and first aid area is on the ship; the “343” can transport up to 50 land based Firefighters out of the elements to a fire or emergency.

Deputy Chief Jay Jonas, Division 7

Thanks go to the following people who contributed to this essay: FM Daniel Maye (Mand Library), Katy Clements (FDNY Photo Unit); Captain William Gates (Ret.), Battalion Chief Jack Kleehaas (Ret.), Captain Andy Trabanco (Ret.), Captain Jerry Sillcocks (Marine Division); Fr. Bill Laghezza (Ret.); Captain James Ellson (Rescue 3) Deputy Chief Vincent Dunn (Ret.), Fr. Chris Roberto (Engine 48).

TIP OF THE HELMET TO: The Officers, Firefighters and former members of Engine 52 and Ladder 52 for hosting the annual Memorial Day Collation. Job well done! Never Forget.

In Memoriam

FIREFIGHTER ROBERT M. TILEARCIO, ENGINE 266:
Passed away on October 26, 2017 due to illness incurred from operating at Manhattan Box 5-5-8087. This was the rescue and recovery effort at the World Trade Center which began on September 11, 2001. May he rest in peace. Never forget!