Seconds from Disaster--Collapse of the Cromwell Pier in Staten Island

by Deputy Assistant Chief James E. Leonard, Brooklyn Borough Commander

Units of Battalion 21, under the command of Acting Battalion Chief Michael Bernstein (Engine 253), responded to the George M. Cromwell Recreation Center (aka Pier 6), 6 Murray Hulbert Avenue/Hannah Street, Staten Island Box 75-0231, on May 26, 2010, at 1410 hours. Weather conditions were warm and sunny. Pier 6 is owned by the New York City Department of Parks. The structure has been used as a recreational center continuously since 1934 and is well-known to most Staten Islanders. The Critical Information Dispatch System (CIDS) states the following: *Recreational facility, two-story 112-by 1140-foot, Class 5, steel truss roof with dry sprinkler system in cockloft and enclosed end on exposure #3 side*. At the time of the incident, the center was closed to the public, but FDNY members were unsure if workers were in the building.

The initial alarm transmitted at 1410 hours stated, *Building collapse; possible workers inside.* This was followed by two more calls reporting the same information. At 1415 hours, Engine 155, commanded by Lieutenant Joseph Morro, and Ladder 78, led by then-Lieutenant (now Captain) Shawn Roudi, arrived on the scene. One minute later, Engine 153, commanded by Lieutenant Naim Vata, Ladder 77, led by Captain John Belmonte (Engine 159, working in Ladder 77), and Chief Bernstein all arrived on the scene at Pier 6.

The initial report to the dispatcher by Chief Bernstein at 1418 hours stated, *Per Engine 155, building does appear to have structural damage. We are checking for further damage.* At 1419 hours, Chief Bernstein reported *a full collapse of the first-floor corner and the pier appears to be collapsing.* One minute after arrival, a two-story section of the building--measuring 60 by 75 feet--had collapsed.

This collapse set the stage for a large inter-agency response, in part because of the size and location of the pier and also the political ramifications of the loss of this recreation center. A large contingent of city, state and federal agencies responded. Additionally, numerous news agencies, along with public officials, responded to the scene. The full spectrum of the FDNY's resources was tested. But the most important fact is that none of FDNY's members was injured. The members who responded to this incident were in a dangerous position, but the actions of two members--making great use of their situational awareness--prevented a tragedy.

When Ladder 78 arrived, Lieutenant Roudi ordered his members to gain access to the pier via a steel gate that was located in the front of the building at the corner of exposures #1 and #4. This gave them entrance to a walkway that extended into the building. Even though the building was closed, reports stated there were possibly workers in the building. Members of Ladders 78 and 77 were performing the basic mission of the FDNY: Protect life and property. A power saw was used to cut the chains that secured the gate. Within a minute, Ladder 78 members would be able to step

The front of the George Cromwell Center (Pier 6) in Staten Island. The two-story facility measured 112 by 1140 feet. *all photos by CTU*

A collapse zone was established on land and the water surrounding the pier.

Collapse of Pier 6 generated a large inter-agency response.

through that gate. Fortunately, that did not happen.

On his arrival, Chief Bernstein positioned himself to the side of exposure #4, approximately 75 feet away from the noise and sounds of the saw. Similarly, the chauffeur of Tower Ladder 77, FF Raymond Ferragano (a 28-year veteran), positioned himself closer to the exposure #2 side of the building, also away from the sounds of the saw. The situational awareness of these members placed them in a position to provide a warning notice to those in danger. At approximately the same time, both FF Ferragano and Chief Bernstein heard the sounds of metal bending. Without hesitation, they yelled to the members forcing entry. Hearing the warning, the remaining members of Ladders 78 and 77, who were forcing entry, dropped their tools and ran. Luckily, the building collapsed inward. None of the members received any injuries. If they had completed cutting the lock and stepped through the gate, they might have been caught in the collapse.

At 1426 hours, Acting Deputy Chief Richard Callery, Division 8, arrived on the scene. He was informed of the situation by Chief Bernstein and all members were accounted for. His actions were to prevent any possible injury. Due to the imminent collapse of the structure, he ordered all members away from the building and established a collapse zone. Chief Callery was notified by the Department of Parks that there were no workers in the building. With the life hazard mitigated, Chief Callery was in a holding pattern.

Also at 1426 hours, the Fire Department Operations Center (FDOC) notified the City-wide Command Chief, Deputy Assistant Chief James E. Leonard, Brooklyn Borough Commander, of the incident. At 1445 hours, Chief Leonard arrived on-scene and the transfer of command took place after a briefing by Chief Callery. Extensive searches were unnecessary, but that did not diminish the multitude of problems that the FDNY faced.

Following the transfer of command, Chief Leonard ordered Division 8 to set up its command board and tent to establish a visible Command Post for all. FF Douglas Palamara, the Division 8 Firefighter, handled this assignment expeditiously and professionally. A large NYPD contingent was on-scene and led by Deputy Chief Sassone, Executive Officer Patrol Borough Staten Island. Chief Sassone was informed that under the Citywide Incident Management System (CIMS), the FDNY would be the Incident Commander (IC). All agencies on the scene were informed of the Command Post location and asked to have a representative of their agency at the Command Post. Con Edison and National Grid also were requested to respond to the scene.

With the life hazard addressed, Chief Leonard had an initial inter-agency meeting with all involved. The identified hazards follow:

1. Imminent collapse of the remainder of the structure.
2. A broken 20-inch water main was undermining the street.
3. The sea wall under the street was damaged.
4. A 5000-gallon diesel fuel tank fed the boiler inside the building.
5. A six-inch and a two-inch low-pressure gas main.
6. A Con Edison transformer with 150 gallons of dielectric fluid inside the building.
7. Stability of the street in front of the pier.
8. Adjacent piers and barges and how they would be affected if the pier collapsed further.
9. Establishment and enforcement of a collapse zone, both on land and the water surrounding the pier.

The Office of Emergency Management (OEM) arrived and consulted with Chief Leonard. After this briefing, OEM was asked to coordinate an inter-agency meeting. The NYPD was asked to locate a building where this meeting could take place. The Department of Parks, along with NYPD, provided the meeting place and the following agencies were present: FDNY, NYPD, Parks, DOB, OEM, Department of Citywide Administrative Services (DCAS), Department of Environmental Protection (DEP), United States Coast Guard (USCG), Occupational Safety and Health Administration (OSHA), Housing Preservation and Development (HPD), Con Edison and National Grid.

As the established Incident Commander, the FDNY coordinated the meeting. Each agency representative was asked to voice concerns. Following the meeting, Chief Leonard formulated an operational plan to deal with the immediate hazards, as enumerated below.

Life--The life hazard was FDNY members. There was no one on the pier. NYPD checked all license plates of the vehicles that were

parked at the pier and all were accounted for. Additionally, NYPD wanted to send in their search dogs. The IC rejected this idea because it would place NYPD members at unnecessary risk. It was agreed that the collapse zone would be maintained and enforced. The USCG was asked to enforce a safety zone around the pier.

Water leak--Using their maps, DEP representatives were working to shut down the broken 20-inch water main.

Diesel fuel--The 5000-gallon diesel tank was located on the street side of the sea wall. The tank was connected via piping to a pump room just inside the building. The pump room contained pumps that fed the boiler for the building, which was approximately 500 feet from the sea wall. It was very important for Con Edison to cut the power source to the building. If the piping broke, there would be an uncontrollable leak into the water. The USCG was asked to place booms in anticipation of the leak.

Gas piping--National Grid was asked to cut the gas to the building.

Further collapse of the building and the street--Structural engineers from the Department of Buildings (DOB) were on-scene. Using a transit, FF Douglas Huebler, Tactical Support #2, expertly monitored the building. The transit showed the building was dropping one-half inch every 15 minutes. FF Huebler kept a written log showing the time and drop of the building. This information was used by both FDNY members and engineers from Buildings and Parks. Tower Ladder 77 was raised and used as a high observation post. Engineers from the DOB surveyed the building from the tower ladder. The condition of the street and sea wall also was evaluated. All agreed that a collapse zone should be continued, monitored and enforced.

Haz-mat and utility issues addressed

The Mobile Command Center (MCC) was used as a meeting place with the FDNY Chiefs on-scene. Present at this meeting were Chiefs Leonard and Callery, acting Battalion Chief Bernstein, Battalion Chief Charles Vella, Safety Battalion, and Battalion Chief Edward Bergamini, Hazardous Materials Battalion. The decided course of action was to shut down the electric, then the broken water pipe, mitigate the potential for an oil leak and then shut the gas off. A Haz-Mat Group would mitigate these issues. Chief Bergamini was assigned as the Haz-Mat Group Supervisor. Haz-Mat #1, commanded by Captain Joseph Abbamonte, and Engine 165--Hazardous Materials Technician Unit (HMTU)--led by Lieutenant Stephen Sapia, were assigned to the Haz-Mat Group. All actions were taken slowly and deliberately. Safety was stressed with all, including members of the other agencies. So far, there had been no injuries and the goal was to maintain that.

At the inter-agency meeting, a major focus was on the potential leak of the diesel tank. A leak of more than 5000 gallons of diesel would be an environmental problem. After a discussion with the fuel oil delivery personnel, the Haz-Mat Group pumped out the tank, using the suction truck from the fuel oil company. With ingenuity and determination, these members successfully completed the operation, thus mitigating a potential environmental problem.

Once the utility hazards were neutralized, the incident was declared *Probably Will Hold* at 1647 hours by Chief Leonard and placed *Under Control* at 1104 hours by Deputy Chief Richard Howe, Division 8 Commander, on May 28, 2010, 44 hours and 53 minutes after transmission of the Box. The discussion at the next inter-agency meeting centered on *Emergency Demolition* of the collapse area. This order is given by the Department of Buildings and usually arranged by HPD. But in this case, because the building was under the jurisdiction of the Department of Parks, the engineers from Parks arranged with contractors for the demolition.

The FDNY maintained a presence on the scene for almost two days. When the collapse area was demolished sufficiently to remove some of the hazard, a secondary search was conducted. The incident then was concluded.

It must be emphasized that when dealing with many other agencies, clear lines of authority must be followed. As the Incident Commander, the issues of other agencies should be considered and addressed. A spirit of cooperation must be emphasized so the mission of protecting life and property can be fulfilled. All of these factors, along with a strong plan, resulted in a successful operation with no injuries incurred.

Lessons learned/reinforced

- Situational awareness is a critical skill for all members. Chiefs, in particular, must get the *big picture*. At this incident, the Acting Battalion Chief took a position where he could see a larger area of the building. By removing himself from the immediate area, he was better able to see and hear the possible signs of a collapse. Likewise, the chauffeur removed himself from the area where forcible entry was being conducted. This afforded him a much different perspective of the situation.
- When operating at collapses, always anticipate a secondary collapse. Have a plan in place in case of secondary collapse. Know your escape route.
- When faced with an imminent collapse, life is the only concern. Leave your tools and equipment if it will hasten your escape.
- To borrow a line from terrorism training, *if you* see *something,* say *something.* All members must be aware of signs of collapse.
- Members must keep their focus on *safety* throughout the operation. Chief Officers must notify all incoming units of the safety concerns. Other agencies operating also shall be informed of the safety issues. Safety of all is FDNY's number one concern. When members are relieved at the change of tour, this is a time when focus on safety may be lost.
- Chiefs must recognize that the OEM is a *coordinating* agency. While OEM may organize inter-agency meetings, it is still the responsibility of the Incident Commander to supervise the meeting. The IC is responsible for ensuring all aspects of the plan are implemented. If a function cannot be accomplished by the designated agency, then the IC must take actions to ensure that the task is reassigned and completed.
- Anticipate interacting with the media at high-profile incidents. Ensure that the Press Officer is notified through the dispatcher. The Press Officer is invaluable on the scene when dealing with the press.

About the Author...

Deputy Assistant Chief James E. Leonard is a 31-year veteran of the FDNY. He is the Brooklyn Borough Commander. He holds AAS and BA degrees from St. Francis College, Brooklyn. He is a 2004 graduate of the FDNY's Officer Management Institute (FOMI). He is pursuing his Masters degree from John Jay College. He writes frequently for WNYF.