

handled the Rear Yard Sector; and Deputy Chief Paul Cresci, Division 1 (who responded on the 10-60 signal), was assigned the 50th Street Sector. At this time, Chief Hodgens assumed command. Battalion Chief John Belnavis, Battalion 9, became Operations Chief and supervised the rescue of victims on the debris pile. Battalion Chief Michael Grogan, Battalion 7, was designated as the Liaison Officer and assisted with outside agencies and the construction workers. Battalion Chief James Harten, Rescue Operations Battalion, supervised the technical rescues and units within the Special Operations Command.

John Peruggia, Chief of EMS Command, became the Medical Branch Director and established his command board directly adjacent to the Command Post. This position facilitated communications between the Incident Commander and the Medical Branch throughout the operation. As victims were found, they were treated and rapidly transported to the nearest medical facility.

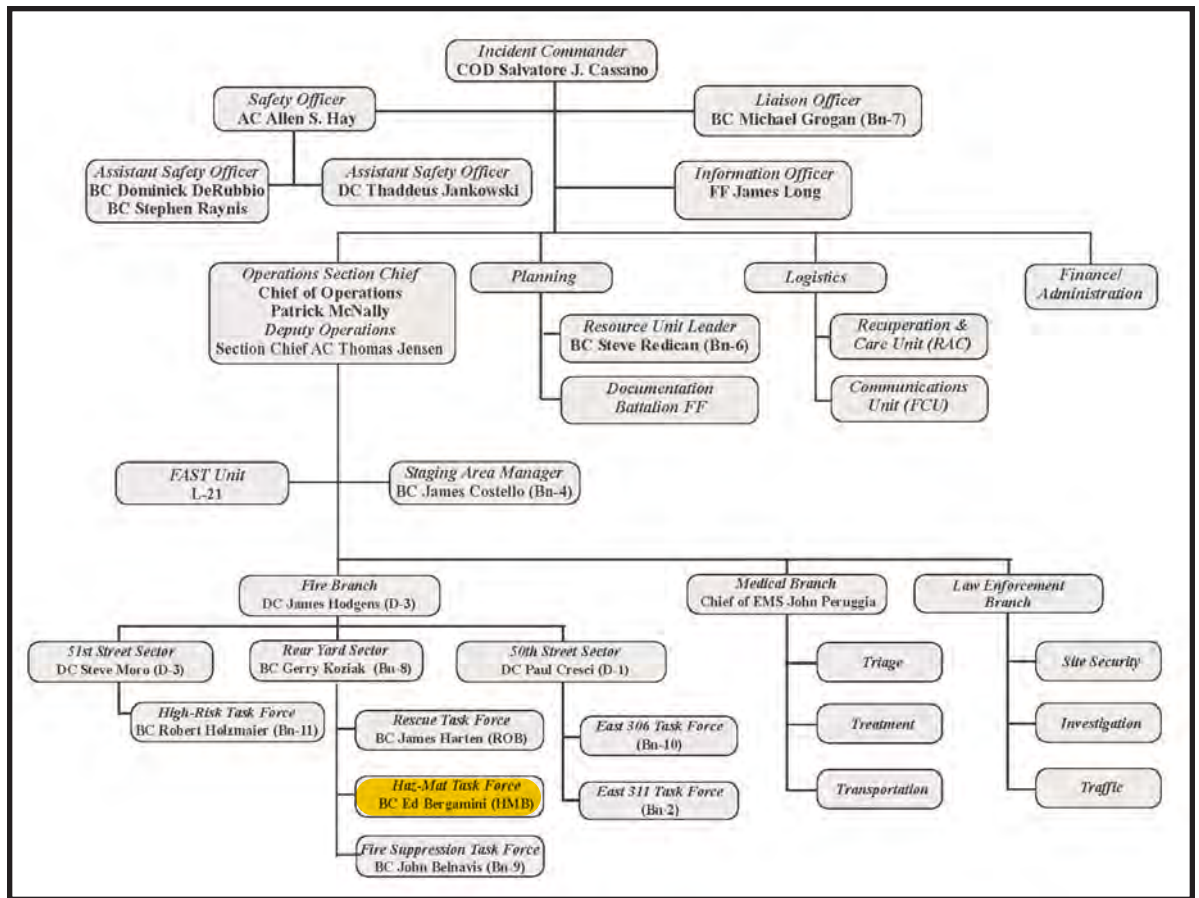
Keeping track of the victims who were treated and accounting for those victims who were reported missing became priorities. Chief Grogan was directed to make contact with the crane contractor to determine how many workers were unaccounted for. The initial reports were that five workers were missing. Assistant Chief Thomas Jensen, Command Chief, arrived on the scene and transmitted a third alarm at 1450 hours.

When Lieutenant Smith and the members of Ladder 2 arrived on-scene, they immediately were confronted with a very serious life hazard. They received reports from civilians and NYPD officers of people trapped in and on the collapsed brownstone building. Lieutenant Smith acknowledged these reports and noted the rear wall of 944 2nd Avenue sustained heavy damage to the top floor. (See photo #4.) He was very concerned that a secondary collapse of this rear wall could endanger his members. The Lieutenant reported this information to Chief Koziak as he deployed his members onto the pile.

Operations

The members of Ladder 2 immediately found a partially buried survivor approximately 10 feet back on the #2 side of the collapsed building, 305 East 50th Street. A stokes basket was called for and the members of Ladder 2 dug out a seriously injured construction worker. This victim was placed in the stokes basket and rapidly removed by the members of Ladder 2 and Engine 8. He was passed off to EMS personnel, who performed a rapid patient assessment and transported the victim to the nearest medical facility.

The members of Ladder 2 quickly found a second victim in



the same vicinity. This victim was rapidly dug out by hand. Unfortunately, he had succumbed to his injuries. The man was removed from the pile by the members of Engine 8 and Ladder 2. As soon as this second victim was removed, Ladder 2 assisted Rescue 1 and Ladder 4 for the next three hours as they tunneled their way to remove a victim who was trapped beneath the rubble.

The Con Edison supervisor reported to the Command Post and immediately was directed to shut off gas in the area. The Ladder 2 chauffeur reported a major diesel leak from the crane. Engine 21 was ordered to stretch a foam hand-line to protect 311 East 50th Street. When Battalion Chief Ed Bergamini, Haz-Mat Battalion, arrived on the scene, he was directed to supervise Haz-Mat 1 in confining and mitigating the diesel leak. He ensured foam lines were properly positioned and meter readings were taken in the surrounding buildings and basements throughout the operation.

Chief Cresci, in charge of the 50th Street Sector, reported a



Photos #6 and #7--In photo on left, Chief Cresci examines the damage (which included a major water leak in a basement) within the 50th Street Sector. The photo on the right shows the 30-foot I-beam that pierced the roof of 306 East 50th Street.

SOC Operations at the March 15, 2008, Crane Collapse

by Battalion Chief James Harten



FDNY member--hit by roof sheathing--is removed from the crane collapse site.

On March 15, 2008, at approximately 1430 hours, units of the 8th and 9th Battalions and the Special Operations Command responded to the crane collapse between 50th and 51st Streets in the borough of Manhattan. FDNY operations continued until 1600 hours on March 17, 2008. This article focuses on the initial operations conducted by SOC units (Rescues 1, 3 and 4; Squads 1, 18 and 288, plus TRV 1; TSU 1; Haz-Mat 1; Haz-Mat Battalion; SOC Dewatering unit; SOC compressor truck; SOC Logistics Vehicle; and the Rescue Operations Battalion) until 2000 hours on March 15, 2008.

The Rescue Operations Battalion, Battalion Chief James Harten, reported in to the Incident Commander (IC), Deputy Chief James Hodgins, Division 3, and was instructed to supervise and support the

Collapse Rescue Plan, per *Firefighting Procedures*, Collapse Operations, Section 11. Chief Harten then checked with the Officers of Rescue 1 and Squad 18 to see what assistance they needed. These members already were working on extricating a construction worker who had ridden the crane down to the ground.

The following issues were addressed under the Collapse Rescue Plan:

Reconnaissance

- The stability of the crane lying against 300 East 51st Street and the possibility of secondary collapse from the free-standing wall of the penthouse of this building were checked by Rescue 4 and Squad 288 members. They determined that the legs of the crane landed squarely on the building and were fully supported against the building. The free-standing wall, however, was a problem and the collapse zone on 51st Street had to be extended farther east. Additional buildings in that direction had to be searched and vacated.
- The stability of 303 East 51st Street--the building under construction--was not a problem, but the net supports on the upper floors had been damaged. They were secured and later replaced that night.
- The Safety and Rescue Battalions determined the boundaries of the collapse zone.
- Con Ed gas, electric and steam and DEP Water were requested to respond through the IC.
- The Office of Emergency Management (OEM) was requested to respond to obtain the heavy equipment that would be needed.
- The NYPD was requested to handle towing.
- Operations were coordinated with the NYPD ESU Captain on-scene.
- The crane fuel leak was handled by Haz-Mat 1, the Haz-Mat Battalion and an

engine company with a foam line.

- The stability and possibility of secondary collapse of 303 East 50th Street--which was exposure #2 to the pancake collapse--was addressed by members of Squad 1 and Haz-Mat 1. These companies were unable to secure the loose brickwork over the collapse, so a shed was constructed over the victim and rescuers on the pile. Using surveyor's transits, three of the four walls of this building were monitored by TSU 1 and SOC Support Truck members.
- Two buildings on the south side of 50th Street were penetrated by steel beams that ruptured the gas line in the basement. Squad 1 members and Con Ed employees addressed the stability and possibility of secondary collapse of these two buildings.

Accounting for and Removal of Surface Victims

- Units on-scene already were removing surface victims to the street.
- Chief Harten collaborated with NYPD detectives and crane company representatives and determined that eight victims were being sought.

Void Search

- Void search was initiated by Rescue 1 and Squad 18 members for a construction worker trapped between the crane and debris.
- Squad 288 members removed the Operating Engineer from the crane cab.

Selected Debris Removal and Tunneling

- Rescue 1 used the call and listen method to get the general location of the final live victim. Then, they used the search camera to pinpoint his location. Members of Rescues 1, 3 and 4 and Squad 18--assisted by SOC Support Ladder Companies--spent the next two hours tunneling to and removing the last victim. As soon as the top of the victim's body was exposed, FDNY rescue medics were inserted to assess the victim and treat him for crush syndrome.
- All members were removed from the pile. Using two search cameras, Squad 1 members searched for 30 minutes to locate any additional victims. The search proved negative.

General Debris Removal

- This operation did not begin until the following morning (March 16) after the cranes had been set up and the man-basket used to remove hanging brickwork from 303 East 50th Street under which all members had to operate the previous day.

Lessons reinforced

- Minimum manpower with maximum supervision should be used in collapse situations for the safety of all members.
- Use of the search camera again proved helpful.
- The six-sided approach was used in the victim search.
- Plan ahead. Even by requesting OEM early on, heavy equipment was not in place until the next morning.
- Small hand and battery-powered tools are most useful around victims.
- Rotate personnel frequently.
- If unable to remove a hazard, create a safe haven for victims and rescuers.
- Risk versus reward must be evaluated constantly, especially when no live victims can be located and secondary collapse potential still exists.

About the Author...

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major water leak in the basement of 311 East 50th Street. The water main for 305 East 50th Street was broken and the water now was seeping through the foundation. Concerned about the structural stability of the bearing wall of this 14-story multiple dwelling, the Department of Environmental Protection (DEP) was requested to shut off the water main to this building.

Battalion Chief Gene Kelty, Battalion 10, was supervising the searches in 311 East 50th Street when he noticed a hole in the roof of 306 East 50th Street. He notified Chief Cresci, who sent Ladder 35 into this building, which was on the south side of 50th Street. Lieutenant Steve McNally, Ladder 35, notified Chief Cresci that a steel I-beam pierced the roof of 306 East 50th Street. He continued his search and noted that the I-beam went through the 12-inch

bearing wall of 306-308 East 50th Street and ended up in the cellar of 308 East 50th Street, just missing the boiler of this four-story brownstone. The 30-foot-long, 12- by 12-inch I-beam was one of six supporting beams that tied the main tower of the crane into the building under construction at 303 East 51st Street. This I-beam was catapulted from the crane as it crashed onto and collapsed the four-story brownstone at 305 East 50th Street. Miraculously, no one was present in either building at the time of the collapse.

Battalion Chief Robert Holzmaier, Battalion 11, was supervising the search of 300 East 51st Street and operating under the command of Chief Moro, in charge of the 51st Street Sector. This entire 23-story building was evacuated due to structural concerns and the very tenuous position of the tower crane. (See photo #2 on