

who had reached the lobby to return to their offices. They could have been held in the lobby or perhaps directed through the underground concourse.

Despite the initial advice given over its public-address system, the South Tower was ordered to be evacuated by the FDNY and PAPD within 12 minutes of the North Tower's being hit. If not for a second, unanticipated attack, the evacuation presumably would have proceeded.

Impact of Fire Safety Plan and Fire Drills on Evacuation. Once the South Tower was hit, civilians on upper floors wasted time ascending the stairs instead of searching for a clear path down, when stairwell A was at least initially passable. Although rooftop rescues had not been conclusively ruled out, civilians were not informed in fire drills that roof doors were locked, that rooftop areas were hazardous, and that no helicopter evacuation plan existed.

In both towers, civilians who were able to reach the stairs and descend were also stymied by the deviations in the stairways and by smoke doors. This confusion delayed the evacuation of some and may have obstructed that of others. The Port Authority has acknowledged that in the future, tenants should be made aware of what conditions they will encounter during descent.

Impact of 911 Calls on Evacuation. The NYPD's 911 operators and FDNY dispatch were not adequately integrated into the emergency response. In several ways, the 911 system was not ready to cope with a major disaster. These operators and dispatchers were one of the only sources of information for individuals at and above the impact zone of the towers. The FDNY ordered both towers fully evacuated by 8:57, but this guidance was not conveyed to 911 operators and FDNY dispatchers, who for the next hour often continued to advise civilians not to self-evacuate, regardless of whether they were above or below the impact zones. Nor were 911 operators or FDNY dispatchers advised that rooftop rescues had been ruled out. This failure may have been harmful to civilians on the upper floors of the South Tower who called 911 and were not told that their only evacuation hope was to attempt to descend, not to ascend. In planning for future disasters, it is important to integrate those taking 911 calls into the emergency response team and to involve them in providing up-to-date information and assistance to the public.

Preparedness of Individual Civilians. One clear lesson of September 11 is that individual civilians need to take responsibility for maximizing the probability that they will survive, should disaster strike. Clearly, many building occupants in the World Trade Center did not take preparedness seriously. Individuals should know the exact location of every stairwell in their workplace. In addition, they should have access at all times to flashlights, which were deemed invaluable by some civilians who managed to evacuate the WTC on September 11.