

Chapter 7

EVACUATION OF WTC 7

7.1 OVERVIEW

The occupants of WTC 7 had clear warnings about the serious nature of their situation. They could feel and hear the percussion from the aircraft impacts, and those with access to windows facing south had views of the fire and smoke emanating from WTC 1 and WTC 2. Modern communication channels were also utilized, as televisions and land and cellular phones brought information and awareness to occupants in the building. Obtaining this information led many people to leave the building prior to any formal orders to do so.

The evacuation experience in WTC 7 was markedly different from that of the occupants of the towers. WTC 7 was not struck by an aircraft, and extensive fires were not ignited early and simultaneously on multiple floors. There was no immediate damage to the stairwells, the elevators were in operation for occupant use, and no occupants were trapped above fire floors without means of escape. Finally, WTC 7 did not collapse for 8½ hours after the aircraft impact into WTC 1. These factors provided more than ample time for people to leave the building safely. With the exception of a handful of officials who reported to the New York City Office of Emergency Management headquarters on the 23rd floor, virtually all of the estimated 4,000 occupants (see below) evacuated prior to the collapse of WTC 2, the first of the two towers to collapse.

Thus, the examination of the evacuation of WTC 7 by the Investigation Team had a purpose different from the examination of the evacuation of the two towers, and required less thorough study. While the occupants left the building without encountering fires, emergency responders, or structural damage, their evacuation did take place during a perceived emergency. Moreover, there were multiple unexpected complications, such as might arise in any such emergency and affect management of the situation, including use of the lobby area as a triage center, the resulting constriction of egress flow, and limitation of expected exit paths due to the potential for debris injury outside the building.

7.2 THE EMERGENCY EGRESS SYSTEM

7.2.1 Stairwell Design

The principal components of the emergency egress system in WTC 7 were two 56 in. to 58 in. (1.42 m to 1.47 m) wide stairwells. These were significantly wider than the conventional 44 in. (1.12 m) wide stairwells. The stairs had a typical tread depth of 9 in. (23 cm) and a typical riser height of 8 in. (20 cm).¹ Stairwell A (also referred to as the west stairwell), located in the west-center part of the building, was vertically continuous from the 47th floor down to the 5th floor. From there, an evacuee moved horizontally through a protected corridor to the west, where stairs led to the exit discharge at the 1st floor

¹ Emory Roth architectural drawing for WTC 7 Floor 5, October 20, 1986.