



3 WTC 3

3.1 Design and Construction Features

WTC 3 (also known as the World Trade Center Hotel, the Vista Hotel, and the Marriott Hotel) was almost completely destroyed as a result of the September 11 attacks due to debris from the collapse of the adjacent WTC 1 and WTC 2. This chapter describes the structural design and construction features of the building as well as details of its collapse. The information contained in this section is based on architectural and structural design drawings dating to 1978, photographs, written reports and articles, videotape recordings, and interviews with Marriott staff. Steel shop drawings were not available for review.

3.1.1 Project Overview

WTC 3 was a steel-framed hotel building located on the southwest corner of the WTC Complex immediately to the south of WTC 1 (the north tower) and to the west of WTC 2 (the south tower). The site was bounded on the west by West Street and on the south by Liberty Street. The building was designed in 1978/1979 by Skidmore, Owings & Merrill (SOM), architects; Weiskopf & Pickworth, structural engineers; and Jaros, Baum & Bolles, mechanical engineers. Weiskopf & Pickworth designed the superstructure for the hotel. Skilling, Helle, Christiansen, and Robertson designed the transfer system between the hotel column grid and the below grade parking grid as well as the structure below the transfer system. WTC 3 opened in 1981 and housed the 825-room Vista hotel. The original owner and operator of the hotel was Hilton International, but the property was sold in 1996 to Marriott Hotels (Harris 2001). Marriott operated the hotel from 1996 until the attacks on September 11, 2001.

3.1.2 Building Description

The building had 22 stories above grade and 6 stories below grade (labeled B1 through B6.) The roof parapet line was approximately 242 feet above West Street. The north and west elevations are shown in Figure 3-1 and the south and east elevations are shown in Figure 3-2, as taken from the original architectural drawings from SOM. The first level below grade provided loading docks, building services, and other functions for the hotel. The other levels below grade were part of the overall WTC complex and provided parking space. The ground level housed the hotel lobby and ballroom. The two stories above the ground level lobby were occupied by restaurants and conference facilities. The next 18 stories accommodated the approximately 825 guest suites. A health club and mechanical services were located on the top floor of the building.

The building was a long rectangle in plan with an obtuse angle change at approximately one-third of the length of the building from the north. The typical floor of the building was approximately 64 feet wide and 330 feet long, with floor story heights of 9 feet 6 inches. Elevators were located at the east side of the building, roughly centered north to south, directly opposite the building entry, which was located on the west side of the building. The general arrangement of the hotel suites is indicated in Figure 3-3.