

The damage on the north face was inclined at an angle that roughly matched that at which the aircraft struck the tower on the opposite face. This suggested that debris from the aircraft tended to pass straight through the tower, perhaps being guided by the floor slabs.

- Significant areas of the aluminum curtain wall were removed, most prominently in a roughly rectangular area extending across 12 columns and covering the 80th, 81st, and 82nd floors. This was where the nascent fireball was first observed. Very little fire was observed in this area following the fireball and before the collapse of the tower. As a result this area has been called the “cold spot.”
- Large piles of debris were evident, extending from the northeast corner about eight windows toward the west on the 80th and 81st floors. These were the same floors where piles were observed on the east face at the north edge, suggesting that the debris had essentially filled up the corners of the tower on these two floors. A third pile of debris could be seen on the 79th floor, extending roughly from column 231 to column 240. These windows overlapped an area where a distinct line of fire appeared on this floor 0.92 seconds after the plane strike.
- One perimeter column in the north face was severed just below the spandrel between the 81st and 82nd floors. The adjacent column was severely bent. This damage must have been the result of a large part of the aircraft passing through the tower.
- Several windows were missing on the 78th and 79th floors.
- Though aircraft and/or parts of the building exited the facade on the north face on the 78th floor at two locations, no fire was observed emanating from this floor.

2.3.5 Debris Expelled by the Aircraft Impact

- Several pieces of the aircraft passed all the way through the building and exited at high velocities from the north side. Most of these were relatively small, but at least two were of substantial size. One, a portion of one of the jet engines, exited the northeast corner of the 81st floor and landed roughly 1,500 ft from the north side of WTC 2. The other, a landing gear assembly, exited in the vicinity of window 253 on the 81st floor and damaged the roof of a building at 45 Park Place, over three blocks to the north. Assuming the exit locations were identified correctly, the engine component exited the building moving toward the east at an angle of roughly 17 degrees to the normal with the north face, while the corresponding angle for the landing gear was approximately 12 degrees.
- There was a great deal of small debris, such as crushed pieces of concrete, and flaming material spread over the plaza. This most likely fell primarily from the north face of WTC 2 since this side overlooked the plaza.

Following the aircraft impact on WTC 2, the debris field on the south side of the building was noticeably increased.