

Preparations for a blast scenario would have been almost impossible to carry out on any floor in the building without detection. Preparations would have included removal of column enclosures or walls, weld torches to cut column sections, and placement of wires for detonation. Occupants, support staff, and visitors would have noticed such activities, particularly since they likely would have occurred around more than one column.

Figure 3–1 shows the results for the two shaped charges applied to Column 79 on a tenant floor that was highly partitioned, such as Floor 12. Nearly all the windows on the northeast section of the floor subjected to a blast would have been broken, even by the smaller charge. Simulations for a floor that was not highly partitioned led to more extensive window breakage.

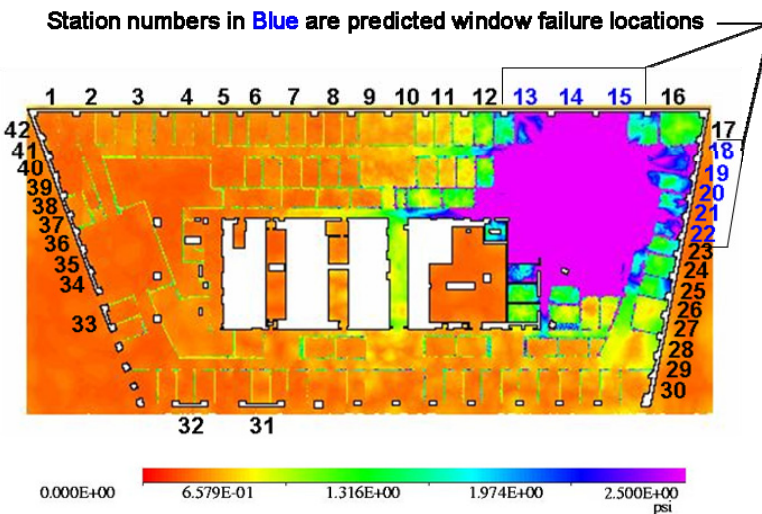
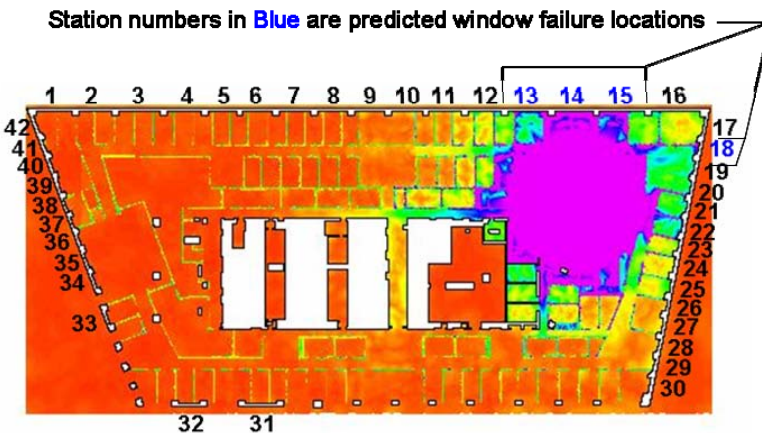


Figure 3–1. Peak overpressure and broken window locations.



Top: 9 lb shaped charge; bottom: 2 lb charge.

The actual window breakage pattern on the visible floors on September 11, 2001 (NIST NCSTAR 1-9, Chapter 5) was not at all like that expected from a blast that was even 20 percent of that needed to damage a critical column in WTC 7. The visual evidence did not show such a breakage pattern on any floor of WTC 7 as late as about 4:00 p.m. or above the 25th floor at the time of the building collapse initiation. Views of the northeast corner of WTC 7 at the time of the collapse were obstructed by other buildings.