

- Detailed floor plans were available for the eight modeled floors in WTC 1 and the 80th floor of WTC 2. For the remaining floors in WTC 2, the layouts were estimated from the architectural drawings of the core space and from recollections by The Port Authority of New York and New Jersey (The Port Authority) staff and workers from the tenant spaces.
- The condition of the interior walls, whether intact or damaged by the aircraft debris, did not change during a fire simulation.
- The furnishings not in the debris path were assumed to be undamaged and were modeled as developed from the experiments mentioned above. Those furnishings deemed to be rubblized were assigned two-thirds the burning rate of the undamaged furnishings.
- During a simulation, windows were removed at the time indicated in the photographs.
- Vertical shafts in the core area were incorporated as shown in the architectural drawings. For undamaged floors, all the openings to the core area were assumed to total 5 m² in area.
- It was assumed that 40 percent of the jet fuel was available for combustion on the impact floors. The distribution was derived from the aircraft impact modeling.
- The mass of combustibles in each aircraft was obtained from the airlines and the aircraft manufacturer.
- In the FDS computational grid, each floor comprised 128 by 128 by 9 cells. Each cell was 0.5 m in width and depth and 0.4 m in height.
- Prior to aircraft impact, the SFRM was assumed to be consistent with the as-built condition and characterized by a uniform equivalent thickness. If a structural element was found to be in the path of a debris field of sufficient intensity, all the insulation (SFRM and gypsum board) was deemed to have been removed.
- Core walls impacted by sufficiently energetic debris were fully removed. This enabled rapid venting of combustion gases into the core shafts and reduced the burning rate of combustibles in the tenant spaces. In Cases B and D, a more severe representation of the damage was to leave a 1.2 m soffit that would maintain a hot upper layer on each fire floor. This produced a fire of longer duration near the core columns and the attached floor membranes.

Sensitivity tests identified those factors that were the most influential on the outcome of single floor FDS simulations. Table E-2 summarizes how those factors were incorporated into the four cases.