

- 10th and 11th floors: a section of the north side, east of center.
- 12th and 14th floors: the same section as on the two lower floors, plus the southeast corner.
- 13th floor: the full east section of the floor.

In addition, the thermostructural simulations indicated that a small section east of center on the north side of the 8th floor had failed approximately 20 min to 45 min before the building collapse.

These support failures would have led to openings in the floor and could have altered the thermal profiles as follows.

- Hot gases from the lower floor would have vented to the upper floor. This would have slowed further heating of the ceiling of the lower floor. The hot gases would have increased the heating of the upper floor.
- Had a sizable hole opened in the floor slab, some combustibles from the upper floor could have fallen to the lower floor. Flames from the lower floor could have ignited combustibles adjacent to the hole on the upper floor. If portions of the floor slab actually separated and fell, they would have smothered some of the burning combustibles on the floor below.

The breaches in Floors 10 through 14 would have only had a modest effect on the heating of the steel and concrete, since the holes would have been there for only a relatively short time. In addition:

- Prior to the breaches in the 8th, 12th and 13th floor slabs, there had been significant burning above and below the vicinity of the breach. Thus, the combustibles on the upper floors had already been ignited, and only a small fraction of the combustibles remained, potentially to fall to the floor below. In about 15 min, hot gas penetration to the already hot upper floor would not likely have had a major effect on the fire intensity or duration there.
- There were essentially no combustibles on the 14th floor. Thus, the only effect of the breach in the 14th floor slab would have been the short-term decrease in the heating of the 13th floor ceiling. The separation of this floor might have allowed for flames from the 13th floor to appear in the 14th floor windows, explaining the brief, late fire observed in the east end of the north face at 5:03 p.m.
- The floor collapses on the 10th and 11th floors resulted from thermal expansion of the support girders due to prolonged exposure to the hot gases from fires on the floors above and below.
 - No fire was observed on the 10th floor, and the fire on the 9th floor had just reached the area of the floor breach. Thus, the effects of the breach in the 10th floor would have been the short-term decrease in the heating of the 9th floor ceiling and the addition of (unignited) combustibles to the 9th floor fire, which had no shortage of fuel already.
 - There had already been a prominent fire on the east side of the 11th floor. Thus, a breach of its floor would not have affected the fire on the 11th floor significantly. Since no fire was observed on the 10th floor, there had been no significant effect of any combustibles falling from the floor above.