Why NIST’s WTC Fireproofing Dislodgment and Collapse Scenario Cannot be Correct

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According NIST’s final report on the collapse of the Twin Towers[1], the collapses were initiated by office fires heating the floor trusses to the point where they began to sag downward. This in turn pulled on the perimeter columns and caused them to bow inward and eventually break, initiating the fall of the upper section of each building. Though many researchers have pointed out severe flaws in the WTC NIST report[2], we shall focus on one aspect of NIST’s collapse scenario that by their own admission is crucial to their conclusions; the loss of fireproofing within the buildings.

According to NIST, the impact of each airplane widely dislodged the fireproofing in each building. In two instances NIST has revealed how important this aspect of their collapse scenario is. First, early on in their report they claim that had the fireproofing not been widely dislodged, the buildings would likely have remained standing.[3] Second, researchers in the 9/11 Truth Movement submitted a Request for Correction to NIST, pointing out several flaws in their report.[4] One flaw noted by these researchers was that NIST’s physical tests of floor models being heated by fires did not produce the level of sagging as NIST suggested in their final report. In response, NIST stated:

[I]t is not possible to compare the floor sagging observed during the ASTM E119 tests with the floor sagging calculated by the analysis models. The ASTM E119 furnace profile is not representative of real fire condition. In addition the specimens had been fireproofed which prevented the steel from heating as quickly as it would in an unprotected condition as was modeled based on the estimated damage to the fireproofing due to debris impact.[5]

It is clear that NIST places a huge amount of importance on the idea that the fireproofing was widely dislodged in the buildings. But do they provide sufficient evidence to back this up? Here we present three reasons why NIST’s fireproofing loss scenario cannot be correct, and therefore their overall collapse scenario cannot be correct either.

1. **It is unlikely that the amount of energy needed to dislodge the fireproofing was present.** In their attempt to defend NIST’s collapse scenario, supporters of the official story often show pictures of the impact hole that show damaged steel missing
fireproofing.[6] However, it’s important to note that these photos show damaged steel at the very front of the impact. Obviously as the plane first enters the building it retains much of its kinetic energy. However, as the plane travels through the building, the plane will of course lose energy. And in the case of the North Tower, the collapse initiated on the south side of the building, opposite to where the plane entered. NIST attempted to show that the fireproofing would be widely dislodged by firing buckshot and shrapnel at steel plates and bars coated with SFRM (Sprayed on Fire Resistant Material).[7] During the testing, the gun was fired at velocities of approximately 500 ft/s and produced damage to the SFRM, but at one point it misfired and produced a projectile velocity of just 102 ft/s (31 m/s), which resulted in no damage to the SFRM.[8] And yet, according to NIST the plane debris was only travelling at a rate of approximately 51 ft/s (15 m/s) once it reached the south side of the North Tower.[9] This strongly suggests that the plane debris would have been unable to dislodge any fireproofing in the area of the building where the fires are said to have started the collapse.

2. The plane debris could not have behaved in the manner as described by NIST. NIST’s scenario requires that the planes be shredded into small pieces as they enter the buildings to widely dislodge the fireproofing. As explained by Kevin Ryan:

[NIST’s] test for fireproofing loss, never inserted in the draft reports, involved shooting a total of fifteen rounds from a shotgun at non-representative samples in a plywood box... Unfortunately, it’s not hard to see that these tests actually disproved their findings. One reason is that there is no evidence that a Boeing 767 could transform into any number of shotgun blasts. Nearly 100,000 blasts would be needed based on NIST’s own damage estimates, and these would have to be directed in a very symmetrical fashion to strip the columns and floors from all sides. However, it is much more likely that the aircraft debris was a distribution of sizes from very large chunks to a few smaller ones, and that it was directed asymmetrically.[10]

The planes being shredded into such small fragments is shown in simulations provided in NIST’s report.[11] Kevin Ryan’s assertion that “it is much more likely that the aircraft debris was a distribution of sizes from very large chunks to a few smaller ones” is corroborated by three facts:

- Large portions of the planes were recovered from Ground Zero after they had exited the buildings.[12]
- At least one survivor from the South Tower, Stanley Praimnath, testified that he saw large portions of the aircraft inside the building.[13]
- Purdue University’s own simulation of Flight 11’s impact into the North Tower (which was described by the University as “[having] a realism never seen before”)

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showed the aircraft being shredded into large chunks, rather than the much smaller debris suggested by NIST.[14]

For these reasons we can be confident that the debris did not behave in the manner as asserted by NIST in their report.

3. **There was no fireproofing loss in the area of collapse initiation in the first place.** As we previously discussed, NIST asserts that the inward bowing of the Towers’ perimeter columns initiated the collapse of the structures. However, we can see from NIST’s own estimates that the major inward bowing occurred in the area of the North Tower where evidently no fireproofing was dislodged. According to NIST, the maximum inward bowing occurred at floor 97 on the building’s southeast face.[15] But according to their simulated estimates for fireproofing loss, there evidently was no fireproofing loss in this part of the building.[16] Therefore, if the collapse initiation area was fireproofed, then it implies that something other than the fires caused this inward bowing to happen.[17]

Images from NCSTAR 1, p. 33, and NCSTAR 1-6, p. 139, respectively. Note that the blue areas in the NCSTAR 1-6 images represent dislodged fireproofing.
It is for these reasons that NIST's fireproofing loss scenario for the WTC buildings cannot possibly be correct. The fireproofing in the Towers could not have been widely dislodged given the lack of necessary energy, lack of a necessary mechanism, and estimates made by NIST that contradict their own conclusions. And if NIST’s report is wrong on this point, it calls into question the validity of their entire report. Thus a new investigation into the collapse of the Towers is surely needed.

References


[3] “The WTC towers likely would not have collapsed under the combined effects of aircraft impact and damage and the extensive, multi-floor fires if the thermal insulation had not been widely dislodged or had been minimally dislodged by aircraft impact.” Quoted from: NIST NCSTAR 1, pg. xxxviii


[8] Ibid., p. 268


[11] NIST NCSTAR 1-2, Figure 7-67 (p. 271) and Figure 7-79 (p. 283)


[13] “The plane impacts. I try to get up and then I realize that I’m covered up to my shoulder in debris. And when I’m digging through under all this rubble, I can see the bottom wing starting to burn, and that wing is wedged 20 feet in my office doorway.” Quoted from: “Accounts from the South Tower”, The New York Times, May 26, 2002, http://www.nytimes.com/2002/05/26/nyregion/26STOWER.html?pagewanted=all (There is also a recorded phone interview with Stanley Praimnath online in which he discusses seeing intact portions of the plane in the building: http://www.youtube.com/watch?v=GRwNJmQw1MY)

[14] “Purdue creates scientifically based animation of 9/11 attack,” June 12, 2007, https://news.uns.purdue.edu/x/2007a/070612HoffmannWTC.html Admittedly, Purdue’s animation does appear to contain one flaw in regards to the debris distribution; namely that the simulation shows debris cutting through at least 10 perimeter columns on the south face of the North Tower. (http://www.cs.purdue.edu/homes/cmh/simulation/phase4/img276-0.jpg) Photographs and videos taken from the south side of WTC1 show no columns severed, and NIST reported that the damage to WTC1’s south wall consisted of only one dislodged exterior panel between floors 94 and 96. (NIST NCSTAR 1, p. 150) However, Purdue’s simulation was meant only to create a realistic visualization of the plane’s impact into the building, not to assess structural damage. Furthermore, Purdue’s simulation shows that even if the debris were to travel all the way through the building, it would still stay in sizable portions, which is consistent with debris recovered from Ground Zero that did exit the buildings.
[15] NIST NCSTAR 1, Table 6-2 (p. 87)

[16] NIST NCSTAR 1-6, Figure 5-17, (p. 139) http://www.nist.gov/manuscript-publication-search.cfm?pub_id=101279