

October 14, 2013

**An Important note from the Principal Investigator Abolhassan ASTANEH-ASL, on the document that follows:**

This is an Abstract of my WTC Project submitted to the Structural Faults Conf. , May 27, 2002.

Respectfully,

Abolhassan ASTANEH-ASL, Ph.D., P.E.

Professor and P.I. for the NSF Funded UC Berkeley WTC Project

# "The World Trade Center, Field Investigation and Analysis of the Collapse"

by

Abolhassan Astaneh-Asl, Professor  
Department of Civil and Environmental Engineering  
University of California, Berkeley

The paper discusses the results of an investigation to the collapse of the World Trade Center led by the author since September 11, 2001. The author having spent several weeks in New York City investigating the collapse of the World Trade Center on a grant from National Science Foundation, will present information on design, construction and the latest findings on why and how the 110-story towers of the World Trade Center collapsed. Finally, lessons learned from these collapses that can be used to prevent future tragedies will be summarized. He conducted an intense 4-month field investigation of the collapse and collected data on the collapsed structure including several members (that he has saved for further studies) from the parts that were hit directly by the planes. The figure to the right above shows an internal column most likely hit by the engine of the 767 (notice the round circles on both sides of the piece). Currently, he is constructing a realistic model of the WTC towers to subject the "As was" structure to the impact of 767 as happened on September 11, 2001 to learn lessons from what might have happened. More importantly, this analytical effort will include subjecting the "enhanced" model to 767 impact to find out if any changes in the original design such as more fireproofing and more robust core walls such as R/C, steel or composite shear walls used around the core instead of gypsum walls used would have changed the tragic outcome and saved lives.

Photo by William Farrington for A. Astaneh's WTC NSF Project. Copyright © 2001 UC Board of Regents

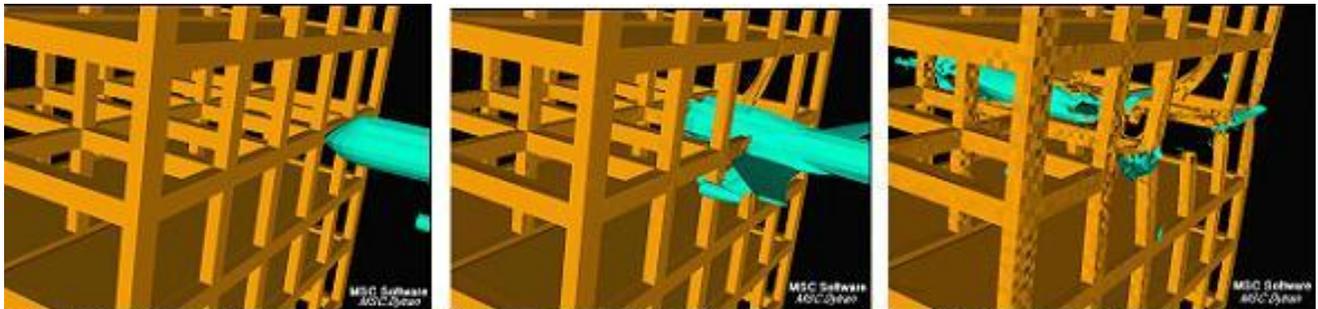


Collapsed World Trade Center Towers

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The Author Investigating Steel Structure of the World Trade Center



Analysis of Impact of Airplane on the Structure and Ensuing Fire, By Abolhassan Astaneh-Asl, Univ. of California, Berkeley with collaboration of Casey Heydari, MSC Software

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