

United States Senate

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July 11, 2014

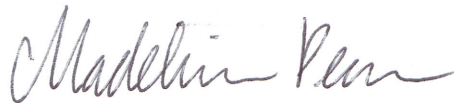
Mr. Mark Graham
PO Box 1823
Elk Grove, CA 95759-1823

Dear Mr. Graham:

Enclosed please find the correspondence Senator Boxer received from the U.S. Department of Commerce, National Institute of Standards and Technology regarding an inquiry that was made on your behalf.

I hope that this information is of assistance. Thank you for allowing the Senator's office to address your concerns.

Sincerely,



Madeline Peare
Constituent Representative

Enclosure



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-
OFFICE OF THE DIRECTOR

JUL 11 2014

Ms. Madeline Peare
Office of Senator Barbara Boxer
70 Washington Street, Suite 203
Oakland, CA 94607

Dear Ms. Peare:

I am responding to Eric Jose Vizcaino's letter of May 20, 2014, in reference to Senator Boxer's constituent Mr. Mark Graham of Elk Grove, CA.

In the letter, Mr. Graham claims that *"the NIST [National Institute of Standards and Technology] theory of the causes of the collapse of WTC [World Trade Center] 7 has now been proven false by the discovery of certain drawings of the World Trade Center through a Freedom of Information Act (FOIA) request in 2011."* He further asserts that a *"review of the released WTC drawings showed there were two serious structural feature omissions from the NIST analyses. They were: #1 Stiffeners were omitted from the column 79 end of girder A2001; and #2 Lateral support beams S3007, G3007, and K3007 from the north exterior frame to beam G3005 were omitted."*

Mr. Graham is referring to the NIST scientific and technical investigation into the collapse of WTC 7, the 47-story office building that collapsed in the afternoon of September 11, 2001, following the terrorist attacks on the WTC towers (WTC 1 and WTC 2) in New York City.

As part of its investigation, NIST reviewed the information in the drawings Mr. Graham references and determined that it was not critical to the scientifically derived most probable cause for WTC 7's collapse. First, Mr. Graham refers to "web stiffeners" located where a specific beam in WTC 7, Girder A2001, was connected to Column 79, the structural element whose failure NIST determined was the cause for the building's eventual global collapse. The "web" is the vertical portion of a steel I-shaped beam (essentially, the long part between the upper and lower flanges) and the stiffeners are employed to prevent this web from buckling under heavy loads. NIST detailed structural analysis of the girder in question indicated that web buckling did not occur under the combined effects of gravity loads and fire. Because there was no web buckling of Girder A2001, NIST did not consider the web stiffeners as a factor in the final NIST analyses.

Second, Mr. Graham refers to three beams in WTC 7 designed to provide lateral support to a 52-foot floor beam known as G3005. The NIST computer analyses of the WTC 7 collapse showed that G3005 did not fail laterally and therefore, the secondary beams S3007, G3007, and K3007—like the web stiffeners—had no bearing on the final NIST analyses nor on the conclusions drawn from them as to the most probable cause for the WTC 7 collapse.

NIST firmly stands behind the results of its technical investigation into the collapses of three buildings at the WTC complex in New York on 9/11—WTC 1, WTC 2, and WTC 7, the subject of Mr. Graham's letter.

NIST

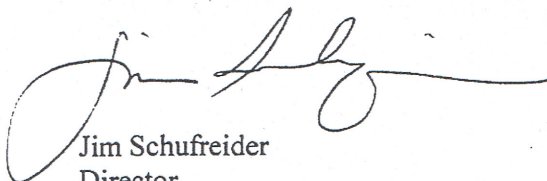
The body of evidence from the NIST investigation—the most detailed examination of structural failure ever conducted—still overwhelmingly leads to the following scenarios:

- The WTC Towers collapsed because aircraft impact damage and debris dislodged fireproofing from critical steel components, jet fuel-initiated fires burned very hot for long duration when fed by debris and office materials, and the heat eventually weakened the exposed steel until it lost integrity and led to a global failure; and
- WTC 7 collapsed because debris from the falling WTC 1 damaged the WTC 7's exterior and ignited fires on multiple floors, and the heat from these fires caused the collapse of several floors between the 5th and 14th stories, which in turn, led to the failure of a critical internal support column (Column 79). The subsequent failure of that column set off a chain reaction of failures across the building's steel infrastructure.

The NIST comprehensive website, <http://wtc.nist.gov>, covers all aspects of the WTC investigation and provides three sets of “frequently asked questions” (on the overall investigation, the WTC towers and WTC 7) that address—based solely on the NIST findings—many of the claims made by those holding alternative views as to how the three WTC buildings collapsed. Please feel free to refer Mr. Graham and others with any questions about the NIST investigation to these FAQs.

Based on the recommendations from the NIST WTC investigation, two sets of major and far-reaching building and fire code changes have been adopted by the International Code Council (ICC) into the ICC's I-Codes (specifically the International Building Code, or IBC, and the International Fire Code, or IFC). The 40 code changes were adopted less than five years from the release of the final report on WTC 1 and WTC 2, and less than two years following the release of the final report on WTC 7. This is an extraordinarily rapid pace in the code making and approval process—a solid affirmation by the ICC that the work done by the NIST WTC investigation team was of the highest quality and critical to ensuring that future buildings—especially tall structures—will be increasingly resistant to fire, more easily evacuated in emergencies, more accessible to first responders when needed, and most important, safer overall.

Sincerely,



Jim Schufreider
Director
Congressional and Legislative Affairs Office

cc: Howard Harary, NIST Engineering Laboratory
Eric José Vizcaino, Director of Constituent Services