National Construction Safety Team Advisory Committee

National Institute of Standards and Technology

December 3, 2018

The Honorable Lamar Smith, Chairman
House Committee on Science, Space & Technology
2321 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Smith:

I am pleased to submit the 2018 Annual Report of the National Construction Safety Team (NCST) Advisory Committee (Committee) of the National Institute of Standards and Technology (NIST). The Committee serves as NIST's advisor on implementation of the NCST Act (P.L. 107-231; the 'Act'), and the opinions and recommendations expressed in this letter reflect our views as an independent, private sector body. This year the committee met by teleconference on February 20, May 16, and November 27 and in person at NIST in Gaithersburg, MD, on August 30. Except for the November 27 teleconference, these meetings have been used to brief the Committee on activities performed under the Act and closely related activities performed by NIST under other authorities.

The Act directs that the Committee annually report our findings and recommendations to Congress in two areas:

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2. Assessment of the implementation of recommendations of the Team and the Committee.

In recent years NIST has developed a system to rate the need and appropriateness of performing formal studies associated with each event and has conducted preliminary reconnaissance investigations of several important events, including Hurricanes Matthew and Harvey, the wildland-urban interface fire in Gatlinburg, Tennessee, and the Fuse-47 construction fire in Silver Spring, MD. Many of these studies involved collaboration with other Federal agencies, especially FEMA and NOAA. The Committee has reviewed the scoring criteria and applauds the proactive approach to search for learning opportunities.

The Committee commends the cooperation with Natural Hazards Reconnaissance Facility (RAPID) of the Federally funded Natural Hazards Engineering Research Infrastructure (NHERI) program, and recommends looking for additional opportunities for collaboration with other aspects of NHERI, especially the recently activated SimCenter and the newly established CONVERGE Center.

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studies. The Committee believes the decision is well founded and looks forward to the findings from the studies. We anticipate there will be subsequent recommendations for ways to mitigate the impacts of future events.

The death toll from Maria has been a subject in the news. Death certificates are the primary and official source of mortality statistics, but, as NCST experts pointed out, they typically do not provide the information needed to determine if a death results from a disaster. Since the number of deaths will remain the most important measure of the severity of a disaster, more consistent methods are needed to measure deaths and injuries that are attributable to the event, and great care is needed both to communicate such information clearly to the public and for comparison with other events, past and future. The Committee highly commends NCST for initiating studies into measuring deaths and injuries from disasters. We look forward to the development of standards for measuring this mortality.

Social science research is a key part of the Maria study, and any such research conducted in the field needs to account for local social norms in order to effectively gather information. We believe collaboration with researchers who are resident in the community of interest is necessary to accomplish this, especially in Puerto Rico, and we support the efforts NIST is already making in their plans for that study.

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Disasters and building failures are inherently unpredictable. Nevertheless, in the interest of public safety, the NCST must have sufficient available staff and funding to respond. At the same time, federal agencies must work within fixed annual budgets. As noted in last year's letter, one possible consideration is to include specific allocation for investigations in the funding mechanisms that are created when a Federal disaster is declared. Additionally, consistent with past practices, annual budgets should include a base-line allowance for responding to new

events, as well as budgeted amounts for long-term studies that can be deferred so resources can be shifted to new unbudgeted events. The Committee urges Congress to support needed flexibility in funding and resource allocation.

In summary, the Committee finds the NCST program to be highly valuable and relevant to the safety of our population. We commend the current administration at NIST for their diligence in evaluating events for worthwhile study and the commitment to finding the funding to carry out the studies when justified. Related to that, we also want to restate our recommendation to Congress that the Act be revised, for the reasons given in our report one year ago. The effects of the failure of the power grid in Puerto Rico on the functionality of essential buildings is just one example that supports our recommendations on this subject. The specific changes that we recommend are appended to this letter.

Sincerely yours,

James Robert Harris, P.E., Ph.D., NAE, Hon. Memb. ACI
Chair, National Construction Safety Advisory Committee

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Sec. 2, paragraph (a):
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And replace the term "building standards, codes, and practices" with "engineering standards, practices, and building codes" at the following locations:
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National Construction Safety Team Advisory Committee

National Institute of Standards and Technology

December 3, 2018

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James Robert Harris, P.E., Ph.D., NAE, Hon. Memb. ACI
Chair, National Construction Safety Advisory Committee

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National Construction Safety Team Advisory Committee

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Subcommittee on Research and Technology
House Committee on Science, Space & Technology
2321 Rayburn House Office Building
Washington, DC 20515

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512 Dirksen Office Building
Washington, DC 20510

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The Committee commends the cooperation with Natural Hazards Reconnaissance Facility (RAPID) of the Federally funded Natural Hazards Engineering Research Infrastructure (NHERI) program, and recommends looking for additional opportunities for collaboration with other aspects of NHERI, especially the recently activated SimCenter and the newly established CONVERGE Center.

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Disasters and building failures are inherently unpredictable. Nevertheless, in the interest of public safety, the NCST must have sufficient available staff and funding to respond. At the same time, federal agencies must work within fixed annual budgets. As noted in last year's letter, one possible consideration is to include specific allocation for investigations in the funding mechanisms that are created when a Federal disaster is declared. Additionally, consistent with past practices, annual budgets should include a base-line allowance for responding to new

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Sincerely yours,

James Robert Harris, P.E., Ph.D., NAE, Hon. Memb. ACI
Chair, National Construction Safety Advisory Committee

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National Construction Safety Team Advisory Committee

National Institute of Standards and Technology

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Sec. 2, paragraph (a):
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Lastly, unrelated to the preceding, consider updating Sec. 2 paragraph (c)(1)(J) by adding a reference to the National Windstorm Impact Reduction Program.

National Construction Safety Team Advisory Committee

National Institute of Standards and Technology

December 3, 2018

The Honorable Bill Nelson, Ranking Member
Senate Committee on Commerce, Science, & Transportation
512 Dirksen Office Building
Washington, DC 20510

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National Construction Safety Team Advisory Committee

National Institute of Standards and Technology

December 3, 2018

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Subcommittee on Space, Science, and Competitiveness
Senate Committee on Commerce, Science, & Transportation
512 Dirksen Office Building
Washington, DC 20510

Dear Chairman Cruz:

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National Construction Safety Team Advisory Committee

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December 3, 2018

The Honorable Edward J Markey, Ranking Member
Subcommittee on Space, Science, and Competitiveness
Senate Committee on Commerce, Science, & Transportation
512 Dirksen Office Building
Washington, DC 20510

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