

MODEL CODES

Terrorism-Provoked Changes Proposed

Controversy continues over federal recommendations produced by WTC investigation

Conspicuously absent from the many proposed model code changes stemming from the World Trade Center attacks are any from the National Institute of Building Sciences. NIBS was charged with translating federal recommendations for change into code language, but controversy over whether any change

is needed has paralyzed the process, say sources.

Under a \$259,921 contract, NIBS was charged to meet the International Code Council's March 24 deadline to submit code change proposals for the 2007 supplement to ICC's International Building Code. Changes were to be based on 30 recommendations for building codes and standards, coming out of the National Institute of Standards and Technology's \$16-million WTC investigation. Instead of writing model code proposals, the NIBS committee, under its Multihazard Mitigation Council (MMC), primarily reviewed the NIST recommendations and provided support for code proposals under development by two ICC committees.

Critics claim the committee hasn't submitted NIST recommended proposals because there is no consensus on the need for change. "They are being advanced by proponents as an unchallengeable imperative, as if society is demanding change at any cost," says Charles

Carter, chief structural engineer for the American Institute of Steel Construction Inc., Chicago. "Yet there is no evidence that the proposals will actually make the public more safe."

By the March 24 deadline, ICC had received 700 e-mails containing more than 2,000 code change proposals. They are posted on ICC's Website, www.icc-safe.org.

The National Institute of Standards and Technology defends its contract with the National Institute of Building Sciences, though NIBS did not write code proposals, as it was charged to do.

As of Jan. 31, Washington, D.C.-based NIBS had spent \$57,089 of its NIST contract value. "I don't think the NIBS contract is a waste of money" even though the original charge has changed from writing code proposals to providing feedback and aid, says Shyam Sunder, NIST's lead WTC investigator.

To date, NIBS has held three meetings. The first was primarily to get orga-

nized. Another was to evaluate "strawman" code proposals, based on the WTC recommendations, written by NIST at the request of NIBS. Another meeting focused on aiding ICC committees in developing their code proposals.

Many building professionals find it odd that NIBS needed draft code language from NIST when NIBS was hired to write code language for NIST. "We had promised to provide them with technical assistance," Sunder says. "When the NIBS group looked at the time available and plans already under way by [ICC committees], and that [their chairs] were members of the NIBS group, rather than duplicate efforts, they decided they would build on the effort by providing technical insight and pros and cons."

Claret M. Heider, NIBS' MMC vice president, calls the NIBS work "a valuable collaboration." It provides an open "forum environment" for discussion of the issues at hand, she says.

After reviewing the NIST trade center recommendations "in depth," NIBS identified those that require updating or development of a standard or standards before they can be reflected in the model codes, says Heider. The committee also identified recommendations that do not require standards development.

The NIBS committee plans to meet this summer to review and possibly modify proposals from ICC's Code Technology Committee and Ad Hoc Committee



PUBLIC CODE CHANGE PROPOSAL FORM FOR PUBLIC PROPOSALS IN THE INTERNATIONAL CODES

2006/2007 CODE DEVELOPMENT CYCLE
CLOSING DATE: All Proposals Must Be Received by March 24, 2006
 The 2006/2007 Code Development Hearings are scheduled for September 20 to 30, 2006 in Orlando, FL

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Inspired by 9/11. Many of the code change proposals are in direct response to the federal WTC investigation.

on Terrorism Resistant Buildings (AHC-TRB) it helped craft. NIBS expects to determine whether to officially support the proposals at ICC code hearings, Sept. 20-30 in Orlando. It plans to review other proposals submitted in response to the WTC recommendations, says Heider.

That includes a proposal, developed by a NIBS task group, for a skyscraper firefighting shaft. Four NIBS committee members submitted the proposal independently because the full committee did not have a chance to debate the proposal, says Heider.

Disproportionate

A fourth NIBS meeting is scheduled for May 1-2 in Washington, D.C. The contentious issue of progressive collapse, becoming known as disproportionate collapse, is on the May 1 agenda. This will be the second NIBS-organized, NIST-sponsored meeting on disproportionate collapse since terrorists destroyed the World Trade Center. At the first, attendees could only agree that the collapse of the WTC's twin towers did not meet

the generally accepted definition of disproportionate collapse.

The May 1 session, which will have representatives of standards-writing groups including the American Society of Civil Engineers, will likely debate the merits of the terrorism committee's disproportionate collapse code requirement. The provision was among many code proposals not endorsed by CTC at a March 9-10 meeting (ENR 3/20 p. 12).



▲ **Firefighting Shaft.** Requirement would increase the cost of construction.

"Progressive collapse is a concept that defies practical building code requirements," says James B. DeStefano, a structural engineer based in Fairfield, Conn. "There is not general agreement among engineers on what progressive collapse is or how it can be designed for."

AHC-TRB has submitted a total of 14 code change proposals. Several suggest requirements for buildings taller than 420 ft. One proposal is for buildings to be able to survive "a contents fire to burnout without local failure of the structure." Another would require an additional exit stairway for the highrises. A third is a requirement for redundant sprinkler system risers. Other proposals address fuel oil storage, stairway communication systems, exit path markings and interior stairway fire-rated enclosures.

CTC proposals address wind load determination; sprayed-on fireproofing cohesion, bond strength and inspection; and the "structural frame" approach to fire-resistance ratings.

The I-Code development process takes 18 months. New codes are issued every three years, with a supplement published for the alternating 18-month cycle. Approved code changes for the 2007 I-Code Supplement automatically become part of the 2009 I-Code if, during the next cycle, there are no approved proposals to modify an I-Code Supplement provision.

Though the 2006 I-Code has been adopted by major jurisdictions, only five have notified ICC that they adopted the 2004 I-Code Supplement that preceded it. It is therefore possible that model code changes for this supplement will not be considered by many jurisdictions until they are in the 2009 code. ■

By Nadine M. Post