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AEI's Symposium Explores Dimensions of Sheltering in Place

By Mark Fitzgerald

ASCE's Architectural Engineering Institute recently hosted a symposium that examined the strategy of moving people to specially hardened areas within buildings rather than evacuating them in the face of unforeseen events. Held in Baltimore March 15-16 at the Engineers Club, the Symposium on Sheltering in Place brought together engineers, architects, risk managers, and many other professionals to discuss such issues as utilities, lifelines, fire protection, threat assessments, and emergency responses. Attention was also given to architectural configuration, blast protection, and structural resistance.

"Sheltering in place is about protecting people and being able to operate a building as a shelter," Earle Kennett, an architect and the vice president of the National Institute of Building Sciences, of Washington, D.C., remarked during the symposium. "You start with identifying what the threats are—whether they are floods or fires or hurricanes or, possibly, a terrorist activity. But you also have to have an effective notification procedure and response plan in place that is able to successfully get individuals to move to a shelter for protection."

According to John H. Sorensen, Ph.D., a researcher at the Oak Ridge National Laboratory, in Oak Ridge, Tennessee, and one of the keynote speakers, the decision to forgo evacuation depends on a variety of factors. As he put it, "There should be a reasonable assurance that the movement of people beyond their residence, workplace, or

school will endanger the health and safety of the public more so than allowing them to remain in place.” The decision to evacuate, he said, “should be based on the reasonable assurance that the movement of people is in the best interests of their health and safety and is of minimal risk to them. In reality, an evacuation decision is also a resource-dependent decision. The availability of transportation and other resources, including shelters, may factor heavily in the protective action decision-making process.” Sorensen went on to outline scenarios favoring evacuation and those favoring sheltering in place.

In his keynote address, Dennis Schrader, a former director of the Governor’s Office of Homeland Security in Maryland, discussed some of the challenges related to emergency management as well as the complexities involved in assessing various threats, vulnerabilities, and interdependencies. “Sheltering in place is a terrific issue to be dealing with,” he said. “We’ve been wrestling with the issue at the policy-making level, the executive decision-making level, and the state and local level. But we cannot agree whether or not sheltering in place is a good idea as a sole policy for the capital region. You can’t just assume that everybody’s going to sit in Washington during a major emergency and then all of a sudden leave and land in West Virginia.”

Schrader went on to emphasize the need to integrate a sheltering plan in such a way as to encompass both the private and the public sector. “People are very concerned about this issue, but they don’t know enough about it,” he said. “Yet there has been a lot of good technical research and quality work done in this field. The work is already there; it just hasn’t been integrated. What’s really needed is a concept of operations plan. This involves sitting down and actually mapping out how things are going to be done. The question is, who is going to integrate this and get something into the hands of the right people at the decision-making level?” Involving stakeholders in the development of such a plan will be an important factor in implementing regional procedures, Schrader added. “This work is fundamental to what is relevant to emergency management and building planning,” he said. “But we’ve got to incorporate this into the law enforcement side, and I think that kind of work really needs to happen at the state level.”