ABSTRACT

In the wake of the tragedy of 9-11, the issues regarding engineering design for disasters, whether natural or man-made, has come more to the forefront of society. The average citizen generally has little knowledge regarding the anticipated performance of building structures in the event of high winds, tornadoes, earthquakes, or bomb blasts. In reality, not every building design professional, including engineers, architects and contractors, are aware of the performance targets that are assumed in the requisite codes and standards.

This presentation will highlight the performance objectives for the natural and man-made disasters that can affect a building structure, including the following:

- High winds, hurricanes and tornadoes
- Floods and tsunamis
- Earthquakes
- Terrorist acts

Specific methods of designing for earthquake demands will be presented and will include a detailed description of anticipated building performance. A brief design example will also be presented. A discussion regarding man-made disasters and the associated anticipated performance will be presented along with new methods for safe-guarding the public in the event of a bomb blast.