

## Outline for Oral Presentation—Herbert Yudenfriend

The purpose of my presentation is to ensure that security is a major building attribute requirement, especially as it impacts fenestration. This includes the need to protect against natural and man-made disasters.

1. Earthquake and tsunami disaster in Japan
2. Tornadoes such as what occurred in Joplin, Missouri
3. Hurricanes such as Hurricane Andrew
4. Oklahoma City bombing

In new building design, it is possible to incorporate fenestration security without in any way reducing high energy performance.

Fenestration retrofits are available to offer significant protection in existing buildings against the listed disasters. New retrofit technologies can upgrade security and energy efficiency in single glazed buildings. In addition, existing fenestration can become disaster resistant through the use of retrofit window film designed for security. In commercial buildings which house offices of federal agencies the following is required:

Shatter Resistant Window Protection. In Government occupied space applications of shatter resistant material (polymer film), acceptable to the Government, shall be applied to exterior windows based on a Building Security Assessment. Application shall be to the interior surface using a “wet glazed” method which requires a silicone bead into the “bite” of the frame and along the edge of the film and frame (or performance equivalent). Testing has shown that a minimum of a 7 mil thick film, or specially manufacturer 4 mil thick film (tested to meet performance equivalent of 7 mil) is the minimum to provide hazard mitigation. The material may require placement at the end of the warranty period based on a government assessment.

BETEC is partnering with AAMA (American Architectural Manufacturers Association) to develop a fenestration security rating system designed to provide building owners and the design community with the ability to select a security level of fenestration products that is certified to provide protection against the list of disasters.