

*The National Glass Association held a conference in Tacoma, Washington on a variety of glass-related topics, including school security applications and compliance with new State legislation. A number of questions during the panel discussion on school security and window film were addressed by Darrell Smith, executive director of the International Window Film Association (IWFA).*

Here is a summary of Smith's remarks to specific questions.

**Can surface-applied films qualify as bullet-resistant or forced-entry-resistant? If so, is a secondary attachment system required?**

- To the knowledge of the IWFA, no window film installed on glass, which does not already have some level of ballistic protection can add ballistic protection
- Acting as a spall-shield is the most ballistic protection window films alone can actually offer
- Thicker multi-layered window films (called Security Films) can help to increase the amount of time for an intruder to enter a building after breaking the glass
- If the glass is broken by an extensive ballistic attack, then on tempered glass an attachment system would be needed to have any delay effect, while on annealed glass the film could still hold the glass in place for a short time but additional impacts on the broken film/glass sheet would cause the glass fragments to cut the film and thus start to collapse. Therefore, an attached security film system would work better.

**If schools apply film to existing exterior windows, does that void the IGU warranty?**

- Voiding a warranty for any reason is up to the manufacturer/supplier of any window
- However, since standard security film is clear and has little absorption and no added reflectance, there is no reason to believe it might cause seal failure or glass breakage on its own

**What about laminates; does the interlayer qualify as a type of "film" for this purpose?**

- I cannot answer that question. I suppose it might, unless some law or code required the "film" to be applied externally.

**How can we relate this to testing according to the new ASTM F3561 Standard *Test Method for Forced-Entry-Resistance of Fenestration Systems After Simulated Active Shooter Attack*? Can window films meet this test standard?**

- The answer to this can be found in the following sections of the "*Test Method*" itself:
  - 1.4 This is a laboratory test to be performed on full systems and therefore not applicable for field testing
  - 1.6 Systems are required to be tested as complete units in a test frame or fielded conditions.
  - Test results only apply to the component or system as tested.

## ADDITIONAL RECENT DEVELOPMENTS DISCUSSED (2023):

### Topics Related to Tennessee Legislative Matters Senate Bill 0274/ House Bill 0322

#### Section 49-6-818. School buildings constructed or remodeled after July 1, 2023.

(a) A public school building, including a public charter school building, constructed or remodeled after July 1, 2023, must, at a minimum:

- (2) Have installed a clear, bullet-resistant or entry-resistant film on the glass panel of each exterior entry or basement level window and door to prevent individuals from entering the school building without authorization by breaking the glass in an exterior entry or basement level window or door;

#### Smith Comments:

- To the knowledge of the IWFA, no window film installed on glass which does not already have some level of ballistic protection can add ballistic protection
- Acting as a spall-shield is the most ballistic protection window films alone can actually offer

#### • Quotes from Texas Administrative Code: Rule 61.1031

- (B) be constructed, both for the door and door frame and their components, of materials and in a manner that make them resistant to entry by intruders. Unless inside an exterior secured area, doors constructed of glass or containing glass shall be constructed or modified such that the glass cannot be easily broken and allow an intruder to open or otherwise enter through the door (for example, using forced entry-resistant film);
- (5) Except when inside an exterior secured area, all windows that are adjacent to an exterior door and that are of a size and position that, if broken, would easily permit an individual to reach in and open the door from the inside shall be constructed or modified such that the glass cannot be easily broken.
- (6) Except when inside an exterior secured area, all ground-level windows near exterior doors that are of a size and position that permits entry from the exterior if broken shall be constructed or modified such that the glass cannot be easily broken and allow an intruder to enter through the window frame (for example, using forced entry-resistant film).

#### Smith Comments:

- What type of film and / or film attachment system might work here could be determined only after the glass and the window system or door system in full (glass, frame, frame attachment to the surrounding wall, etc.) has been specified. To state whether any film, attached or unattached, could comply with this rule would be dependent on the "system" variables as well as the type of glass in a specific window or door.