

School Security: Windows and Doors Respond First

The request:

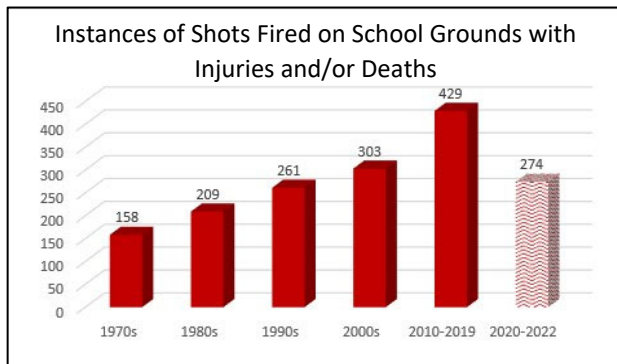
- Support **H.R. 887: Securing Our Students Act**, allocating additional funds to schools for bullet-resistant doors and windows.
- Endorse the use of H.R. 887 funds for security windows and doors for high-risk areas in schools that meet, at a minimum, the **new ASTM standard on active shooter attack**.

The issue:

From 1970 to 2022, there were:

- 1634 incidents of school shooting, defined as shots fired on school property.
- 194 active shooter incidents, defined as the shooter killing and/or wounding victims, either targeted or random, during a continuous episode of violence on K-12 school property.
- 786 deaths and 2224 injuries from these incidents.

Active Shooter Events in schools are becoming more frequent. In 2020 and 2021, there were 190 active shooter events in schools despite many schools holding fewer in-person school days during the pandemic.



The average length of active shooter events is 8 minutes; the shortest time is 90 seconds. Response times for first responders average 3 minutes, so some active shooter events are over even before first responders arrive.

Common locations for active shooters to begin the attack are entrance/exit areas and cafeterias.

There are no building codes or mandates for school security. In comparison, every building is subject to fire codes because of (relatively smaller numbers of) historic deaths in building fires. Since the adoption and enforcement of the fire codes, the number of deaths from fires has dramatically decreased.



The strategy:

In active shooter events, windows and doors can be the first line of defense, slowing down an attacker when installed as security glazing resistant to forced entry, allowing more time for schools to enact emergency plans and for first responders to arrive.

ASTM F3561 Standard Test Method for Forced-Entry-Resistance of Systems after Simulated Active Shooter Attack serves as the minimum industry-accepted standard for security windows and doors for schools.

High risk areas of school buildings include entrance lobbies, corridor classroom windows and cafeterias.

Window and door solutions - Glass can be part of the school's security plan as the "first element of surprise."

- Glass in a security window or door looks like a typical window but can slow down or deter an active shooter's entry into the building.
- Windows and doors can be a first line of defense and allow for line of sight, allowing school personnel and first responders to see impending danger.
- Security windows and doors can assist in creating secure spaces in classrooms and throughout the building.
- Translucent glass can provide privacy and allow light to enter while selectively blocking line of sight of attackers.
- Windows and doors can be designed for forced entry resistance, bullet-resistance, or both.
- Retrofit options are readily available to replace existing windows and doors.
- Security windows and doors can create a secure environment for teachers and students without imposing visible barriers.
- Security windows and doors provide passive protection, even during power outages.

Students in classrooms with natural daylight score 7-30% higher in math and reading and have lower rates of absenteeism.

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References

- H. R. Bill 887 *Securing Our Students Act*: <https://www.govtrack.us/congress/bills/118/hr887/text>
- ASTM Standard: ASTM F3561 *Standard Test Method for Forced-Entry-Resistance of Systems after Simulated Active Shooter Attack*. astm.org
- <https://everytownresearch.org/maps/gunfire-on-school-grounds/>
- *School Shootings & Active Shooters 1970-2021*- National Safety Security Protection Association published January 2022
- <https://k12ssdb.org/active-shooter>
- First responders' average response time: <https://leb.fbi.gov/image-repository/police-response-time-to-active-shooter-attacks.jpg/view>
- K-12 Facility Active Shooter/School Shooting Risk Assessment- National Safety Security Protection Association created August 2021, updated December 2021
- FEMA Primer to Design Safe School Projects in Case of Terrorist Attacks and School Shootings (December 2012): https://www.dhs.gov/xlibrary/assets/st/bips07_428_schools.pdf
- United States Secret Service and United States Department of Education publication *Threat Assessment in Schools*: <https://www2.ed.gov/admins/lead/safety/threatassessmentguide.pdf>
- <https://www.schoolsafety.gov>
- Benefits of views to the outside:
 - Daylighting Impacts on Human Performance in School. [Journal of the Illuminating Engineering Society, Summer 2002](http://www.illuminating.org). Lisa Heschong, Roger L. Wright, Ph D. and Stacia Okura.
 - <https://www.glass.org/resources/market-intelligence/daylighting>



Additional Resources at glass.org

- NGA Glass Technical Paper FB71-21 School Security Glazing
- NGA Glass Technical Paper FB16-07 Bullet Resistant Glazing
- NGA Glass Technical Paper FB43-14 (2020) Security Glazing
- NGA/PGCI Protective Glazing Manual
- NGA Laminated Glazing Reference Manual
- Glass Magazine Glass & Metals 401: Guide to Protective Glazing #

School Security Windows and Doors Specifications

When deciding what level of protection to specify, consider these factors:

- Direct line of sight to students and faculty
- Location and movement of occupants during an active shooter event
- Distance and time for first responders

FEMA publication *Primer to Design Safe School Projects in Case of Terrorist Attacks and School Shootings* includes the following considerations in Appendix F:

- Use extensive glazing at main entrance to enhance visual surveillance to parking lots and pedestrian routes.
- Install openings or windows in solid walls to make areas adjacent to the school without line of sight visible from the interior.
- Consider using burglary- and ballistic-resistant glazing in high-risk school areas.
- Consider using steel window frames securely fastened or cement grouted to the surrounding structure.