Partner Alliance for Safer Schools

WHITE PAPER: Doors as Life-Safety Systems: Locks, Glazing, Fire Protection & Performance in K–12 Schools

The volunteers who make up the Partnership Alliance for Safer Schools (PASS) bring together their research and expertise from the education, public safety, and industry communities to develop and support a coordinated approach to make effective use of proven security practices for schools. The PASS team is also dedicated to developing white papers on specific, school-safety topics.

The content in these white papers may point to specific products, brands, or organizations as illustrations of how certain safety and security measures are implemented. PASS does not endorse specific products or brands. Together, the volunteers and partners of the PASS share a single vision: making all schools safer is both achievable and urgently needed.

AUTHORS

Main authors: PASS Technical Committee

KEY TOPIC

Understanding classroom and school doors as integrated life-safety systems that must simultaneously support security, fire protection, accessibility, egress, and emergency response.

PROBLEM SOLVED

This white paper addresses a growing disconnect in K–12 safety planning: doors are often modified, blocked, or altered in pursuit of increased security without leadership fully understanding how those changes affect life safety, fire protection, accessibility, and emergency response.

This Doors and Door Hardware webinar provides clear, PASS-aligned guidance on:

- Locking without blocking
- Glazing as a vulnerability and delay component
- Maintaining fire door integrity and compartmentation
- Preserving first responder access
- Meeting inspection and maintenance requirements

- Aligning phased, layered improvements with PASS Guidelines

RELEVANT PASS GUIDELINE SECTIONS (7th Edition)

- Exterior layer
- Entry layer
- Classroom/interior perimeter layer
- Architectural component
- Access control component
- Policies & procedures component
- People (roles & training)
- Inspection & maintenance expectations

MOST RELEVANT FOR

- School administrators
- Facility managers & maintenance personnel
- Architects & engineers
- Security consultants
- Hardware & door suppliers
- Authorities having jurisdiction (AHJ)
- Fire marshals & first responders

TIME TO READ

Approximately 12–15 minutes

PASS POSITION STATEMENT

PASS affirms that doors in K–12 schools must function as complete life-safety systems. Security measures must not compromise fire protection, emergency egress, accessibility, or first responder access.

PASS does not support modifications, aftermarket devices, or improvised solutions that block door operation, override listed hardware, or interfere with fire-rated assemblies.

PASS supports code-compliant locking solutions that:

- *Secure doors without restricting egress*
- *Maintain predictable operation*
- *Preserve fire door integrity*
- *Support layered, delay-based protection strategies*
- *Sustain performance through inspection and maintenance*

I. Executive Summary

Doors are one of the most heavily used and critically important safety components in any school building.

Every school door may be expected to:

- Secure against unauthorized entry
- Allow one-motion free egress
- Support accessibility requirements
- Limit fire and smoke spread (where rated)
- Permit authorized corridor-side access
- Function reliably under stress

When doors are modified without understanding their full safety function, unintended risks emerge.

This white paper outlines how locking, glazing, fire protection, and maintenance intersect — and provides schools with a practical roadmap for aligning door systems with PASS Guidelines.

II. Introduction: Why Doors Matter More Than We Think

School safety discussions often focus on cameras, access control systems, and emergency communications. However, the door remains the final physical barrier between safety and harm.

Unlike standalone security equipment, doors must perform across **multiple emergency types**:

- Active assailant
- Fire
- Medical emergency
- Behavioral crisis
- Severe weather
- Accidental lockdown

Doors must function consistently in all scenarios — not just one.

III. Doors as Complete Systems

A door is not just a slab of wood or metal.

A complete opening includes:

- Door leaf
- Frame
- Lockset
- Latching mechanism
- Closer
- Hinges

- Glazing
- Fire-rating components (if applicable)
- Access control integration

Changing one component affects the entire system.

Unapproved modifications can:

- Void fire ratings
- Interfere with latching
- Block responder entry
- Compromise ADA compliance
- Reduce durability and reliability

PASS emphasizes evaluating doors holistically — not piece by piece.

IV. Locking vs. Blocking

The distinction between locking and blocking is critical.

Locking

- Uses intended hardware
- Maintains one-motion egress
- Preserves responder access
- Keeps door operation predictable

Blocking

- Restricts door movement
- Often uses unlisted or improvised devices
- Interferes with fire door function
- Delays or prevents entry

Security achieved by blocking often creates new hazards.

PASS guidance is clear: secure doors without obstructing their intended operation.

V. Classroom Locking: Leading Practice

Effective classroom locking hardware must:

- Be lockable from the inside without a key
- Maintain single-motion free egress
- Permit authorized corridor access

- Provide visual lock status where feasible
- Be listed for use on fire door assemblies (where applicable)
- Meet ADA operability requirements

Legacy classroom locksets requiring corridor-side key locking should be phased out.

Predictability under stress is a safety feature.

VI. Locking Beyond the Classroom

Classroom doors are not the first line of defense.

PASS recommends:

- Exterior doors secured during instructional hours
- Designated, controlled entry points
- Visitor management protocols
- Consistent locking strategies across similar spaces

When exterior layers fail, interior layers become overburdened.

Layered protection reduces reliance on any single door.

VII. Glazing as a Vulnerability and Delay Component

In many openings, glazing is the most vulnerable element.

Large or unprotected vision panels can:

- Allow reach-through unlocking
- Reduce delay time
- Undermine perceived security

PASS recommends:

- Using glazing intentionally
- Protecting glazing where required
- Considering location and configuration
- Focusing on delay, not impenetrability

Security is measured in time gained — not absolute resistance.

VIII. Fire Doors & Compartmentation

Fire doors are life-safety devices.

They are designed to:

- Limit spread of fire and smoke
- Support safe evacuation
- Protect egress paths
- Maintain compartmentation

Unlisted modifications can void fire ratings and create liability.

Fire-rated doors must:

- Self-close and latch
- Maintain listed glazing and hardware
- Avoid unapproved field alterations

Compartmentation supports both fire events and all-hazards emergency planning.

IX. First Responder Access Requirements

Emergency responders must be able to:

- Enter classrooms quickly
- Unlock from the corridor
- Avoid special tools or training
- Rely on predictable hardware behavior

Doors must not:

- Require special instructions
- Add separate devices
- Obstruct or trap occupants
- Override listed hardware

Delays in access can directly increase harm.

X. Inspection, Testing & Maintenance

Safety depends on performance — not just installation.

Model codes require annual inspection of fire door assemblies and continuous maintenance of all means of egress doors to ensure they remain readily operable, unobstructed, and compliant.

Emerging state-level requirements (e.g., annual inspection mandates in some jurisdictions) reinforce accountability.

Inspection programs should:

- Verify latching and closing
- Confirm lock operation
- Assess glazing condition
- Ensure no unapproved modifications
- Document deficiencies
- Establish corrective action timelines

Maintenance sustains safety over time.

XI. Case Studies: When Door Performance Fails

Door-related failures in school environments are rarely caused by a single decision. They often result from incremental modifications, legacy hardware, or unintended interference with the door's designed operation.

The following real-world examples illustrate how door performance directly affects life safety, emergency response, and overall school resilience.

A. Oxford High School (2021) — Delayed Entry Due to Aftermarket Devices

The independent after-action review of the Oxford High School shooting documented significant delays caused by aftermarket barricade-style devices installed throughout the building.

When law enforcement attempted to enter secured rooms, officers encountered unexpected door conditions. They were required to obtain a specialized tool and learn how to disengage devices in real time. Entry was delayed by several minutes in multiple locations, including rooms where victims required immediate medical attention.

This case reinforces a critical life-safety principle:

Doors must operate predictably and must not require special tools or knowledge for emergency access.

Even well-intended security enhancements can increase harm when they interfere with responder access.

B. Virginia Tech (2007) — Secured Entrances Slowing Response

The Virginia Tech Review Panel Addendum (2009) documented that the attacker chained exterior entrances to Norris Hall, preventing immediate law enforcement entry.

Officers attempted forced entry but were unable to breach chained doors quickly. They were forced to locate an alternate access point, delaying intervention.

The documented finding emphasized:

Secured or obstructed entrances delayed police entry and prolonged the attacker's ability to inflict harm.

Although this event did not involve school-installed hardware, it demonstrates the universal danger of barriers that prevent predictable entry and override normal door function.

Door systems must balance security with responder override capability.

C. Fire Events in Educational Occupancies — The More Frequent Emergency

According to NFPA research, U.S. fire departments respond to thousands of structure fires in educational properties annually. Most occur during school hours.

In fire events, doors that:

Do not latch
Are blocked open
Have inoperable closers
Have compromised fire-rated glazing
Require multiple motions to exit

… can significantly increase risk.

Unlike targeted violence incidents, fire events occur far more frequently. Fire door performance is not theoretical — it is routinely relied upon.

Fire-rated doors that fail to close and latch defeat compartmentation and allow smoke spread, which is the leading cause of fire-related fatalities.

D. Everyday Misuse & Behavioral Incidents

Schools routinely document incidents in which:

- Students barricade doors using furniture
- Supplemental devices are misused during fights
- Staff are locked out of classrooms
- Bathrooms or small rooms are intentionally secured to isolate individuals

When any occupant can unilaterally override normal door operation without corridor-side control, the potential for misuse increases.

Modern, code-compliant locksets preserve:

- Single-motion egress
- Authorized corridor access
- Predictable behavior

Aftermarket or improvised devices remove these safeguards.

Key Takeaway

Across active assailant events, fire emergencies, and everyday behavioral incidents, a consistent pattern emerges:

When doors do not operate as designed — or are modified in ways that restrict egress or responder access — risk increases.

Life safety systems must function consistently across all hazard types, not just one.

XII. Codes & Standards

Applicable codes include:

- International Building Code (IBC)
- International Fire Code (IFC)
- NFPA 101 Life Safety Code
- NFPA 80 (Fire Doors)
- 2010 ADA Standards for Accessible Design

Key requirements include:

- Single-motion egress
- No key, tool, or special knowledge required for exit
- Accessible operable parts
- No unlisted modifications on fire doors
- Corridor-side authorized access

Security cannot override these requirements.

XIII. Industry & National Alignment

PASS aligns with national safety organizations that emphasize:

- Single-motion egress
- Code-compliant locking
- Corridor-side access
- Avoidance of unlisted devices
- Layered security strategy

Balanced, code-aligned approaches are widely supported across fire, law enforcement, facilities, and design communities.

XIV. Action Items for Schools

A. Conduct a Door & Hardware Audit
   ✔ Identify lock function
   ✔ Confirm fire ratings
   ✔ Verify ADA compliance
   ✔ Assess glazing exposure
   ✔ Check for unapproved modifications
B. Remove Non-Compliant Modifications
   ✔ Remove unlisted barricade devices
   ✔ Eliminate improvised blocking methods
C. Standardize Locking Strategies
   ✔ Install interior-lockable, code-compliant hardware
   ✔ Include visual indicators where feasible
D. Address Glazing Vulnerabilities
   ✔ Evaluate protection options
   ✔ Prioritize high-risk areas
E. Implement Inspection Program
   ✔ Establish annual inspection
   ✔ Document findings
   ✔ Coordinate with AHJ
F. Train Staff
   ✔ Proper locking procedures
   ✔ Recognizing malfunctioning doors
   ✔ Avoiding improvised blocking

XV. Interim Measures

Where full hardware replacement is not immediately feasible:

- Configure classroom locks to “always locked” where possible.
- Ensure corridor-side authorized access remains.
- Remove blocking devices.
- Prioritize high-risk areas for early upgrade.

Interim solutions must not introduce new code violations.

XVI. Conclusion

Doors are foundational to school safety.

They must:

- Secure without trapping

- Delay without obstructing
- Contain without compromising egress
- Perform predictably under stress

Security measures that interfere with life safety create new risk.

PASS reaffirms that schools should adopt layered, code-compliant, inspection-supported door strategies that preserve both security and life safety.

XVII. Alignment Matrix

PASS Guidelines v7
NASFM Guidance
ASIS School Security Standard
SIA School Security Positions
ZeroNow School Safety Recommendations

(All align on single-motion egress, responder access, and avoidance of unlisted door modifications.)