Specifying safer schools

Recent events in the United States have reignited the conversation around protecting K-12 schools. As students and adults demand change, school officials continue looking for ways to enhance security and protect the safety of their children and faculty. They’re not alone; architects can help design safe and secure educational facilities by understanding the threats and potential vulnerabilities these buildings face.

In 1999, just 19 percent of public schools reported using security cameras. By 2013, that number had increased to 75 percent. It is estimated that by 2018, schools will spend more than $1.1 billion annually on security infrastructure, with a majority of these funds being invested in video surveillance systems. These systems are helpful when analyzing events after they have occurred and can play a part in a comprehensive security plan. But while they can potentially deter a crime from occurring, they aren’t able to prevent it from happening in the first place.

The balance of available security funds will be focused on the most visible points of entry such as the front entrance, while secondary access points often remain vulnerable to unauthorized access. Because the traffic through these openings is much lower, it is estimated that only half are equipped with an electronic access control system. Not surprisingly, more than 55 percent of schools surveyed reported that their secondary doors were frequently left unlocked or propped open, with 22 percent stating that this occurs on a weekly or even daily basis.

As a matter of convenience, latches are taped, pebbles are placed in strikes and door stops are used to prop open these doors. The most common culprits are the students and teachers who occupy the building, but neither the students nor their teachers are likely to have received any training on the inherent security risks of such behavior. The resulting unsecured access point creates vulnerabilities that not only compromise the building’s everyday security, but could also limit the ability of administrators to effectively lockdown the facility in response to an emergency event.

Securing the perimeter

One of the most important steps in securing the perimeter of a facility is to control the flow of people entering and leaving. Many schools rely on security checkpoints to prevent weapons and other contraband from entering the school, but these are easily bypassed if students or unauthorized guests can gain access through unsecured secondary entrances. After years of steep budget cuts, most schools lack the necessary funds to purchase and install traditional access control systems on their secondary openings. As a result, a recent survey indicated that over half of schools are still manually locking and unlocking doors and using janitorial touring as their primary means of ensuring secondary openings are secure.

“Doors that are unlocked or dogged and unmonitored provide means for intruders to enter the building. The time it takes to manually unlock doors for arrival, and then lock them after arrival, is significant.” – Paul Timm, PSP, a board-certified Physical Security Professional with Facility Engineering Associates.

Relying on manual touring also means that any time an emergency warrants a lockdown of the school, janitorial staff must manually lock all of their secondary openings—a procedure which could take a significant amount of time to complete and potentially put school staff into harm’s way.

Controlling access is key

“Access control is the cornerstone of effective school security,” says Timm. “Schools cannot furnish a safe
learning environment without controlling and restricting access and being able to account for students and staff.”

In searching for a solution to the problem of lax perimeter security, school officials often become overwhelmed or discouraged by the projected costs of installing additional access control hardware on secondary openings. Architects and building designs can address this early in a project by considering perimeter security.

The first step to addressing the problem is to designate a single, primary point of entry for school hours. This is preferably a front door location that will be easily seen and supervised to provide more control over who should—and shouldn’t—enter the building. The main entrance should be clearly marked by signage with directions to a secure vestibule that will serve as the visitor management center. Creating one primary location for individuals to enter the building creates a far more secure environment and decreases the risk of students carrying weapons into the facility undetected.

Of course, the only way to ensure that all students, faculty and visitors use this primary point of entry is to ensure that all other points of entry are secure at all times. Ideally, all doors will be closed and secured, creating a closed campus environment where access is strictly monitored and restricted. However, if this is not feasible for the campus then the goal should be to at least reduce the number of exterior openings to as few as possible.

An effective way to achieve this is to discuss guidelines for the use of each opening. Working with key stakeholders, outline the following details for each door on campus:

- When will the door be locked and unlocked?
- How will it be staffed or monitored?
- How will it be secured?
- How will security be enforced?
- Who is and is not allowed access?
- How will authorized users be granted access?

Unsecured and unmonitored doors have the potential to allow two types of events to occur unnoticed—either an uninvited guest entering or a student exiting. There are a number of security devices available to ensure that all points of entry are secure at all times while still allowing free egress in the event of an emergency.

**Extending access control**

In order to effectively secure a campus, all secondary entrances should be incorporated into the access control system, either directly or through the installation of electromechanical locks that are connected wirelessly to the existing system.

Mechanical and electronic technologies continue to converge, leading to the creation of wireless electromechanical locks and access control systems that are significantly less expensive, more reliable and easier to install than traditional wired solutions.

When evaluating the available options for schools, prioritize solutions that are proactive rather than reactive. Obtaining a recording of a crime via video surveillance is not nearly as effective as preventing the situation in the first place by ensuring the campus is completely secure.
Another feature to specify is open platform hardware that will be allow the system to be compatible with any existing or future software. Interoperability is a major factor in terms of security, operational efficiency and convenience. Access control solutions that do not work well together will cause challenges for administrators and users. Whether the impact is the need to issue multiple credentials or manage multiple access control software platforms, lack of interoperability drives inefficiencies that put more strain on limited resources and create inconvenience that can ultimately lead to compromises in security.

**Consult the experts**
When specifying solutions to enhance perimeter security, architects should collaborate with school officials, a professional integrator and door hardware consultant to develop a scalable, long-range, comprehensive security plan for their facility. Bringing in experts can play a vital role in helping to identify and prioritize the security measures that need to be implemented.

“An effective physical security assessment will identify both strengths and weaknesses of your security program. More than simply identifying vulnerabilities, a good assessment report will prioritize recommendations in a phased approach.”
– Paul Timm

With the number of available security products, the selection process can be overwhelming. Door hardware consultants and security integrators can ensure that the system or products installed are successful, appropriate, code-compliant and cost effective. While controlling costs in an issue on any project, particularly in light of the budget cuts many schools have had to contend with, this is not the area to cut corners. Collaborating with experts early on will prevent unnecessary expenses, ineffective or incompatible products and the potential liability that could result from code violations. For example, there are a number of security products such as barricade devices that are being marketed to schools as an inexpensive and effective means of enhancing classroom security. However, the majority of these products violate model building codes and actually create additional threats to life safety. Professional security integrators and Allegion’s team of experts will be aware of these potential code violations and can help ensure school administrators focus on safe, reliable and cost-effective solutions.