

# K-12 school safety

Let's create a secure, strategic  
and smart solution, **together.**



# School security tops the list of issues impacting K-12 schools today

**749,400**

nonfatal victimizations occurred at school among students 12-18 (2016)<sup>1</sup>

**~100,000**

public schools estimated throughout the U.S.<sup>2</sup>

**44**

years is the average age of public schools in the United States, with 12 years since major renovations<sup>2</sup>

**here's** what  
experts  
are saying

Children spend nearly 11,500 hours in schools throughout their K-12 careers. Every stakeholder at your school expects students to spend that time in a safe environment—one that is properly secured to ensure only authorized individuals have access. At Allegion™, our vision is to make the world safer, securing the places where people thrive. Our team of experts is experienced in a variety of environments and can help you develop a strategy that builds a foundation of security, both today and in the future.

When it comes to securing your facility, there isn't a one-size-fits-all solution. And with a broad range of resources in the market, it's helpful to work with a trusted expert to navigate the solutions that fit your unique needs. The age of your facility, credential platform and protocols, budget and long-term security strategy must be considered. Wherever you are on the continuum, we can help you improve security. We'll address your most pressing needs, starting with the weakest links. From there, our experts will help you develop a long-term strategy that can evolve and adapt to future advancements.

Children not only need educational tools to learn, but also an environment that allows them to be their best. Allegion is here to help.

**Let's get started.**

<sup>1</sup> U.S. Department of Justice, Bureau of Justice Statistics, National Crime Victimization Survey (NCVS)  
<sup>2</sup> U.S. Department of Education, National Center for Education Statistics



## Developing a security strategy

A comprehensive security strategy should be an ongoing part of your effort to provide a safe school environment.

**Hardware audit:** Industry experts recommend developing door hardware standards across multiple facilities or campuses. In the event of emergency lockdown situations, standards can minimize confusion and aid in response speed. Contact Allegion to perform an audit of your facility's current hardware solutions.

**Access control/lockdown strategy:** Identify your lockdown strategy and how it relates to your school's access control platform. Consider security protocols, lockdown solutions and credential management.

**Safety committee:** Form a safety committee—composed of administrators, faculty, front office/receptionists, security, IT, health services and emergency responders from the community—to regularly assess current assets, threats, hardware, procedures, etc.

**Policies and procedures:** Define how you'll control access at your school, along with staff roles and responsibilities for implementing those procedures. Protocols and actions should be clearly defined, documented and practiced regularly. These should be part of your school's code of conduct to ensure educators are trained on them.

**Layered security:** Taking a “layered security” approach can effectively deter, detect and delay adversarial behaviors. A layered security approach works from the outside in to protect critical assets. As one layer is bypassed, another layer provides an additional level of protection. The following page examines this in greater detail.

Contact an expert.

**Watch now:** Options for securing classroom doors

#### 4 Classroom perimeter

There are a number of areas within a school that are vital to protect. While technology, administrative areas and other capital equipment may be targets in the event of an incident, the most important assets in a school are students, staff and visitors.

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#### 1 Property perimeter

Perimeter protection should deter or prevent those with criminal intent from entering the campus. Property perimeter barriers may include things like fencing, guard houses, shrubbery, sidewalks and lighting.

#### 2 Parking lot

It is important to have a strategy for securing areas beyond the building itself. Exterior areas of focus could include parking lots, walkways, outdoor gathering areas, etc.

## Lockdown: The foundation of your security plan

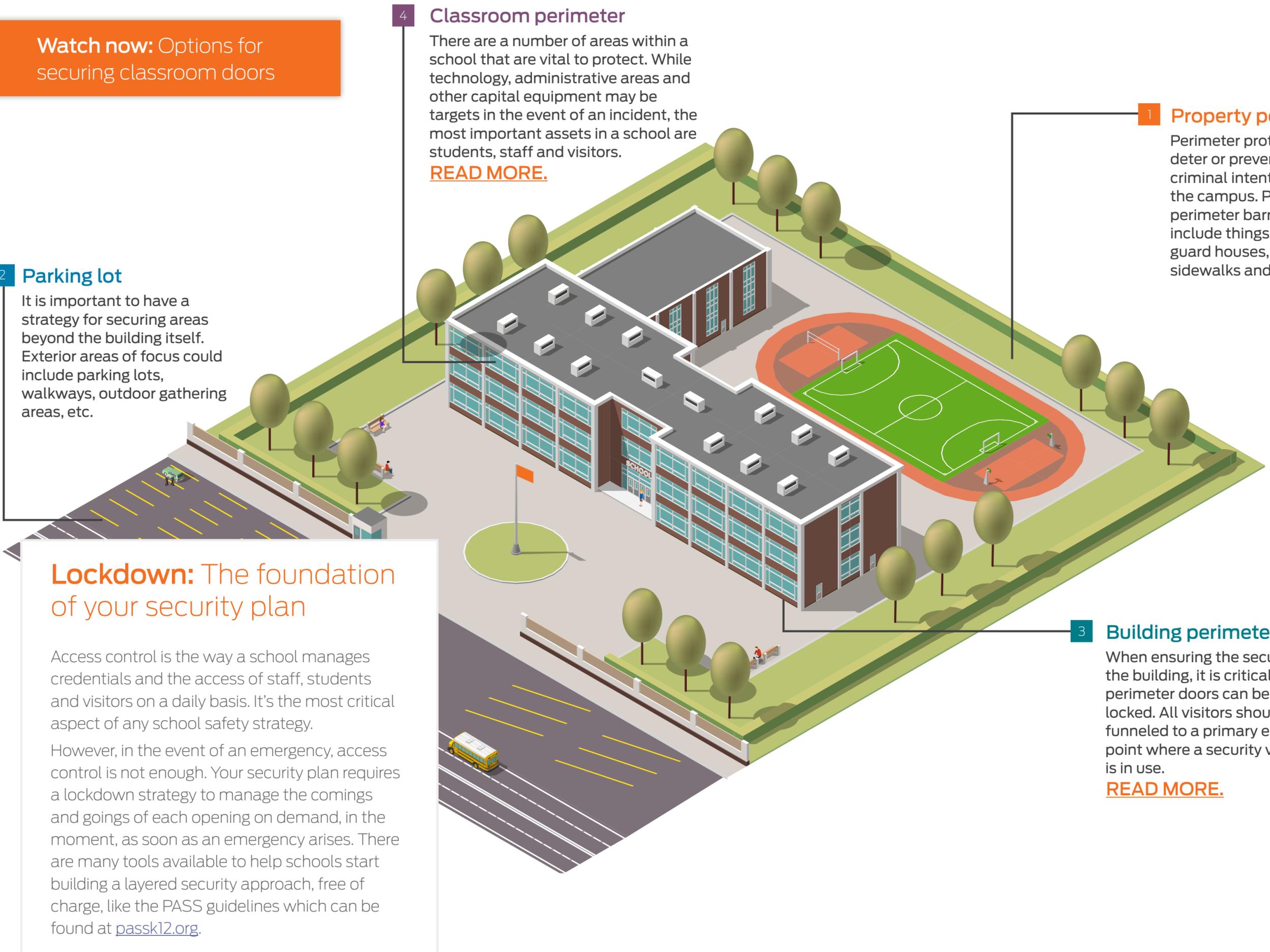
Access control is the way a school manages credentials and the access of staff, students and visitors on a daily basis. It's the most critical aspect of any school safety strategy.

However, in the event of an emergency, access control is not enough. Your security plan requires a lockdown strategy to manage the comings and goings of each opening on demand, in the moment, as soon as an emergency arises. There are many tools available to help schools start building a layered security approach, free of charge, like the PASS guidelines which can be found at [passk12.org](http://passk12.org).

#### 3 Building perimeter

When ensuring the security of the building, it is critical that all perimeter doors can be easily locked. All visitors should be funneled to a primary entrance point where a security vestibule is in use.

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## Classroom security

Schools should have the tools in place to manage the use of each opening so that they can lockdown on demand, as soon as an emergency arises—without compromising egress. There are three options for classroom lockdown. Select the credential that best fits your building, protocols and budget. Options include patented keys, fobs, or magnetic stripe, proximity or smart cards.

### Manual lockdown

A high-security lock with an inside/outside cylinder allows a teacher/faculty member to lock the outside lever from inside the room in the event of an emergency.

### Remote lockdown

Standalone electronic door locks can be locked wirelessly with a fob or other device from anywhere in the classroom.

### Centralized lockdown

Electronic locking systems can be initiated both remotely or by a teacher in the classroom. This is a networked solution tied into the school security system.

## Perimeter security

Controlling access is a critical part of a school's efforts to provide a safe learning environment. It begins with a secure perimeter—from the main entrance to all secondary entrances and tertiary openings. The perimeter is the first check point, or layer, to the building. It controls who and when people enter the school.

### Primary entrances

These include main and event entrances. Main entrances typically lead to a security vestibule as an additional layer of security.

### Secondary entrances

These make up the majority of exterior openings throughout the campus and are essential to a secure perimeter. These openings are typically manually managed and monitored, and they should remain locked.



## Compartmentalization

Doors serving large assembly spaces like cafeterias and gymnasiums are very important to consider because of the potential for many building occupants to be gathered there.

An additional point of security to consider is the use of cross-corridor doors to compartmentalize a building. In the past, these doors were often used to deter the spread of smoke and flames in case of a fire, but current code requirements have reduced the need for cross-corridor fire doors. However, these doors can serve an important purpose when it comes to school security.

The least complicated way to equip these doors is to specify panic hardware that is locked on the access (pull) side, with wall-mounted electromagnetic holders. The doors are held open most of the time but can be released with the push of a button—typically in the main office—that cuts power to the magnetic holders. Depending on the system, this could also be done automatically when the alarm sounds to indicate a security breach. Since the access side of the hardware is already locked, the doors are automatically secure as soon as they are closed. When budget permits, the panic hardware may be equipped with electrified lever trim which locks when the system is activated.

### **There are a few considerations when using cross-corridor doors to compartmentalize for security:**

- The school must have a means of immediately notifying building occupants that a security breach is taking place.
- In most cases, the doors must allow free egress from the push side and can only be locked on the pull side.
- Impact-resistant glazing should be used in doors and sidelights adjacent to the door hardware, to delay access to the inside lever or touchpad through broken glass.
- For some schools, magnetic holders with an increased holding force may be needed in order to reduce the frequency of students closing cross-corridor doors.
- Planned egress routes should lead out of the building through outer doors—preferably directing occupants away from lobbies and other congested areas.
- Periodic drills should address the use of cross-corridor doors and the planned egress routes.
- Keys or access-control credentials should be readily available to allow emergency access to secured areas.

## Recognizing the need for lockdown

- If your door hardware requires an individual to step out of the room to lock the door, then your staff and students could be at risk.
- Hardware with “unrestricted ability” to lock or unlock the door could allow anyone, including students, to take control of the opening.
- Magnets or tape on the door to prevent latching violates model codes if the door is fire-rated.
- If your school’s exterior doors do not automatically close, then they are not in a ready position for an emergency lockdown.
- Hardware that is not permanently attached to the door, requiring teachers or staff to locate and attach the device in the midst of a lockdown emergency, can take critical time.
- Door hardware that slows down entering or leaving a room during an emergency situation could unnecessarily place staff and students in harm’s way.

**Still unsure?** Contact Allegion for school security advice.





## Removing barricades to life safety

Barricade devices are retrofit security products that are designed to lock down a classroom in the event of an active shooter. They are often perceived as effective and inexpensive means to provide additional security. However, many of these products not only violate current life safety code requirements, but could also result in increased risk and liability.

The model codes that have been adopted in most of the United States—the International Building Code (IBC), the International Fire Code (IFC) and NFPA 101—The Life Safety Code—all require doors in a means of egress to unlatch with one releasing operation. While a handful of jurisdictions have modified their codes in order to allow classroom barricade devices, the vast majority of states require code-compliant security methods to be used. While the intention is to keep a gunman or active threat out of the classroom, there are several unintended consequences associated with these devices that could put children and faculty at great risk.

- Consider what might happen if barricade devices were deployed and the occupants inside suddenly needed to evacuate. The requirements for free egress, fire protection and accessibility must always be considered in conjunction with the need for security.
- There is no guarantee that these retrofit devices would only be deployed in an emergency situation. In fact, they may be misused by the students themselves to facilitate the types of assaults that occur more frequently in schools than active shooters.
- An active shooter could barricade the door with hostages inside, preventing entry for authorized personnel. With inconsistencies from one state to the next—and even greater variations between school districts where retrofit security devices are allowed—first responders could arrive on-scene unprepared. Not knowing what to expect and which tools are needed to access rooms equipped with classroom barricade devices can delay or prevent evacuation.

There are code-compliant locks readily available that provide necessary security without compromising safety. Our experienced security consultants can help evaluate your facility and identify solutions that fit your school, protocols and budget. Contact us today at 877-671-7011.



Industry expert Lori Greene shares the latest K-12 code-related information. Go to [idighardware.com/schools](https://idighardware.com/schools) to sign up for notifications today.

# Designing safer schools

Architects are able to make a big impact on safety and security through design techniques. Crime Prevention Through Environmental Design (CPTED) considers physical and psychological aspects of a facility's design to help reduce opportunities for crime to occur. At its core, this strategy is designed to prevent crime by increasing the perceived risk of being caught or making it more difficult for a threat to occur. CPTED principles usually can be implemented at little to no cost, especially when designed upfront.

Three principles are defined here, but there are more that architects may find beneficial. For example, design for unsafe activities to happen in safe places. If you know that issues like drug dealing or fighting tend to happen on the basketball court, plan for the court to be in a highly visible area.



## Natural surveillance

Improving the visibility of potential offenders increases their perceived risk. Offenders don't want to be seen and they definitely don't want to be caught. Designing for clear sight lines means less opportunities for them to lurk or go unnoticed. This can be achieved by adding windows and improving lighting. Avoiding sharp corners and design elements that create blind spots can also improve natural surveillance.



## Designed access control

Designed access control, also known as natural access control or way finding, differentiates between public and restricted spaces. This is achieved through the placement of signs, designated walkways, labeled building entrances, gates, vehicle barriers or even landscaping. The goal is to control the flow of access to approved areas.



## Border definition

This is also referred to as territorial reinforcement and is another way to make the distinction between private and public property. Using fences, sidewalks and landscaping, schools can display their ownership and deter potential offenders. No trespassing or private property signs are common, as well as those that indicate a security system is currently in place.

Want more design tips for schools?



## Rock Hill School District

### Project scope

Rock Hill School District, located in York County, S.C., welcomes nearly 18,000 students to its campuses each fall. It's the largest district in the county and 11th largest in the state, sprawling more than 3.1 million square feet. It's no surprise that the school district has gone the extra mile to secure its students, staff and facilities.

Fortunately, Rock Hill schools haven't been victims of any serious or violent incidents. But they are readily prepared for emergency situations. The district has had to respond to police-related incidents in the past that have required lockdown out of caution.

"We have 31 locations," says Tim Boan, access control technician for Rock Hill Schools. "When an incident like a robbery or police chase happens, we need to lock down two or three schools and ensure students are inside. Our school has gone the extra mile to make sure we have the proper training."

In the event of a lockdown, police officers are the only people that can get someone into the building. Office staff, custodial and other employees must follow the school's procedures for safety when outside of the building during a lockdown. This requires an advanced level of training and accountability. It also requires security solutions that make lockdown and access control possible.

The classroom and office-door locks are predominately a combination of Schlage® LE and NDE wireless electronic locks as well as some Schlage

AD-400 wireless electronic locks. These integrate with the school's access control software provider, which allows for lockdown across each building—and the entire district. It also allows staff like Boan the option to set up event schedules to reduce manual efforts.

### Challenge

While nearly all the schools are connected to the access control solution, there was still a missing piece: the secondary perimeter openings. Staff still needed to manually lock, or undog, these doors.

Ideally, every opening in K-12 facilities would be connected to access control software. However, that historically was not practical—or affordable for most schools—so they had to come up with other means to secure these openings.

"Schools want the safest, most secure solutions to protect students and staff," says Yong Lacy, Allegion US category leader, openings. "However, these schools are also up against tight budgets, so connecting all perimeter openings often was not an option. Instead, schools may have kept secondary openings locked throughout the day, but this required manual touring to verify the status of each opening."

According to findings from the research group SMARI, it's estimated that only half of secondary doors in schools with a networked access control system are connected, because the majority of available security funds are focused on the main entrances. Additionally, more than half of schools report that their perimeter doors are left unlocked or propped open, which results

in vulnerabilities that compromise a building's security solution—even one as advanced as Rock Hill.

### Solution

To enhance perimeter security, Rock Hill decided to implement the Von Duprin® Remote Undogging option from Allegion. When paired with a leading access control software provider, Allegion's Von Duprin upgrade kit solution is designed to extend access control to perimeter openings, making it ideal for K-12 facilities.

The Von Duprin RU retrofit kit for exit devices is a cost-effective solution for secondary openings that enables remote locking for centralized lock down, "dog on next exit" and door status monitoring with integrated request to exit (RX), latch bolt (LX) and door position switch (DPS) signaling capabilities. It connects wirelessly via Bluetooth Low Energy to Allegion's ENGAGE™ Gateway, providing real-time, bi-directional communication to the S2 Netbox. RU is a modular battery powered kit that can be added on to existing Von Duprin 98/99 and 33A/35A Series devices.

Schools looking to improve key control can benefit from the "dog on next exit" feature. This enables staff to visit the door and actuate the push pad from the interior to enable push-pull operation at a scheduled time without the need for a key or credential. Likewise, to secure the door a schedule can be set for remote undogging for lock up.

The Von Duprin Remote Monitoring (RM) option is also available. It's a sensor-only configuration for exit-only or fire-rated doors that require monitoring. It provides visibility to door status with the same RX, LX and DPS signals as the RU, without the centralized lockdown component.

Once the products were installed, the Von Duprin RU seamlessly integrated with the district's access control software. This allows the schools to secure doors at any time, along with the rest of the locks that are connected to the access control software. It greatly simplifies lockdown procedures by reducing the need to manually tour the building.

"Before, security trumped convenience," says Lacy. "Now, with the Von Duprin RU kit, schools can balance the two—keeping students and faculty safe while improving efficiencies for the staff. Removing the need to manually visit each opening is especially important in the event of emergency and saves valuable time. Plus, sending staff to manually lock a door puts them

in harm's way. Now they have peace of mind knowing that everything is controlled and monitored in real-time through a centralized platform."

Kevin Wren, director of risk, security and emergency management for Rock Hill School District, agrees. "The Von Duprin RU allows our schools to lockdown the entire perimeter in seconds versus minutes. It happens with the push of a button instead of someone running from door to door to manually undog the opening. The more we are able to eliminate human error, the better we will be."

### Results

Overall, the school is pleased with the perimeter security solution. Boan was especially satisfied when he learned the full range of capabilities, beyond locking the device remotely. The scheduling feature allows him to set up a schedule, walk away from the system and have it secure a facility the way he intended.

Another feature that excites Boan and Wren is the fact the solution can retrofit to work with their current hardware, eliminating the need to purchase new devices for every opening. "With this, we can use our existing exit devices, which will save costs compared to replacing our devices," says Wren.

This will dramatically reduce future costs as the district intends to extend this solution to its other campuses.

"We rent our facilities quite a bit," Boan says. "We'll have 1,000 to 2,000 people inside our buildings to see a recital, and we have lots of doors. Instead of dogging doors, we can control them. And if there is an emergency, it's amazing that we can control it the way we do through our access control system so that we don't leave a door accidentally unlocked. This device is a game-changer."

Wren adds, "We've now eliminated the risk of a door being left unlocked overnight. Traditionally, following an event, someone had to manually secure all of the openings. If they forgot to lock a door, it would be left unsecured all night long. Now we can easily monitor all of the openings to ensure they are locked."

The Rock Hill School District is a great example for schools looking to enhance their perimeter security measures. To learn more about the solution, contact Allegion at 877-671-7011 or visit [us.allegion.com](http://us.allegion.com).

## About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a \$2 billion company, with products sold in almost 130 countries.

For more, visit [www.allegion.com](http://www.allegion.com)

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