



Santa Barbara City College case study

Upgraded security system gives quick lockdown capability



Santa Barbara City College is located on a 74-acre bluff overlooking the Santa Barbara harbor and Pacific Ocean.

Overview

With a major security upgrade designed around electronic locks, Santa Barbara City College (SBCC) expanded and centralized its access control system, achieved campus-wide lockdown capability and improved control over its key system. The new system's Schlage AD Series electronic locks also integrate fully with the college's Blackboard TransACT system to provide one-card convenience and many additional security benefits.

Concerned with the growing number of violent incidents at educational facilities around the country, officials of the college took a proactive approach to improve security at its main campus and two satellite locations. "The administration wanted the ability to lock down whatever campus was experiencing an emergency with the push of a button," says Julie Hendricks, the senior director of facilities, planning and campus development.

The project provided an opportunity to make other security improvements as well. According to Nancy Tolivar, of the college's IT department, too many keys had been issued without proper control in past years, making it extremely difficult to know who had keys to which doors. Electronic locks and card readers were chosen to provide greater control over credentials, more flexibility, and a higher level of security. Following a successful pilot program, funding was approved by the Board of Trustees. A complete upgrade that followed included installing 600 Schlage® AD Series electronic locks in more than 18 buildings at three sites.

The project's goals included expanded, centralized lock management, campus-wide lockdown capability, the use of electronic locks on all exterior entrances as well as on all rooms having a capacity of five or more occupants, and the capability to manually lock the electronically controlled doors from the inside.

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One important feature of the AD Series electronic locks is their seamless integration with SBCC's existing Blackboard Transact™ system. Implemented by the college in 2007, the system uses a single card for student IDs, food service, bookstore and other transactions, as well as security. The locks and other hardware, all brands of Allegion, were purchased through Blackboard, and representatives of both companies were involved throughout the process. The college contracted with Kinyon Construction, of Santa Maria, California, and its partner RKG Construction, to handle the installation.

Advance preparation ensures project success

The ambitious project upgraded the locks and other hardware on approximately 2,000 doors in a six-month period. SBCC Project Manager Jay Sullivan credits advance training and teamwork for much of the success. "The carpenters' union set up stations to train workers on the new technology. They saw it as a skill-building opportunity, and there was tremendous cooperation between the electricians' and carpenters' unions. We had three teams of carpenters and two teams of electricians working on campus every night."

Sullivan notes that other team members who played key roles in the rapid completion and success of the project include SBCC Director Rob Morales and the purchasing department, Loren Studley, Allegion's account executive, and Shirley Gonzalez, Blackboard's vice president. In addition, he says, Brandon Lovelace and the IT department, as well as Lorraine Valenzuela of the security department made important contributions to the security system's design and installation.

Before starting the project, Sullivan worked with hardware consultant Bob Simpson, of Integrated Door Systems, to survey the more than 2,000 doors on the three campuses. Sullivan explains, "We needed to identify and tag the doors and update our drawings so we could move forward with developing specifications. We were making decisions with Erik Fricke, the security director, on a door-by-door basis under an aggressive schedule." The survey also helped identify many doors and hardware items that were in unsatisfactory condition or not working properly and needed repair or replacement before the new locks could be installed. Sullivan adds, "When we walked the campus, we realized we had too many different kinds of hardware. Since we've been able to standardize, we now have a system that is not only secure, but easily maintainable with all the right parts."

After the openings in all the buildings were inventoried, architect Richard McKenzie, AIA, of Architect's Consulting Service, was able to create accurate CAD drawings of each, which can be updated easily to reflect future changes. Being able to look at building layouts and see details on specific door locations will simplify maintenance and could be valuable in case of a security incident as well. With the electronic locks, these drawings also will help workers locate hidden components such as panel interface modules (PIMS) for wireless locks, which often are mounted above the ceiling or in an equipment closet.

Quick lockdown capability boosts security

The AD Series locks are easy to install and provide real-time control and monitoring. The integrated system makes it easy for administrators to add or remove users or to check the status of an opening. AD Series locks combine all the components required at the door into one integrated design that incorporates the electrified lock, credential reader, request-to-exit switch, door position switch, tamper guard and more. Because the AD Series is modular, it can be upgraded without taking the lock off the door.

The electronic locks provide keyless entry on more than 600 doors with just the swipe of a card. They are installed on exterior doors and also on interior doors for any classroom or meeting room that can be occupied by more than five people. Most interior openings use wireless locks, which were easier to install in existing buildings, although high-use exterior doors are hard-wired. All AD Series locks have multi-tech readers that accept any NFC credential technology. The AD Series locks are controlled only by staff and faculty, using MIFARE NFC cards that also are encoded with magnetic stripe information. The college's existing Blackboard magnetic stripe cards are used for student credentials and transactions.



Top: Security officers and other staff members access electronic locks with NFC Smartcards.

Bottom left: Schlage AD Series electronic locks are used on most exterior doors.

Bottom right: Students use magnetic stripe cards for room access as well as for student IDs, food service, bookstore and other transactions.

Door consultant Bob Simpson says, "We had to be able to lock down every location that could hold five or more people electronically from a remote location and also do a local lockdown if necessary. Each of these locations becomes an area of refuge where people can be safe if there is a threat." With the system, Security Director Erik Fricke can lock down any given area or an entire campus almost instantly from any location using a tablet he carries with him. In addition to Fricke, only the college president, vice-president and a few other authorized people have access to the computer system that controls the lockdown. Individual electronic locks also incorporate an internal pushbutton, so a professor can lock the room from the inside. If the campus goes into a lockdown and any students aren't behind the safety of a door, people inside can open the door to let them in and then relock it safely from the inside.

Mechanical locks also upgraded

Along with the electronic locks, SBCC upgraded mechanical locks on approximately 1,400 doors where electronic locks were not required, using Schlage L Series mortise locks and ND Series grade 1 cylindrical locks. All have interchangeable cores for the new Everest 29 Primus Level 9 key system, which provides patent protection against unauthorized duplication through 2029. Other Allegion hardware solutions used at SBCC include LCN 4000 Series door closers to ensure that doors close and latch securely, and 9500 Series automatic door operators on student restrooms and many building entrances. Von Duprin 99 Series exit devices provide security while allowing safe egress.

Vitally important to the success of the project was the high-level commitment and support it received from President Lori Gaskin and Vice President Joe Sullivan. Project Manager Jay Sullivan says, "They really shepherded this project along, because it's very challenging to convert the entire campus and change from keys to card readers. Their backing helped overcome the natural user resistance that could occur with a changeover like this." He adds that the cooperation and team effort between the contractor and SBCC's security, IT and facilities departments and all other participants played a major role in the project's success.

While the security of students, faculty and staff provided the major impetus for the upgraded safety program, it also enhanced the protection of property such as computers and other electronic equipment. Project Manager Sullivan states, "We now have a higher level of security that encompasses the entire campus. More than just switching over to the new locks, we redesigned the whole security system."

Looking ahead, SBCC plans to establish the electronic locks as a campus standard and implement a Near Field Communication (NFC) credential for smartphones. Additional goals include instituting a battery replacement schedule for wireless locks, enhancing door access reporting and automating door schedule and access plan input. For future construction, hard-wired locks will be used whenever possible, with "wire-ready" openings in new buildings. These standards will be implemented soon, starting with a planned West Campus classroom and office building that will replace multiple moveable buildings.

Founded in 1909, Santa Barbara City College serves approximately 25,000 students each semester who enroll in courses for transfer preparation, career education and foundational skills and an additional 4,500 enrolled in lifelong learning classes. In 2013, SBCC was named national co-winner of the prestigious Aspen Institute Prize for Community College Excellence.



Top: Inside pushbutton on electronic lock allows door to be locked safely from inside, yet occupants can exit without restriction.

Bottom: Many exterior doors include LCN door closers to control doors and ensure that they close and latch securely, with Von Duprin 99 Series exit devices to provide security while allowing safe egress.

About Allegion

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