



Today's schools must be both welcoming and secure.

Safe Schools Through Environmental Design

By Jody Andres, AIA, LEED AP

Architects who design facilities with safety and security in mind base them in large part on the concept of crime prevention through environmental design (CPTED)—a concept developed by architect Oscar Newman in the 1960s, when many urban areas were experiencing social unrest and buildings were beginning to deteriorate.

The guiding principle of CPTED is that the design of buildings and open spaces can influence human behavior. Specifically, proper design can promote safety and encourage orderly conduct.

Safety Design Elements

CPTED seeks to increase safe conditions and reduce those perceived to be unsafe primarily through four elements: surveillance, access, territoriality, and maintenance.

Surveillance. When people believe they can be seen, they are less likely to engage in criminal behavior. The goals, then, are to eliminate hiding places such as isolated stairways or bushes; to keep areas well lit; and to install security monitors for hidden areas.

Access. Establishing a visitor's identity before providing access can reduce potential risk. A video intercom system is an effective option for screening visitors. Guests should pass through the reception area and present their credentials before being allowed into the school.

Increasingly, schools are adding a layer of security for office staff by incorporating a transaction window, sometimes with bullet-resistant glazing. Electronic locks on interior and exterior doors provide varied levels of access and record who uses them.



Limiting access is one element of safe school planning. Increasingly, schools are adding a layer of security for office staff by incorporating a transaction window, sometimes with bullet-resistant glazing.

CHINNA PONG/STOCK.ADOBE.COM

PHOTOS COURTESY OF HOFFMAN PLANNING, DESIGN, AND CONSTRUCTION, INC.



Well-kept facilities communicate a sense of ownership and high expectations, thus discouraging crime, including vandalism.

Territoriality. Landscaping, fencing, and even art can be used to identify and reinforce territories. Inviting students to select art, displays, or landscaping can give them a greater sense of ownership and make it easier and more apt for them to identify intruders.

Physical maintenance. Run-down facilities practically invite unwanted behavior by giving the impression that nobody cares what happens in the area. Conversely, well-kept facilities communicate high expectations, thus discouraging crime. Walk your property regularly, noting anything that is broken or looks shabby. What starts as a cracked window or a damaged ceiling tile with water stains can actually become the gateway to unwelcome behavioral issues.

Order maintenance. This aspect of CPTED focuses on clearly communicating expectations regarding behavior and holding people accountable. The goal is to reduce minor misbehaviors early on, well before they grow into more risky behaviors. Doing so requires teachers, administrators, resource officers,

and campus law enforcement to foster positive student relationships.

**Equipped with
new knowledge,
administrators can
create safe havens that
will address multiple
safety and security
perils while following
current regulations.**

Hardening and Softening

Today's districts face the challenging incongruity of needing to be both welcoming and secure—of hardening and softening their schools.

Hardening. “Hardening” refers to adding physical security measures, such as metal detectors at entrances, fencing around the perimeter of the property, and armed personnel within the school, making it more difficult to enter.

Hardening strategies include surveillance by both cameras and

personnel, limited entry sequencing, electronic locks, emergency buttons, and checkpoints. These safeguards create barriers to unwanted guests.

School district leaders should be aware of some of the challenges of such hardening strategies. For example, surveillance cameras, electronic locks, and metal detectors are often associated with institutional environments, which are not conducive to learning and personal growth.

Furthermore, legal and privacy requirements must be considered when using video monitoring and recording. The presence of law enforcement on school campuses is generally accepted as promoting positive outcomes; however, some community members may not support this measure.

The ability to lock doors from the inside, while providing access to emergency personnel from the outside, is important. In many states, door security or barricade devices that are separate from the typical door hardware and latching mechanisms violate building codes.

Metal detectors can give a negative impression of a school's safety



Visitors should ideally be required to pass through a reception area for clearance before being allowed to enter the rest of the school building.

and level of violent behavior. Security cameras can simply push misbehavior to other locations and in some instances may even result in negative behavior by attention seekers.

Softening. “Softening” or “tempering” means creating an environment where students respect and care for one another. It also means promoting positive relationships between staff members and students.

Fostering positive relationships between student groups as well as teachers is pivotal when it comes to safety. Consequently, personnel who are trained in crisis identification, action, and management should be stationed near student areas, such as commons, cafeterias, or libraries.

Research showing the positive mental and physical effects of biophilia is mounting. Biophilia suggests

that people have an innate tendency to seek connections with nature. With respect to CPTED, biophilia is about integrating natural materials, views of nature, vegetation, daylight, and other elements of the natural world into buildings to create a more positive environment.

A combination of hardening and softening is an appropriate strategy—it’s important not to swing the pendulum too far in either direction.

Professional Collaboration

Choose a qualified leader to spearhead your security and safety solutions. Invite security professionals, school district personnel, product representatives, architects, community representatives, contractors, and representatives from local government, civil defense, and the fire and police departments to work together

for creative solutions. Involve as many team members as practical and be sure to incorporate administrative and policy requirements.

Additionally, keep everyone up-to-date through resources from the American Institute of Architects. The AIA regularly updates school design guidelines and provides material to make safe school design eligible for federal grants. The association also provides a clearinghouse for best practices in educational design.

With a comprehensive approach and a guiding coalition, you can create the most effective and efficient avenue to providing a safe environment for your students, faculty, and staff.

Jody Andres is a senior project architect and the K-12 market leader at Hoffman Planning, Design & Construction, Inc.
Email: jandres@hoffman.net