

Improving School Access Control

National Clearinghouse for Educational Facilities

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Few things are more important for school safety and security than controlling access to buildings and grounds. It is relatively easy to incorporate effective access control measures in new school designs but more difficult in existing schools, where most building and site features cannot be readily altered or reconfigured.

The National Clearinghouse for Educational Facilities publishes 25 [NCEF Assessment Guides](#) covering a wide range of school safety and security measures. Those addressing access control are included here. Use them for thinking about and devising better ways of controlling access to and within your school.

Refer to the NCEF publication [Mitigating Hazards in School Facilities](#) for guidance on implementing the access control measures you select. Coordinate your efforts with your school's crisis planning team.

For information on crisis planning, see [Practical Information on Crisis Planning: A Guide for Schools and Communities](#), by the U.S. Department of Education, Office of Safe and Drug-Free Schools.

School Grounds

From the NCEF Assessment Guide [School Grounds and Site Access Control](#):

Access Control

- Are entry points to the site kept to a minimum?
 - Are there at least two entry points so that if one is blocked, the other can be used?
 - Can unsupervised site entrances be secured during low-use times for access control purposes and reinforce the idea that access and parking are for school business only?
- Do site entries provide for the ready passage of fire trucks and other emergency vehicles?
 - Are gates available for closing access points when necessary?
 - Do perimeter fences, walls, or "hostile vegetation" provide sufficient access control, surveillance and territoriality? Fencing options, including their pros and cons, include:
 - A solid wall or fence blocks natural surveillance and can attract graffiti.
 - A stone or concrete block wall can be an effective barrier against bullets.
 - A solid wall or fence can enhance privacy.
 - Wire mesh fencing usually provides foot holds, making it easy to climb over.
 - Wire mesh fencing is relatively easy to vandalize but often the most economical option.
 - Smaller gauge wire mesh may deter climbing.
 - Powder-coated wire mesh fencing can be more aesthetically pleasing.
 - Wrought iron fencing is low maintenance, vandal resistant, without blocking surveillance or providing foot holds.
 - A short fence can establish territoriality, but is of limited value for controlling access.
 - Tall, continual fencing can significantly restrict access, but may also block a pedestrian path serving students who walk to and from school, forcing them to take a longer route where they are more exposed to traffic, crime, or environmental hazards. A compromise may be appropriate, such as installing gates at selected locations. Open gates at least define likely entry points; lockable gates provide the school with the ability to further secure the site but can also create an unexpected barrier for a student trying to escape to or from the site.
 - "Hostile vegetation" (dense, thorny groundcover or bushes) often can be used effectively to define boundaries of various kinds around and within school property, providing it doesn't interfere with natural surveillance.

Surveillance

- Can site entry points can be readily observed and monitored by school staff in the course of their normal activities?
- Are site entry points positioned so one individual can monitor as many entries as possible? Nothing should block this means of visual surveillance, such as signs, trees, shrubs, or walls.
- Is natural surveillance from the surrounding neighborhood maintained, allowing neighbors and passing patrol cars to help serve as guardians of the school?
- Are there are any hidden areas on the site? In many cases, landscaping, signs, vending machines, bus shelters, trash receptacles, mailboxes, storage sheds, or street furniture can be altered or moved to improve natural surveillance.
- Are there hidden areas adjacent to the school that might provide offenders with "cover" or provide students with a location for illicit activities? Have they been made safer by opening them up, exposing them, sealing them off, or other measures?

Territoriality-Maintenance

- Are the school site and buildings well maintained, reinforcing territoriality? Are there signs of graffiti, breakage, neglect, or disrepair? Well maintained buildings and grounds promote civil order and demonstrate ownership of and respect for school property, qualities that tend to be reciprocated by students, staff, and community.
- Does the school have a marquee or other sign visible from beyond school property that clearly identifies the school by name?
- Are site entry points clearly marked?
- Do adequate signs, postings, or window decals direct all visitors to the main site entry points to gain permission to enter? Are illustrations, such as a map with arrows showing visitors the route to the main entry, included where appropriate? Signs should be simple, readable, well lit, written in all relevant languages, located at all entry points onto the property and at all entry points into the school, and easy to read from an

appropriate distance.

- Are school property lines clearly marked, establishing territoriality? Boundaries between joint-use areas and school-only areas should be similarly marked. Examples of property line markers include fencing, landscaping, natural geographic features, ground surface treatments, sculpture, architectural features, signs, or changes in elevation.

Landscaping

- Does landscaping reinforce access control, natural surveillance, and territoriality? Careful design can maintain ample sight lines for effective surveillance.
 - Where fences are used to border property, appropriate landscaping can soften edges while communicating to the public the message of privacy.
 - Uninviting neighborhood development can be screened and intrusive noise softened, while discouraging unwanted visitors.
 - In more rural settings, landscaping can define boundaries without the use of fences.
 - Landscaping can serve to control and direct access and traffic. Trees lining sidewalks or drives can give natural direction to pedestrian and vehicular traffic while limiting or denying access to identified sections of the school site.
 - Hedges should be kept low enough to expose places where people could otherwise hide. North Carolina recommends that shrubs and hedges bordering walkways not exceed 18 inches in height and that tree branches and leaves be kept clear to a minimum height of 8 feet off the ground.

Exterior Lighting

- Is exterior lighting uniform and does it eliminate pockets of shadow or glare? Exterior lighting is best evaluated at night.
- Are exterior lighting fixtures vandal resistant, beyond easy reach (at least 12 to 14 feet off the ground), maintainable, and built with break-resistant lenses or protected by cages or other means?
- Are lighting fixtures designed to avoid providing handholds for climbing onto the building?
- Is exterior lighting well maintained?

- Is the exterior lighting scheme effective for enhancing natural surveillance, discouraging trespassing, and preventing school vandalism?

- Practice either the "full lighting" or the "dark campus" approach after hours. The dark campus approach discourages trespassing inside the building at night (intruders' lights are readily visible) and saves electricity.
- A compromise to a complete blackout is to utilize motion detectors to activate lighting as needed.
- Security lighting should be directed at the building if the building is to be patrolled from the exterior. Lighting should illuminate the grounds if the building is to be patrolled from the interior, without compromising surveillance by creating glare for the observer.
- Timers or motion detectors should illuminate entry points for the first worker to arrive and the last to leave.

- Can exterior lighting controls be centrally accessed from the main administration area?

Traffic Circulation

- Where there are roadways through the site, are they serpentine or otherwise indirect or do they include traffic calming features, with gates or barriers as needed? Do signs prohibit through traffic?

- Are designated entries, routes, and parking lots for after-hours use clearly identified and controlled within the context of the site?

- Are hiding places minimized or eliminated along pedestrian routes? Hiding places can be exposed to natural surveillance by trimming landscaping, improving lighting, removing solid fencing, or installing convex mirrors.

Vehicle Parking

- Are parking areas within view of the main office, other staffed areas, or surveillance cameras?

- Do signs or posted rules clearly identify who is allowed to use parking facilities and when they may do so?

- Is visitor parking located near the main entrance, with clear signs directing visitors to the main office?

- In high schools, are parking spaces numbered and marked for the designated users: students, faculty, staff,

and visitors? Are unassigned parking spaces minimized, especially in student parking zones?

- In high schools, is a section of the parking lot reserved for students who attend part time or who spend part of the day off-site? This makes it easier for the school to secure the main parking area during the day and for staff to pay attention to cars coming and going during the school day.

- Is access to parking areas limited by curbs, fencing, gates, and a minimum number of entry points?

- Can gates close off unnecessary parking entrances during low-use times to control access and reinforce the perception that school parking areas are private?

- Do school expansion plans include anticipated parking expansion? Note that parking patterns predict entry points; if drivers start using a new lot on the south side, they will enter and exit on the south side regardless of where the official entry is. Plans for expanded parking should anticipate this by adding a fully controlled entry that serves the new area.

Dumpster Enclosures

- Are dumpsters either enclosed in a designated service area or surrounded on three sides by a high wall, preferably a see-through, climbing-resistant fence, and provided with a securable gate? Through the use of see-through fencing, wall openings, or motion response lighting, hiding around these enclosures is made difficult.

- Are dumpsters and their enclosures positioned so that they cannot be used as ladders for gaining access to the school roof?

Site Utilities

- Is access to site utilities, such as electrical transformers, generators, and meters, limited and secure, and is exposed equipment protected against vandalism and vehicular damage?

- Do site utilities create hiding places?

- Are exterior mechanical equipment enclosures lockable? Do doors have protected hasps, hinges, and deadbolt locks or a high security padlock? Do hasps and hinges have secure fasteners and are hinge pins non-removable?

- Is exterior mechanical equipment reachable by vehicles protected with bollards or other devices?
- Do meter locations allow access for meter readers without compromising access control for secure areas of the school?

Storm Water Retention Areas

- Where used, are storm water retention areas located to help limit access to school property, demarcate school boundaries, or segregate play and pedestrian areas from heavy vehicular traffic?
- Does fencing around enclosed storm water retention areas provide footholds for climbing or interfere with natural surveillance of these areas or other parts of the site?
- Are storm water pipes over 15 inches in diameter leading to or from storm water retention areas protected with appropriate grating or metal rebar to prevent access into the retention area or school site?

High Risk Sites

- Are panic button or intercom call boxes used in parking areas, at entry points, in isolated areas, or along the building perimeter as needed? Where panic buttons or call boxes are impractical, do individuals carry pendant alarms?
- Is the perimeter of the site secured to a level that prevents unauthorized vehicles or pedestrians from entering, and does this occur as far from the school building as possible? Anti-ram protection may be provided by adequately strengthened bollards, street furniture, sculpture, landscaping, walls, and fences. Anti-ram protection should be able to stop the threat vehicle size/weight at the speed attainable by that vehicle at impact. If anti-ram protection cannot absorb the desired kinetic energy, consider adding speed controls such as speed bumps to limit vehicle speed. Serpentine driveways can also help to slow a vehicle's approach.
- Can vehicle entry beyond checkpoints be controlled, permitting entry by one vehicle at a time?
- Is there space outside the protected perimeter to pull over and inspect cars?
- Are there perimeter barriers capable of stopping vehicles?

- Are manholes, utility tunnels, culverts, and similar unintended access points to the school property secured with locks, gates, or other appropriate devices, without creating additional entrapment hazards?

Outdoor Athletic Facilities and Playgrounds

From the NCEF Assessment Guide [Outdoor Athletic Facilities and Playgrounds](#):

Natural Surveillance

- Are athletic facilities and playgrounds in direct view of front office staff or other staff in the building? Options for improving natural surveillance include placing play areas on higher ground, installing lighting for night games, removing visual obstacles, or installing windows.

Boundaries and Setbacks

- Do play areas have clearly defined boundaries and are they protected by fencing?
- Are student gathering places set back from streets, driveways, and parking areas by at least 50 feet? A generous setback makes it harder for intruders to sell drugs to students, lure them off campus, or victimize them with drive-by shootings. This recommendation may be unworkable for schools built on small lots.

Joint Use Facilities

- Are access points between joint-use facilities and the school limited and secure?
- During non-school hours, can parts of the building that are unoccupied or off limits be sealed off from public use?
- Are separate or limited-access amenities such as restrooms, water fountains, garbage cans, and vending areas provided near after-hours or community recreational areas? This bars unwelcome visitors from entering an unsupervised area of the school.

Building Access Control

From the NCEF Assessment Guide [Building Access Control: Entry Doors, Windows, Walls, and Roofs](#):

- Is access into the school 100 percent controllable through designated, supervised, or locked entry points, including windows and service entries?
- Is entry granted by supervising staff or through the use of proximity cards, keys, coded entries, or other devices?
- Can portions of the school that are not being used be readily secured? This can be accomplished by locking wing doors or accordion-style gates or other means, provided emergency egress is not blocked.
- Are there entry signs, in all relevant languages and with simple maps or diagrams where needed, to direct visitors to designated building entrances?
- Where appropriate, do signs warn in a friendly but firm way about trespassing and illicit behavior and cite applicable laws and regulations?

Exterior Doors

- Is the number of exterior doors minimized? Can they be?
- Are all exterior doors designed to prevent unauthorized access into the building?
 - a) Exterior doors should have as little exposed hardware as possible.
 - b) Exterior doors should be equipped with hinges with non-removable pins.
 - c) Exterior exit-only doors do not need handles and locks protruding on the outside. However, it should be possible to open the doors from outside during an emergency in some manner, such as with a proximity card.
 - d) Exterior doors should be constructed of steel, aluminum alloy, or solid-core hardwood.
 - e) Exterior door frames should be installed without excess flexibility to deter vandals from prying them open.
 - f) Exterior glass doors should be fully framed and equipped with breakage-resistant tempered glass.
 - g) Exterior door locks used as the primary means of security should be mounted flush to the surface of the door.
 - h) Exterior doors should not rely on key-in-knob or other protruding locking devices.

- i) Exterior swinging doors should have a minimum 1-inch deadbolt lock with a 1-inch throw bolt and hardened steel insert, a free-turning brass or steel tapered guard, and, if glass is located within 40 inches of the locking mechanism, double cylinder locks.
 - j) Panic bar latches on exterior doors should be protected by pick plates to prevent tools and plastic cards from releasing the bolt.
 - k) Exterior doors with panic push-bars should be equipped with tamper-proof deadbolt locks to prevent easy exit after school hours by criminals or vandals. They should also be equipped with an astragal (metal plate) covering the gap between the doors.
 - l) The armored strike plate on exterior doors should be securely fastened to the door frame in direct alignment to receive the latch easily.
 - m) Key-controlled exterior doors can be equipped with contacts so they can be tied into a central monitoring and control system.
 - n) Exterior double doors should be equipped with heavy-duty, multiple-point, long flush bolts.
 - o) Doors that are vulnerable to unauthorized use, when students open them from inside the building, can be made more secure by installing door alarms, delayed opening devices, or sensors or cameras monitoring doors from the central office.
- See also the NCEF publication [Door Locking Options in Schools](#).

- Do exterior doors have narrow windows, sidelights, fish-eye viewers, or cameras to permit seeing who is on the exterior side?
- Are windows and sidelights sized and located so that if they are broken, vandals cannot reach through and open a door from the inside?
- Are exterior doors designed and certified to resist thrown objects?

Exterior Walls

- Do exterior walls provide niches or blind spots that provide places to hide?
- Are building niches and recesses fenced off, well lit, or observable from inside the building?
- Do walls provide footholds, or are the top 3 to 4 feet nearest the roof non-climbable?

Windows

- Are windows used to enhance natural surveillance of courtyards and school grounds and parking lots, especially from classrooms and administration areas? Windows in administrative areas are particularly important for helping staff monitor the main entrance area and the school grounds around it.
- Do all windows lock securely? Do sliding windows have lift and slide protection? California suggests avoiding sliding and casement windows, which are associated with security problems, and any operable windows with crank and worm-gear openers, which tend to break or jam.
- Are window hardware and frames in good condition, and are transom windows or other window configurations that have clear security weaknesses either permanently closed (provided they are not to be used as a means of emergency egress) or reinforced with slide bolts or other security devices?
- Are windows located strategically, providing natural light and natural surveillance, while providing sufficient stand-off distance and the means to deter vandalism and forced entry?
 - Glass replacement is the highest routine maintenance cost for some schools.
 - Consider incorporating skylights (but only if roofs are fully protected from climbers), solar light tubes, clerestory windows, and light shelves in lieu of normal-height windows in exposed or vulnerable locations. Some school districts prohibit skylights because they are considered impossible to protect from climbers.
 - Clerestory windows allow for ventilation, light, and privacy while minimizing wall penetrations, but do not allow for natural surveillance.
 - California suggests that ground floor windows be eliminated where possible on the building perimeter, but this must be weighed against the need for natural light and ventilation in occupied areas and the loss of visual surveillance of school grounds.
- Are second-floor windows inaccessible or protected against entry?
- Are basement windows protected from unauthorized entry by security grilles or window well covers?

Windows in High Risk Areas

- In high risk areas, are windows and their framing and anchoring systems designed and located to resist the effects of explosive blasts, gunfire, and forced entry?
 - Windows overlooking or directly exposed to public streets or dangerous areas should be either minimized or protected.
 - The greatest risk to occupants from an explosive blast originating near the school or even blocks away is injury from flying glass shards, so window glazing should be laminated or protected with an anti-shatter film. Glass-clad polycarbonate and laminated polycarbonate are two types of alternative glazing material.
 - Bullet resistant glazing should meet the requirements of [UL 752](#).
 - Security glazing should meet the requirements of [ASTM F1233](#) or [UL 972](#).
 - Window assemblies containing forced-entry-resistant glazing should meet the requirements of [ASTM F588](#).

Roofs

- Is built-in roof access from inside the building only? Is the access point locked and located inside a secure room? Some schools apply slippery finishes or coatings to exterior pipes and columns to block unauthorized access to the roof. (In new buildings, exterior roof access ladders or exterior building materials and architectural elements that allow climbing to obtain roof access should be avoided.)
- Are mechanical equipment enclosures on the roof protected from unauthorized access or vandalism?
- Is access into the school through skylights blocked by security grilles or other devices?
- Are roof parapets low enough to allow visual surveillance of the roof from the ground?

Canopies, Awnings, Breezeways, and Covered Walkways

- Do covered walkways and adjoining posts, structures, walls, planters, or other building features provide climbing access to adjoining windows, roofs, or other upper-level areas?
- Are covered walkways and their surroundings adequately lit to promote visual surveillance?

- Do windows in occupied areas of the building overlook walkways for natural surveillance?

Courtyards

- Are lines of sight across courtyards unobstructed so one person can supervise the entire area?
- Are entries into courtyards from the exterior of the school controlled and lockable?
- Are courtyard entries next to administration or staff spaces, with windows permitting visual surveillance?
- Are courtyards configured to eliminate unauthorized after-hours access?
- Do windows in occupied areas of the building overlook courtyards?
- Are outer courtyard walls climbable and are outside seating, planters, and landscaping features far enough from courtyard enclosures to eliminate climbing opportunities?

High Value Targets

- Are high-value targets for theft, such as offices, computer rooms, the media center, music rooms, shops, and chemical storage areas, protected by high security locks and an alarm system, or is at least one all-purpose storage room available for storing valuables? Note that chemicals must be stored separately.

School Security and Surveillance Systems

From the NCEF Assessment Guide [Security and Surveillance Systems](#):

Building Security Systems

- Has the school moved toward the integration of all school communication and security systems? This is referred to as ISMS, or Integrated Security Management Systems, and includes telephone, surveillance, access control, public address, and fire, duress, intrusion, proximity, door alarms. It is best done at the front end, before purchasing independent security technology components. For more information, see the NCEF publication [School Security Technologies](#).

- Does a mass notification system reach all building occupants (public address, pager, cell phone, computer override, etc.)? Does it provide warning and alert information, along with actions to take before and after an incident? Refer to the NCEF publication [Mass Notification for Higher Education](#) for related information.

- Is basic security alarm system installed throughout hallways, administrative offices, exit doors, and rooms containing high-value property such as computers, shop equipment, laboratory supplies, and musical instruments? As needs and budgets allow, use room alarm, motion detection, and electronic surveillance systems at primary and secondary entry points, stairwells, courtyards, unsupervised or hidden areas inside the building and along the building perimeter, rooms containing valuable equipment or student records, and in rooms containing dangerous chemicals such as chemistry labs and maintenance supply areas. Have expert contractors install and maintain these systems?

- Are card access systems installed throughout the campus for use by students and staff? Card access systems greatly simplify access control and eliminate problems associated with lost keys and massive re-keying.

- Where keyed locks are used, is a master key control system in place to monitor keys and duplicates?

- In high risk areas, are magnetometers (metal detectors) and x-ray equipment installed? Are they used effectively?

- Is access to information on building operations, schematics, procedures, and construction drawings and specifications controlled and available only to authorized personnel?

Building Surveillance Systems

- Do CCTV camera systems cover appropriate areas of the school and record to digital or tape devices? Are these devices set up to send images to printers or be downloaded onto disks? Do the pictures printed from this equipment provide clear enough images to identify suspects in court?
- Do CCTV cameras use lenses that capture useful images under existing lighting conditions? Is infrared used if needed for dark areas or at night?
- Are cameras triggered by motion or intrusion?

- Are camera housings designed to protect against tampering, vandalism, and exposure to extreme temperature or moisture?
- Do cameras have an uninterruptible power supply, and are they connected to the building's emergency power supply?
- Are camera servers located in a secure location so they can't be tampered with?
- Is the surveillance system protected with adequate firewalls so it can't be broken into?

Entry and Reception Areas

From the NCEF Assessment Guide [Entry and Reception Areas](#):

Main Entry

- Is the main point of entry at the front of the school and is it clearly marked and readily identifiable?
- Is the main entry, or a supervised and controlled designated secondary entry, the closest entry option for visitors approaching after parking?
- Do signs spell out behavioral expectations, access restrictions, and applicable local and state regulations?
- Are the main entry doors remotely controlled from the reception desk or the school office? Is there an intercom so visitors can be queried before they are admitted into the building? If the entry is not visible from the reception desk or school office, is the intercom supplemented by a surveillance camera?
- Where security screening is warranted, does the entry have adequate space for queuing, equipment, and pulling students aside for investigation? If built-in metal detectors are going to be used, have manufacturers been contacted to determine space needs?

Secondary Entries and Exits

- Is the number of building entries and exits kept to a minimum, and are all controlled or supervised?
- Where building and stair exit doors are protected from the weather, do they conceal unwanted activity?

Reception Area

- Are panic or duress alarm buttons installed at the reception desk?
- Is the main entry controlled from the reception desk (see above)?
- Do windows facilitate surveillance from the reception area, providing, on the outside, an unimpeded view of the main entry and drop-off and visitor parking areas, and, on the inside, a view of the adjoining halls and stairwells, and, preferably, the closest bathroom entries?
- When the main entry doors are unlocked, can securable internal doors oblige visitors to confer with the receptionist to gain entry beyond the reception area?
- Does the reception area include adequate protective features, including a counter or desk to serve as a protective shield, a panic or duress button to call for help, and a telephone, a radio base station if radios are used.
- Is the school's main administrative area located off the reception area so administrators can see who is coming and going?
- Does the school layout require visitors to pass through at least visual screening before they can gain access to bathrooms, service spaces, stairwells, or other amenities inside the school? Can anyone get past the reception area without being seen close enough by staff to be identified?

High Risk Schools

- Is the reception area protected by a bullet-resistant windows and walls or does it have a rear exit or safe haven into which the receptionist can retreat? A safe haven is a windowless room with a solid door, easily locked from the inside without requiring a key, and in which there is a telephone for calling for help.
- Are entries designed to mitigate explosive blast hazards? Do they contain design elements that could entrap an explosion, thus amplifying its impact? Are interior and exterior foyer doors offset from one another? Do doors and walls along the line of security screening meet requirements of [UL 752, Standard for Safety: Bullet-Resisting Equipment](#)?

Corridors and Interior Doors

From the NCEF Assessment Guide [Corridors, Interior Doors, and Lockers](#):

Corridors

- Are corridor sight lines maximized for natural surveillance and safety?
- Are corridors well lit with artificial or natural lighting and have no dark or shadowed recesses? Are lighting controls protected from unauthorized use?
- Are recesses, niches, or blind corners visually exposed with windows, convex mirrors, chamfered (angled) corners, or surveillance cameras? Are they shallow enough in depth not to serve as hiding areas or sealed off against illicit use?
- Are lockers, vending machines, trash containers, fire extinguishers, display cases, cabinets, and water coolers mounted flush with walls and allow natural surveillance, or do they have a low enough profile not to provide hiding places?
- Do otherwise hidden corridors and stairwells receive visual surveillance through the placement of windowed administrative offices or other spaces occupied by adults or through the use of video surveillance equipment?
- Do corridors have interior glazing to improve surveillance?

Interior Doors

- Do door access devices such as master keys or proximity cards allow staff to gain quick entry to any room where students have secured themselves?
- Does door hardware permit criminals or vandals to lock or chain corridor doors as a way of significantly slowing down security officers in pursuit?
- Are recessed door entries angled or chamfered? Chamfered door entry recesses are inset at 45 rather than 90 degrees to reduce opportunities for concealment and to minimize pedestrian collisions and conflicts.
- Do recessed doors project more than 7 inches into the corridor? Section 1005.2 of the [International Building](#)

[Code](#) does not permit a fully opened door to project into a corridor (a path of egress) by more than 7 inches.

Stairs and Stairwells

From the NCEF Assessment Guide [Stairs and Stairwells](#):

- Are stair risers enclosed to prevent persons under the stairs from grabbing the ankles of others using the stairs, or are under-stair areas completely blocked off?
- Do windows or openings provide natural surveillance into stairwells located on outer walls?
- Where natural surveillance is inadequate, are enclosed stairwells electronically monitored?

Classrooms

From the NCEF Assessment Guide [Classrooms](#):

Natural Surveillance

- Are all parts of the classroom visible from the classroom door, with no parts of the classroom hidden from sight? This aids natural surveillance and reduces opportunities for misbehavior.
- Do interior windows between classrooms and corridors promote visual surveillance in both directions? Are they obstructed by posters, pictures, or other posted materials?
- Do classroom windows enhance visual surveillance of the school grounds?
- Do retractable classroom partitions fully recess into permanent, lockable niches to eliminate hiding places?
- Do retractable classroom partitions contain windows or otherwise provide visual access into adjoining spaces when they are in use?
- Are classrooms well lit, with as much natural light as possible? Well lit classrooms are safer classrooms, and natural light does not depend on a power source.

Classroom Communications

- Are all classrooms, including portable classrooms, on the public address system? Do intercoms, phones, or radios allow for two-way verbal communication between the classrooms and the school's administrative or security offices?

Classroom Doors

- Does door hardware allow staff to quickly lock down classrooms from the inside without having to step into the hallway? Dual cylinder, ANSI F88 locksets are recommended for all classroom doors. They allow doors to be locked from either side to prevent entry into the classroom from the corridor side, but they cannot be locked (in accordance with building and fire code requirements) to prevent egress from the classroom. The capability to quickly lock the door from either side is the fastest solution for "lockdown" situations. Additionally, F88 locksets meet all ADA requirements. Installation costs are a few hundred dollars per door. For more information, see the NCEF publication [Door Locking Options in Schools](#).
- Are exterior classroom doors made of metal or solid wood, with heavy duty, vandal-resistant locks?

Auditorium/Theater/Performing Arts Center

From the NCEF Assessment Guide [Auditorium/Theater/Performing Arts Center](#):

- Are there separate, secure, controllable entrances to the auditorium, theater, or center for after-hours activities? Is attendee access to the rest of the school controlled?

Library/Media Center

From the NCEF Assessment Guide [Library/Media Center](#):

- Does the library or media center, if jointly used by the school and the community, have separate and secure access for school use and after-hours activities, and does it restrict access to and from other areas of the school?

Food Service Areas and Student Commons

From the NCEF Assessment Guide [Food Service Areas and Student Commons](#):

- Can the kitchen and serving areas be secured during and after school hours?
- Are food services or students commons areas that are used after school designed to prevent unauthorized access further into the building?

Music Rooms

From the NCEF Assessment Guide [Art, Music, and Dance Rooms](#):

- Does the music room have an alarm system to deter breaking and entering?
- Are windows in practice rooms burglar resistant or alarmed?

Restrooms

From the NCEF Assessment Guide [Restrooms](#):

- Do school restroom have windows? California advises against using windows for ventilation in bathrooms because windows can serve as passageways for weapons, people, or contraband.
- If a restroom is intended for use by people engaged in after-school activities, is it conveniently located and able to be used without providing access to the rest of the school?

Labs, Shops, and Computer Rooms

From the NCEF Assessment Guide [Labs, Shops, and Computer Rooms](#):

- Do labs, shops, and computer room entries have alarm systems to deter breaking and entering?

- Do rooms for storing equipment, supplies, chemicals, tools, or other items that could be used for dangerous purposes have adequate, locking doors?
- Are windows in rooms with costly equipment or hazardous materials highly burglar resistant, or are they alarmed, or both?

Indoor Athletic Facilities

From the NCEF Assessment Guide [Indoor Athletic Facilities](#):

- Does the facility have separate, secure entrances for school use and after-hours activities?
 - Is user access to the rest of the school controlled?
- Are walls and entryways free of hiding places, such as deep niches or recesses?

Custodial and Equipment Rooms

From the NCEF Assessment Guide [Custodial and Equipment Rooms](#):

- Are all rooms containing mechanical, electrical, communications, water, fire, security, and other critical equipment identified by number or simply as "Equipment Room" to provide less information to intruders? Check with local emergency responders to ensure they are comfortable with this kind of unspecific designation.
- Are doors to these rooms made of metal or solid wood, with concealed hinges, pick plates, high quality deadbolt locks, and high security strike plates?

Door Locking Options in Schools,
http://www.edfacilities.org/pubs/door_locks.pdf
Mass Notification for Higher Education,
<http://www.ncef.org/pubs/notification.pdf>

NCEF resource list, *Access Control Systems*,
http://www.edfacilities.org/rl/access_control.cfm

U.S. Department of Education, Office of Safe and Drug-Free Schools

Practical Information on Crisis Planning: A Guide for Schools and Communities,
<http://www.ed.gov/admins/lead/safety/emergencyplan/crisisplanning.pdf>

Other Resources

UL 752, *Standard for Safety: Bullet-Resisting Equipment*,
<http://ulstandardsinfontel.ul.com/scopes/scopes.asp?fn=0752.html>

UL 972, *Burglary Resisting Glazing Material*,
<http://ulstandardsinfontel.ul.com/scopes/scopes.asp?fn=0972.html>

ASTM F588, *Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact*, <http://www.astm.org/Standards/F588.htm>

ASTM F1233, *Standard Test Method for Security Glazing Materials And Systems*,
<http://www.astm.org/Standards/F1233.htm>

International Building Code, <http://www.iccsafe.org>

Resources

National Clearinghouse for Educational Facilities (NCEF)

Mitigating Hazards in School Facilities, with links to 25 NCEF Assessment Guides,
http://www.edfacilities.org/pubs/pubs_html.cfm?abstract=mitigating2

School Security Technologies,
http://www.edfacilities.org/pubs/security_technologies.pdf