



“...what we need is a plan.”

From planning to technology trends:

School Security Solutions Workshop Session

Agenda

1. Building expertise for your school security plan
2. Communications
3. Crime Prevention Through Environmental Design, Lighting
4. Top ten technologies for School Security



Workshop overview:
Building expertise
for your school
security plan

PART I



A conversation at a recent school management meeting...

“Are the basics enough? Are there locked door protocols, access control, video surveillance, emergency communications”

Are the school safety officers on regular tours?

“What we don't have is a plan. There is not one single person responsible for coordination of an incident. Video playback requires training and there is no one monitoring the system.”

Where are the communications protocols between office and classrooms for emergencies?



Part 1: Take the steps to a sound School Safety and Security Plan

- Threat and vulnerability assessment (TVA) development
- Operating procedures, incident response, crisis management and recovery, development of the school safety and security plan
- Coordination with first responders
- Learn how to manage and use the safety and security technology available; make it work for you, not the other way around.



Take the steps to a sound School Safety and Security Plan

- What actionable data and security/safety resources do you have?
- Operating procedures, incident response, crisis management and recovery, the development of the school safety and security plan is of the greatest importance to schools
- Once created, the plan can be linked to human resources and the most useful systems available
- Learn how to manage and use the safety and security technology available; make it work for you, not the other way around.



Develop TVA based on risk

One balanced viewpoint by a designer:

“The real concern I have is helping ensure that the schools understand the actual risks, to include the likelihood of a mass casualty event, which will help ensure that decisions are made based on quantifiable risk and not emotional connections to largely infrequent situations. “



First responder¹ Categories

- EMS
- Law Enforcement
- Fire
- Explosives
- HAZMAT
- Search & Rescue



¹www.firstresponder.gov

Example: migration to IP Video

- Migration path to IP video is easier and lower in cost
 - Uses the existing quality coaxial infrastructure
 - Offers three significant advantages await those that adopt
1. Higher resolution, usable forensic video, often from HDTV IP cameras
 2. Easier ways of searching incident video and supporting mobile devices that are popular among first responders and today's security force
 3. Use of "smart" IP cameras that offer embedded and connected video analytics for "proactive" alerting and "reactive" video synopsis

The “big three” in School Safety and Security Planning

- 1 Risk Assessment
- 2 Master Planning
- 3 Site Survey



Communications

PART 2



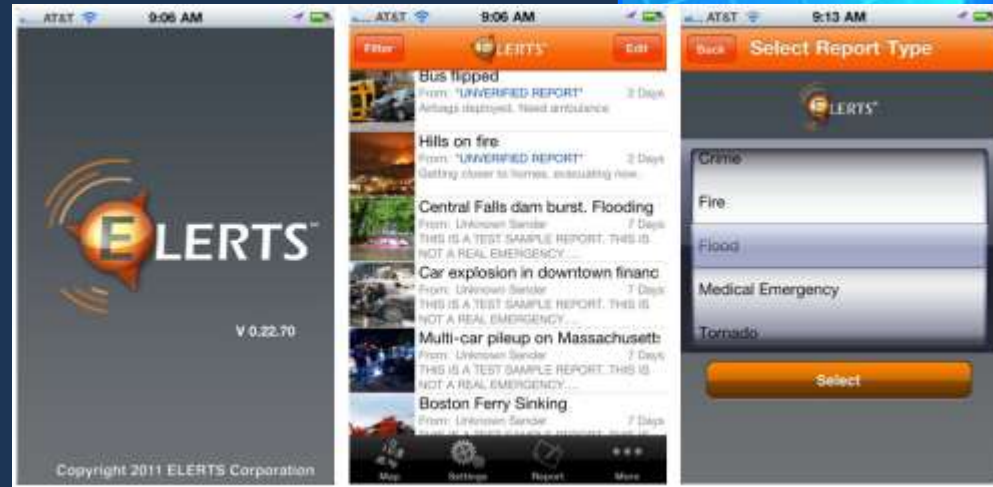
Communications

- Are there communications protocols between office and classrooms for emergencies?
- Unified Communications Systems often have mass notification and emergency communications built in
- Telephony or VOIP Solution Providers can enhance



Communications

- Cloud computing, mobility and video surveillance are here providing new opportunities for better communication of emergencies
- Popular solution permits the “opt-in” of a mobile device to a school’s emergency communications network, allowing simplified sharing of potential threats and incidents in progress
- This solution has now “graduated” to include automated call up of nearby cameras to the incident and personal emergency applications triggered by students, faculty and staff



Information sharing with Law Enforcement

- Example: Large Emergency Event Digital Information Repository (LEEDIR)
- The LEEDIR platform was conceptualized by the Los Angeles Sheriff's Department when the value of eyewitness information was realized in helping solve crimes and informing disaster response
- LEEDIR is now available to all law enforcement and relief agencies around the US
- “LEEDIR allows any law enforcement agency in the nation to have “on retainer,” a digital repository, an electronic bucket, that can be activated with a simple phone call and click of the button. Once the bucket is activated, the public can send in digital pictures and video from the scene, and it will expand and contract on the fly.”



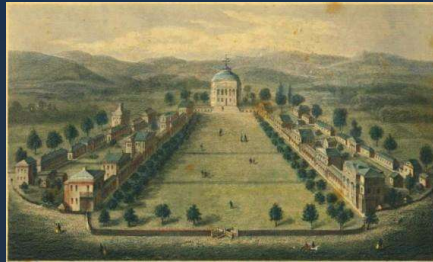
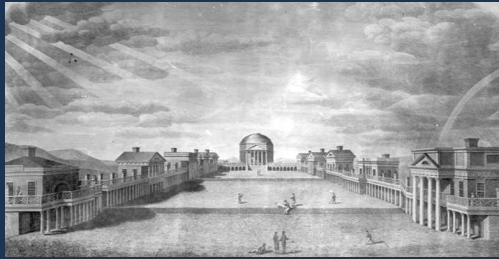
Crime Prevention Through Environmental Design

PART 3

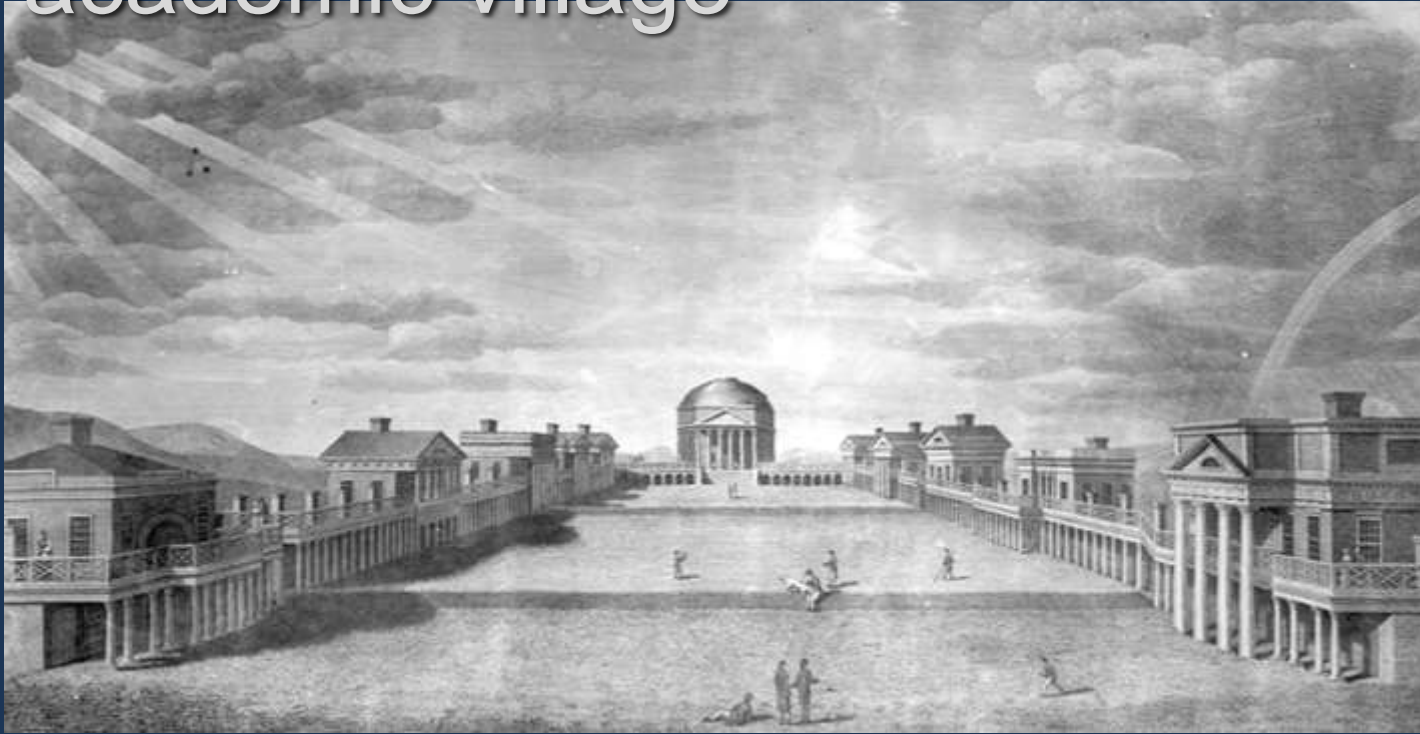


A vision...and a challenge

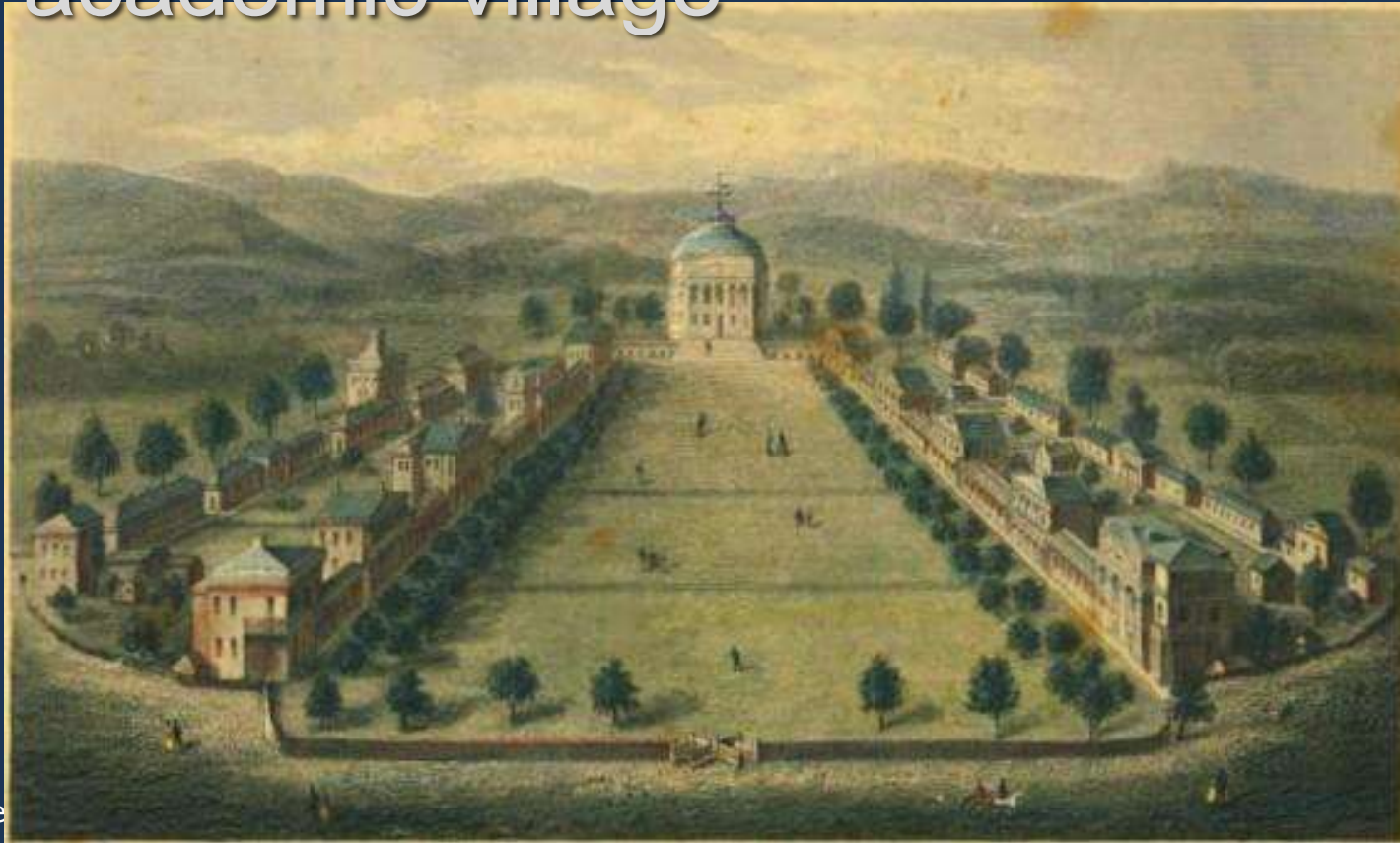
Thomas Jefferson's vision of the "academical village" – is aesthetically pleasing and conducive to the growth and diversity of an academic institution, but it also creates challenges to security.



Jefferson's concept: the academic village



Jefferson's concept: the academic village



Today's reality: "Open" yet using CPTED*



* On the same campus; University of Virginia

Crime Prevention Through Environmental Design (CPTED)

School Security Symposium

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What is a Safe School ?

A safe school is a place where students enjoy optimal learning opportunities provided by teachers focused on student achievement.

It is where students and teachers function efficiently in a supportive environment.



What is CPTED and how does it relate to Schools?

Crime Prevention Through Environmental Design (CPTED) is the broad study and design of environments to encourage desirable behavior, heighten functionality, and decrease anti-social behavior

The environment of the surrounding neighborhood is an extremely critical factor to school safety. Drug activity, community crime rate, the presence of gangs and outsiders and even traffic patterns for vehicles and pedestrians can have significant impact on the ability to establish and maintain a safe school.



CPTED is built on three considerations:
Natural Surveillance

Natural Access Control

Territorial Reinforcement



Natural Surveillance

The capacity to see what's occurring without having to take special measures to do so:

Clear Direct Views – Windows, both interior and exterior



An Adult Presence – A school employee monitoring during class change times in hallways, near bathrooms, and locker areas

Effective Lighting – The most dramatic and visible improvement at a school after installation





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Natural Access Control

Clearly Established School Property Lines

Secure Site Perimeter and Limit Access Through Selected Points

Delineate Public and Private Spaces on School Grounds





Improving Access Control

Limit the number of buildings

Limit the number of entrances

Locate the office at the front of the school, where staff will have a clear view of the entrance



Improving Access Control

Provide a separate, controlled entrance for staff

Provide a drop off/pickup lane for buses only

Minimize the number of driveways or parking lots that students will need to cross

Where possible, set buildings and playgrounds back from public streets, driveways, and parking areas by at least 50 feet



Territorial Reinforcement

Physical Attributes That Express Ownership

Fences

Signage

Landscaping

Pavement Designs









Interior Areas of Focus

Circulation Management:

Wide corridors that allow for surveillance. Look for unsupervised alcoves and hidden areas that limit surveillance

High Activity Areas:

Cafeterias, Locker Areas, Bathrooms and Stairwells. Use these locations as an opportunity for Natural Surveillance through designated personnel or design improvements

Security System Design Criteria

Incorporate Closed Circuit Television Cameras (CCTV) where possible, consider both interior and exterior locations. Make sure footage is stored and backed up for after event purposes

Establish effective and reliable emergency two-way or cellular communications system campus wide. Test your system frequently to ensure reliability

Consider Electronic Card Access Readers at critical entry points throughout the facility. This aids in securing the physical building perimeters

Security System Design Criteria

Lighting:

LED Technology is the lighting of choice

Better Optical Light for Less Glare and Eye Strain

Contains no Mercury which is common in current school lighting

Average Energy Savings of 70%, Typical ROI is only 1-2 years





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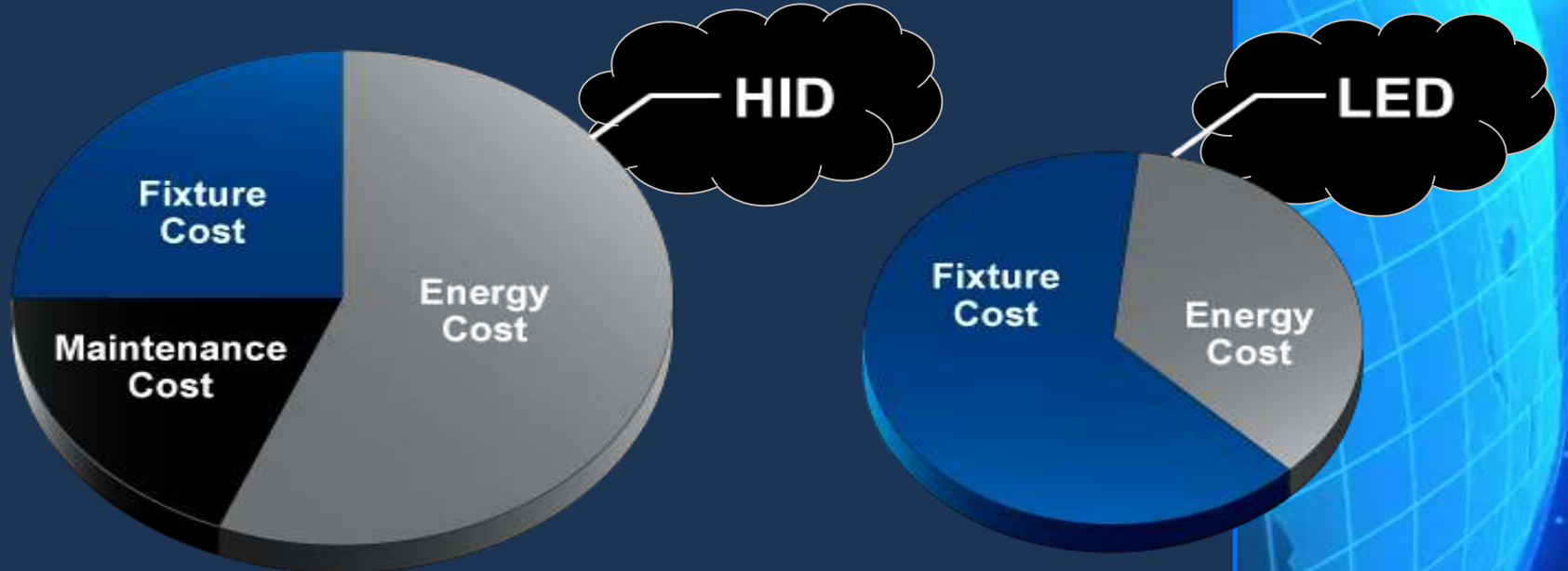


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LED Lighting:

Improved HDTV Surveillance performance, Lower Total Cost of Ownership (TCO)



LED Lighting: upgrade from High Pressure Sodium Lighting



City of Austin, TX – Parking Structure - Before

LED Lighting: upgrade from High Pressure Sodium Lighting



City of Austin, TX – Parking Structure - After


LED Lighting: upgrade from High Pressure Sodium Lighting



Crocina Tunnel, Arezzo, Italy

LED Lighting: upgrade from High Pressure Sodium Lighting

50%



LED Lighting: upgrade from High Pressure Sodium Lighting



75%

LED Lighting: upgrade from High Pressure Sodium Lighting



Completion

How is a Safe School Planned?

In the truest sense, safe school planning is all about the “art of the possible”

Every community has the opportunity to shape the direction and substance of its own safe school program. Each community can create the exact school climate it wishes

A safe school plan, more than anything else, is a function of the community’s commitment to its young people



Key Questions to Ask

“What do we wish to accomplish?”

“How do we want to make it happen?”

A safe school cannot be mandated; it must be planned, realized and nurtured by those closest to it

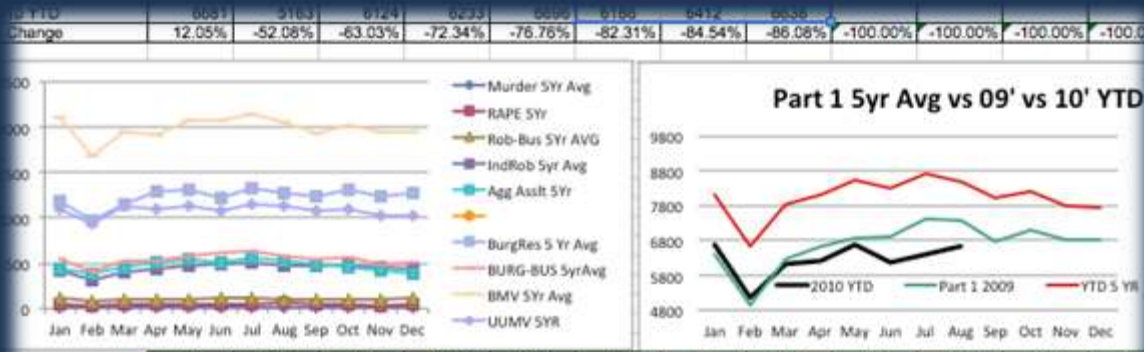


School Security:
It's On Everyone's Mind



Crime and Loss Prevention

- Loss Prevention: planning for the most likely; adding force multipliers to repel and protect hard assets
- Video surveillance and analytics needed for fast forensic review
- Access control is your first line of defense, backed up by response team; remember no physical security systems is effective without response or enforcement
- Awareness of Crime Analysis is key to predictive “policing”



Top ten technologies for School Security

PART 4





Top Ten Physical Security, Safety and Cyber Technologies for Schools

Top Ten School Safety/Security Trends

- 10 Too much Big Data? Make it searchable and conduct better investigations. How can this be linked to criminal databases?
- 9 Cyber Security; the latest exploits in schools
- 8 Tactical solutions, screening and advanced detection methods
- 9 Improved site safety/security through lighting, CPTED, waiting area surveillance and “shelter in place”

*Security 2/2013 Feature

**IMS 12/2012 “Video Surveillance Trends for 2013”

***Central Station Alarm Association

***ASIS PhySec Council “top topic”

****SIA Education top rated session at ISC West 2013



Top Ten: Industrial Security Trends

- 5 Access Control, lockdowns, soft and hard asset tracking; Child Protective Services and complementary tech
- 4 Information sharing, public safety alarm protocol*** and how to communicate and work with first responders and your fusion center
- 3 Unified communications, emergency comm, mass notification** for schools
- 2 Better video “vision”; better analytics and the age of the “smart” camera****
- 1 Mobility, Mobile applications, BYOD**



From needs
...to solution



Wrap up

Solution to needs

CPTED | Security Master Planning | Threat & Vulnerability Assessment | Crisis Management & Recovery Exercises

Plan

All solution elements in play | Exercise multiple communication paths including mobility & redundancy

Training

Alert-Lockdown-Inform-Evacuate | Communications-Access Control-Video Observation & Recognition

Action

Real-time event Review & Synopsis | Track & Investigate

Review

Develop Metrics for Communications | Intelligence | Action | Recovery and improve

Improve

Resources abound!

- Emergency operations plans (EOPs) for schools and institutions of higher education (IHEs)
- [Federal guidance on EOP development](#), including the recommended six step planning process and key topics that support EOP development, such as information sharing, school climate, active shooter situations, and psychological first aid
- [Creating a healthy indoor school environment](#)
- Safety Message - [Preventing Accidents in Chemistry Labs](#)
- [Social Media For Schools](#)
- [Guide for Developing High-Quality School Emergency Operations Plans](#)

For additional information about CPTED Strategies or CPTED Audits, please contact:

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Thank You

Standards and best practices

- ***New CT School Safety Infrastructure Standard and Checklist, [here](#)
- Washington DC area boosts door control security, [here](#). “With an intruder being central to the Sandy Hook tragedy, [access control to schools has become a dominant issue](#). In Virginia, 2012 data show that controlled access systems are in place at 59 percent of elementary schools, 51 percent of middle schools and 37 percent of high schools.
- In Montgomery, officials expedited funding in January for a \$364,000 project to install buzz-in systems with exterior cameras and intercoms at a group of elementary schools.

Standards and best practices (Cont'd)

- Delaware Comprehensive School Safety Planning process, [here](#)
- MN Comprehensive School Safety Guide, [here](#)
- PA State Police School Security Report, [here](#)

