



Facility and Space Use Survey & Strategic Master Plan
Venture Project 170064.01

SAFETY & SECURITY | FINAL

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PART I
Building Recommendations

Racine County Dennis Kornwolf Human Services Center



Racine County Dennis Kornwolf Human Services Center

- **Short and long-term goals:**
 - Integrated security “Alertus” system
 - Multiple panic alarms in individual/key rooms
 - Enhanced control access to building
 - Multiple egress exits in case of emergencies
 - Install proximity readers around exterior of building
 - Install comprehensive I.P. camera system
 - Install additional exit signage in case of emergencies
 - Doors should be equipped with advanced locking hardware
 - Hardline phones
 - Medical Supplies
 - Administrative counters should be heightened
 - Additional Outside Signage
- **Ultimate goals:**
 - Safe room concept with communications
 - Advanced staff training on security procedures
 - Multiple egress exits in case of emergencies

Law Enforcement Center



Law Enforcement Center

- **Short and long-term goals:**
 - Integrated security “Alertus” system
 - Multiple panic alarms in individual/key rooms
 - Multiple egress exits in case of emergencies
 - Install additional exit signage in case of emergencies
 - Hardline phones
 - Emergency buttons/Signage
 - Security Audits – Industry Standards
 - Additional Proximity key readers
 - Install additional exit signage in case of emergencies
 - Doors should be equipped with advanced locking hardware
 - Hardline phones
 - Medical Supplies
 - Additional Outside Signage
- **Ultimate goals:**
 - Safe room concept with communications
 - Advanced staff training on security procedures
 - Multiple egress exits in case of emergencies

Sheriff's Patrol Satellite



Sheriff's Patrol Satellite

- **Short and long-term goals:**
 - Integrated security “Alertus” system
 - Multiple panic alarms in individual/key rooms
 - Enhanced control access to building
 - Multiple egress exits in case of emergencies
 - Install proximity readers around exterior of building
 - Install comprehensive I.P. camera system
 - Install additional exit signage in case of emergencies
 - Doors should be equipped with advanced locking hardware
 - Hardline phones
 - Medical Supplies
 - Administrative counters should be heightened
 - Additional Outside Signage
- **Ultimate goals:**
 - Re-due main entrance to have additional security measures
 - Advanced staff training on security procedures
 - Multiple egress exits in case of emergencies

Ives Grove Complex - Public Works



Ives Grove Complex - Public Works

- **Short and long-term goals:**

- Integrated security “Alertus” system
- Multiple panic alarms in individual/key rooms
- Enhanced control access to building
- Multiple egress exits in case of emergencies
- Install proximity readers around exterior of building
- Install comprehensive I.P. camera system
- Install additional exit signage in case of emergencies
- Doors should be equipped with advanced locking hardware
- All Building plans are mapped to show safety equipment
- Exterior entrance areas need barriers/fencing
- Doors need proper locking hardware
- Hardline phones
- Medical Supplies
- Additional Outside Signage

- **Ultimate goals:**

- Safe room concept with communication
- Advanced staff training on security procedures
- Multiple egress exits in case of emergencies

Courthouse



Courthouse

- **Short and long-term goals:**
 - Integrated security “Alertus” system
 - Multiple panic alarms in individual/key rooms
 - Multiple egress exits in case of emergencies
 - Install proximity readers around exterior of building
 - Install additional exit signage in case of emergencies
 - Doors should be equipped with advanced locking hardware
 - Hardline phones
 - Medical Supplies
 - Additional Outside Signage
 - Department reception areas need more security (e.g. higher counters, glass barriers, permanently locked doors)
- **Ultimate goals:**
 - Safe room concept with communication
 - Multiple egress exits in case of emergencies
 - Advanced staff training on security procedures



PART II

Introduction

History of CPTED

Other Competing Crime
Prevention Strategies

CPTED

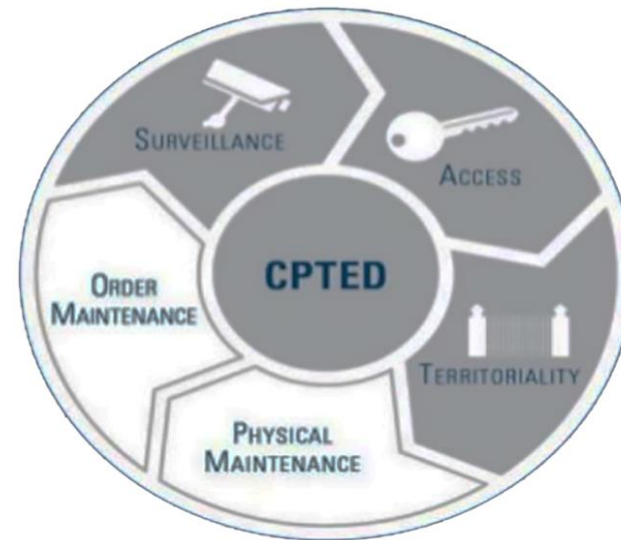
Introduction – Introductory Quote

“The theory of Crime Prevention Through Environmental Design is based on one simple idea: that crime results partly from the opportunities presented by the physical environment. This being the case, it should be possible to alter the physical environment so that crime is less likely to occur.”

-Donald V. Clarke

Introduction - What is CPTED?

- ***“Crime prevention through environmental design CPTED is a multi-disciplinary approach to deterring criminal behavior through environmental design. CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts.”*** -Wikipedia Contributors



- ***“The proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime, an improvement in the quality of life, and enhanced profitability.”*** - The National Crime Prevention Institute (NCPI)

Introduction - What is CPTED?



- ❑ CPTED is not just about safety and security, but also about a better quality of life, human behavior, productivity, profitability, as well as generating activity within the community that will attract people, thereby cycling back to safety and security by providing natural surveillance and territorial reinforcement.

History of CPTED

- ❑ **Ancient times)** CPTED concepts and principles can be studied through various historic examples, revealing an ancient tradition of using the environment to support and influence human behavior.
- ❑ **1960s)** Elizabeth Wood created some of the original CPTED thinking while working with the Chicago Housing Authority through developing guidelines and putting emphasis on design features that would support natural surveillance.
- ❑ Jane Jacobs, a journalist and urban theorist, took a stand and challenged the basic understanding of urban planning of her time, which actually believed neighborhoods should be isolated from each other, and that an empty street was safer than a crowded one, and that the car represented progress over the pedestrian. Jacobs' also stressed concepts of territorial identity and natural surveillance, which are today the framework of CPTED.
- ❑ **60s/70s)** A criminologist, C. Ray Jeffery, coined the term CPTED in the 60s and wrote the book "Crime Prevention Through Environmental Design" in 1971.

-Wikipedia Contributors

History of CPTED (Continued)

- ❑ **70s/80s)** Architect Oscar Newman’s term “defensible space” placed emphasis on specific design features that were missing from Jeffery’s work. It was widely adopted but with mixed success. Newman and others moved to improve defensible space by adding CPTED based features.
- ❑ Contributions to CPTED in the 1980s helped create the famous “broken windows theory;” As well renowned criminologist Timothy Crowe’s CPTED training program.
- ❑ **90s/2000s)** US Government's largest CPTED technical assistance and training program was funded by the US Department of Housing and Urban Development. CPTED’s significant merit has also influenced public and private organizations as well as the US Department of Housing and Urban Development (HUD) by providing casework and training implementation.
- ❑ **Today)** CPTED is a well-established, well-researched, law enforcement embraced, internationally utilized, and endorsed safety and security measure through various case studies, bibliographies, and documents by the United States Department of Homeland Security.

-Wikipedia Contributors

Other Competing Crime Prevention Strategies

❑ CPTED - organized & mechanical approach versus a natural approach

- There are generally two schools of thought when thinking about CPTED, resulting in some confusion and competition within the CPTED movement.
 - One group casually blends CPTED's three strategies (organized, mechanical, and natural approaches), creating more of a crime-control model.
 - The other group places principle emphasis on natural approaches.

❑ Defensible Space

- Similar to CPTED by sharing the basic characteristics of natural surveillance, including natural access control and territorial concern. But CPTED is an extension of the concepts of defensible and applied to many more facets of building types and building occupancy classifications.

❑ Environmental Security

- A concept that was developed side by side to CPTED, and was initially used in residential conditions.
- Environmental Security uses a broad range of crime control strategies, including social management, target hardening, activity support, and law enforcement officials.

-Wikipedia Contributors

Other Competing Crime Prevention Strategies (Continued)

Security by Design

A concept of repackaging security engineering, physical security, and procedural security measures to improve and put emphasis on the design process.

Natural Crime Prevention

A concept that developed from CPTED, focusing on natural strategies, and factors from behavior management and control of the design and built environment.

Safer Cities

A crime prevention method that incorporates traditional crime prevention and law enforcement strategies with CPTED. (CPTED planners know that CPTED does not replace other crime prevention strategies, but a high priority should be placed on natural strategies to take advantage of how human and physical resource are being used).

Situational Crime Prevention

A concept much more complex than CPTED because it uses other crime prevention and law enforcement strategies that focus on specific location crime problems.

-Wikipedia Contributors

CPTED - The Three Overlapping Strategies of CPTED

❑ Natural Access Control

- A design concept that limits the opportunity for crime by clearly differentiating between public and private space.
- Access control strategies are classified primarily by natural spatial definition, mechanical, e.g., locks, and organized, e.g., security officers

❑ Natural Surveillance

- Increases the perceived risk of attempting deviant actions by enhancing visibility of potential offenders to the general public.
- Facilitates observation and effectively keeping intruders out because of an increased perception of risk.

❑ Territorial Reinforcement

- Promotes social control through increased definition of space and improved property concern.
- An environment designed to clearly delineate private space creates a sense of ownership and clearly delineates private and public space, while creating a sense of owned space where strangers or intruders stand out and are more easily identified.

-Fennelly, Lawrence

CPTED - The Three Overlapping Strategies of CPTED



- Surveillance: Will I be seen?
- Access: Who can get in & out?
- Territoriality: Does anyone care what happens here?



CPTED - Other Elements of CPTED

Maintenance

- Deterioration can indicate less control by the intended users and a greater tolerance for disorder.
- Maintenance represents ownership of property to reinforce organized boundaries and reinforcements.

Activity Support

- CPTED creates a greater interest among community members who will be more involved with what is happening around them.
- It is important to not that CPTED is not just about security, but also to improve quality of life and bolster the efficiency of intended human activities.
- The full success of CPTED partly relies on the communities support by placing most of its emphasis on human activities and therefore how potential criminals will be exposed.

Target Hardening

- A term often used by police officers, those working in security, and the military to strengthen a building or installation to protect it in the event of attack or reduce the risk of stealing. There is an understanding that a strong and visible defense will deter or delay a potential attack.

-Fennelly, Lawrence

CPTED – Organized, Mechanical, and Natural

CPTED planners typically use three categories in efforts to maximize the use of natural strategies before using more costly organized and mechanical ones that serve as impediments to profit.

❑ Organized

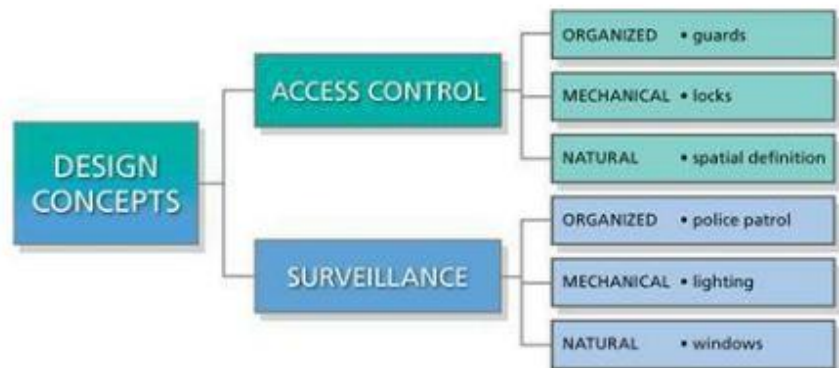
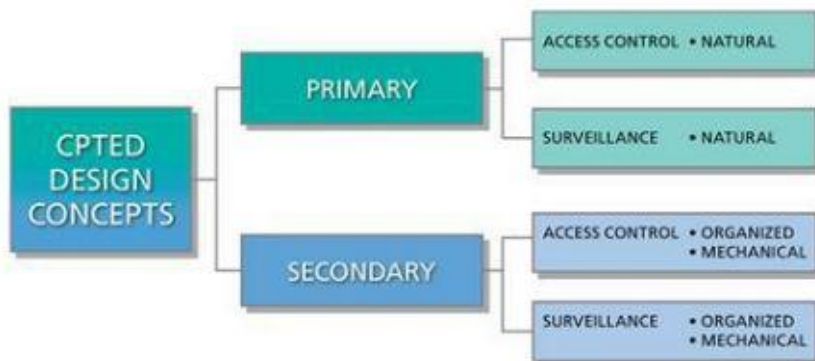
- Labor-intensive security whereby the cost is extracurricular to the normal functions and requirements of human space (e.g., security officers).

❑ Mechanical

- Capital- or hardware-intensive security whereby the cost is, once again, extracurricular to the normal functions and requirements of space (e.g., fences, alarms, cameras).

❑ Natural

- The integration of security and behavior concepts into how human and physical resources are used (e.g., spatial definition, placement of workstations, location of windows).



CPTED - The Three-D Concept

- The three strategies of CPTED: (natural access control, natural surveillance, and territorial reinforcement) can help to be achieved through the introduction of the “Three-D Concept,” which works hand in hand with CPTED as a guide, and encourages the evaluation of space by asking the following types of questions:
 - **Designation**
 - What is the designated purpose of this space? What was it originally intended to be used for? How well does the space support its current use? Its intended use? Is there conflict?
 - **Definition**
 - How is the space defined? Is it clear who owns it? Where are its borders? Are there social or cultural definitions that affect how that space is used? Are the legal or administrative rules clearly set out and reinforced in policy? Are there signs? Is there conflict or confusion between the space’s designated purpose and its definition?
 - **Design**
 - How well does the physical design support the intended function? How well does the physical design support the definition of the desired or accepted behaviors? Does the physical design conflict with or impede the productive use of the space or the proper functioning of the intended human activity? Is there confusion or conflict in terms of the manner in which the physical design is intended to control behavior?

-Fennelly, Lawrence


The Five Basic Types of Information for CPTED Planning

- Crime Analysis Information**
 - Information on crime reports for the major purpose of identifying patterns of criminal activity
 - Geographic and similar offense patterns
- Demographic Information**
 - Information that describes the nature of the population for a given city, district, or neighborhood
- land-use Information**
 - Information and maps that describe and depict the physical allocations and uses of land for noticing natural boundaries, pedestrian and traffic flows
- Observations**
 - Environmental cues are key to normal user and offender behavior for observations of where problems may arise
- Resident or user Interviews**
 - Sources of people's perceptions of where they feel safe and where they feel endangered from locations on crime maps where the most offenses occur

-Fennelly, Lawrence

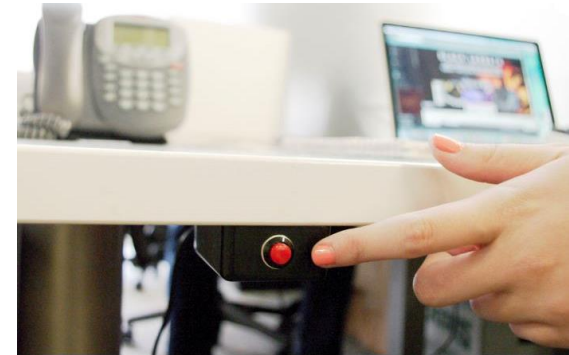
Cited Works

- ❑ Fennelly, Lawrence. Crime Prevention Through Environmental Design (Kindle Location 1021). Elsevier Science. Kindle Edition.
- ❑ Wikipedia Contributors. “Target Hardening.” Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 3 July 2017. Web 3 July 2017. < https://en.wikipedia.org/wiki/Target_hardening >
- ❑ Wikipedia Contributors. “Crime Prevention Through Environmental Design.” Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 15 Jan. 2018. Web 17 Jan. 2018. < https://en.wikipedia.org/wiki/Crime_prevention_through_environmental_design >
- ❑ Chandler, Arizona Police. (2017, June 27). Crime Prevention Through Environmental Design (CPTED). <https://www.chandlerpd.com/wp-content/uploads/2010/12/Chandler-C3-CPTED-Handbook-2016-1.pdf>
- ❑ National Crime Prevention Council. (2003, October) “Crime Prevention Through Environmental Design Guidebook.” <http://www.popcenter.org/tools/cpted/PDFs/NCPC.pdf>
- ❑ California Walks, Shasta County. (2017, September) “Crime Prevention Through Environmental Design: Creating Safe & Vibrant Communities in Shasta County.” http://healthyshasta.org/downloads/CPTED%20Final%20Report%202017/Cal%20Walks_CPTED%20Redding%20Final%20Report.pdf



PART III
Case Study
Examples of CPTED

Case Study Examples of CPTED

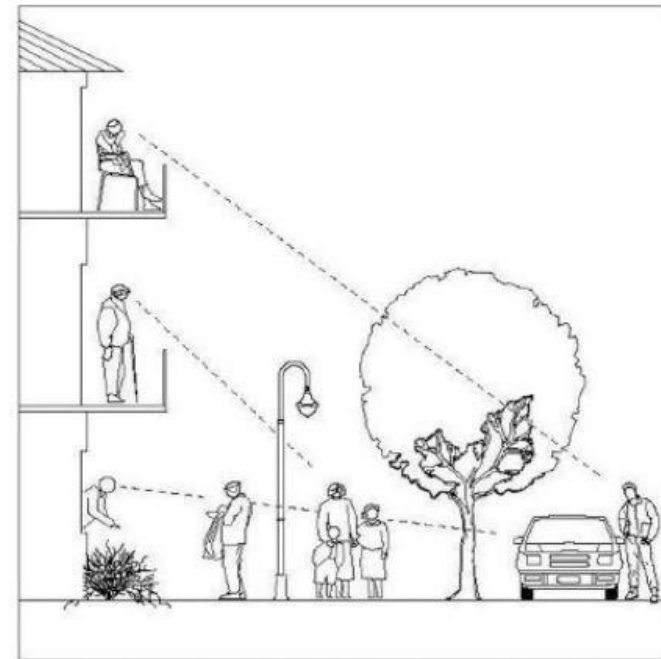
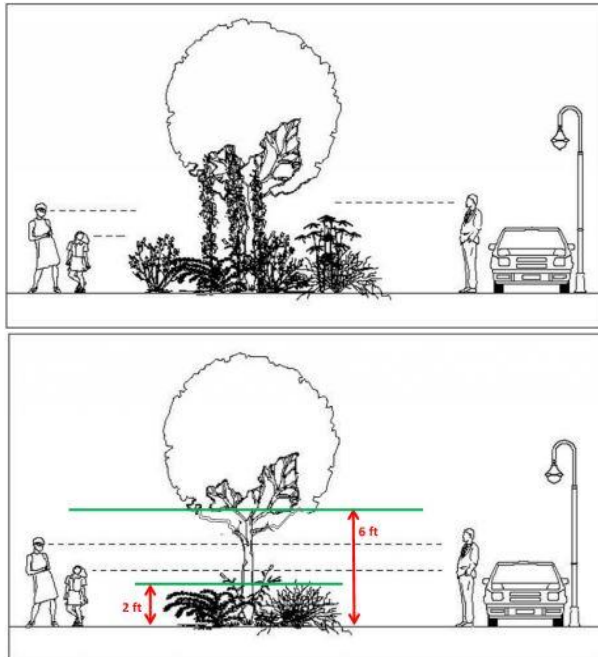


1. Provide hardline emergency phones that flash lights upon activation on all floors and levels.
2. Use bright colors and large numbers to identify floor levels to reduce user disorientation and confusion.

- Install accessible defibrillators and first aid equipment for emergencies, (trained professionals will not always be on site, to combat this, encourage additional staff to be trained).

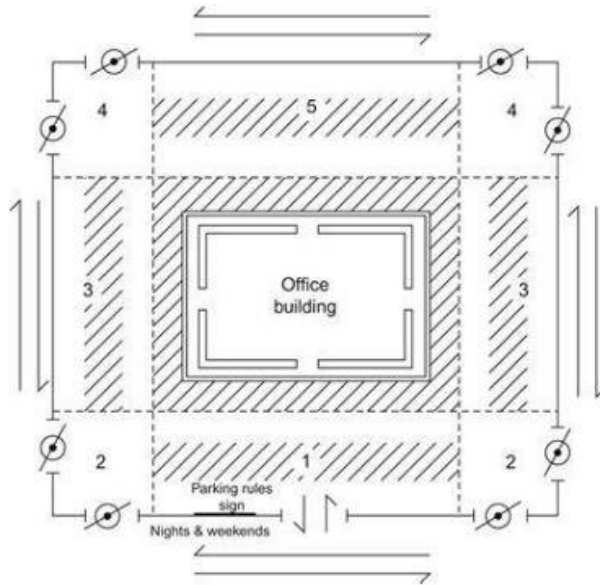
- Install panic buttons for moments of irregular high stress. A quick press button can be extremely useful when people need to act abruptly and lack the proper time to make traditional calls for help.

Case Study Examples of CPTED

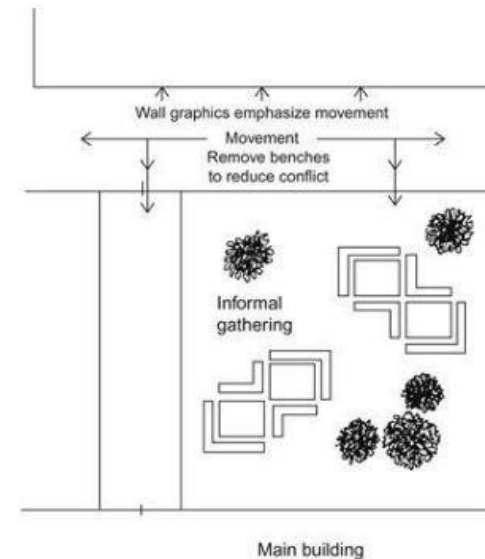


1. Trim lower level shrubs to be no more than 2 feet in high from the ground and trees braches at least 6 feet from the ground for adequate fields of view.
2. Use appropriate and uniformed lighting, low or see-through fencing, shrubs, and removal, redesign of areas that offer concealment: blind corners, shrubs, trees, and walls.

Case Study Examples of CPTED

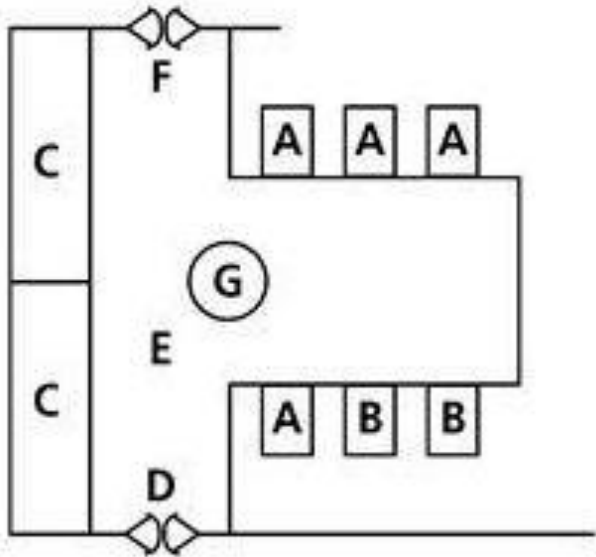


1. Parking lots should have zoned areas that are clearly labeled to identify allowable space and time usage, this way improper parking is more subject to be noticed and scrutinized by law enforcement officials and or security officers.
2. Labeled zones can also be easily closed depending on events.



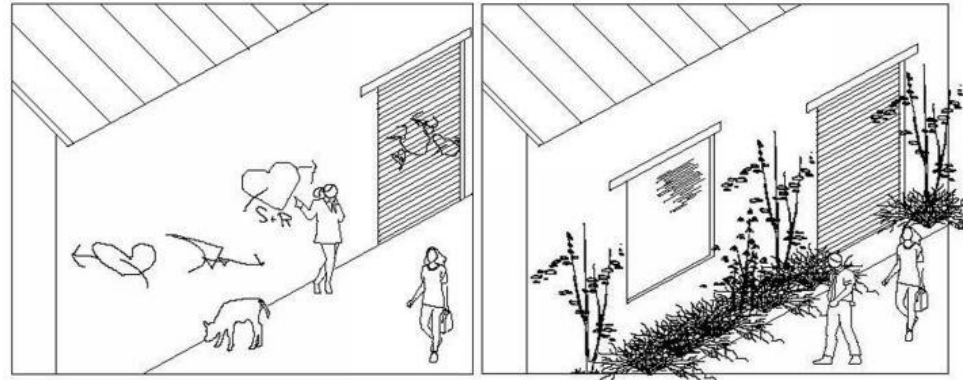
1. Movable amenities (e.g. seating) might be used more effectively and more often than permanent ones.
2. Normal users will feel safer moving through areas intended for gathering behavior, and abnormal users will be spotted easier, making it more difficult to occupy these spaces.

Case Study Examples of CPTED



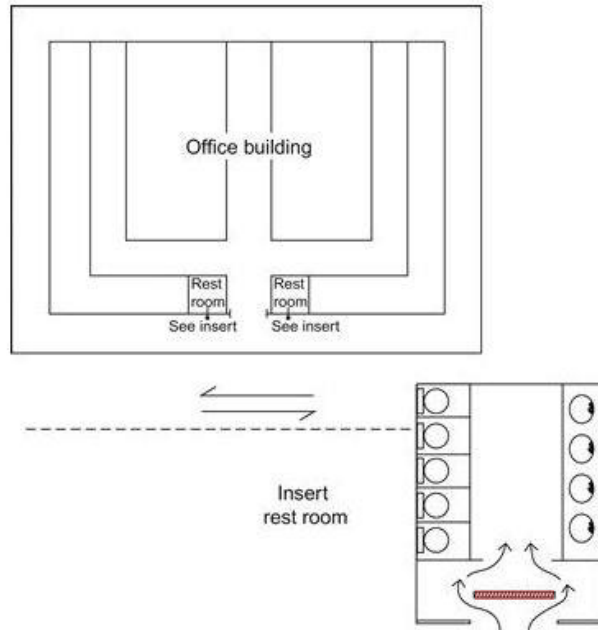
Layout example of well designed lobby:

- A. Elevators serving lobby and floors above.
- B. Separate elevators serving lobby and floor below
- C. Restrooms that are visible from the entrances
- D. Main entrance
- E. Main floor corridor that is visible from main entrance
- F. Controlled access/egress door
- G. Security/receptionist station to screen entrances

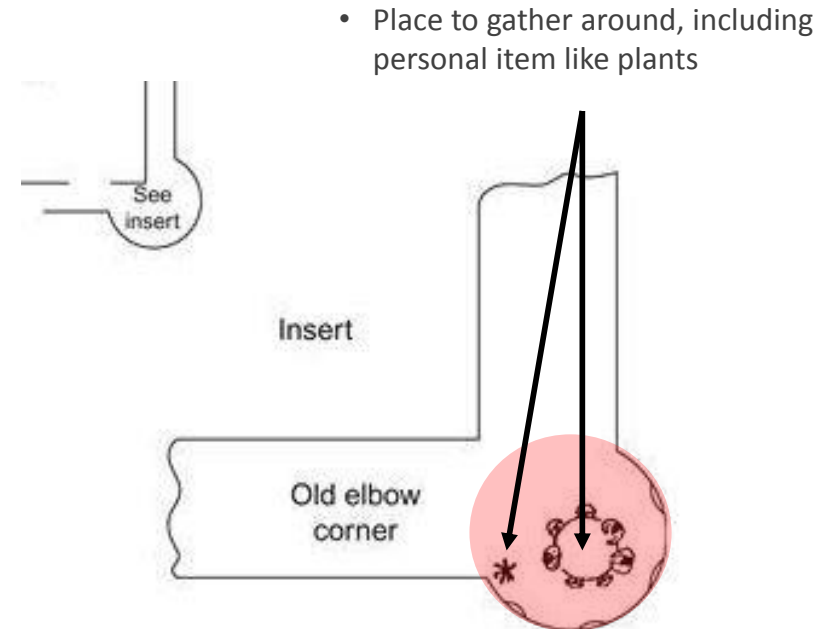


1. Designs should have vegetation under and along walls and accessible windows. This deters access to windows, trespassing, and degradation of walls, (e.g. graffiti).
2. Landscaping and fencing can also be used to define the transition from public to private areas.

Case Study Examples of CPTED



1. Restrooms should be located in the most convenient and accessible places to increase use, which increases the perception of safety.
2. A maze-type entry system or doors placed in a locked-open position will increase convenience and safety, and normal users may determine who is in the restroom by glancing around the privacy screen or wall.



- Place to gather around, including personal item like plants
1. A safe activity may be located in a poorly used or unsafe space to displace any potentially unsafe use.
 2. A safe activity will serve as a magnet for normal users, who will be attracted to the area.
 3. The safe activity and normal user behavior will create and intensify the perception of risk for the abnormal user.
 4. Space utilization and productivity should go up in most cases.

Case Study Examples of CPTED



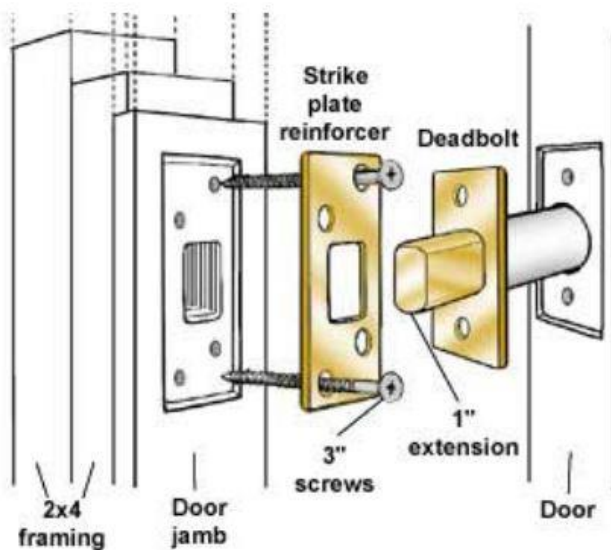
1. Entrance bollards typically serve as blockades that also represent ownership, but bollards with the option of seating are an attractive and useful strategy to allow natural surveillance.
2. Flag poles, large planters, artwork, and traditional seating arrangements are also useful strategies for showing personal touch and ownership.

Case Study Examples of CPTED

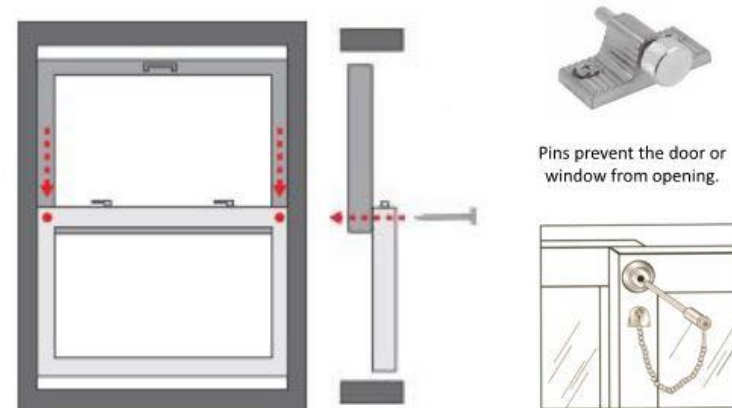


- Building facades should limit window signage to incorporate clear sightlines from within buildings. Entryways and parking areas should be visible from the interior of structures, so occupants can clearly see outside before leaving the building, allowing for natural surveillance.

Case Study Examples of CPTED



- Provide secure door opening hardware at building openings, preferable deadbolts to securely lockout potential threats.

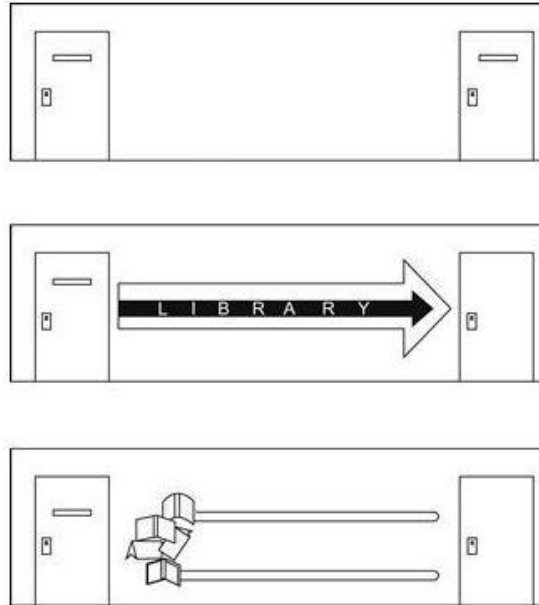


- Install security pins and or screws to adjustable windows to limit the chances of someone being able to throw or slip something inside.

Case Study Examples of CPTED



- Provide appropriately scaled and thoughtfully designed wayfinding system outside and within buildings.



1. Users should be influenced to mark their turf and identify their boundaries.
2. This should extend to unassigned or undifferentiated spaces that will mark transitional zones.



- Well designed and strategically located signs and maps should contribute to feelings of security. It is helpful if signs are standardized to give clear, consistent, concise and readable messages for users.

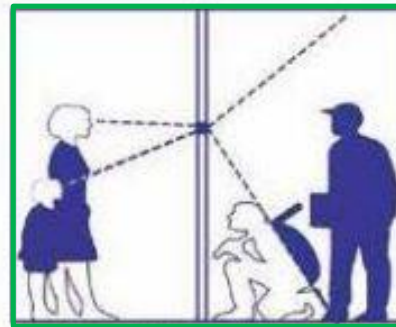
Case Study Examples of CPTED



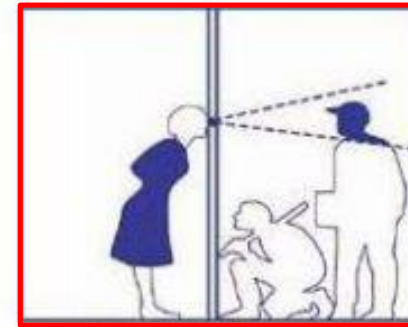
A.



B.



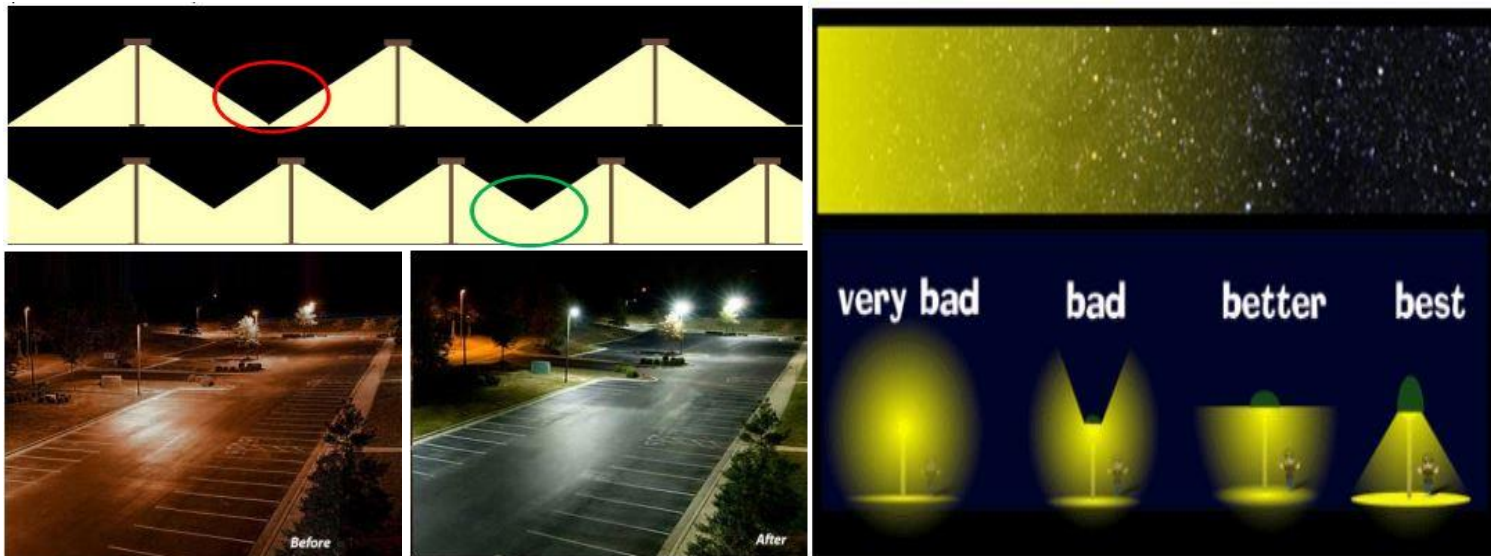
Security Door Viewer



Traditional Peephole

1. Provide doors with natural surveillance to allow users to view through them and detect potential threats.
2. Doors with windows, 3D eye viewers (image A.), and or security cameras are strategies to detect threats that cannot be traditionally seen.
3. Install motion detecting and motion tracking lights (image B.) to ward off unwanted guests from the building

Case Study Examples of CPTED



1. Use LED lighting that provides a more uniform, brighter, and pure illumination of the spaces.
2. LED enables a person to clearly see a person, object, and true colors at 100 feet or better.
3. Encourage businesses to be located lighting, particular around building entrances and parking areas, to allow for natural surveillance

Cited Works

- ❑ Fennelly, Lawrence. Crime Prevention Through Environmental Design (Kindle Location 1021). Elsevier Science. Kindle Edition.
- ❑ Wikipedia Contributors. “Target Hardening.” Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 3 July 2017. Web 3 July 2017. < https://en.wikipedia.org/wiki/Target_hardening >
- ❑ Wikipedia Contributors. “Crime Prevention Through Environmental Design.” Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 15 Jan. 2018. Web 17 Jan. 2018. < https://en.wikipedia.org/wiki/Crime_prevention_through_environmental_design >
- ❑ Chandler, Arizona Police. (2017, June 27). Crime Prevention Through Environmental Design (CPTED). <https://www.chandlerpd.com/wp-content/uploads/2010/12/Chandler-C3-CPTED-Handbook-2016-1.pdf>
- ❑ National Crime Prevention Council. (2003, October) “Crime Prevention Through Environmental Design Guidebook.” <http://www.popcenter.org/tools/cpted/PDFs/NCPC.pdf>
- ❑ California Walks, Shasta County. (2017, September) “Crime Prevention Through Environmental Design: Creating Safe & Vibrant Communities in Shasta County.” http://healthyshasta.org/downloads/CPTED%20Final%20Report%202017/Cal%20Walks_CPTED%20Redding%20Final%20Report.pdf