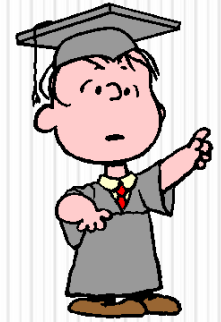




NATIONAL  
CRIME  
PREVENTION  
COUNCIL

# Crime Prevention Through Environmental Design



# **DAY ONE**

- I. Welcome, Introductions and Expectations***
- II. Safe/Unsafe exercise***
- III. CPTED History***
- IV. CPTED Principles and Strategies***
- V. Security Surveys***
- VI. Security Survey Field Practicum***
- VII. Practicum Classroom Prep and  
Day One Wrap-Up***

# **The 6 Pillars of US Policing**

*- President's Task Force on  
21<sup>st</sup> Century Policing*

***Building Trust and Legitimacy***

***Policy and Oversight***

***Technology and Social Media***

***Community Policing and***

***Crime Reduction***

***Officer Training and Education***

***Officer Safety and Wellness***



# Human Nature



***10% never do anything you ask***

***10% always do what you ask***

***80% are influenced***



# Safe or Unsafe?

*The physical environment can have a dramatic effect upon:*

- *Our attitude or feelings*
- *Our own behavior*
- *The way in which we view the behavior of others*



# ***Safe or Unsafe?***

**Your impressions of these places are based on:**

- ***How well you knew the area,***
- ***What you saw,***
- ***What you heard,***
- ***What you smelled, and***



***Your personal history; your cultural, educational and personal background is key to how you view your environment***

# Safe or Unsafe?

The arrangement and design of buildings and open spaces can encourage or discourage undesirable behavior and criminal activity

# Crime and the Environment

- *Crime may be related to the existing land use.*
- *Crime may be related to specific site or neighborhood characteristics.*
- *Crime may be related to traffic and transit volumes and patterns during certain hours of the day.*
- *Crime may be related to changes in demographics or changes in length of occupancy.*
- *Crime may be related to ineffective rules or policies.*
- *Crime may be related to activity schedules and routines.*



# Definition of CPTED



Crime Prevention Through Environmental Design is defined as...

*the proper design and effective use of buildings and public spaces within a community environment that can lead to a reduction in the **fear** of crime, the **incidents** of crime, and an **improvement in the quality of life.***

# ***Successful implementation of CPTED will...***

***Reduce the incidence of crime,  
Reduce the fear of crime, and  
Improve the  
quality of life.***



# **CPTED Involves Many Disciplines**

***Crime prevention***

***Architecture***

***Urban design***

***Landscape  
architecture***

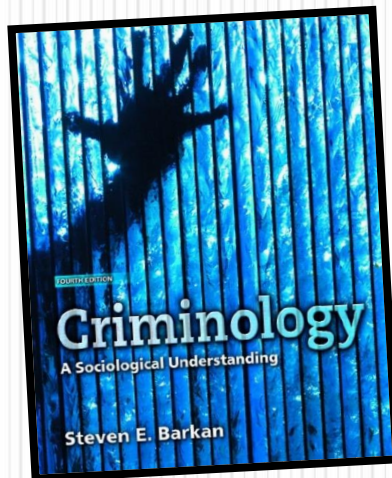


***Planning***

***Sociology***

***Criminology***

***Psychology***



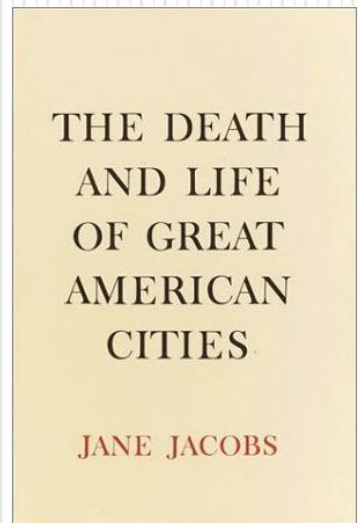
# The Early CPTED Thinkers



- **Jane Jacobs** - 1961  
*The Death and Life of Great American Cities*
- **C. Ray Jeffrey** - 1971  
*Crime Prevention Through Environmental Design*
- **Oscar Newman** - 1972  
*Defensible Space*
- **Wilson and Kelling** - 1988  
*Broken Windows*


# Jane Jacobs (1961)

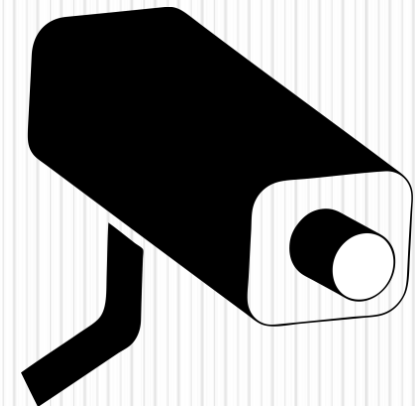
*“...the public peace...is not kept primarily by the police, necessary as police are. It is kept by an intricate, almost unconscious, network of voluntary controls. No amount of police can enforce civilization where the normal, casual enforcement of it has broken down.”*



# C. Ray Jeffrey

*We have finally gotten around to considering education, transportation, recreation, pollution and shopping variables with which any city planner must cope, but security of person and property is not yet an item taken into consideration when we design and build cities.*

  
**SECURITY**



# Oscar Newman

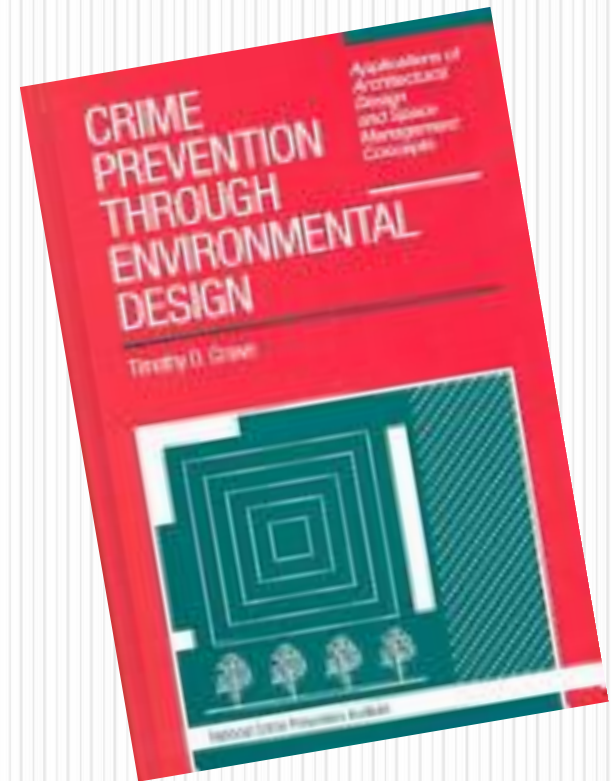
## Defensible Space (1972)



- *Space which people can adequately defend from criminal attack is defensible space.*
- *Defensible space inhibits crime by creating the physical expression of a social fabric that defends itself.*
- *The form of buildings and their arrangement can either discourage or encourage people to take an active part in “policing” while they go about their daily business.*

# **Timothy Crowe** **(*Crime Prevention Through Environmental Design*, 1991)**

***Criminologist Timothy Crowe provided a solid base and “opened the door” for CPTED to move forward through policing and into the community.***





# Timothy Crowe

Three users of space (“the actors”):

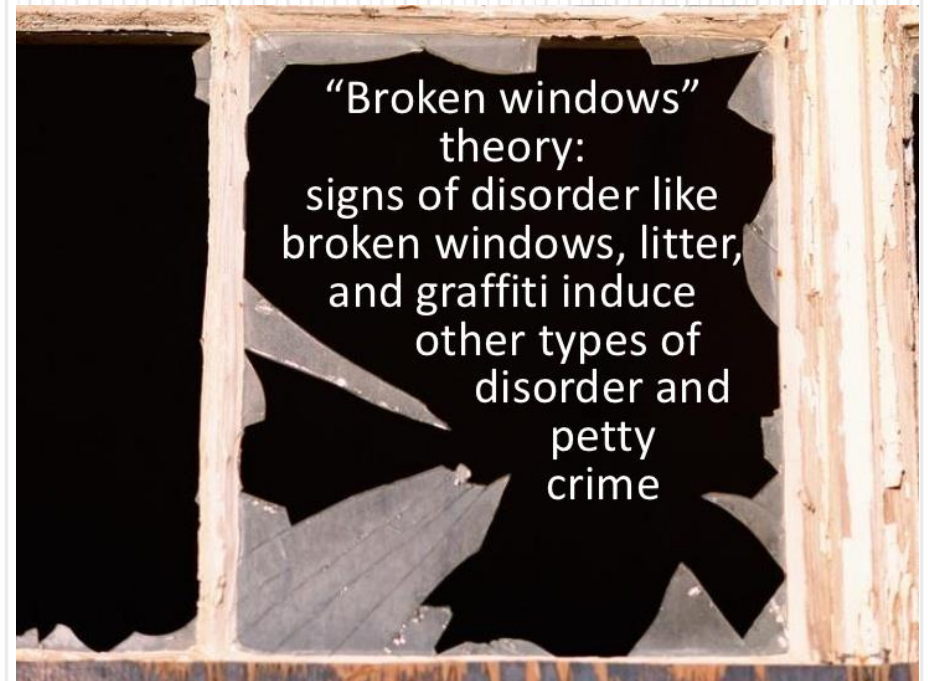
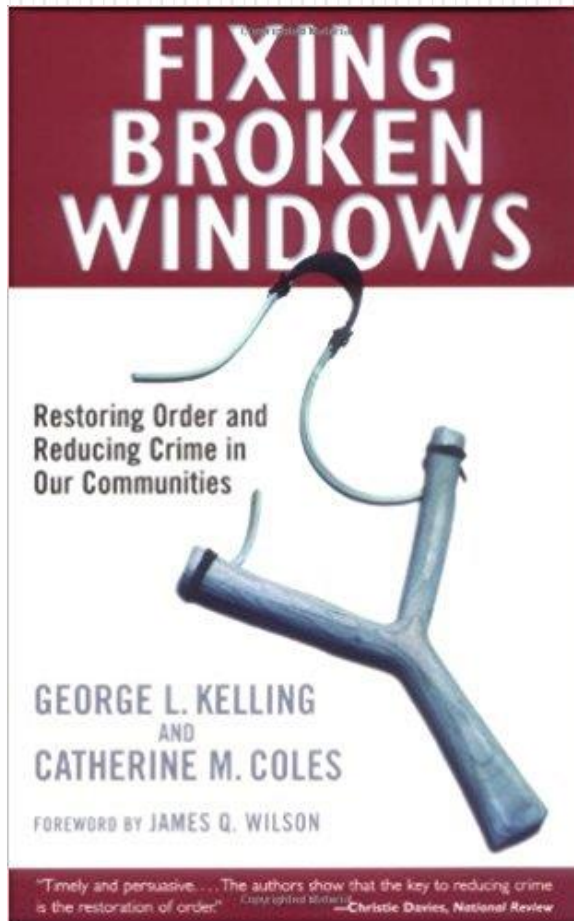
**Normal users** - *persons whom you desire to be in certain places (Majority)*

**Abnormal users** - *persons whom you do not desire to be in that space (Minority, but effects the Majority)*

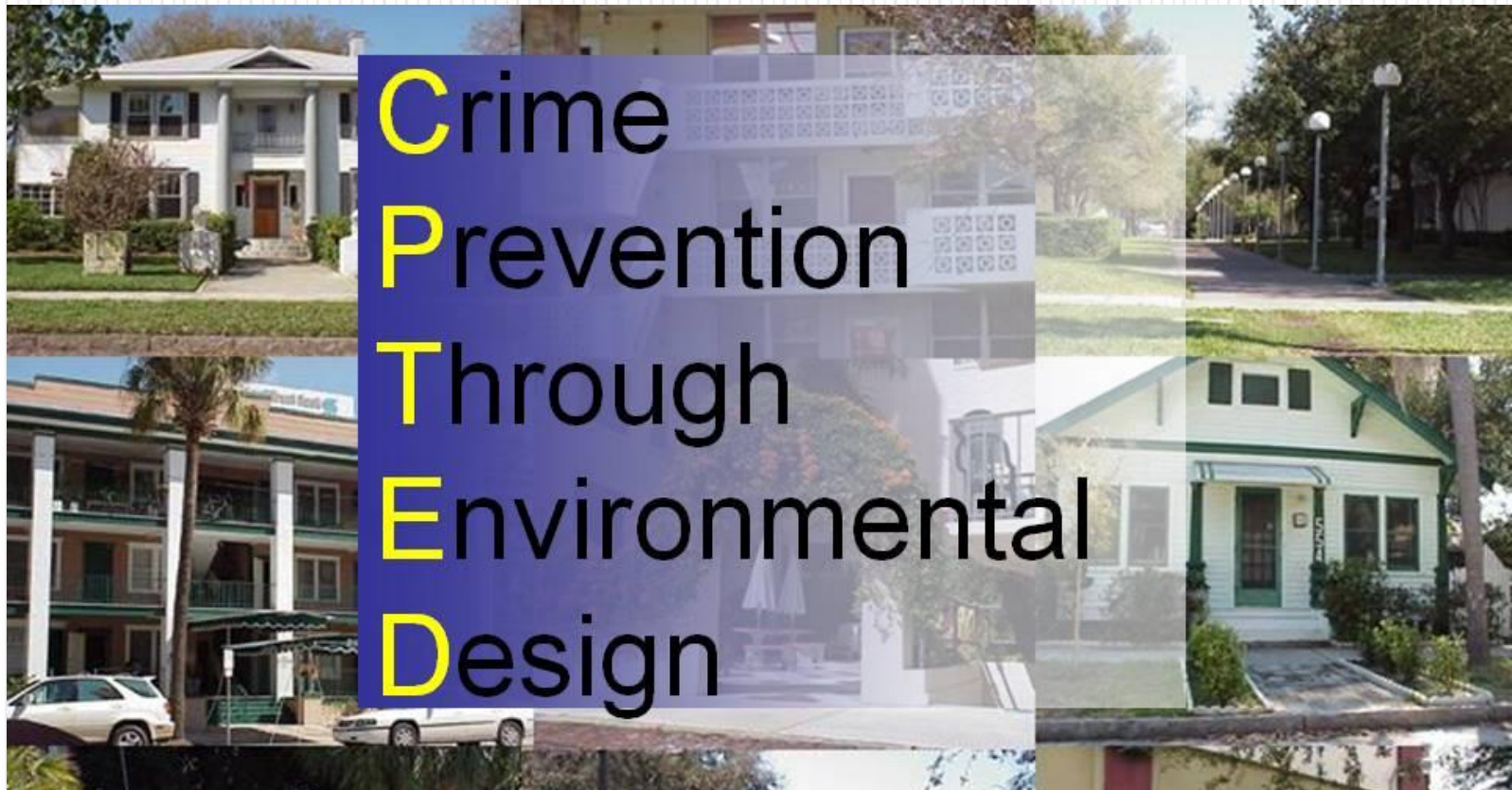
**Observers** - *those persons who have to be in that space to support the human function*

# Broken Windows Theory

(Wilson and Kelling) 1988



# ***What are the Four CPTED Principles?***



**C**Crime  
**P**revention  
**T**hrough  
**E**nvironmental  
**D**esign

# Four CPTED Principles

- 1. Access control***
- 2. Surveillance***
- 3. Territorial Reinforcement***
- 4. Maintenance (Order and Physical)***

# CPTED Principle # 1



## 1. Access Control

- *Design elements that direct movement into, or out of an area*
- *Can include placements of entrances, exits, fences, landscaping and lighting*
- *Creates a perception among offenders that there is a risk in selecting the target*

# Access Control *(continued)*

- ***Natural***
- ***Mechanical***
- ***Organized***



# Natural Access Control – Strategies

- *Create a perception among offenders that there is a risk in selecting the target*
- *Doors, shrubs, wood, stone, etc. to deny admission to a crime target*
- *Locate vulnerable areas near sources of surveillance*
- *Convert streets to pedestrian use*



# Mechanical Access Control – Strategies

- *Control emergency exits*
- *Fence off problem areas*
- *Surveillance equipment at access points*
- *Identification procedures for entry*
- *Physical and mechanical means of access control*
- *Locks, bars, and alarms to supplement natural access control if needed*





# Organized Access Control

*The formal use of people, such as uniformed law enforcement, private security, and organized volunteers*



# CPTED Principle # 2



## 2. *Surveillance*

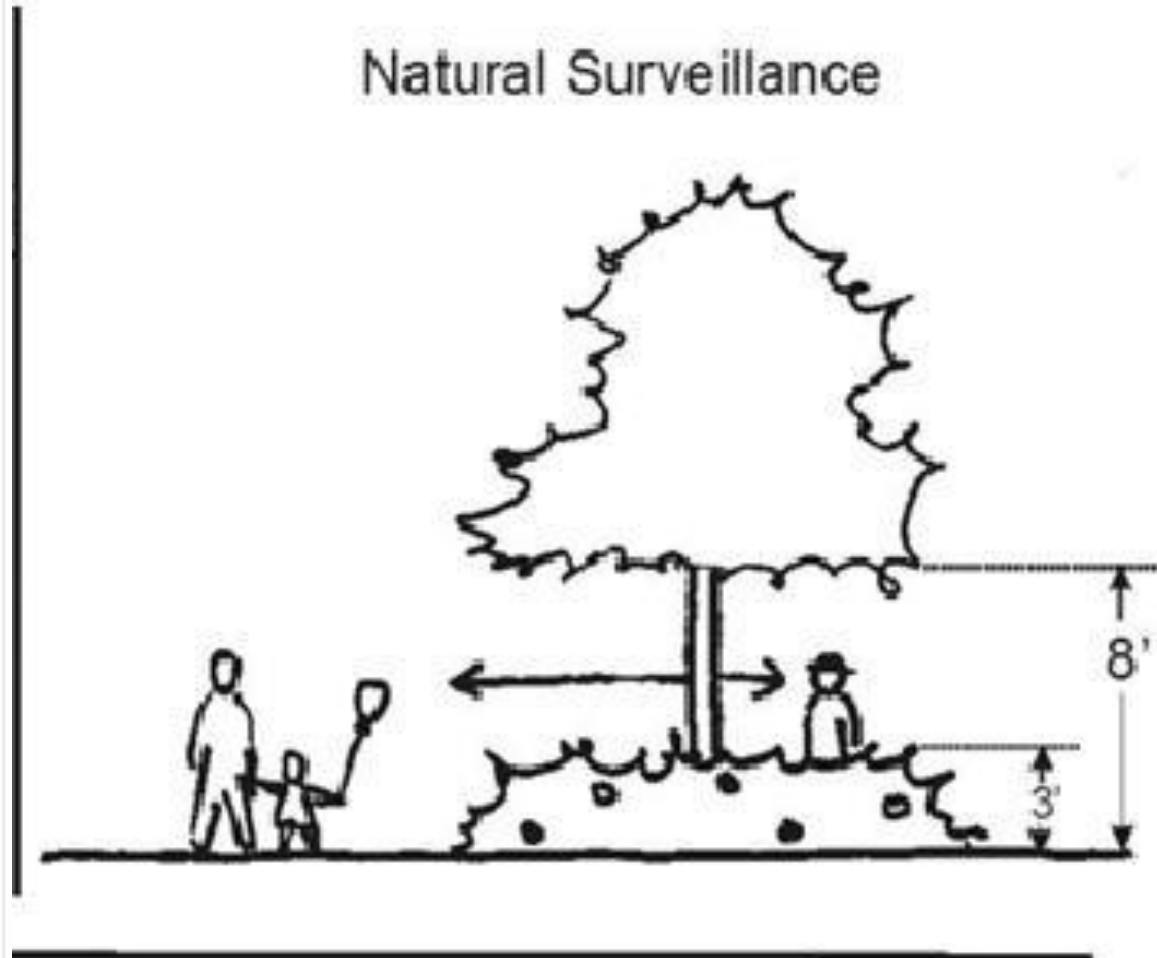
- *Design concept directed at making intruders easily observable*
- *Features maximize visibility of people, parking areas, building entrances, etc.*
- *Elements include see-through fencing, front porches, good nighttime lighting, and pedestrian friendly walkways and streets*

# Surveillance *(continued)*

- ***Natural***
- ***Mechanical***
- ***Organized***



# 3 ft. – 8 ft. Rule 2 ft. – 6 ft. Rule Old



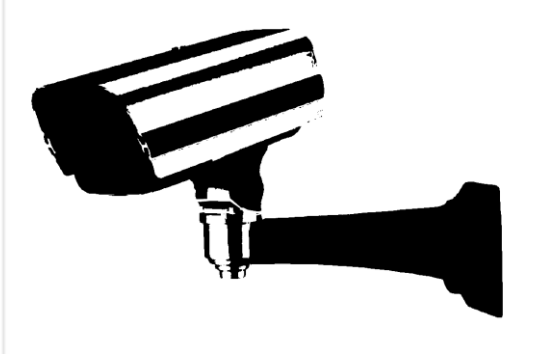
# Natural Surveillance - Strategies

- *Make use of natural lighting*
- *Windows facing streets and alleys*
- *Front porches/stoops*
- *Remove window clutter or visual obstructions*
- *Locate cash registers at the front of the  
business*
- *See-through  
fencing*



# Mechanical Surveillance - Strategies

- *Security Lighting*
- *Locate vulnerable areas near activity*
- *CCTV*
- *Placement of cameras*
- *See-through fencing with an access control component*



# Adequate Levels of Illumination

- **Parking lots** *3-5 footcandles*
- **Walking surfaces** *3 footcandles*
- **Recreational areas** *2-3 footcandles*
- **Building entryways** *5 footcandles*



# Organized Surveillance

- *Locate staff to monitor high-risk areas*
- *Electronic surveillance coupled with viewing staff*
- *Locate vulnerable areas near activity (i.e. lockers)*





# CPTED Principle # 3

## 3. Territorial Reinforcement

- *An overlapping principle that provides users with a sense of control over the environment and its activities*
- *Potential offenders become discouraged*
- *Promoted by features that define property lines and distinguish private space from public space*
- *Gardens, indoor/outdoor activity areas, pavement designs, yard art, CPTED fences*

# Three Qualities of Successful Streets

- 1. Demarcation** - *between public and private space*
- 2. Ownership of Public Safety** - *eyes upon the street*
- 3. Constant Users** - *continuous sidewalk users*



# Defensible Space

- *Describes an area or “zone of defense” by the design characteristics that create it*
- *Areas or zones within a campus building would be designated as being:*
  - *Public*
  - *Semi-public*
  - *Private*
  - *Semi-private*
- *Designation determines who has the right to occupy it under certain circumstances*



# CPTED Principle # 4

## 4. Maintenance

- *Addresses management and maintenance of space*
- *Proper upkeep helps signal that the place is well cared for and signals that the owner, manager or neighbors are watching out for the property*
- *Examples include; mowing grass, picking up and disposing of trash, repairing broken windows and removing graffiti as soon possible*

# **Maintenance**

***Physical Maintenance***

***Order Maintenance***

# **Maintenance** *(continued)*

- ▶ ***Crime is often concentrated in dilapidated areas with litter or graffiti***
  - ***If problems are not addressed quickly, they can exacerbate crime***
  - ***May imply that residents, officials, and police will overlook or ignore criminal activity***
- ▶ ***Well-maintained properties send strong messages about who should be there and who should not.***

# **Order Maintenance**

***The implied or explicit presence of authority.***

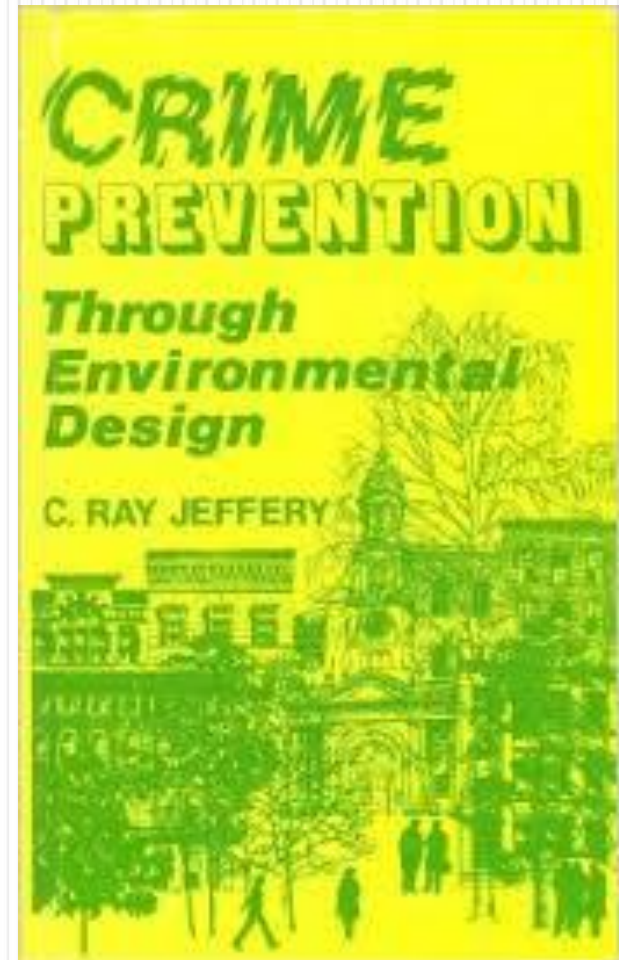
***Locating formal gathering areas where they may be easily observed.***

***Clearly defining the hours and conditions of use for vehicle and pedestrian routes.***

# C. Ray Jeffrey

1971 - *Crime Prevention Through Environmental Design*

- ***“The way we design our urban environment determines the crime rate and the type of crime to a great extent.”***
- ***“Yet, crime prevention has never been considered an integral part of urban planning.”***





# **CPTED Security Survey**

## **Cover Sheet:**

**Agency name**

**Location: name and address**

**Time(s)**

**Weather**

**Person(s) doing survey**

**Introduction to CPTED/Demographics**

**Pictures/Narrative**

**Suggestions**

**Disclaimer**

# Landscaping

- *Decorative fencing*
- *Flower beds*
- *Shrubbery*
- *Ground cover*
- *Varied patterns of cement work*



# Landscaping

## Material Selection

- *Use*
- *Size, shape, and foliage density*
- *Deciduous/evergreen*
- *Fruit/flower*
- *Growth rate and longevity*
- *Maintenance*
- *Habitat requirements*
- *Urban tolerance*
- *Policy/ordinance restrictions*



These examples represent typical mature heights in city conditions. Check the [Arborday.org](http://Arborday.org) Tree Guide for expected mature height and crown spread of trees you are considering.



**Shrubs**

**Dogwood**

**Sassafras**

**Pin Oak**

**White Oak**

**Ponderosa Pine**

Flowering  
Plums,  
Hawthorn,  
Sumac,  
Hornbeam,  
Redbud

Post Oak,  
Quaking  
Aspen,  
Eastern  
Redcedar,  
Flowering  
Pear

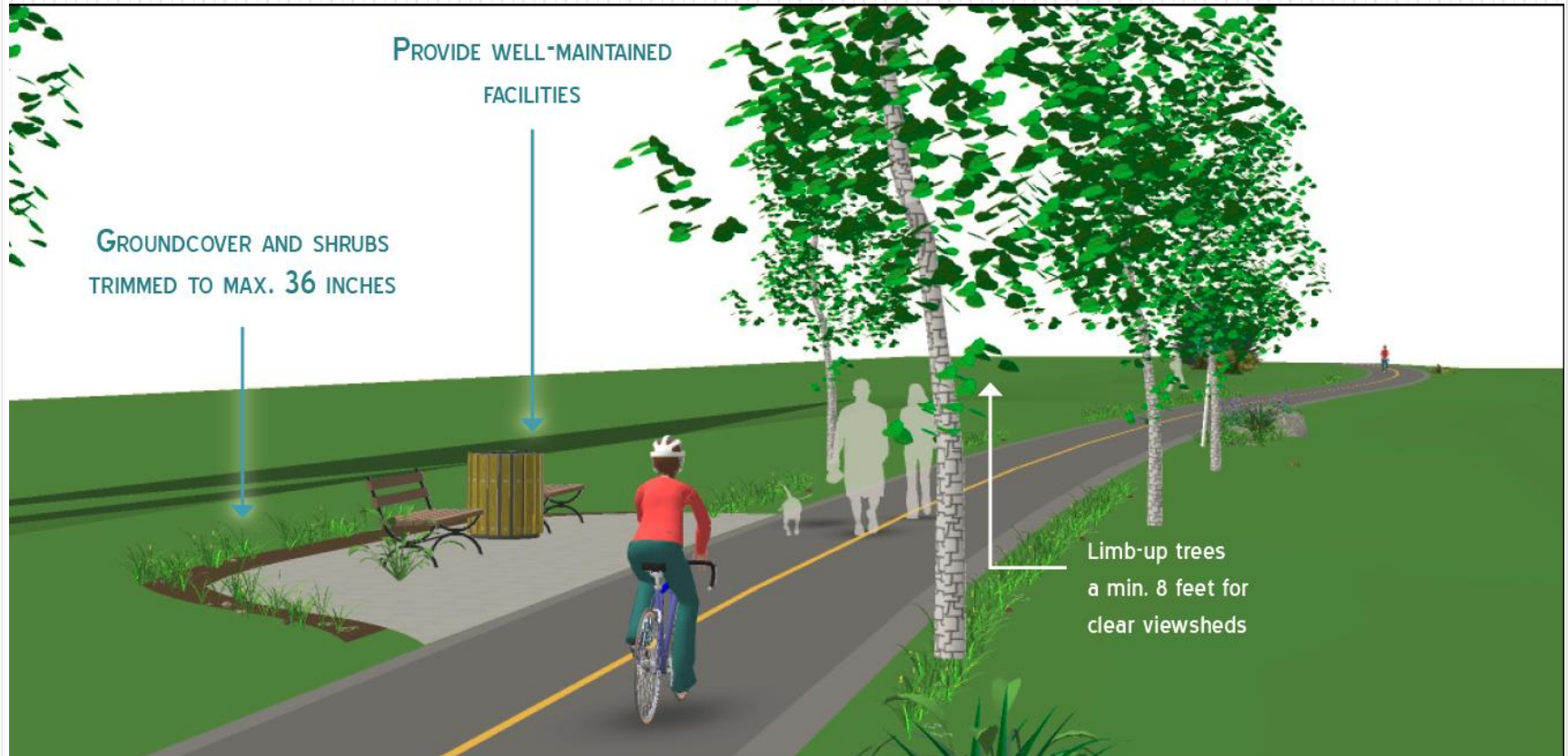
Arborvitae,  
Green Ash,  
Hemlock,  
Blue  
Spruce

Linden,  
Red Oak,  
Tuliptree,  
Walnut,  
Many Pines

Redwood,  
Planetree

*\*Individual specimens may grow larger in natural settings.*

# Landscape Guidelines



# **“Urban Forest”**

***The art, science, and technology of managing trees, forests, and natural systems in and around urban areas for the health and well-being of communities.***

- National Urban Forest Council



# Traffic Calming

**Median Barriers** on a major street prevent left turn entries to the neighborhood or traffic on a local street from crossing from one neighborhood to another.

**Circles** slow traffic and provide a visual impression of street discontinuity.

**Cul-de-Sacs** prevent entries to or exists from the neighborhood.

**Chokers** narrow the street at the intersection, slowing traffic and providing safer pedestrian crossing.

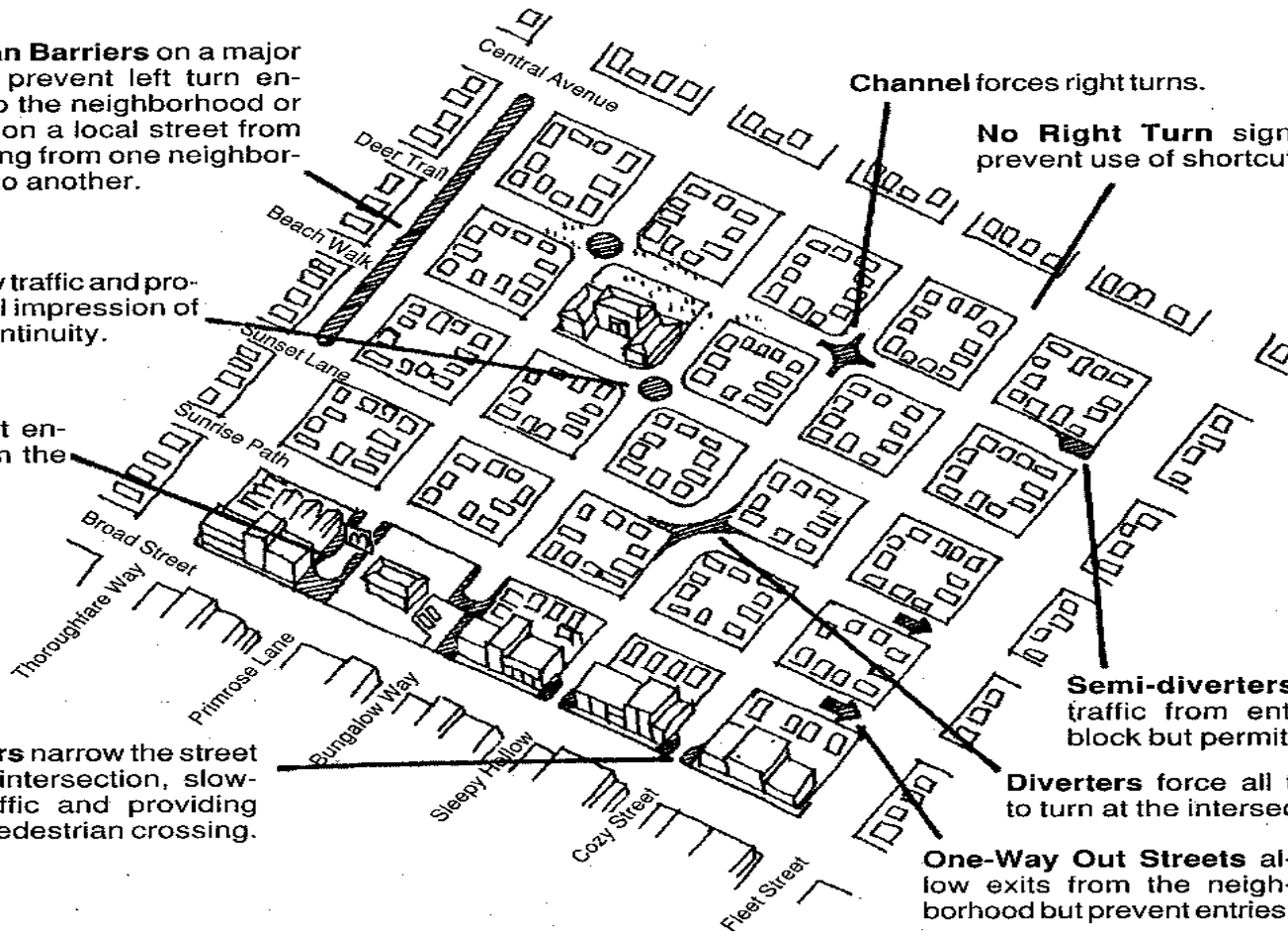
**Channel** forces right turns.

**No Right Turn** signs prevent use of shortcut.

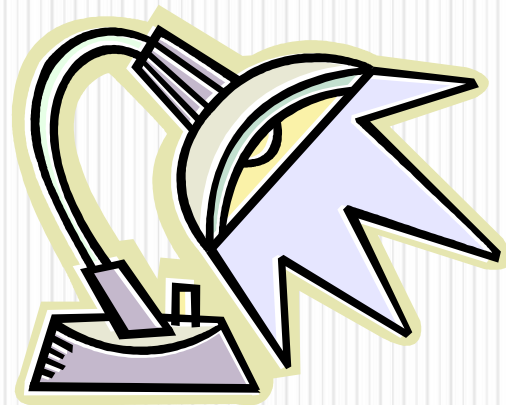
**Semi-diverters** prevent traffic from entering the block but permit exits.

**Diverters** force all traffic to turn at the intersection.

**One-Way Out Streets** allow exits from the neighborhood but prevent entries.



# Good Lighting



- ***Creates a positive environment***
- ***Furthers a sense of pride and ownership***
- ***Discourages criminal activity***
- ***Enhances natural surveillance***
- ***Reduces fear***



# Lighting Standards

## IES Recommended Practices

Illuminating Engineering Society

[www.iesna.org](http://www.iesna.org)

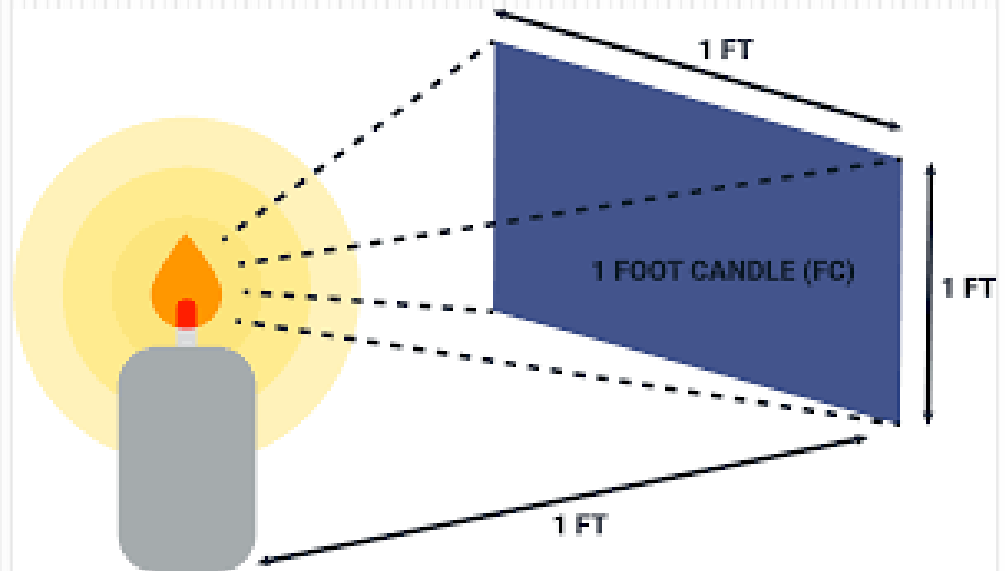
“The Lighting People”



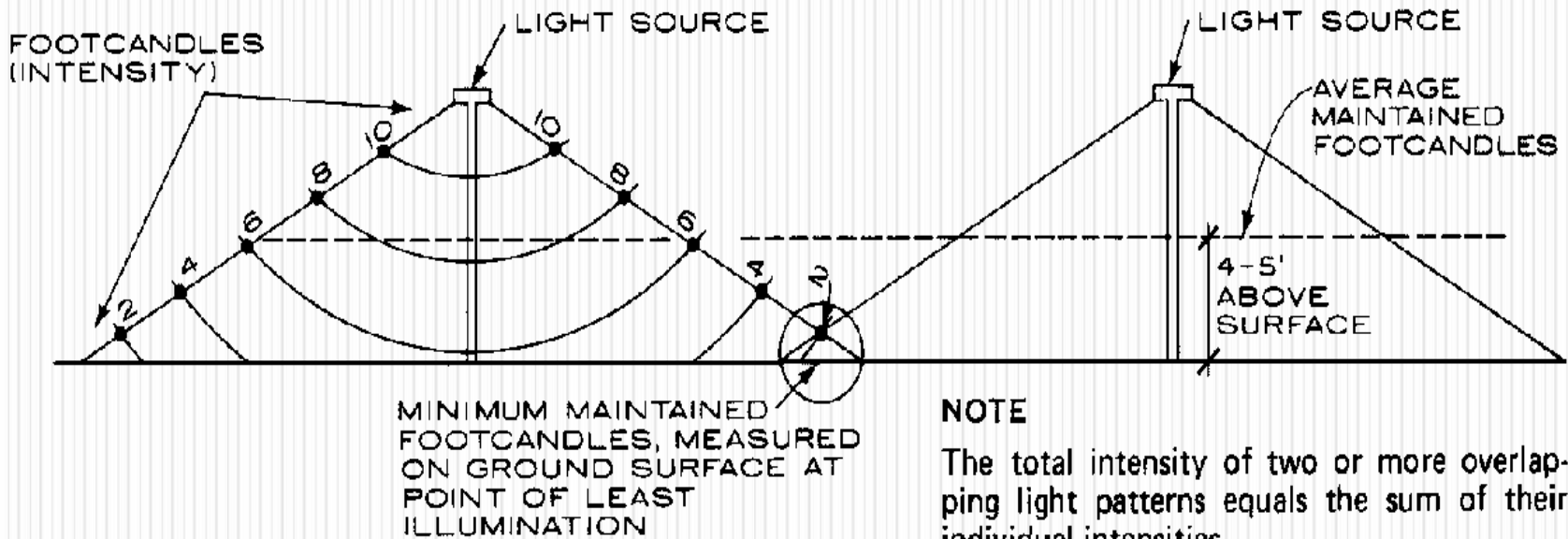
# Lighting

***What is a foot-candle of light?***

***A foot-candle (fc) is the amount of light falling on a surface, one foot square in area, from a standard candle one foot away.***

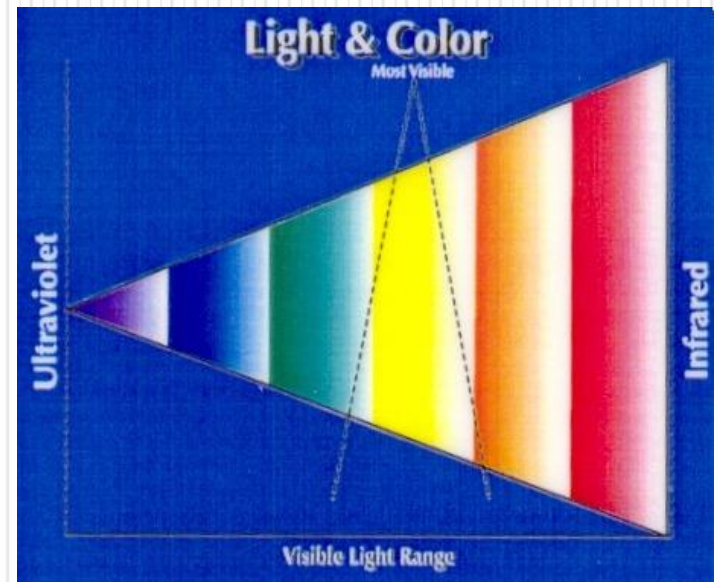


# Lighting

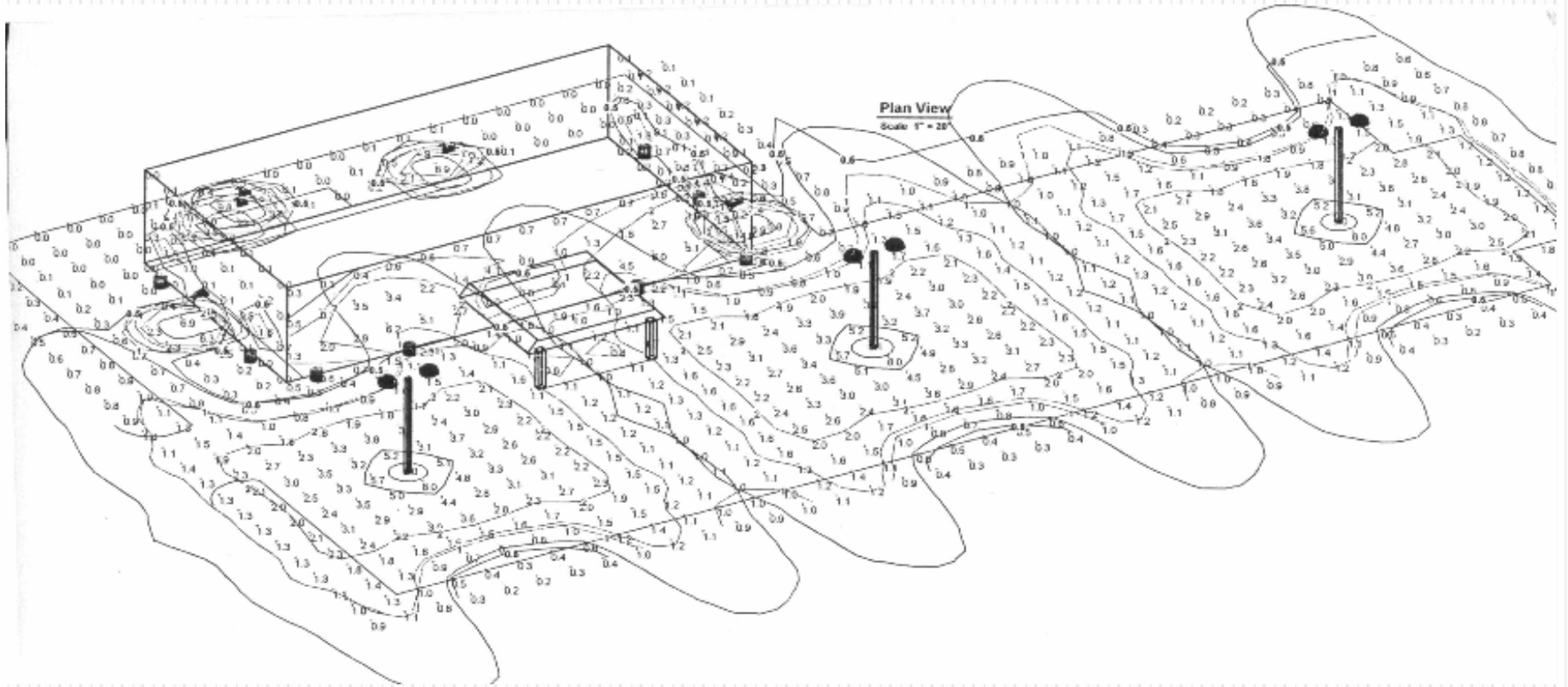


# Color Rendering Index

- *How well true colors are seen under a particular light source*
- *100 CRI is max*
- *CRI of 50+ allows for accurate color identification*



# Lighting Design



# The 3 E's

- ***Education*** (short term goals and least expensive)
- ***Enforcement*** (intermediate goals with moderate costs)
- ***Engineering*** (long term goals with most costly suggestions)

# CPTED Security Surveys

*Residential*



*Campus*



*Commercial*



# Disclaimer

No CPTED  
recommendations can  
positively ensure or  
guarantee a crime free  
environment.



# Additional CPTED Considerations

## Context:



***Oscar Newman included Context as the fourth principle to CPTED. Context (Image and Milieu) is every bit as important to CPTED as are the other core principles.***

# Additional CPTED Considerations

## Activity Support:



***Activity support involves placing natural activities in an area at appropriate times to increase surveillance and enhance access control.***