PREVENTING CRIME WITH ENVIRONMENTAL DESIGN: STRATEGIES FOR LANDSCAPE ARCHITECTS

ASLA URBAN DESIGN PPN WEBINAR
JUNE 12, 2019
01 UNDERSTANDING SAFETY
02 WHAT IS CPTED
03 DESIGN STRATEGIES
04 PROGRAM + POLICY STRATEGIES
05 CPTED APPLICATION
06 DISCUSSION
UNDERSTANDING SAFETY: REAL + PERCEIVED
HOW SAFE IS PUBLIC SPACE?

» Trails, parks, and public space do not generate crime, but these areas are not immune to crime and asocial behavior

» News reports about incidents is not a substitute for data-based studies

» Many existing studies rely on perception of crime instead of actual crime data

» There tends to be a gradient of increasing crime in more populated areas

» Rarely does a single study encapsulate both the subjective and objective results of crime in parks and trails
UNDERSTANDING SAFETY: REAL + PERCEIVED

FIGHTING SAFETY PERCEPTION

» Fighting perception of crime is the hardest part in designing for active communities.

» Trails, parks, and public space are not immune to crime but they are community focal points.

» Perception must be fought before and after projects are built.
FIGHTING SAFETY PERCEPTION

» Only **3% of the 372 trails studied** in the RTC study reported any type of major crime.

» FBI study of 36 Urban Trails surveyed covering 332 miles with 5 million estimated users: rates of crimes were in the **tenths to hundredths of a percent** when compared to general urban area crime.

» Vancouver Engineering Services Department conducted a comprehensive analysis of bicycle paths: “Incidents of **break and enter** appear to be more closely linked with adjacent land use, density and demographics, than the presence of a bike route.”

» Buncombe County Greenways and Trails Master Plan, Connect Buncombe (2012) - “The data suggest that greenway-adjacent properties do not incur greater risk of crime than other properties within the same neighborhood statistical area. **On the contrary greenway-adjacent properties had lower crimes rates 75% of the time.”**
UNDERSTANDING SAFETY: REAL + PERCEIVED

WHICH "FEELS" MORE SAFE?
UNDERSTANDING SAFETY: REAL + PERCEIVED

WHICH "FEELS" MORE SAFE?
UNDERSTANDING SAFETY: REAL + PERCEIVED

WHICH "FEELS" MORE SAFE?
Some communities have a disproportionate burden of violence.

The risk of experiencing violence varies significantly by race, ethnicity and socioeconomic status.

Fear of crime/safety is one of the main reasons why people choose to or let their families actively commute.

There are some blight elimination programs that exist (CDC).
Crime Prevention Through Environmental Design, coined in 1971 by criminologist C. Ray Jeffreys

Influence from Jane Jacobs

The proper design and effective use of the built environment can lead to the reduction in the incidence and fear of crime and thereby improve the quality of life.

Builds on 4 principles:

- Natural Surveillance
- Territorial Reinforcement
- Natural Access Control
- Maintenance
WHAT IS CPTED?

NATURAL SURVEILLANCE

» Design the space to allow visibility by legitimate users and keep unwanted behavior under observation

» Make the offender’s behavior more easily noticeable

» Provide a good visual connection between trail and streets, common areas, parks, sidewalks, parking areas and alleys
WHAT IS CPTED?

TERRITORIAL REINFORCEMENT

» "My area/Your area"

» Use design elements such as sidewalks, hardscape, landscaping, and low fencing to help distinguish between public and private areas

» Clear displays of ownership encourage respect for property and discourage unwanted use

» Sends message that investment has been made
WHAT IS CPTED?

NATURAL ACCESS CONTROL

» Use landscape elements to deny admission to a unwanted behavior targets.

» Create a perception among offenders that there is a risk in selecting the target.

» Use signs to direct visitors to appropriate buildings, entrances and parking.

» Limit access without completely disconnecting the use.
» Cleaning, repairing, and landscaping needs to be performed routinely.
» Repair or abate vandalism as soon as possible.
» Encourages use of the space for the intended purpose and discourages abnormal and asocial use.
» Maintenance sends a signal that someone cares about the space and is likely to defend it against intruders or vandalism.
» Keep shrubs trimmed to 2 feet and prune lower branches of trees up to 6 feet for open site lines (“6-foot, 2-foot rule”).
WHAT IS CPTED?

CPTED IS PLACEMAKING
WHAT IS CPTED?

NOT REALLY CPTED
WHAT IS CPTED?

SECURITY DESIGN

» Terrorism response
» Restricted access
» Vehicle barriers/deterrents
» Temporary and permanent security measures
» CCTV/public monitoring
» More high risk structures
» Other target hardening measures

https://thefield.asla.org/2017/09/08/asla-panel-on-security-design/
DESIGN STRATEGIES FOR PUBLIC SPACE
STRATEGIES FOR PUBLIC SPACE

PROPER LIGHTING

» Typically most appropriate for urban areas or commuter trails

» White metal halide lamps provide best color rendering for CPTED

» Ensure tree canopy does not interfere with lighting fixture

» Always provide lighting in trail underpasses, day and night

» Work with qualified lighting engineer
STRATEGIES FOR PUBLIC SPACE

PUBLIC ART

» Public art creates perception of ownership
» Art can act as “eyes”
» Engages community artists
« Brightens energy in unanticipated spaces
STRATEGIES FOR PUBLIC SPACE

LANDSCAPE

» 6-foot, 2-foot rule
» Thin out brushy undergrowth to create permeability along trail corridors
» Prevent ambush areas/hiding spots
» Create frequent access points in parks and trails
» Create vertical and horizontal clear zones for sight distance
» Keep parking areas flat and open to allow for sufficient visibility and surveillance
SIGNAGE + TECHNOLOGY

» Signage creates a sense of place
» Indicates the park or facility is maintained and “owned” (territorial reinforcement)
» Helps establish a sense of safety for users
» Mile markers can help law enforcement with co-locating in event of emergency
» Locator codes are becoming more popular on trails
STRATEGIES FOR PUBLIC SPACE
SAFETY POLICY/CPTED ORDINANCE

» Post rules and expectations for public space
» Impose quick, fair, and consistent consequences for violations
» Helps foster safe, orderly, and predictable behaviors
» Several cities have created special districts through zoning codes called Overlay Districts which include CPTED design requirements through code
» Minimum lighting standards
» Zoning standards that support walkable communities
STRATEGIES FOR PUBLIC SPACE

ENGAGE THE COMMUNITY

» When community takes ownership of a public space, crime cannot win

» The more a facility is used the less likely it will attract unwanted or asocial behavior

» During planning use inclusive public engagement

» Engage community leader groups
STRATEGIES FOR PUBLIC SPACE

PROVIDE ACTIVITY SUPPORT

» Plan safe and strategic activities to encourage the intended use of the space

» Group walks/group bike rides

» Sidewalk and street level activities such as markets, fairs, and festivals, in key community areas

» Increase the number of people using a space, thereby enhancing visibility, social comfort and control
STRATEGIES FOR PUBLIC SPACE

PARTNER WITH LAW ENFORCEMENT

» Communicate about active community facilities with local police departments

» Involve law enforcement during planning and design

» Invite police to public meetings to talk with residents about crime misconceptions

» Understand local law enforcement resources and limitations
STRATEGIES FOR PUBLIC SPACE

PARTNER WITH RELEVANT GROUPS

» Community planners and local government: **policy**
» Local leaders: **community leadership and support**
» Bicycling and walking advocates: **programs and funding opportunities**
» Educators and parents: **programs, community interests**
» Volunteers and interested citizens
» Business Owners
» Faith-Based Organizations
MAINTENANCE AND MANAGEMENT

» Eliminate vandalism immediately: consider graffiti abatement program

» Guerrilla mowers/weederers

» Use vandalism-resistant materials

» Ensure vegetation is properly maintained to CPTED standards

» Use low-maintenance landscaping and architectural materials

» Ensure proper trash collection and removal

» Consider anti-litter campaign
STRATEGIES FOR PUBLIC SPACE

AMBASSADOR PROGRAMS

» Many are volunteer organizations
» Citizen group of “eyes and ears” for parks and trails
» Effective for maintenance, safety, and patrolling
» Encourages and promotes use
CPTED APPLICATION

DESIGNING OUT CRIME

» Understand the community’s history and demographics
» Research crime statistics and analyze crime data
» Understand adjacent land use
» Consider a CPTED site assessment by a qualified professional

"It takes more than police to police parks."
~ Kim Vann, Planner, Henrico County, VA
from: http://www.americantrails.org/resources/safety/designcrime.html

III. 5-Year Crime Analysis

The analysis of reported crime is an important element in conducting a CPTED assessment. By conducting an analysis, the type of crime that is occurring can be determined and possible trends identified. It is important to understand crime trends in the area to determine security needs and potential risks.

The Lowerre neighborhood has the highest crime rate in the City. Located in the Third Precinct, the Lowerre neighborhood has been riven by gang violence over the last decade. In each category except rape, Precinct Three has by far the most incidents (see table below). The most recent crime data found on the City of Yonkers Police Department website pertains to the amount of service calls in the

<table>
<thead>
<tr>
<th>County</th>
<th>Total Population</th>
<th>Under 19</th>
<th>Non-White</th>
<th>Workers over 16 with no Vehicle available</th>
<th>Families below poverty level in past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westchester</td>
<td>68,047</td>
<td>20,662</td>
<td>30%</td>
<td>37,938 (56%)</td>
<td>14,696 (71%)</td>
</tr>
<tr>
<td>Bronx</td>
<td>22,036</td>
<td>7,024</td>
<td>32%</td>
<td>5,862 (27%)</td>
<td>1,211 (17%)</td>
</tr>
<tr>
<td>Both Counties</td>
<td>90,083</td>
<td>27,686</td>
<td>31%</td>
<td>43,800 (49%)</td>
<td>15,907 (57%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Precinct 1</th>
<th>Precinct 2</th>
<th>Precinct 3 (Study Area)</th>
<th>Precinct 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assaults, burglaries, murders, rapes, robberies</td>
<td>82</td>
<td>180</td>
<td>705</td>
<td>420</td>
</tr>
</tbody>
</table>

SOURCE
Yonkers Police Department Crime Statistics: 2010
**CPTED APPLICATION**

**IN PRACTICE**

» CPTED can be applied at all phases of a project: land use planning, master planning, feasibility, design, construction, post construction, post operation, and retrofit

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| 10. What of the following issues affected your decision to allow, or not allow, your child to walk or bike to/from school? (Select ALL that apply) |
| My child already walks or bikes to/from school |

| 11. Would you probably let your child walk or bike to/from school if this problem were changed or improved? (Select one choice per line, mark box with X) |

- [ ] My child already walks or bikes to/from school

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| 1.3 Common/Open Space Areas and Public On-Site Open Space |

- Provide natural surveillance for common/open space areas.

- Position active uses or habitable rooms with windows adjacent to main common/open space areas, e.g. playgrounds, swimming pools, etc., and public on-site open space. 🛑

- Design and locate dumpster enclosures in a manner which screens refuse containers but avoids providing opportunities to hide. 🛑

- Locate waiting areas and external entries to elevators/stairwells close to areas of active uses to make them visible from the building entry. ✓

- Locate seating in areas of active uses. 🛑

- Other strategy used: ________________________________

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| 1.4 Entrances |

- Provide entries that are clearly visible.

- Design entrances to allow users to see into them before entering. 🛑

- Entrances should be clearly identified (Signs must conform to FWCC Section 22-1569(D). Permit Exceptions. (Applicable during Certificate of Occupancy Inspection).)

- Other strategy used: ________________________________

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| 1.5 Fencing |

- Fence design should maximize natural surveillance from the street to the building and from the building to the street, and minimize opportunities for intruders to hide.

<table>
<thead>
<tr>
<th>Section and Performance Standard</th>
<th>Functional Area Performance Standard</th>
<th>Evaluation for Agency Use Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPTED Application</td>
<td>Preventing Crime with Environmental Design</td>
<td>ASLA Urban Design PPN Webinar</td>
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**PREVENTING CRIME WITH ENVIRONMENTAL DESIGN || ASLA URBAN DESIGN PPN WEBINAR**
CPTED APPLICATION

PROFESSIONAL DESIGNATION

» CPTED professionals (CPD’s) are qualified to identify strategies and concepts that
effect human behavior and influence a project’s real and perceived security

» CPD’s are trained to:

• Perform field assessments for unbuilt or built trails, parks, streets, and urban sites
• Make planning and design recommendations for CPTED improvements
• Do site plan reviews for local government or private developer agencies
• Write CPTED ordinances
• Author CPTED design guidelines
• Do overlay districts for planning and zoning
• Give basic CPTED training
CPTED IN SUMMARY

» CPTED is **fluid**.
» It is **not a checklist or easy fix** for all situations.
» One-size-does-NOT-fit-all.
» CPTED is most successful as a **sum of its parts**.
» CPTED is not a substitute for **individual instinct**.
» CPTED is **affordable**!

“Crime occurs on roads, in schools, parking lots, office buildings, zoos and homes. However no one would rationally argue that we should not build any of the above because crime will occur there. The same should be true with trails.”

~ From Rail Trails and Safe Communities publication, Rails Trails Conservancy

Source: Michigan Youth Violence Prevention Center:
http://yvpc.sph.umich.edu/projects/violence-prevention-through-environmental-design/