

CRIME PREVENTION SMARTCODE MODULE

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CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

The best way to bring security to streets is to make them delightful places that honorable and decent citizens will want to walk in.

James Howard Kunstler

STANDARDS FOR ARTICLES 1, 2, 3, 4, 5 5

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CRIME PREVENTION SMARTCODE MODULE

Crime Prevention generally addresses one of three conditions:

- 1. Personal Security - protection from assault or other forms of attack that injure, and from theft
- 2. Property Security - protection of property from burglary or damage
- 3. Emergencies - the functioning of spaces during a natural disaster, crime response (often ongoing, such as a hostage situation or shooting where the subject is at large) or a terrorist attack.

From a design perspective, personal security is the most important factor, although it often overlaps with the other two. Like many other urban characteristics, it is the result of a complex mix of ingredients. Security cannot be achieved by “target-hardening” alone; nor are such measures likely to be conducive to other urban goals like walkable thoroughfares. Instead, crime prevention should be achieved through context-sensitive design.

The best-known such program, Crime Prevention Through Environmental Design (CPTED), has evolved over time. While many of the techniques refined in CPTED have been in use for hundreds of years, they have been transformed in the last few decades by the work of urban scholars such as Jane Jacobs and Oscar Newman, who have described a more precise relationship between the built environment and criminal behavior. Out of their work have come strategies such as encouraging “eyes on the street” (Jacobs) and creating “defensible space” (Newman). The tools in this module build on these and related insights.

As the quotation on the Module cover suggests, the normative principles of New Urbanism and traditional town planning are already the foundation for safe environments. The principles and standards in this Module were chosen to complement and reinforce those in the base SmartCode.

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ARTICLE 1. GENERAL TO ALL PLANS

1.3 INTENT

The CPTED program addresses 14 principles that support crime prevention. See the annotations for Table CP-1.

The SmartCode supports neighborhood crime prevention by coding for walkable thoroughfares, attractive and plentiful civic spaces, and frontages that provide “eyes on the street.” However, its Intent section does not specifically mention crime prevention other than at the Block and Building Scale (1.3.3c). Calibrators should consider adding the two new principles provided here.

The phrase “evenly implemented” should be interpreted by honoring the characteristics of different Transect Zones. Retail and apartments will usually require more attention, and even different strategies, as reflected in other parts of this Module. Generally, places with retail (T5 and T6) that draw people and showcase valuable goods should be more secure. Apartment buildings, courtyard buildings and bungalow courts require strategies that emphasize “ownership” of semi-private or semi-public areas. The ownership problem is less acute where the common domain is the public sidewalk, or where individual dwellings have individual yards that are well-marked using the principle of Territoriality.

ARTICLE 2. REGIONAL SCALE PLANS

Crime risk should be analyzed regionally, city-wide, or at least across several neighborhoods, to account for what is known in CPTED as Displacement. Design improvements at the block scale and even the neighborhood scale may simply displace crime to another location.

ARTICLE 3. NEW COMMUNITY SCALE PLANS

3.1.8 In many jurisdictions CPTED is the beginning of a partnership with local law enforcement to get them involved in the design of the community. The Consolidated Review Committee (CRC) should include a local police representative.

3.X CRIME PREVENTION

3.X.2 SPECIFIC TO ZONES T3, T4, T5, T6

The provisions to secure the alleys and the gaps between buildings are included in case of severe crime or terrorism threat. Even if there is no crime problem, local conditions can change; these provisions support adaptability.

However, New Urbanist principles do not permit the gating of entire neighborhoods. Gated communities undermine healthy mixed use, because retail and lodging depend

(continued)

ARTICLE 1. GENERAL TO ALL PLANS

1.3 INTENT

1.3.1 THE REGION

- i. That crime prevention strategies should be evenly implemented throughout the region to prevent Displacement.

1.3.2 THE COMMUNITY

- i. That crime prevention strategies should be evenly implemented throughout each neighborhood to prevent Displacement.

ARTICLE 2. REGIONAL SCALE PLANS

2.1 INSTRUCTIONS

- 2.1.5 Guidance from Crime Prevention Through Environmental Design (“CPTED”) professionals **should** be provided during the preparation of Regional Plans.

ARTICLE 3. NEW COMMUNITY SCALE PLANS

3.1 INSTRUCTIONS

- 3.1.8 New Community Plans **shall** include a CPTED-based Risk Assessment report, to be submitted with preliminary site plans. **The CRC shall determine the review entity for the Risk Assessment.**

3.X. CRIME PREVENTION

3.X.1 GENERAL TO ALL ZONES T1, T2, T3, T4, T5, T6 AND SD

- a. New Communities and their buildings, Private Frontages, Thoroughfares and Civic Spaces **should** be designed and constructed using CPTED principles and techniques, as provided in Section 5.X Crime Prevention and on Table CP-1 and Table CP-2.
- b. Crime prevention methods should not conflict with Section 1.3 Intent.
- c. If water retention areas, including swales, are fenced for child safety or habitat protection, fencing shall be visually permeable.

3.X.2 SPECIFIC TO ZONES T3, T4, T5, T6

- a. A block **should** be designed for rapid future adaptation to a securable perimeter using barriers that seal gaps between buildings at or near their Facades. Such barriers may include, but are not limited to, fences, gates, or Barrier Plants.
- b. Rear Alleys and Rear Lanes **shall** be potentially securable at both ends.
- c. Trees in the Public Frontage shall be trimmed to create a six feet minimum clear area above ground.

3.X.3 SPECIFIC TO ZONES T4, T5, T6

- d. Berms are not permitted in the Public Frontage.

3.X.4 SPECIFIC TO CIVIC SPACES

- a. Civic Spaces should be located to be generally visible from one or more of the windows of their enfronting buildings.
- b. Trees in Greens, Squares, Pocket Parks, and Plazas shall be trimmed to create a six feet minimum clear area above ground.
- c. Trees in Parks within **20 feet** of a walkway or bikeway **should** be trimmed to create a six feet minimum clear area above ground.

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3.X.2 cont.

upon customers from outside the neighborhood. It undermines the notion of public space, including public streets and civic freedom. It undermines connectivity between neighborhoods and therefore transportation options.

Subsection 3.X.2 calls for only the alley and yards to be gated into a secure commons. The character of the private frontage is still supportive of the Transect Zone and there are still eyes on the public realm. Securing the alley is of limited use to prevent property crime if access to side and rear yards is not also controlled, but the standards are separated here because alley closure is easier to design and manage. It may be implemented to restrict illegal parking and loitering, which in turn may reduce the likelihood of certain crimes occurring in that particular block.

However, many urbanists oppose even block-level security. Reasons range from the inhibition of mobility, commerce and sociability to questions about its effectiveness as a crime preventer. This is not just a design issue; a common perimeter requires common management. This view holds that the weakest link on a block decides its security, and that with multiple property owners there is likely to be a security breach. It only works under ideal circumstances, with cooperative property owners or a high degree of coercion.

Others believe that securable walls/fences/gates perform a filter function. This view acknowledges that any security system has some degree of porosity, but that the defenses provided here are capable of reducing crime in any given area by filtering it. However, displacement is still an issue. See 1.3.2i Intent above.

ARTICLE 5. BUILDING SCALE PLANS

The Article 5 standards are divided here in two main sections to indicate different ways to create a calibration. These are:

- 1. All Crime Prevention Module standards could be listed under a separate Crime Prevention section. This format is used in several other Modules.
- 2. All Crime Prevention Module standards could be assimilated into the base SmartCode’s existing sections, such as Building Configuration and Parking Location.
- 3. The Crime Prevention Module standards (and others that may be added) could be split, as they are here, into different kinds of sections.

Consult with the local code administrator(s) to determine what would work best for the current or proposed review process.

5.X CRIME PREVENTION

5.X.1 c. Parking lots are crime targets for obvious reasons. If everyone on a block shares a single parking lot, the lot is not really public, yet nobody who lives there takes ownership. The area may not be adequately maintained and monitored. Safer options include individual parking in the rear and onstreet parking in the front. The base SmartCode provides essential location standards for parking lots and garages, and their relationship to walkable thoroughfares.

ARTICLE 4. INFILL COMMUNITY SCALE PLANS

4.1 INSTRUCTIONS

- 4.1.X Infill Regulating Plans shall include a CPTED-based Risk Assessment report, to be submitted with preliminary site plans.
- 4.1.3 x. locations at risk for crime where CPTED techniques are advised or required, as determined by the Consolidated Review Committee based on a Risk Assessment.

ARTICLE 5. BUILDING SCALE PLANS

5.X CRIME PREVENTION

- 5.X.1 SPECIFIC TO MULTI-UNIT RESIDENTIAL AND MIXED-USE BUILDINGS IN ZONES T4, T5, T6 AND SD
 - a. Where CPTED techniques have been required by the Consolidated Review Committee as shown on an adopted Regulating Plan, property owners shall address Territoriality, Access Control, Natural Surveillance, Activity Support, and Image, as provided on Table CP-1.
 - b. Crime prevention methods should not conflict with Section 1.3 Intent.
 - c. Where shared outdoor parking areas are present, each building shall have at least one window from which the parking lot is visible on each story of the elevation(s) facing the lot. Parking spaces should be assigned to residents and located close to the resident’s unit, but not marked with their unit number. Visitor parking should be designated separately.
 - d. Recreation areas such as pools, tennis courts, clubhouses and playgrounds should be generally visible from one or more of the windows of the buildings they serve.

5.7 BUILDING CONFIGURATION

- 5.7.X SPECIFIC TO ZONES T3, T4, T5, T6
 - x. Each Principal Building and each Outbuilding containing an Accessory Apartment or Home Occupation shall have at least one window on each story of a Facade from which its adjacent Public Frontage is visible.
 - x. Where Rear Alleys or Rear Lanes are present, each Principal Building and each Outbuilding containing an Accessory Apartment or Home Occupation should have at least one window on the rear elevation, through which a person or vehicle moving through a part of the alley or lane would be visible. This window may look out from any room type. CCTV surveillance may substitute for this requirement by Warrant.
 - x. In the absence of securable windows, Barrier Plants should be planted below windows to ground floor Common Rooms, extending at least twelve (12) inches to each side of a window but no higher than its sill. Vegetation shall not hinder the egress requirements for emergency exit from sleeping areas.
 - x. Outbuildings shall be lockable.
- 5.7.X SPECIFIC TO ZONES T3, T4
 - x. Each Principal Building and each Outbuilding containing an Accessory Apartment or Home Occupation shall have at least one window on each elevation from which at least 25% of the adjacent yard is visible, where a yard is present. Each window for this purpose shall look out from a Common Room.

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- 5.7.X
- SPECIFIC TO ZONES T4, T5, T6**

 - x. Security grates on Facades shall be visually permeable from the Public Frontage, above the height of 3 feet.
 - x. For Retail uses, at least one checkout counter should be located at the front of the store and visible from the Public Frontage.

TABLE CP-1 . MULTI-UNIT RESIDENTIAL AND MIXED-USE BUILDINGS.

The Crime Prevention Through Environmental Design (CPTED) program addresses 14 principles. Some are oriented toward a positive result, while others are named for negative conditions. As the SmartCode is primarily a prescriptive code, this table and Table CP-2 are marked with the five positive principles described in these notes. Two other positive principles, Land Use Mix and Connectivity, are not included here because they already apply to normative urbanism at all scales of development, and should be assumed to be present or planned for all inhabited Transect Zones.

For information about all 14 principles, see *Safe Growth and CPTED in Saskatoon, Crime Prevention Through Environmental Design Guidelines: an Illustrated Guide to Safer Development in Our Community*, by Gregory Saville AlterNation LLC., and Elisabeth Miller City of Saskatoon Planning and Development (Saskatoon, Saskatchewan, Canada. June 2010).

Territoriality is the concept of creating and fostering places that are adopted by the legitimate users of the space (i.e., they take ownership), making it less likely for people to engage in criminal or nuisance behavior at that location. This can be achieved by clearly marking public, private, and semi-public areas through landscaping. Other methods may include installing signage, beautifying an area with street art or informal civic spaces, or extending restaurants onto sidewalk cafes. People are more likely to feel a sense of ownership and exhibit Territoriality in a neighborhood if there is a close relationship among physical, political, and social systems or networks. City-wide design decisions, such as locating a major highway or transit line, can support a community’s sense of ownership by reinforcing a neighborhood boundary. (If poorly placed, however, it can erode a community by isolating it or destroying its integrity.) When a place is well defined, it is easier to identify with, care about, and know when visitors or strangers are in the neighborhood. In addition, design can help define a neighborhood by giving it recognizable character.

Access Control refers to controlling who goes in and out of a neighborhood, civic space, building, and other places. Access Control includes focusing on formal and informal entry and exit points in buildings or parking areas using fencing, access gates, intercoms, etc., and signifying entrances to civic spaces and neighborhoods with hedging, archways and other types of landscaping or design.

Natural Surveillance is the concept of putting “eyes on

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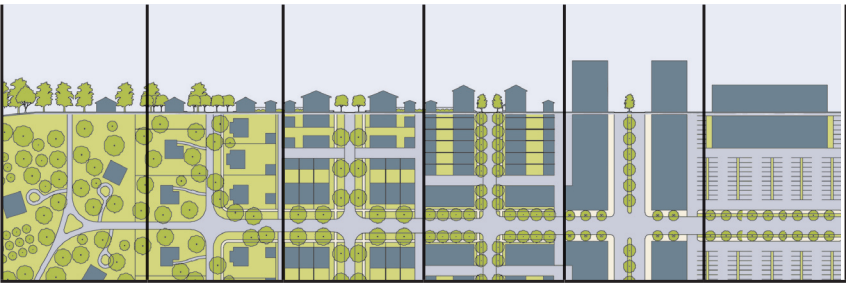
the street,” making a place risky for offenders who wish to commit crime with impunity. Public areas are safer if they are visible to legitimate users and observers of those spaces, and if it is also obvious to would-be criminals that they can be seen. Crimes against people usually take place in areas hidden from view; victims accosted in public view may be taken to secluded areas. Citizens in the street feel safer if they can see and be seen by other people. Creating clear sightlines through thoroughfare design, landscaping, lighting, and site design optimizes the potential for natural surveillance. Porches and transparent windows facing public thoroughfares and civic spaces are especially effective. Natural Surveillance is different from Formal Surveillance, e.g., organized surveillance (security patrols including Neighborhood Watch groups) and mechanical surveillance (closed circuit television). Those methods may ultimately be required in some places; however, Natural Surveillance based on the SmartCode and CPTED methods should make them unnecessary.

Activity Support is the concept of filling an area with legitimate users by facilitating and scheduling activities like sporting events, outdoor music, block parties, flea markets, farmers’ markets, mural painting, etc. Both regularly scheduled and randomly occurring activities decrease opportunities for offending with impunity. Places and facilities that are underutilized have a higher potential for criminal activity. A compatible variety of activities makes an area safer by bringing in different legitimate user groups, adding “eyes in the street” and capable guardians. Zoning that separates land uses may leave areas deserted and intimidating at certain times of the day or week, such as a main street that empties out every evening because no one lives above the stores. A significant byproduct of Activity Support is that it gives would-be criminals something more productive to do.

Image refers to the appearance of the public realm, and how it is instrumental in creating a sense of place or territoriality for legitimate users. A place that does not appear to be cared for may indicate to criminals that property owners and legitimate users of that place tolerate criminal activity, while well-maintained places communicate ownership and safety. Regular cleanups, graffiti vandalism removal, weed-ing of vacant lots, litter pickup and creation of informal public art and gardens are a few ways to enhance image. Image improvement requires effective management and maintenance strategies that hold landlords and property managers accountable to keep properties up to code and reinforce a sense of ownership, pride and involvement.

MULTI-UNIT RESIDENTIAL & MIXED-USE BUILDINGS

Table CP-1: Multi-Unit Residential and Mixed-Use Buildings. This table provides methods that are recommended for the three Transect Zones where multi-unit structures are normally permitted, plus Special District. The cells below the Transect Zones are marked with the CPTED principles supported by the methods, as described in the annotations for this table. At the community site plan level, some interventions in T2 and T3 may support crime prevention for the higher zones. Risk Assessment is essential for all multi-unit sites to determine whether CPTED techniques are necessary.

CPTED PRINCIPLES T Territoriality AC Access Control NS Natural Surveillance AS Activity Support I Image						
	T2	T3	T4	T5	T6	SD
	COMMUNITY SCALE SITE PLANNING					
	Site lighting (1)		T - NS - AS - I	T - NS - AS - I	T - NS - AS - I	T - NS - AS - I
	Access Control for vehicles			T - AC	T - AC	T - AC
Boundary Definition (plantings, fences) (2)	T - AC - I	T - AC - I	T - AC - I	T - AC - I	T - AC - I	T - AC - I
Wayfinding & signage (3)	T - AS - I	T - AS - I	T - AS - I	T - AS - I	T - AS - I	T - AS - I
Building Frontage on Thoroughfares (4)			T - NS - AS - I	T - NS - AS - I	T - NS - AS - I	T - NS - AS - I
Building Frontage on Civic Spaces (4)			T - NS - AS - I	T - NS - AS - I	T - NS - AS - I	T - NS - AS - I
CPTED landscaping & plantings (5)			All Principles	All Principles	All Principles	All Principles
BUILDING EXTERIOR						
Doors – burglary resistance			AC	AC	AC	AC
Windows – burglary resistance			AC	AC	AC	AC
Shutters – forced entry protection			AC	AC	AC	AC
Access Control system			AC	AC	AC	AC
Perimeter protection – vehicle barriers			AC	AC	AC	AC
CCTV Formal Surveillance systems			T - AC	T - AC	T - AC	T - AC
Restricted access to roof (from exterior)			AC	AC	AC	AC
CPTED landscaping & plantings (5)			T - AC - NS - I	T - AC - NS - I	T - AC - NS - I	T - AC - NS - I
BUILDING INTERIOR						
Alarm systems – intrusion detection			AC	AC	AC	AC
CCTV control room			AC	AC	AC	AC
Building security lighting			T - AC - AS	T - AC - AS	T - AC - AS	T - AC - AS
Restricted access to roof (from interior)			AC	AC	AC	AC
CRITICAL INFRASTRUCTURE						
Protection of mechanical spaces			AC	AC	AC	AC
Protection against CBRNE* attack	AC - NS	AC - NS	AC - NS	AC - NS	AC - NS	AC - NS
Protection against blasts			AC - NS	AC - NS	AC - NS	AC - NS
Protection of utilities	AC - NS	AC - NS	T - AC - NS	T - AC - NS	T - AC - NS	T - AC - NS
CCTV surveillance (for any of above)	T - AC	T - AC	T - AC	T - AC	T - AC	T - AC

*Chemical, Biological, Radiological, Nuclear, high-yield Explosive

(1) see Public Darkness table of Sustainable Urbanism Module
(2) see Section 5.7 of SCv9.2 and Fences & Walls Module
(3) see Section 5.12 of SCv9.2 and Sign Module
(4) see Section 5.6 and Section 5.7 of SCv9.2
(5) see Section 5.11 of SCv9.2 and Landscape Module

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DEFINITIONS OF TERMS - CRIME PREVENTION

- Access Control:** a technique or techniques for limiting and/or identifying who may have access to a site.
- Activity Support:** the filling of public areas, or spaces near public areas, with legitimate users.
- Barrier Plant:** plant with a dense vegetation structure and thorns or needles.
- Berm:** a manmade mound or wall of earth or sand for screening a building or parking lot, or for landscape design.
- Boundary Definition:** the act of establishing Territoriality, or the defined edge itself. (Syn: edge definition)
- CBRNE:** Chemical, Biological, Radiological, Nuclear, high-yield Explosive.
- CCTV:** see **Closed Circuit TV**.
- Closed Circuit TV:** a camera and television system allowing guardians to watch activity in another room, another part of the same room, or outdoors. It also records activity for later analysis.
- Common Room:** one of the main rooms in a dwelling or business, including but not limited to the following types or any combination of them: kitchen, dining room, living room, family room, recreation room, office, studio, lobby, or retail shop.
- CPTED:** Crime Prevention Through Environmental Design, a professional safety organization and their set of techniques.
- Displacement:** the movement of criminal activity from one location to another as the first location becomes inhospitable for it.
- Formal Surveillance:** in contrast to Natural Surveillance, a mechanical system and/or professional guardian(s) watching over a site.
- Movement Predictors:** places that channel the movement of people along a predictable route or path.
- Natural Surveillance:** in contrast to Formal Surveillance, the ability of non-professionals to look out over or into public areas and report crime, or prevent it by their obvious presence.
- Risk Assessment:** professional evaluation of a site to help determine which crime prevention strategies are most appropriate.
- Territoriality:** the concept of creating and fostering places that are adopted by the legitimate users of the space (i.e., they take ownership), making it less likely for people who do not belong to engage in criminal or nuisance behavior at that location.
- Visible:** able to be seen by a human being with normal vision unaided by binoculars, telescope, or Closed Circuit TV.