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**Innovations in Urban Design:
Using the Tactics of Situational Crime Prevention**

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There is great concern about growing crime in our cities. Although this is not new, there seems to be a belief that urban places everywhere are now experiencing higher levels of youth crime, violent incidents, and social disorder than in the past. One look at the 1988 General Social Survey in Canada and the increasing fear of crime that it reports, and it is easy to conclude that this concern is certainly real (Statistics Canada, 1990).

In this paper I deal with the role that planning professionals can play in addressing the event and the fear of urban crime. I provide an overview of our current response to these issues and present a new response, situational crime prevention, as a useful planning tactic for the future (cf. Saville, 1988). I propose some minimum standards and ways in which to classify those engaged in this form of planning activity. Included here are some minimum criteria for crime prevention plans and risk assessments of urban designs. Finally, I outline a few urban designs that may impact on the event and the fear of crime and I suggest that they should be subject to a crime prevention planning process.

The information here is obtained from on-going project consultancies from the crime prevention planning firm, Action Assessment Group Inc., as well as research from the evolving field of environmental criminology. I also use my experience of eight years as a police officer and a background education in urban planning to frame this discussion.

Our response to urban crime

In the last decade Canada has seen the development of a number of community programs focussed on the concern about urban crime. For example, the Safer Cities and Healthy Cities programs have created numerous community

development projects across Canada focussing on crime and the fear of crime. Most recently the Canadian Federation of Municipalities and the Canadian Council for Social Development have adopted the crime prevention through social development program as a means to address urban crime (Canadian Criminal Justice Association, 1989). This has been followed by the creation of a National Commission on Crime Prevention in Ottawa. These initiatives attempt to address the root causes of criminal motivation and the underlying factors that create criminal environments. In general, they are interested in trying to change the people who victimize or who are victimized. They deal with the motivations of criminals and with problems in public and in private places, such as spousal assaults, alcohol abuse, illicit drug use and juvenile delinquency. They are termed social prevention.

There is another category of initiatives that are termed situational prevention. These are initiatives that focus on the types of opportunities for crime created by the physical environment. They are concerned with crime in public places such as vandalism, street assaults, burglary, disturbances, and robberies. They change the environment where crime occurs, rather than trying to change the people who are involved in criminal activity.

As will be noted later, comprehensive crime prevention planning by a qualified prevention planner (as opposed to a prevention technician, a distinction I will describe shortly) should incorporate both social and situational measures.

This article deals primarily with the latter.

Changing the environment where crime occurs

An early attempt to examine the relationship between crime and the environment was the pioneering work of architect Schlomo Angel (Angel, 1968). His work examined whether communities with dense environments were safer because there were more "eyes on the street", a theory first proposed by Jane Jacobs (Jacobs, 1961). He found instead that there was a "critical intensity zone" where,

public areas become unsafe not when there are either just enough people on the scene to attract the attention of potential offenders, but when there are not enough people for surveillance of the area...

...physical configurations [should] be altered to channel pedestrian circulation to eliminate the critical intensity zones. His idea involved the use of an evening space of a public square equipped with every possible design assurance for maximum safety that created an optimal density to avoid crime during the night hours when street crimes were most likely to occur (Piombini 1987:25).

In the 1970s this idea was expanded in a concept called crime prevention through environmental design (CPTED) which attempted to create safe environments by redesigning the physical environments. For years the Canada Mortgage and Housing Corporation, among other such organizations, has studied research in CPTED (Linden, 1990). As a result, security guidelines for building codes (primarily to reduce break-ins), and CPTED checklists for new development proposals, have evolved in many Canadian cities.

Safety audits and the problem with checklists

Recent research in situational crime prevention suggests that the CPTED checklist approach is an especially inappropriate way to implement crime prevention planning. A checklist ignores the situational nature of crime and, in some cases, may actually increase risk. For example, although minimum standards of lighting may be an effective deterrent of crime in commercial areas, it may lead more people to use shortcuts through a well lit (but isolated) walkway late at night thereby placing them at unnecessary risk. It matters little that a walkway has minimum standards of lighting if it is isolated from view, especially if it also attracts criminals or troublemakers.

Another example of problems with CPTED checklists is the case of recommendations for convex pedestrian mirrors to see around corners in underground walkways. Recent evidence has emerged indicating that this style of mirror generates higher fear levels in women and elderly people since, though one can see the figure of a person around a corner, this figure is so distorted it is difficult to see with any detail exactly whether this person is a threat or simply another pedestrian (Wekerle et al, 1992:15; Toronto Transit Commission et al, 1989).

A more recent innovation in Canada is the urban safety audit, developed in Toronto in 1988 by police, transit planners, and the Metro Action Committee on Public Violence Against Women and Children (METRAC). It is a program that encourages different groups within the community to incorporate crime prevention designs into new,

or existing, developments (Toronto Transit Commission et al, 1989; Wekerle et al, 1992). In these audits, a small group of residents, security or police specialists, facility administration personnel, and others, walk through a site in the evening and make notes of problem areas. They also attempt to formulate suggestions for correcting problems which are then written into a report.

The first safety audits were conducted in Toronto, and they primarily dealt with crime prevention at what will later be described as the micro or meso scale (Saville, 1991). The audits confirm crime prevention research that shows there are key factors influencing the perception of safety in public spaces. Such factors include entrapment areas (confined areas near well travelled routes), movement predictors (a permanent route with no choice for pedestrians), and obstructed sightlines (blocked views due to walls, fences, pillars, bushes or sharp corners). Often this influence will have more impact on fear than on risk, therefore these factors must be considered in the specific context of the environment where they are located. Indeed, this is the strength of the situational approach.

The situational approach

The situational approach draws on the early work of Jane Jacobs (1961) and Oscar Newman (1972). It specifically relates to the work by criminologist C. Ray Jeffery (1972). As such it utilizes tactics that are rooted in reducing opportunities to crime through environmental modifications or through target removal. Practical courses in CPTED are still offered throughout North America. For example courses can be found at the School of Criminology, Simon Fraser University in B.C., the National Crime Prevention Institute at University of Louisville, KY., the first Canadian CPTED course (still operating today) at the RCMP Fairmont Training Academy in Vancouver, a new course at the C.O. Bick Police Academy in Toronto, and at the California Crime Prevention Institute Police Training Academy in Sacramento, California.

Typically, these courses teach planning and architectural concepts such as urban design and the effective use of space. This includes how "territoriality" can be enhanced through environmental modifications, access control, and natural surveillance to improve what Newman called the "defensible space" of a particular location. Some, such as

the RCMP Fairmont Training Academy course, utilize a situational approach to crime prevention and incorporate newer ideas such as the "broken windows" hypothesis which has shown that building maintenance and neighbourhood cleanliness can help create a safer environment (Wilson and Kelling 1982, 1989).

Planning and architectural schools have limited exposure to the evolving practice of situational crime prevention. A day-long professional development seminar in urban crime and planning at the University of B.C. Centre for Human Settlements in 1993 and a day and a half accredited course for architects and planners in 1994 at Simon Fraser University's Harbour Centre represent significant new in-roads to be explored by the planning professional. These new courses present the findings of recent research in situational crime prevention and also provide insight into the role that planning professionals can play in the future.

Recent theoretical advancements

There are many differences between the social and situational prevention approaches. The former deals with education, jobs and family upbringing.

However, because situational prevention has typically focussed on reducing the physical opportunities for crime, it deals with the specific crime or problem at a small scale. While it normally focuses on the environment where crime occurs, it does not exclude any approach. It utilizes whatever tactics make sense for that situation. Hence, the term situational crime prevention (Clarke and Mayhew, 1980; Clarke, 1980; Clarke, 1992).

Recent theoretical developments in criminology have advanced the practice of situational crime prevention considerably. Environmental criminology theory (Brantingham and Brantingham, 1991) and the routine activity theory (Cohen and Felson, 1979) are converging approaches that have contributed to the evolution of situational crime prevention.

For example, environmental criminology concerns itself with the complexities of interrelations *between* urban crime and the physical environment. Factors such as activity nodes and edge effects across the urban landscape are used to determine criminal opportunities (Brantingham and Brantingham, 1993). Activity nodes can act as "crime generators", as in the case of certain fast-food restaurants or video arcades. Edge effects are generated around the actual, or perceived, physical borders of different land uses such as the edge of a park, the border of a commercial strip, or the area around a shopping mall. High crime rates are often associated with such areas (Herbert and Hyde, 1984, 1985; Brantingham, Brantingham and Wong, 1990).

Other research in environmental criminology has examined what is called the "displacement phenomenon" (Repetto, 1976; Gabor, 1981; Cornish and Clarke, 1987; Clarke 1994). This occurs when crime is moved in time and space by prevention strategies. Displacement research has shown two key findings: total displacement is rare, and; displacement can be used advantageously if proper crime prevention planning is incorporated into new designs.

In other theoretical advancements, the routine activity theory predicts that the convergence of a motivated offender, a suitable target and the absence of any kind of "guardian" will greatly increase the likelihood of an opportunity for criminal activity. These routine activities of people throughout a city are direct planning concerns - travel paths to work, bus routes, where people shop, where kids hang-out. They can contribute or detract from the levels of crime that a city experiences (Felson 1987). Land use decisions, zoning regulations, and official community plans represent areas where planners can have a positive influence.

Theoretical studies provide the crime prevention planner with the capacity to, not only apply situational prevention to places that already exist, but to consider the crime generating capacity of developments that will be built. A comprehensive crime prevention review, in conjunction with new development plans, can incorporate social and situational approaches to provide the safest environment possible.

Tactics of Situational Crime Prevention

In *Situational Crime Prevention: Successful Case Studies* Clarke lists a number of specific tactics in the situational approach. These include twelve tactics in three categories: increasing the effort to commit crime; increasing the risk to commit crime; and reducing the rewards of committing crime (Clarke 1992). Some tactics apply to planning professionals, and some do not.

Increasing the effort includes traditional tactics that can involve engineers, architects, planners, city administrators or civic politicians. These tactics include *target hardening* (better locks on houses, vandal resistant windows) and *access control* (limiting the number of entranceways to buildings, providing electronic control over doorways). They also include the newer concepts of *deflecting offenders* (placement of bus stops or taverns, street closings) and *controlling facilitators* (caller ID on telephones to reduce harassing calls, limiting spray can sales to reduce graffiti).

Increasing the risks includes tactics that can be implemented by police officers, private security, operational employees and administrative personnel. It can also involve municipal engineers or specialists such as lighting technicians or landscaping architects. These techniques involve traditional enforcement and security tactics such as *entry/exit screening* (bar coding, electronic point-of-sales systems), *formal surveillance* (police and security patrols, burglar alarms), and *employee surveillance* (closed circuit television). It also includes CPTED tactics such as *natural surveillance* (eyes on the street, street lighting, landscaping and defensible space).

Reducing the rewards includes a variety of tactics that involve property owners, city administrators, politicians, and security professionals. These tactics include *target removal* (reducing cash on site, removable car radios to prevent theft), *property identification* schemes (Operation Identification programs), and *removing inducements* (graffiti cleaning, gender neutral phone lists to reduce harassing phone calls to women). They also include the notion of *rule setting* (drug-free school zones, public park regulations).

Obviously these tactics cover a wide array of approaches to prevent crime in specific situations. Planning professionals cannot be expected, nor is there need, to know how to apply all these tactics. In fact, a number of individuals can implement this version of crime prevention - police officers, engineers, civic politicians and administrators, private security, as well as architects and planners.

In situations requiring tactics to deflect potential offenders from a site or to enhance natural surveillance through design, planners and architects would take the leading role. In other situations requiring tactics that designate an area as "drug free" or to limit traffic in prostitution strolls, it would be the civic politicians in conjunction with planners and traffic engineers would take the lead role. Employing tactics that reduce rewards, such as property identification programs, would likely involve police officers in the municipality.

Note that each set of tactics requires different levels of involvement depending on the type of problem expected (or experienced) and the type of persons who can have the greatest impact. It is suggested here that it is the task of the "crime prevention planner" to have a background understanding of each of these tactics, who should implement them, and when or where they would be most effective. The crime prevention planner may be a designated municipal CPTED planner, a regional social planner or a crime prevention consultant. Minimum standards for those practicing these activities will be discussed shortly. First, I will discuss crime prevention planning and the use of situational crime prevention on some emerging urban designs.

Categories of crime prevention planning

There are at least five categories of crime prevention planning. They are illustrated under Figure 1. Three deal with the size and scope of development and two deal with the timing of its construction. The first three categories relate to development size - micro, meso and macro. The final two are stages of development and they will be described in the section about implementation as before and after.

It should be noted that the five categories of crime prevention planning mentioned here are not mutually exclusive of each other. They overlap and occasionally an effective strategy at one level might work in another. They are developed here from a planning/architectural perspective, rather than a security consultants perspective (although crime prevention strategies exist at all levels for both).

Examples provided below are drawn from actual crime prevention planning projects conducted recently in British Columbia by Action Assessment Group, Inc.

The *micro* development refers to development at the smallest scale. This is a specific architectural feature on a building, home, park, walkway, or any other urban design. It would apply to a pedestrian walkway over a railroad crossing to a public park. It would also refer to proposed below ground window wells in a subsidized housing complex.

Case #1

An architectural feature in itself is neither positive nor negative as far as crime is concerned. It is the situation specifics which determine the problem. In a recent crime prevention planning project, the case of the window wells, access into the townhouse apartments became a key issue. As the position of the windows was just below ground level, this offered a possible entrapment area. Also, proposed sliding glass doors on the sunken window wells provided potential burglars ample unobserved access into the apartments. This was important especially since criminological research into burglary shows that sliding glass doors are a preferred point of entry by burglars (Cromwell, Olson and Avary, 1991; Bennett and Wright, 1984). Accordingly, situational tactics such as target hardening, access control, natural surveillance, and removing inducements were proposed in this situation.

The *meso* development involves designs of a larger scope including the apartment building, the shopping mall, the park area, and public transit routes. At the meso scale the relationships between social activity and physical environment are complex and difficult to examine closely.

Case #2

In a recently proposed new college campus, a meso development, the crime prevention planning considered:

- 1) the location of the nearby transit stops as movement predictors for students (potential for assaults and fear of crime);
- 2) the placement and distance of the parking lots from main entranceways as related to sightliness and visibility at nighttime (potential for assaults and thefts from autos);
- 3) the visibility, type of landscaping, amount of lighting, and accessibility into, and out of, interior courtyard areas (potential for assaults, fear of crime, lack of defensible space);
- 4) the surveillance (formal, employee, and natural) of internal "hotspot" areas such as cashiers, underground parkades, and student study areas (potential for robberies, thefts, assaults and fear of crime);
- 5) the sightliness into, and isolation of, public washroom areas (potential for sexual assaults, fear of crime).

Each of these factors is related to the other. It is difficult to predict the precise behavior without a full crime risk assessment and crime analysis, including demographic profiles, movement information (bus route times, traffic cordon counts, college class times, locations of student activities, etc.), and other background information. Once these assessments were concluded in this case, previous research into campus crime was examined (Saville, 1990; Tritt, 1987; Skelton 1987). In the final report the proposed situational crime prevention measures included access control, deflecting offenders, entry/exit screening, formal surveillance, employee surveillance, natural surveillance, target removal, and rule setting.

The *macro* development is a large scale including new town centers, mixed urban land uses, and official community plans.

This is the most complex level of development and the potential crime problems are numerous. Who will live around a new town center in the next decade? How will employment levels, immigration, demographic mix, and the presence (or absence) of a critical intensity zone influence the potential crime in an area? How are the proposed land use mixes going to influence activity generators and movement predictors?

Case #3

In another recent development project, crime prevention planning was applied to a proposed multi-nucleated, regional town center with shopping, recreational, residential, open space and office land uses (Saville and Wong, 1989). Crime prevention planners identified conflicting land uses that the developers were able to correct prior to plan registration. This was a case of macro crime prevention planning in what will later be described as a *before* stage of development.

In this case an elevated light rail, public transit station was located adjacent to a commercial shopping complex. Townhouses were proposed for development on the other side of the shopping complex next to a heavily treed park area. Since the shopping complex closes at 9 PM, townhouse residents returning home from the transit stop at nighttime would be forced around the shopping complex onto long isolated walkways through the park area in order to get home. From a crime prevention perspective, this isolated pedestrian route represented a high risk movement predictor.

The macro solution, at this before stage of development, would be to deflect offenders by moving the transit station between the park and the residential area. However, in this particular case this was not an option. Therefore, crime prevention planners utilized meso and micro strategies to compensate, including formal surveillance, natural surveillance, target removal, and rule setting.

Specific solutions in this case involved permitting controlled access through the shopping mall, providing security devices and patrols in key areas, enhanced landscaping and lighting along pedestrian walkways, and administrative operating procedures to reduce risk.

Emerging urban designs and situational crime prevention

New urban designs are emerging that may well impact urban crime patterns in the future. New tactics in situational crime prevention and crime prevention planning will be important elements of the planning process. Following are a few of these new urban designs.

Vernacular Architecture

In recent years, post-modernism has been a prominent architectural style in urban residential and commercial designs. Since the famous Seaside development in Florida, another architectural style has emerged called vernacular architecture.

This style is reminiscent of architecture from the 1930s to the 1950s in which romantic versions of "small-town" North America are featured - eight foot deep front veranda's, picket fences, smaller housing sizes, bay windows and so forth (Langdon, 1988)

Vernacular architecture is, by its nature, a micro level concern of situational crime prevention. In theory, at least, front verandas in which people sit and watch their streets should put more "eyes on the street", thereby reinforcing natural surveillance and perhaps encouraging an informal version of community rule setting. This should also be reinforced by positioning bay windows in front of residences. But, as research in environmental criminology has illustrated, behavior of this sort would depend on the kind of people inhabiting these vernacular structures, not merely the architectural style itself. In theory and on the surface, vernacular architecture should be a positive architectural feature in urban design.

New Town Developments and TNDs

A larger extension of vernacular architecture is the new town development, also called traditional neighbourhood developments (TND). These new urban developments are characterized by narrow street sizes (eighteen foot widths), alleyways and garages in back where parked cars are displaced to allow socializing in front, visual landmarks (gazebo's) at the end of short streets, easy walking distances around town, corner stores within walking distance, and so forth. Even reducing the curb radius at intersections to slow cars is used to increase the pedestrian-friendliness of TNDs (Duany and Plater-Zyberk 1992; Langdon 1988).

Seaside in the Florida panhandle represents one of the first TNDs. McKenzie Town near Calgary, Fleetwood in Ontario, and the proposed Bamberton development on Vancouver Island are more recent versions. Recreating a "sense of place" missing in many contemporary suburbs is one of the main goals of these new urban forms.

In principle a strong sense of community, positive social interaction, and neighbourliness are all factors that can be associated with lower public crime rates. However, many of the TND developments have been built in retirement or resort areas, areas that are typically low in reported crime. It is yet to be seen the impact of such urban designs in other locations.

For example, placing vehicles in alleyways and garages at the rear of houses is likely to escalate thefts from autos since surveillability is reduced. Furthermore, unless careful attention is paid to the location of pedestrian walkways, homes with unobserved access points alongside walkways may be at higher risk of burglary than necessary. Studies already indicate that territoriality and surveillance along isolated walkways increases burglary rates in adjoining residences.

Recreating "Main Streets"

The Heritage movement in planning, characterized by business district streetscaping to recreate small town "Main Street", is another more recent urban design that has received little exposure to crime prevention planning.

The intent in this form is to create low rise, human-scale storefronts in small downtown areas. Every effort is made to make the downtown an attractive place to be - stylish lighting standards, plenty of benches and seating areas, cobbled sidewalks and angled street parking, and others. Local street vendors and a diverse mix of land uses are other strategies utilized to recreate Main Street.

There are many versions of this trend, such as the Port Moody or Kelowna downtown revitalization projects in British Columbia. Although called an "entertainment district", the Electric Avenue redevelopment in Calgary is also reminiscent of this style. As with the TNDs, there are many potential problems with such developments. For example, while street bench seating may attract shoppers in daytime, the nighttime use is another matter. Loitering teens with nothing to do may well cause an increase in commercial break-ins and vandalism, especially if care isn't taken with surveillance and territoriality.

Furthermore, in the Electric Avenue example the Calgary police have reported significant increase in assaults and street crime resulting from the excessive number of liquor establishments located along Electric Avenue. As a result the city council has received recommendations to restrict the size of bars (nothing larger than 120m² in the area), and limit the distances permitted between liquor establishments (a distance between pubs no less than 45m) in the belief that the area has exceeded the "bar threshold" (Calgary Planning Commission, 1992).

In fact, the notion of the threshold (and the related idea of a neighbourhood carrying capacity) is fairly unexplored in ecological studies in criminology. The hypothesis states that a neighbourhood has a threshold of certain activities or land uses, such as the number of bars or video arcades, and when this is exceeded the result is a disproportionately higher level of crime compared to surround areas (Wilson, 1980; Saville and Wong,

forthcoming). The impact of such findings for planning professionals, especially for the reduction of opportunities for crime, is considerable.

There are numerous other examples of urban designs that impact crime and the fear of crime - monster homes, new regional city centers, co-op housing complexes, the proliferation of underground parkades, and many more.

Implementation of crime prevention planning

In addition to three categories of crime prevention planning, micro, meso and macro, there are various stages at which this planning can be applied. For descriptive purposes, these stages can be defined as *before* and *after*.

Before stages represent phases of development that exist prior to construction. In some cases, developers and planning professionals are able to consider potential problems long before plan registration. In other cases, new developments are confronted with public resistance during public meetings or at city council meetings once plans are complete. Obviously the earlier comprehensive crime prevention plans and risk assessments are completed, the easier it is to adopt recommendations, the less expensive it is for the developer to make subsequent changes, and the safer the development will be.

After stages involve retrofits of existing sites or redevelopment projects. This stage limits the number of situational prevention measures that can be applied, however risk assessments are more straightforward since current problems can be measured and patterns of existing crime statistics can be analyzed. Crime analysis, safety audits, site interviews and focus group meetings are all tools that crime prevention planners utilize in the *after* stages.

As a process, crime prevention planning can be incorporated in a number of ways. In British Columbia, for example, police officers are first trained in CPTED and then encouraged to sit as members of advisory design panels during the plan registration process. On these panels they are able to provide their own preliminary input

regarding potential problems with new developments, and also help educate other members of the panel about their own concerns.

In Ontario, and recently across Canada, urban safety audits have been conducted at assorted urban locations to determine high fear areas and potential crime hotspots. These audits have been useful in currently existing structures such as parking lots, subway stations, and community colleges, especially to obtain perceptual information on fear of crime.

In some jurisdictions, CPTED-trained police officers are mailed development plans and asked to provide written comment. This is the least desirable form of input since officers rarely have adequate time to provide comprehensive assessment. They frequently rely on CPTED checklists which, as already noted, can be a haphazard form of implementation that might make matters worse.

The most comprehensive way to incorporate crime prevention planning is to have a designated CPTED planner, or hire crime prevention planning consultants, with background in planning, environmental criminology or policing, and the tactics of situational crime prevention. These individuals can be utilized at any stage in the development process. However, the implementation of situational prevention measures is easier at earlier stages than at latter stages.

Figure 1 below illustrates the relationship between micro, meso, macro urban designs and the before/after stages of development. Recall that these categories are not mutually exclusive. For example in the macro/before example, Case #3, crime prevention planners were unable to utilize a strategy to deflect offenders. Therefore, they compensated with appropriate micro and meso strategies. Note that the number of situational prevention measures available to planners diminishes as size and stage of development increases.

Figure 1
Situational prevention measures available during site development

	micro	meso	macro
before	<ul style="list-style-type: none"> * target hardening * target removal * formal surveillance * employee surveillance * natural surveillance * access control 	<ul style="list-style-type: none"> * deflecting offenders * natural surveillance 	<ul style="list-style-type: none"> * rule setting * deflecting offenders * remove inducements
after	<ul style="list-style-type: none"> * target removal * formal surveillance * employee surveillance 	<ul style="list-style-type: none"> * remove inducements 	<ul style="list-style-type: none"> * rule setting

Professional standards for crime prevention planners

As this discussion illustrates, crime prevention planners have a distinct role from the traditional role of land use, environmental, economic or transportation planning. Nor do crime prevention planners have the same concerns as social planners, the latter most frequently associated in Canada with housing, child care, multiculturalism and other social issues. Instead, crime prevention planning is a distinct field of expertise with a wide variety of methods and tactics, of which situational crime prevention is only one. In conjunction with the Canadian Institute of Planners policy on hiring consultants, the following is proposed as a set of recommended standards for crime prevention planning practitioners.

Ideally, there should be two categories of crime prevention planning: 1) the crime prevention planner; and, 2) the crime prevention technician. Skills for both of these activities should include professional competence, technical competence, and appropriate educational background and experience.

Crime Prevention Planners:

1. Professional competence

At a minimum, crime prevention planners should possess a university degree in a subject related to planning, architecture, or criminology. This should include studies in environmental criminology/psychology, situational crime prevention, urban geography, urban planning and design, or environment and behavior.

The most qualified planners should possess a graduate degree in any of the above fields and be eligible for membership in a professional planning or architectural association.

2. Technical competence

At a minimum, the crime prevention planner should have completed one or more accredited courses specifically focussed on crime prevention (including crime prevention through environmental design or situational crime prevention) urban planning practice and theory, and techniques in private security and loss prevention.

3. Experience and background

Ideally, the crime prevention planner should have some relevant professional planning or architectural experience, such as project management, monitoring plan development, CPTED reviews, or other duties related to the planning and architectural process. The most qualified crime prevention planner will have skills in methodological techniques including data and computer analysis (including geographic information systems), interviewing, crime statistics analysis, and demography.

Additionally, a background in policing, private security, or criminology should also be a component of the most qualified crime prevention planner.

Crime Prevention Technicians:

1. Professional competence

Should have completed some post-secondary courses in environmental criminology/psychology, situational crime prevention, urban geography, urban planning and design, or environment and behavior.

The most qualified crime prevention technicians should possess a college diploma or college certificate in any of the above fields.

2. Technical competence

The crime prevention technician should have completed one or more accredited courses specifically focussed on crime prevention (including crime prevention through environmental design or situational crime prevention) urban planning practice and theory, and techniques in private security and loss prevention.

3. Experience and background

The most qualified crime prevention technician will have skills in methodological techniques including data and computer analysis (including geographic information systems), interviewing, statistical crime analysis, or demography.

Additionally, a background in policing, private security, or criminology should also be a component of the most qualified crime prevention technician.

Minimum crime prevention project criteria

Whether a crime prevention planning project utilizes the skills of a planner or technician, the degree to which each assessment is conducted must be determined by the specific project itself. Obviously, some more complicated projects, such as meso or macro/before developments, may be inappropriate for crime prevention planning technicians. Conversely, micro/after developments may not require the skills of the crime prevention planner.

However, there are certain basic criteria that should be met when utilizing crime prevention planning tactics, such as situational crime prevention. These minimum criteria should be found in any written report summarizing a crime prevention planning review. They include:

1. Site visits, including interviews with local residents and other relevant persons, and photographic surveys of the site and the surrounding area by day and night and on different days of the week.
2. A collaborative research process, including meetings with the main stakeholders in a project (police, residents, architects, city planners, etc). This process can take the form of interim meetings, focus groups, public meetings, search conferences, and so forth.
3. A risk assessment, including examination of pertinent crime statistics, local demographics, mobility patterns, and any available projections of these elements. This can include geographic information system computer simulations, computer "hotspot" analysis, and other technical formats. On new commercial developments, marketing studies are useful to examine potential user groups and densities of high-crime age cohorts.
4. An architectural or planning design review. This involves an analysis of plans at whatever stages the development exists. For example, on micro or meso/before developments, photometric surveys and detailed landscaping plans are useful to examine sightliness, entrapment areas, and natural surveillance locations.

Conclusion

Crime prevention planning that utilizes strategies such as situational crime prevention can be an effective way to enhance the actual and perceived safety of new urban designs. Urban planners must therefore seriously consider the necessary standards and criteria for crime prevention planning. This is especially important at a time when new urban designs are emerging, such as Vernacular architecture, new town developments, and recreating Main Streets. It is the next natural step in creating a more sophisticated form of urban planning for the future.

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