

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

CPTED PROGRAM MANUAL

Volume II
CPTED Strategies and Directives Manual

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PREFACE

Crime is one of the most significant social problems in the United States, requiring innovative and varied solutions for reduction and prevention. Although Federal, State, and local governments have committed enormous resources towards combatting crime, the fear of crime is a discomfoting facet of everyday living in many communities. This fear has combined with other social forces to undermine the vitality of commercial areas, has led to the abandonment of residential areas as families are prompted to flight, enmeshed school administrations with internal disorders which have disrupted educational activities, and has often hastened declines in public transportation ridership.

NILECJ has recognized the need for research and the development of new approaches for crime prevention and the restoration of personal security. Because the environment in which we live is such a fundamental determinant of how we act and perceive our surroundings, it is both natural and imperative that we seek an understanding of its influence upon both crime and the fear of crime within our society.

In 1974, a major exploration of techniques for Crime Prevention Through Environmental Design (CPTED) was initiated with an award to a consortium of firms headed by the Westinghouse Electric Corporation.

The goal of the CPTED Program is to develop and demonstrate design concepts for urban environments that will reduce crime and im-

prove the quality of urban life by reducing the fear of crime. Specific objectives of the Program are:

- To consolidate and extend CPTED concepts that bear upon the prevention of crime in urban settings.
- To mount demonstration projects for the evaluation and refinement of CPTED concepts.
- To distill the concepts and demonstrations' findings into guidelines suited to architects, planners, and developers.
- To disseminate and institutionalize Program results on a wide basis.

There are several products developed by Westinghouse that are based on the experience and knowledge gained from the CPTED Demonstrations. These products were developed with the explicit purpose of articulating and formalizing the process involved in planning and implementing a CPTED project. Chief among these products is the CPTED Program Manual. The Program Manual, which consists of three volumes, was produced to assist urban designers and criminal justice planners in determining the applicability and feasibility of the CPTED concept to the solution of crime or fear-of-crime problems in various different urban environments. The Program Manual also provides detailed guidance for the planning and implementation of a CPTED project. Volume I, the Planning and Implementation Manual, describes the planning framework and related project management activities. Volume II, the Strategies and Directives Manual, presents a catalog of strategies, together with

examples of specific design directives. Volume III, the Analytic Methods Handbook, provides a catalog of appropriate analytic techniques.

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CHAPTER 1. INTRODUCTION

1.1 Purpose and Scope

The purpose of the Strategies and Directives Manual is to provide a comprehensive overview of CPTED strategies that can serve as useful examples for addressing crime problems and opportunities that are common to residential neighborhoods, commercial areas, and public high schools.

This document is designed to be used in conjunction with the other two components of the CPTED Program Manual, Volume I -- CPTED Planning and Implementation Manual, and Volume III -- CPTED Analytic Methods Handbook. The first provides a framework for organizing and coordinating the various stages and activities involved in a CPTED project. The second provides a framework for criminal justice and urban planners to gather and analyze crime- and environment-related data in settings where a CPTED project is being planned and implemented. Both of these components should be reviewed, and the Planning and Implementation Manual in particular read thoroughly, before working with the Strategies and Directives Manual.

After identifying and analyzing the crime problems to be addressed by a particular CPTED project, the planner should use the Strategies and Directives Manual as an aid to develop proposed solutions to these problems. For some problems, the strategies presented may be directly applicable; however, they are by no means all-inclusive. No effort has been made to identify all possible strategies applicable in all possible

environments. It is expected that the material will suggest additional solutions, or the adaptation of others, for the specific area of interest.

The strategies are presented in three chapters, one for each of the three environments in which CPTED concepts have undergone demonstration: Residential, commercial, and schools. Most of the strategies are based on experiences in these demonstrations areas; however, they are not necessarily limited to such experiences. For example, the commercial demonstration site was an urban commercial strip surrounded by residential neighborhoods. Strategies developed for this type of area obviously differ from those applicable for other commercial sites (such as manufacturing complexes or multistory office buildings).

Similarly, the schools demonstration was implemented in a campus-like, high school setting. Strategies developed there are not necessarily directly applicable to other schools (e.g., in urban settings).

Strategies can also have multiple applicability. That is, they can be suitable for a different environment than the one for which they were developed. For example, some commercial complexes (such as suburban hospital settings) have physical design elements that much more closely resemble the schools mode (i.e., campus-like) than the commercial mode (i.e., urban strip) described above. Therefore, it is worthwhile to consider strategies presented for all three environments when addressing a particular situation.

The remainder of this chapter details the classification structure for the presentation of strategies.

1.2 Classification Structure

1.2.1 Environment

The range of possible environmental modes of CPTED concern is limitless. However, the design modes that have already received attention in formal research and demonstration projects are the residential, commercial, and schools environments.

- Residential -- The definition of a residential mode can range from a single mobile home to a multistory, high-rise apartment or condominium. Included are single-family detached and attached or townhouse units; garden apartments and midrise developments; and whole neighborhoods. Each of these may have appurtenant or ancillary structures (such as single or multiple garages, carports, storage buildings, central boiler/air conditioning plants, play structures). Related interior spaces pertain generally to multiple-unit residences, and include lobbies, hallways, laundry and mailrooms, elevators and stairs, storage rooms, etc. Finally, the targets at risk in the residential mode include not only the residents and residences but also the passers-by who use the residential streets.

- Commercial -- A broad picture of the commercial mode must include the entire array of retail, wholesale, service, manufacturing, banking, and real estate establishments. Their geographical locations range from heavily urbanized central business districts to rural villages, from scattered lots in primarily residential areas to large tracts devoted exclusively to commercial use. The commercial mode can be classified into interior and exterior spaces. Interior spaces include entryways and lobbies, stairwells, office suites, restrooms, corridors, service spaces, kitchens, etc. Exterior spaces include contiguous streets, alleys, sidewalks, delivery areas, service entrances, parking lots, etc. Potential crime targets in the commercial mode include employees, patrons, passers-by, and the establishments themselves.
- Schools -- The schools mode can be classified according to different educational levels and needs -- elementary, secondary, postsecondary, and special schools. In reviewing the physical plant, the school premises can be divided into interior and exterior spaces. Interior spaces

include corridors, stairs, classrooms, lobbies, restrooms, storage, custodial and mechanical rooms, gymnasias, laboratories, offices, libraries, kitchens, cafeterias, etc. Exterior spaces include parking areas, recreational areas, loading and delivery areas, etc. Potential crime targets include students, teachers and administrators, service personnel, visitors, and the structures themselves.

1.2.2 Operating Hypotheses, Objectives, and Strategies

Operating hypotheses are statements that describe the nature of the relationship between behavior and environment. Four hypotheses have been formulated for CPTED purposes: Access control, surveillance, activity support, and motivation reinforcement.

Access control is primarily directed at decreasing criminal opportunity. In essence, it operates to keep unauthorized persons out of a particular locale if they do not have legitimate reasons for being there. In its most elementary form, access control can be achieved in individual dwelling units or commercial establishments by use of adequate locks, doors, and similar installations. Access control can also be achieved through personnel deployment such as doormen and security guards. In certain instances, access control can be achieved by the creation of psychological barriers. These barriers can appear in the form of signs, parkways, hedges -- in short, anything that announces the integrity and uniqueness of an area.

The primary aim of *surveillance* is not to keep intruders out but to keep them under observation. Surveillance increases the perceived risk to offenders, as well as the actual risk *if* the observers are willing to act when potentially threatening situations develop.

A distinction can be made between organized surveillance and natural surveillance. Organized surveillance is usually carried out by police patrols in an attempt to project a sense of omnipresence (i.e., to convey to potential offenders the impression that police surveillance is highly likely at any given location).

In some instances, surveillance can be achieved by nonhuman techniques such as closed-circuit television (CCTV) or alarms. Noteworthy success is reported to have been achieved in certain residential complex systems where the CCTV surveillance channel can be dialed on residents' individual sets.

Natural surveillance can be achieved by a number of design techniques (such as channeling the flow of activity to put more observers near a potential crime area, or creating a greater observation capacity by installing windows along the street side of a building, enclosing a staircase in glass, or using single-loaded corridors). The technique of defining spaces can also convey a proprietary sense to legitimate users, inducing a territorial concern.

The concept of *activity support* involves methods of reinforcing existing or new activities as a means of making effective use of the built environment. This perspective is based on the observation that,

in a given community, there are often resources and activities capable of sustaining constructive community crime prevention. Support of these activities can bring a vital and coalescing improvement to a given community, together with a reduction of the vulnerable social and physical elements that permit criminal intrusions. Such an approach might focus on a geographic area (e.g., block, neighborhood, or city sector), a target population (e.g., vulnerable elderly victims or opportunistic youthful offenders), or an urban system (e.g., health delivery, transportation, or zoning).

In contrast to the more mechanical concepts of access control and surveillance that concentrate on making offenders' operations more difficult, *motivation reinforcement* seeks not only to affect offender behavior relative to the built environment but to affect offender motivation by increasing the risk of apprehension and by reducing the payoff to him.

The hypothesis also seeks to positively reinforce the motivation of potential victims. Territorial concern, social cohesion, and a general sense of security can result from such positive reinforcement strategies as altering the scale of a large, impersonal environment to create one that is smaller, more centralized, and personalized. These results can also occur from improving the quality of an environment by such measures as upgrading the housing stock, the school facilities, or the interiors of subway cars; organizing occupants; or changing management policy.

Territorial concern, social cohesion, and a general sense of security can be reinforced through the development of the identity and image of a community. Recognized consciously, this approach can improve not only the image the population has of itself and its domain but also the projection of that image to others. With a definition and raising of standards and expectations, patterns of social estrangement decline, together with opportunities for aberrant or criminal behavior.

Thirteen *objectives* for the residential environment have been derived from these hypotheses, fourteen for the commercial, and eleven for the schools. These objectives correspond to the types of project-specific objectives that are generated by the crime/environment analysis described in the Planning and Implementation Manual. They provide a basis for the selection of possible solutions to crime and fear problems. The suggested solutions are presented as strategies.

A *strategy* is a method of affecting the interaction between human behavior and the environment through the manipulation (i.e., creation, modification, or elimination of one or more environmental variables). In addition, the strategy provides a rationale for adopting one or more *directives*. The directives describe the various means by which a given strategy can be fulfilled. Thus, while the strategies concentrate on *what* can be done to achieve the objective, the directives focus on *how* it can be done.

Directives must be formulated to meet site-specific requirements. Thus, no attempt has been made to present a taxonomy of directives. In

some instances, the strategy needs no further refinement; in other instances, examples of directives are provided for illustrative purposes.

Strategies have been classified according to their primary thrust or orientation into physical, social, management, or law enforcement categories. Many strategies include a combination of approaches (e.g., a strategy can have both law enforcement and management elements). Although the strategies cannot be neatly categorized, the strategy selection process is simplified by the use of the following frame of reference:

- Physical Strategies -- Create, eliminate, or alter physical features that affect criminal actions. For example, to provide special barriers to impede undetected access. This could be achieved by installing grilles on ground floor windows, cutting down concealing shrubs, and erecting high fences.
- Social Strategies -- Create interactions among individuals. An example is to involve neighborhood residents in crime prevention programs. This could include establishing neighborhood watch activities, holding seminars on how to reduce individual vulnerability to crime, and increasing police/community cooperation programs.

- Management Strategies -- Have a policy and practice thrust. One management strategy is to amend zoning to reduce the vulnerability of structures to burglary by establishing minimum security standards. Management strategies also include those that impact upon the economy, with the assumption that improving income levels, employment rates, and the quality of the physical environment (via monetary inputs) will ameliorate crime problems.
- Law Enforcement Strategies -- Concern both public police support and private security forces. For example, one strategy in this category is to increase police patrol in a high-crime-rate area. Another strategy is to hire private security guards to patrol particular blocks, building sites, or buildings.

1.2.3 Framework

The following framework is used to present the strategies:

Design Hypothesis -- A statement regarding the interaction between behavior and the environment.

Objective -- A statement focusing on a specific approach to a crime/environment problem based on that design hypothesis.

Strategy:

- A possible solution based on the above approach.

Directive:

- A specific instruction for carrying out the above solution.

Classification

Physical, Social,
Law Enforcement,
and/or Management

Discussion/Examples/References -- Additional information provided to further illustrate a strategy or related directives.

The following example is excerpted from Chapter 2:

2.10 Community Awareness

Objective -- Create neighborhood/community crime prevention awareness to aid in combatting crime in residential areas.

Strategy:

- Encourage citizens to secure their homes.

Directive:

- Develop and distribute brochures that describe how to improve residential security.

Classification

Management

Discussion -- Police/community cooperative education programs often include distribution of literature that is instructive and advisory in nature. Brochures and fliers, distributed by bulk mailings, are the most common format.

Brochures written to the level of the prospective reader assume a minimal knowledge of security hardware and practices and are amply illustrated.

(Example of a project employing this method [reference]).

The CPTED Annotated Bibliography is included as Appendix A of this Manual. References (in parentheses) in the Discussion/Examples/References sections are to citations in this bibliography. An index to individual items in this manual follows Appendix A.

CHAPTER 2. CPTED STRATEGIES FOR THE RESIDENTIAL ENVIRONMENT

This chapter presents a comprehensive array of objectives and strategies that address residential crime problems. In residential areas, crime problems of greatest concern generally include burglary, robbery, assault, and vandalism.

In addition to the strategies, wherever possible, directives, examples, and references are included. This material clarifies strategies, presents some guidelines for implementation, and refers the user to additional information sources.

Table 2-1 presents a summary list of the objectives for the residential environment.

2.1 Access Control

Objective -- Provide secure barriers to prevent unauthorized access to building grounds, buildings, and/or restricted building interior areas.

Strategies:

- Erect barriers to impede undetected access to the site through neighborhood areas (such as vacant lots, structures with adjoining walls).

Classification

Physical

Discussion -- *Barriers may be constructed, such as fences or walls, or they may consist of landscape plantings, which offer a psychological*

Table 2-1

Objectives for Residential Environment

1. Access Control: Provide secure barriers to prevent unauthorized access to building grounds, buildings, and/or restricted building interior areas.
2. Surveillance Through Physical Design: Improve opportunities for surveillance by physical design mechanisms that serve to increase the risk of detection for offenders, enable evasive actions by potential victims, and facilitate intervention by police.
3. Mechanical Surveillance Devices: Provide residences with security devices to detect and signal illegal entry attempts.
4. Design and Construction: Design, build, and/or repair residences and residential sites to enhance security and improve quality.
5. Land Use: Establish policies to prevent ill-advised land and building uses that have negative impact.
6. Resident Action: Encourage residents to implement safeguards on their own to make homes less vulnerable to crime.
7. Social Interaction: Encourage interaction by residents to foster social cohesion and control.
8. Private Security Services: Determine appropriate paid professional and/or volunteer citizen services to enhance residential security needs.
9. Police Services: Improve police services to provide efficient and effective responses to crime problems and to enhance citizen cooperation in reporting crime.
10. Police/Community Relations: Improve police/community relations to involve citizens in cooperative efforts with police to prevent and report crime.
11. Community Awareness: Create neighborhood/community crime prevention awareness to aid in combatting crime in residential areas.
12. Territorial Identity: Differentiate private areas from public spaces to discourage trespass by potential offenders.
13. Neighborhood Image: Develop positive neighborhood image to encourage resident and investor confidence and increase the economic vitality of the area.

barrier. See related section in CPTED Technical Guideline 7, Planning Public Outdoor Areas.

<u>Strategies (continued):</u>	<u>Classification</u>
<ul style="list-style-type: none">● Upgrade construction materials at gates, doors, and windows; install improved mechanical locking devices; and/or add to the heights of fences and walls to increase the security offered by existing barriers.	Physical
<ul style="list-style-type: none">● Avoid the use of fences with large mesh perforations and walls with very rough surface textures that can provide footholds and handholds for scaling.	Physical
<ul style="list-style-type: none">● Provide scaling deterrents at tops of fences and walls.	Physical
<ul style="list-style-type: none">● Remove branches on trees and other physical objects near fences and walls that might be used as ladders for scaling.	Physical

Discussion -- Chain link fencing should be constructed of a number 11 or heavier gauge, with twisted and barbed selvage at top and bottom. The fence should be at least seven feet tall (or as specified in the

building code) and begin no more than two inches from the ground. If the soil is sandy or subject to erosion, the bottom edge of the fence should be installed below ground level. It should be stretched and fastened to rigid metal posts set in concrete. Mesh openings should be no more than two inches square. The fence should, additionally, be augmented by a top guard or overhang of three strands of stretched barbed wire angled at 45 degrees away from the protected property. This overhang should extend the height of the fence by one foot, to an overall height of eight feet. To protect the fence from washouts or channeling under it, culverts or troughs should be provided at natural drainage points. Similar height and overhang specifications are recommended for masonry walls.

Strategies (continued):

Classification

- Provided additional barriers for vulnerable openings on lower floor levels and openings that are accessible from outdoor stairs and roofs (e.g., grilles and bars on windows, transoms, and ventilation outlets).

Physical

Discussion -- Windows and other openings larger than 96 square inches should be protected by grilles, metal bars, or heavy screening, when they are less than 18 feet from the ground or less than 14 feet from outside structures.

Strategies (continued):

Classification

- Provide a lockable entry vestibule to create an additional obstacle for offenders.* Physical
- Provide self-closing and -locking devices on exterior doors. Physical
- Remove exterior door handles and/or provide panic hardware on fire doors that are not intended for general use. Physical
- Block off access routes from windows or roofs of adjacent structures that could be used to reach windows or roofs of the structure in question. Physical
- Fence off problem areas between or behind buildings that are not intended for public use. Physical
- Provide secure storage areas within multiple residences. Physical
- Provide secure doors and locks on apartment doors that lead to shared interior corridors: Physical

*Vestibules are defined in this manual as smaller than lobbies and without amenities normally found in a lobby.

Strategies (continued):

Classification

Directives:

- Replace spring-bolt locks and key-in-knob locks with mortise locks and dead bolts.
- In doors with windows, install a double-cylinder lock in place of a thumb turn on the inside.
- Provide locks that have at least six pins.
- Maintain strict key control.
- Protect hinges from removal.

Discussion -- Mortise locks are mortised to the door, that is, inserted into the door itself, rather than applied to the surface, for example, with screws. A deadbolt lock has no automatic spring action (in spring-bolt locks the bolt can be withdrawn from the inside by the door handle). The deadbolt is usually operated by a key and holds fast when in the projected position. A double cylinder deadbolt lock cannot be unlocked by turning the handle on the inside if the intruder breaks the glass in the door. A key is required to unlock the door even from the inside once the keyed bolt is thrown. Such locking mechanisms present some hazard to occupants inside in case of fire; occupants should keep keys in an easily accessible place (79, 102, 175).

Strategies (continued):

Classification

- Provide electrically activated locks and an intercom system that enable residents to inter-rogate visitors from apartments before permitting entry to an interior corridor.

Discussion -- Lobby doors should provide maximum visibility into the lobby. Door frames should be rugged, heavy-duty metal. The vertical member incorporating a heavy-duty mortised lock should be at least 5 inches thick and sustain a concentrated load of at least 500 pounds. The key-operated cylinder lock should have at least six pins. The key should not open any other lock (to minimize susceptibility to picking). An anti-friction latch and strong door closer should be used.

Intercom systems should consist of a buzzer and intercom in each apartment and in the lobby. The lobby installation consists of a panel outside the locked door containing the numbers of all apartments and the names of the residents. Next to each name is a call button that rings in the associated apartment. The tenant can respond by speaking into a wall-mounted microphone/speaker connected to a speaker/microphone near the panel outside the door. The visitor responds to interrogation by speaking into the microphone on the outside door panel. The tenant must push a button in his apartment to unlock the outside door for the visitor. These systems are only effective if tenants use them properly. Careless tenants who automatically unlock the door without questioning

the visitor defeat the system.

Retrofit cost is high for these systems. Some local telephone companies have a variation of the system that uses existing telephone wires (175).

<u>Strategies (conintued):</u>	<u>Classification</u>
• Provide building residents with keys for private access to rooms located off of shared corridors (such as laundry facilities and mail rooms).	Physical
• Provide keyed elevators for access to corridors from unsecured areas (such as parking facilities).	Physical
• Prevent access to interior corridors from emergency fire stairs by removing door handles in stairwells.	Physical

Discussion -- *Fire stairs are still accessible from the corridor but not vice versa, thus the fire safety codes are not violated. However, once in the stairwell, one must continue all the way to the ground level in order to get out. This prevents intruders from gaining unauthorized entry into the building other than through main entrances (175).*

2.2 Surveillance Through Physical Design

Objective -- Improve opportunities for surveillance by physical mechanisms that serve to increase risk of detection for offenders, enable

evasive actions by potential victims, and facilitate intervention by the police.

Strategies:

Classification

- | | |
|---|----------|
| • Orient points of entry to the building site to be directly accessible and clearly visible from areas of street and pedestrian activity whenever possible. | Physical |
| • Limit the number of possible access points. | Physical |
| • Provide well-defined pedestrian access corridors that channel flows for good natural surveillance. | Physical |
| • Eliminate unnecessary visual barriers that can conceal unauthorized entry attempts. | Physical |

Discussion -- Well planned outdoor landscaping can facilitate natural surveillance opportunities. Planted borders, including trees, should be located far enough back from pathways and be periodically trimmed as required to provide uncrowded visual corridors that are not encroached upon by foliage. Since the visual focus of strolling pedestrians is usually about 35 feet ahead, people tend to feel most comfortable and secure when site conditions allow them clear views of that distance or more. In high

crime areas, densely planted shrubbery that is 2 feet tall or lower is preferable to eliminate potential hiding places for offenders. Pathway corners and intersections are particularly critical and should be free of all visual obstructions that can conceal dangers.

Strategies (continued):

Classification

- | | |
|---|----------|
| ● Orient windows on nearby buildings within the site development to look out over entrances and vulnerable grounds areas. | Physical |
| ● Locate activity areas to look out over entrances and vulnerable grounds areas. | Physical |
| ● Provide intercoms, door viewers, and/or chain locks on doors to provide safe visitor identification opportunities. | Physical |

Discussion -- Door viewers are installed through opaque doors to allow residents to see who is outside the door without opening it. They should be used in each door providing entry into a private dwelling. There are a variety of models on the market, ranging in size from 0.2 inch to 3 inches in diameter. Optics include one-way glass, plastic, and wide-angle lenses. Openings larger than 1/4 inch are not recommended. Larger openings can be punched out to allow insertion of tools for opening the door from the inside, or a weapon can be thrust through the

hole while the resident is looking through it. A wide-angle lens offers the best visibility. It produces a curved image, but clarity is not impaired. Other viewers require the person being viewed to stand directly in front of the viewer. The best models contain double glass for safety. Viewers should be located about 4 feet, 9 inches from the floor (159, 175).

A case-hardened chain lock may be used as a substitute for a door viewer. The chain allows the door to be opened slightly (up to 2 inches), permitting easy conversation. The chain is useful for this purpose only, not to protect a locked door. Once the door is opened to the length of the chain, a burglar can break the chain or pull it loose from the door jamb by a powerful thrust against the door, or a crowbar or other tool can be inserted to pry the door open.

The Oakland (California) model ordinance requires a door viewer in the entry door to each unit of a multiple dwelling. It is not a requirement for single-family dwellings but is recommended (157).

Strategies (continued):

Classification

- In large apartment buildings
restrict the number of units that
share exterior entrances to foster
social identity and control.

Physical

Reference -- For further information on special circumstances pertaining to large buildings or complexes, see CPTED Technical Guideline 9, Security Engineering.

Strategies (continued):

Classification

- Remove unnecessary obstacles that can obscure natural surveillance of vulnerable areas from the street and/or interior locations.

Physical

Directives:

- Eliminate alcoves in corridors.
- Straighten corridors (avoid bends) where possible.
- Eliminate vestibules.
- Enhance surveillance where obstacles cannot be removed by using simple devices (such as mirrors inside elevators and at corners in corridors).

Physical

Reference -- (175).

- Design building interior circulation paths to improve natural surveillance overall and/or at specific points.

Physical

Directives:

- Locate entries to multiple dwelling units at points where residents and maintenance staff are able to provide continuous surveillance without interrupting their daily activities.

Strategies (continued):

Classification

Directives (continued):

- Afford maximum surveillance by creating traffic paths that are direct, straight, and short.

Discussion -- Use single-loaded or open corridors to provide surveillance opportunities to residents or security personnel. Position entries so that they face parking lots and play areas outdoors, and building offices or resident commercial areas indoors.

- Provide secure windows in walls and/or doors that obstruct visibility of dangerous areas (such as interior fire stairs and elevators). Physical

Directives:

- Use vandal-proof transparent materials.
- Expose, or partially expose, stairways to corridors, if fire safety codes permit.

Discussion -- Several companies manufacture an unbreakable, transparent polycarbonate that looks like glass. Lexan is guaranteed unbreakable, but it costs two to three times as much as glass and scratches easily. Lexan MR4000 is slightly more expensive but much more resistant to scratching.

Another type of durable material is fabricated like auto safety glass: A layer of tough vinyl bonded between two layers of high quality glass. It is sold by one company as Secur-lite. It can be broken, but the noise and effort are considerable deterrents (157, 175).

<u>Strategies (continued):</u>	<u>Classification</u>
<ul style="list-style-type: none"> ● Provide the opportunity for activities that attract new users to vulnerable areas and, hence, increase natural surveillance. 	Physical
<ul style="list-style-type: none"> ● Trim or remove shrubbery or trees that interfere with natural surveillance of problem areas. 	Physical
<ul style="list-style-type: none"> ● Undertake demolition and clearing of derelict structures that can provide hiding places for offenders. 	Physical
<ul style="list-style-type: none"> ● Survey lighting requirements and supplement or replace existing street and alleyway lights as required. 	Physical

Reference -- For more detailed information on exterior lighting, see *CPTED Technical Guideline 7, Planning Public Outdoor Areas*.

<u>Strategies (continued):</u>	<u>Classification</u>
<ul style="list-style-type: none"> ● Locate parking lots in areas where they are close to vehicular and/or 	Physical

Strategies (continued):

Classification

pedestrian activity, or areas where they are clearly visible from the interiors of inhabited buildings.

- If parking lots are located in areas isolated from active locations, provide well-lighted access corridors that channel and maximize traffic levels. Physical
- Provide benches and other amenities to encourage pedestrian traffic in appropriate areas such as along streets that connect activity nodes with transit stops. Physical

2.3 Mechanical Surveillance Devices

Objective -- Provide residences with security devices to detect and signal illegal entry attempts.

Strategies:

Classification

- Provide perimeter lighting along fences and walls. Physical
- Provide special lighting at gates. Physical
- Provide lighting of interior ground areas. Physical

Discussion -- There are numerous varieties of lighting. One of the

major factors to consider in choosing lighting for surveillance purposes is the type of bulb. Depending upon the area in question, one of the following types may be chosen:

Incandescent - Common light bulbs of the type found in the home. They have the advantage of providing instant illumination when the switch is thrown.

Gaseous Discharge Lamps - Mercury vapor lamps provide strong light with a bluish cast. They are more efficient than incandescents because of longer lamp life. Sodium vapor lights give out a soft yellow light and are more efficient than mercury vapor. They are widely used in areas where fog is a frequent problem.

Quartz Lamps - These lamps emit a very bright light and snap on almost as rapidly as the incandescent bulb. They are excellent for use along the perimeter barrier and in troublesome areas.

(See also 78, 157, 159.)

Strategies (continued):

Classification

- | | |
|--|----------|
| • Construct protected observation areas to house special security staff. | Physical |
| • Provide electronic trespass detectors and silent or deterrent types of | Physical |

Strategies (continued):

Classification

alarm systems at gates, doors,
and windows off of corridors, and
at other strategic interior loca-
tions.

Discussion -- *Electronic security equipment includes a wide range of products varying in sophistication and cost. Products are available for single-family residences and large multifamily complexes, small businesses, and large commercial establishments. Although intrusion detection devices are very helpful, all can be defeated -- some much more easily than others.*

The contact switch is an example of an electronic detector. When a door, window, or gate is opened, the contact is broken and a signal is sent to an alarm. The alarm can be a deterrent type that emits a loud noise (siren, bell, or buzzer) intended to frighten the intruder and possibly to alert a guard or tenant to investigate and take action. Silent alarms can be lights or other means of alerting a guard, who is monitoring alarms at a central location, or a buzzer in the interior intended to waken a sleeping tenant or caretaker.

There are systems to detect breaking glass, as in a storefront. Cameras and television are used to detect intrusion. The former requires onsite inspection to recover the film or print, while television can be monitored continuously at a central location.

Central alarm systems are expensive and dependent on the existence of a security force (perhaps police) to respond. They require minimal

response time for apprehension (27, 34, 56, 90, 91, 157, 175, 227).

Strategies (continued):

Classification

- Provide adequate interior lighting:

Physical

Directives:

- Corridors and lobbies should be well-lighted at all times.
- Door-actuated light switches can be used for rooms not normally lighted at all times.

References -- (78, 175).

- Provide enclosed observation areas and closed-circuit television installations at entry points and other critical locations (see Figure 2-1).

Physical

Discussion -- Closed-circuit television (CCTV) is an electronic security system and is discussed, in part, with the directive on electronic trespass detectors. CCTV provides visual surveillance where unaided surveillance is impractical. CCTV has a high initial cost but saves security personnel costs and expensive redesign of existing

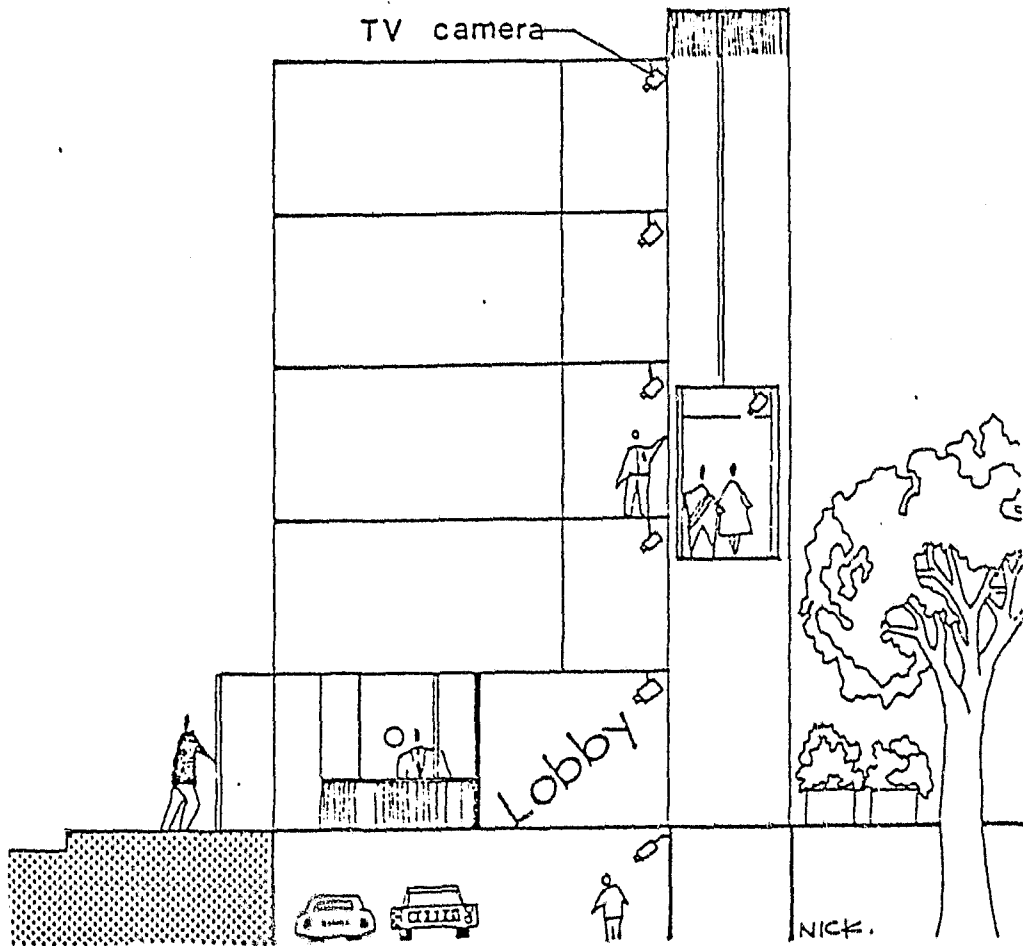


Figure 2-1. Provide Enclosed Observations Areas and Closed-Circuit Television at Entries and Other Interior Locations

structures. In general, electronic surveillance is not as good as personal surveillance in that it is not capable of immediate, on-the-spot action. CCTV does have the advantage of being an ever-present guard over the area in its field of view. Only a thoroughly knowledgeable criminal would know the form and timeliness of response to an alert by CCTV.

Lighting and camera positions determine field of view, and camera housing determines vulnerability to theft and vandalism. Available lighting determines the type of camera (and, therefore, the cost) required to produce a usable image. For interior use, increased lighting is usually cheaper than low-light-level cameras. Outdoors, the reverse is usually the case.

Effectiveness also depends on the capabilities of the persons who are monitoring the camera. Choice of personnel depends on availability and costs. Crime reduction attributable to CCTV would have to be substantial to warrant using police officers for the monitoring function. A civilian guard can control several entrances, the lobby, and interior of elevators. Volunteer tenants are another source of monitors -- they have the advantage of being able to recognize other tenants, but are subject to the vagaries of volunteers and require quasi-technical training (175).

2.4 Design and Construction

Objective -- Design, build, and/or repair residences and residential sites to enhance security and improve visual quality.

Strategies:

Classification

- Develop minimum security standards for adoption by State and municipal building code officials.
- Management

Discussion -- *Building security ordinances are usually adopted by city governments, and the performance specifications are centered around the ability of a particular barrier to withstand attack. The adequacy of a barrier is increased by target hardening, which takes the form of stronger materials, improved construction techniques, or the installation of certain kinds of hardware.*

Doors and windows are particularly vulnerable barriers. Recent building security codes address not only the locks, bolts, face plates, and hinges, but also the strength of the door, the door frame, and the supporting wall. The standards improve the ability of a door to withstand attack and extend the time required by a determined attack to defeat it, thus increasing the risk of discovery.

Some communities have amended building codes to include anti-intrusion standards and devices. While each community operates differently, there is sufficient similarity to extrapolate from the experience of one to the needs of another (157).

A model security code has been drafted by the Model Ordinance Service of the International Association of Chiefs of Police. Another model security ordinance has been written by the International Conference of Building Officials (ICBO). This organization sets the

pattern for code development throughout the United States. The ICBO model code is understood to meet the requirements of law enforcement agencies, equipment manufacturers, and the construction industry, and is readily adaptable to existing community ordinances.

A report examining the relationship between building codes and crime prevention makes recommendations in four areas: Public Information, Law Enforcement Officer Training, Insurance Premium Reduction, and Security Ordinances (123; see also 19, 21).

Strategies (continued):

Classification

- | | |
|--|--------------------------------|
| ● Mandate that building owners make necessary improvements to their properties through strict enforcement of public safety codes. | Management,
Law Enforcement |
| ● Encourage residents to improve alleyways and to remove obstacles to surveillance in both the front and the back of their residences. | Management,
Physical |

Discussion -- Alleyways are often fear-producing areas and are frequently entry points for burglars who are not visible from the street. While concentrating on eliminating obstacles to natural surveillance in the front, residents should not forget that alleys provide, in many instances, unobserved access and escape. Garages that open onto alleys

should be secured with suitable locks and doors which are kept locked. Windows should also be vandal-proof. If cars are parked in alleys, they should be locked and valuable items should be removed. Cars should be parked in such a position as to be visible from the home if possible. Shrubbery and tree pruning may also be necessary to provide good surveillance in alleys. High fences and poor lighting are often impediments to natural surveillance. General improvements in the appearance of alleys can also tend to discourage use by offenders and encourage use by legitimate residents, thus increasing natural surveillance. Enhanced police or citizen patrol may also be necessary.

Strategies (continued)

Classification

- | | |
|---|------------|
| • Provide low-interest loans for security improvements. | Management |
| • Obtain security hardware for homes at reduced costs through bulk purchase programs. | Management |

Discussion -- Local citizen groups or civic organizations, in cooperation with police, can conduct security inspections to determine residential needs and secure commitments to purchase necessary hardware. After arranging bulk purchases, these can be warehoused and allocated by private regional distributors or police or fire departments.

Strategies (continued):

Classification

- | | |
|---|------------|
| ● Lobby for insurance rate reductions for residences that comply with minimum security standards. | Management |
| ● Secure grants for neighborhood block associations to make security improvements. | Management |
| ● Conduct and publish cost/benefit evaluations for security improvements initiated through building security inspection programs. | Management |
| ● Initiate paint-up/fix-up programs with volunteers provided and supervised through private or public organizations (i.e., local chapter of the National Association of Retired Persons): | Social |

Directives:

- Sponsor youth programs that employ young people after school and during summer vacations to paint and repair homes and businesses through private or public organizations.

Strategies (continued):

Classification

- | | |
|---|------------|
| ● Encourage the municipality to trim trees and make street and sidewalk improvements to improve the visual quality. | Management |
| ● Urge public utility companies and municipal officials to remove telephone and power poles and provide underground lines. | Management |
| ● Create design review committees that include security experts to evaluate crime-related implications of proposed public developments: | Management |

Directives:

- Consider potential impacts upon victim and offender populations (e.g., who will they attract?; how will they be used?).
- Consider potential short- and long-term impacts upon the social and economic character of the area.

Strategies (continued):

Classification

Directives (continued):

- Consider special security requirements relative to existing law enforcement resources.
- Consider potential crime displacement into and/or out of the area.

Discussion -- A checklist of items to be considered for residential subdivisions might include the following categories: Street patterns and lot plans, parking, structural, walkways, and landscaping. Similar considerations apply to apartment complexes. Guidelines also can be considered for opening and closing of streets and alleys (157).

The nature of the housing development, the size and number of units, the extent of facilities and amenities, the cost to residents, the geographic location, eligibility criteria for new residents, and the nature and enforcement of management policies will determine the kind of people attracted to and remaining as residents.

Offenders are attracted by vulnerabilities. Potential offenders among the residents, like any potential offenders, are deterred by features of environmental design, management policies and practices, and resident vigilance (45).

If the new development combines attractive targets (e.g., elderly residents), vulnerabilities (including overburdened police), attracts problem-prone tenants (e.g., juveniles), crime is likely to be displaced into the area. Conversely, if the new development minimizes vulnerabilities, if management crime prevention policies and procedures are sound and rigorously implemented, and if the tenants are (or become) vigilant and act in unison, crime is likely to be displaced out of the neighborhood.

2.5 Land Use

Objective -- Establish policies to prevent ill-advised land and building uses that have negative impact.

Strategies:

- Establish and enforce zoning ordinances that prevent land uses that are incompatible with the security interests of the community (i.e., "X-rated" establishments in residential or school areas).

Classification

Management

Discussion -- *Individuals and civic organizations can conduct campaigns to encourage the enactment of zoning ordinances that will lead to the improvement (upgrading) of land use in their area and prevent use that will attract crime and contribute to overall degradation of the community.*

Research and findings on the relationship of environmental design and urban crime indicate that the design of neighborhoods can promote feelings of territoriality and can be effective in discouraging crime (51).

Strategies (continued):

Classification

- Establish and enforce public management policies not to place public facilities or people in inappropriate locations that could pose crime problems (i.e., unsupervised parks in high-crime-rate areas, elderly people in large apartment complexes with many problem-aged youths).

Management

Discussion -- *It can be impractical to require that people not be placed in locations or situations posing crime problems, but the potential for encouraging crime should be considered in each decision involving placement. The objective should be to minimize the potential for crime while considering other factors (i.e., social and economic cost/benefit trade-off). Some requirements are at cross-purposes. The creation of activity in a high-crime-rate area improves surveillance, but it also exposes participants to crime.*

With these constraints in mind, the vulnerability of elderly people should not be increased by mixing them with delinquent-prone youths. Bus stops and emergency dial-free phones should be in the open and protected by transparent shelters. Public gathering places should be patrolled by police. Businesses should be clustered to provide full service for family shopping. Customers should not have to run a gauntlet of crime-prone establishments to reach their homes, local shopping, public transportation, or recreation.

2.6 Resident Action

Objective -- Encourage residents to implement safeguards on their own to make homes less vulnerable to burglary and robbery.

Strategies:

Classification

- | | |
|---|----------|
| <ul style="list-style-type: none"> ● Teach young children how to call the police to report emergencies. | Social |
| <ul style="list-style-type: none"> ● Avoid leaving house keys in "hidden" locations that would be quickly discovered by burglars (e.g., under door mats, above door and window sills, etc.). | Social |
| <ul style="list-style-type: none"> ● Provide activity decoys when away from the house (e.g., lights or radios that switch on automatically). | Physical |

References -- (19, 78).

- | | |
|---|--------|
| <ul style="list-style-type: none"> ● Arrange for mail to be picked up, newspaper and milk deliveries to be | Social |
|---|--------|

Strategies (continued):

Classification

- stopped and lawn to be mowed when the house is vacant for days or weeks to make vacancy less obvious to burglars.
- Ask neighbors to keep watch over property during extended vacancies. Social
 - Avoid placing notices of planned trips in newspapers. Management
 - Post deterrent notices such as "beware of dog," "property identification compliance," etc. Physical
 - Use optical door viewers, intercoms, or partially opened doors with chain latches in place before opening the door to visitors. Physical

Discussion -- See similar strategy in Section 2.1.

- Participate in property identification programs. Physical, Management

Discussion -- Property marking projects are one of the most common citizen involvement activities designed to reduce the chance of victimization. Property marking projects exist in law enforcement agencies throughout the United States. Programs are variously called Operation Identification, Crime TRAP (Total Registration of All Property), Project

Theft Guard, etc. They involve a sponsor who supplies an electric etching pencil that citizens use to mark their property. Identifying numbers are filed with a law enforcement agency for reference in the investigation and identification of stolen property.

All items of value should be marked on the main body of the article with the owner's identifying number (e.g., Social Security). The identification mark should be accessible without dismantling the object. On most items, the bottom or underside is the best location for the identification marks.

Lists of property that has been marked should be kept in a safe place and given to the police in the event of a burglary. A decal or other symbol can be displayed on doors or windows of the house, apartment, or business to alert burglars that all property is marked for ready identification by law enforcement agencies.

An assessment of a number of these projects has been published (193). Findings include:

- Operation Identification projects have been unable to recruit more than a minimal number of participants in their target areas.
- The recruitment cost per participant for an Operation Identification project is quite high (median project cost is \$4 per household) not counting donated promotional resources and manpower.

- Operation Identification participants have significantly lower burglary rates after joining as compared to before joining; however, municipalities with Operation Identification projects have not experienced reductions in areawide burglary rates.
- No evidence exists to indicate that Operation Identification produces any increase in either the apprehension or conviction of burglars.
- The presence of Operation Identification markings does not significantly reduce the opportunities to dispose of stolen property.
- There is no indication that Operation Identification markings appreciably increase either the recovery or return of stolen property.

The examples of actual Operation Identification projects are so numerous that it is impractical to list them. Reports on selected projects appear in Appendix A (19, 20, 22, 42, 43, 67, 100, 108, 109, 122, 150, 151, 189, 193). Also, see CPTED Technical Guideline 8, Citizen Involvement in CPTED Projects.

2.7 Social Interaction

Objective -- Encourage interaction by residents to foster social cohesion and control.

Strategies:

- Provide secure and attractive

Classification

Physical

Strategies (continued):

Classification

lounges, recreation areas, and utility facilities to encourage people to meet and come to know their neighbors:

Physical

Directives:

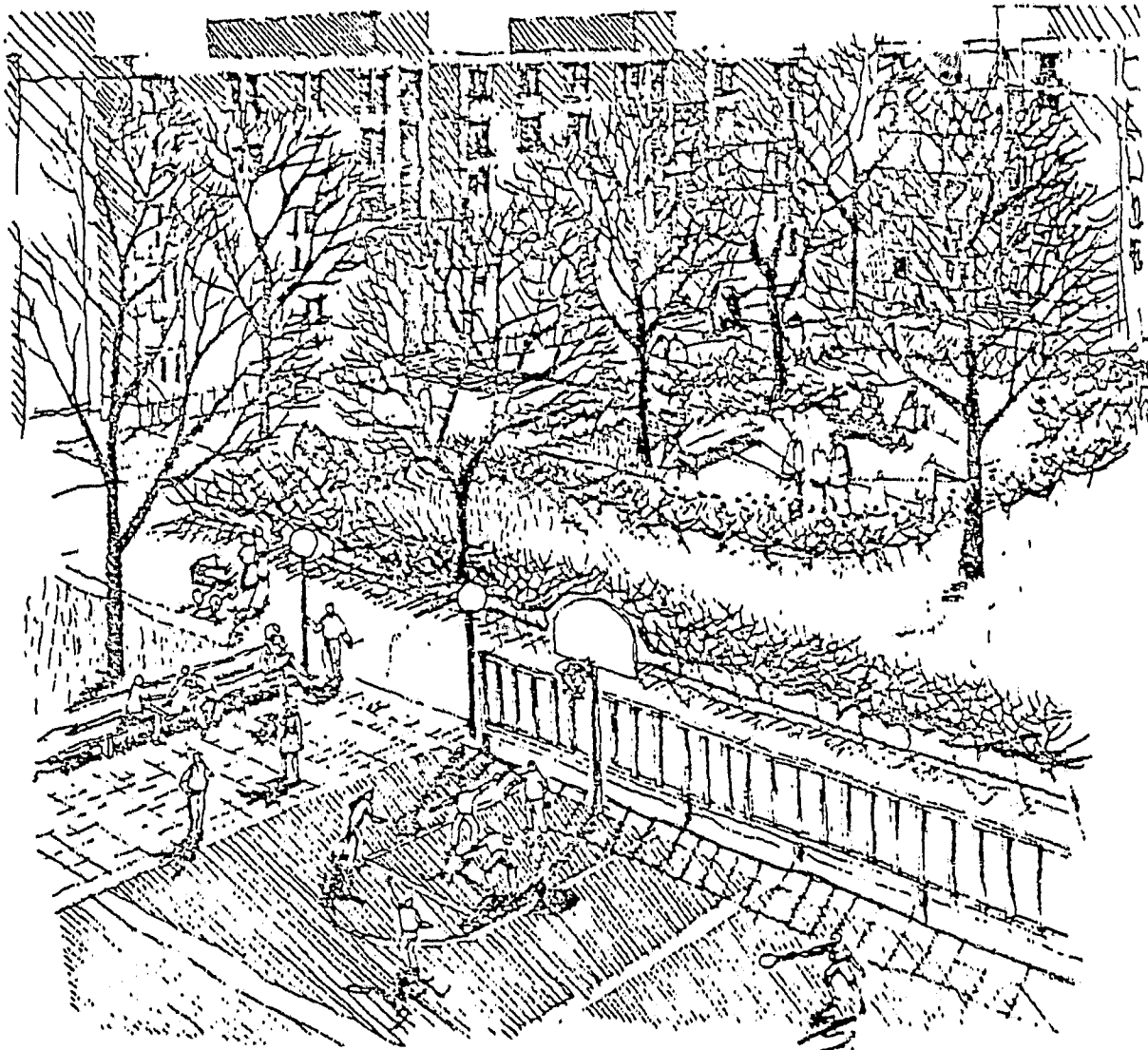
- Limit the numbers of laundry rooms and similar facilities to ensure greater numbers of residents using them at any one time.
- Locate facilities such as mail rooms near active and populated sectors of buildings.

Reference -- (175).

- Separate amenities that are designed for different age groups (e.g., play areas and quiet areas) so they do not interfere with each other and discourage use (see Figure 2-2).
- Restrict the number of apartments sharing a common corridor to encourage neighbor interaction and identification of who does or possibly does not "belong" on the floor:

Physical

Physical



Source: U. S. Department of Justice. Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Design Guidelines for Creating Defensible Space, by Oscar Newman. Washington, DC: Government Printing Office, April 1976. S/N 027-000-00395-8

Figure 2-2. Separate Amenities that are Designed for Different Age Groups, such as Play Areas and Quiet Seating Areas

Strategies (continued):

Classification

Directive:

- Shorten or segment corridors in existing buildings by erecting permanent partitions where fire codes permit.
- Avoid design planning that forces involuntary mixing of elderly residents with groups that can interfere with their privacy and security (such as families with teenage children).

Physical

Discussion -- Create play and recreation areas by age groups. Enclose sand boxes, swings, slides, and the like in a wire fence with a gate and several benches for parents/babysitters. In a separate facility that is removed from small childrens' play yards, provide tennis, volleyball, basketball, and other facilities for teen play. In a separate area, removed from the teen play area but not isolated from surveillance, create a place for the elderly to congregate. This could include horseshoe and shuffleboard courts, tables, and chairs (175). For more information, see CPTED Technical Guideline 7, Planning Public Outdoor Areas.

Strategies (continued):

Classification

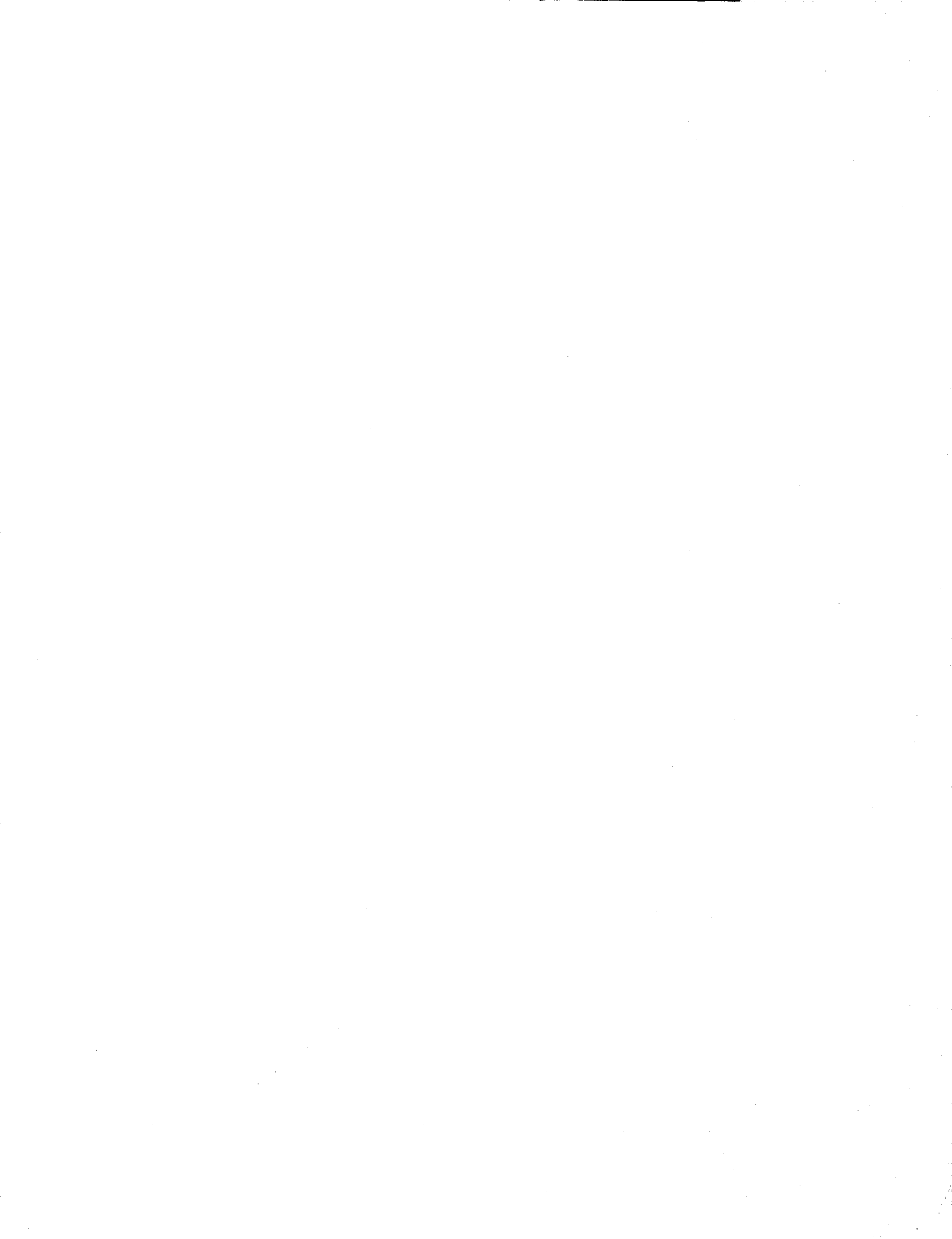
- Sponsor tenant picnics, parties, etc., to encourage social interaction among tenants.

Social

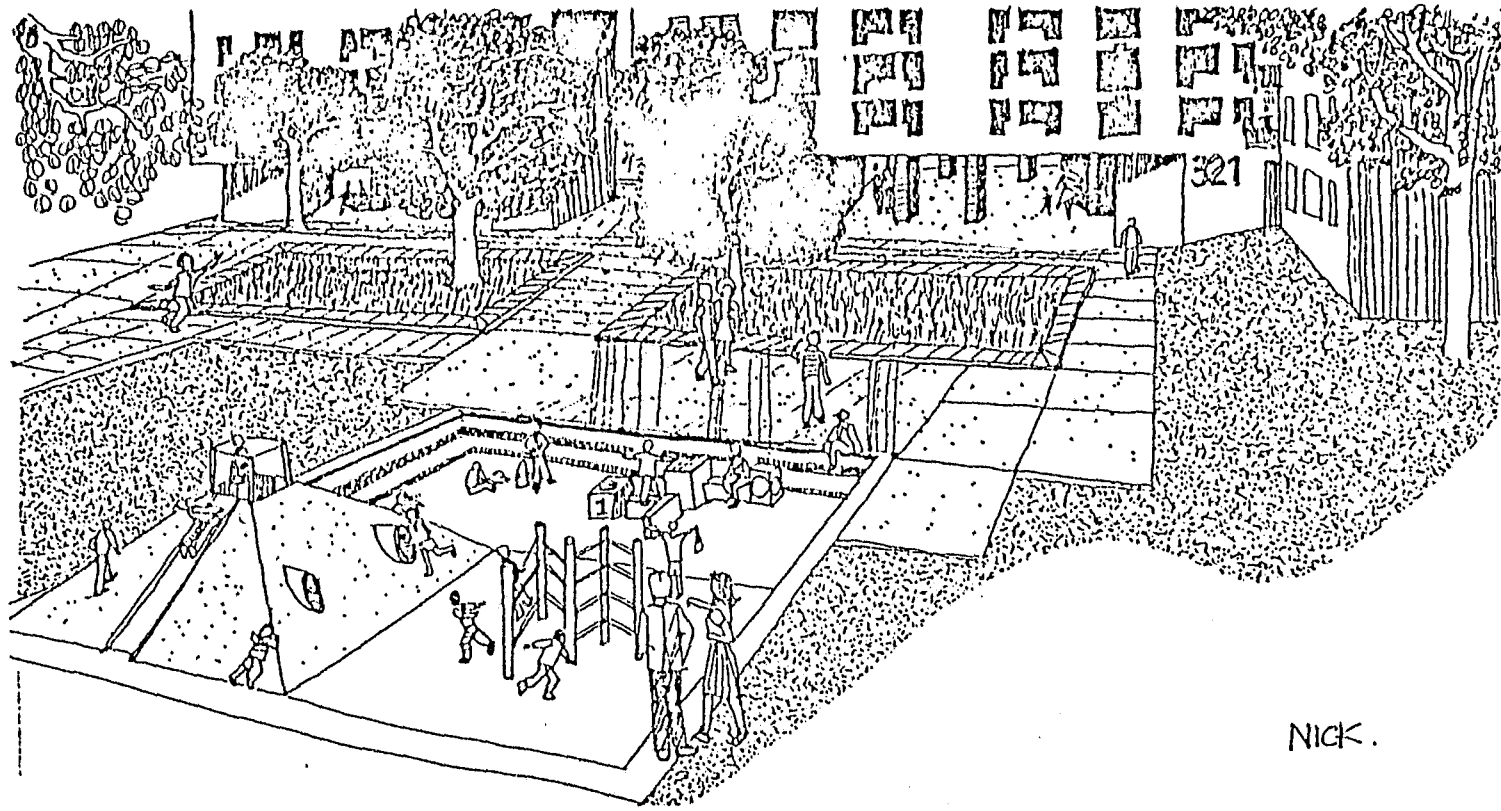
Strategies (continued):

Classification

- Sponsor special events for special age and interest groups (e.g., dances for young people, recreation for older people) to promote group identity and satisfaction. Social
- Create pleasant outdoor, common areas (mini-plazas) in secure locations (see Figure 2-3). Physical
- Provide attractive bus shelters and public telephone booths that are transparent and vandal-resistant to increase pedestrian comfort, convenience, and security (see Figure 2-4). Physical
- Provide well-designed street furniture, trash receptacles, fountains, and landscaping that complement existing buildings and enhance the comfort and satisfaction of pedestrians. Physical
- Provide well-designed pedestrian scale and area lighting fixtures that are attractive. Physical



2-57



NICK.

Figure 2-3. Create Pleasant Outdoor Common Areas in Secure Locations

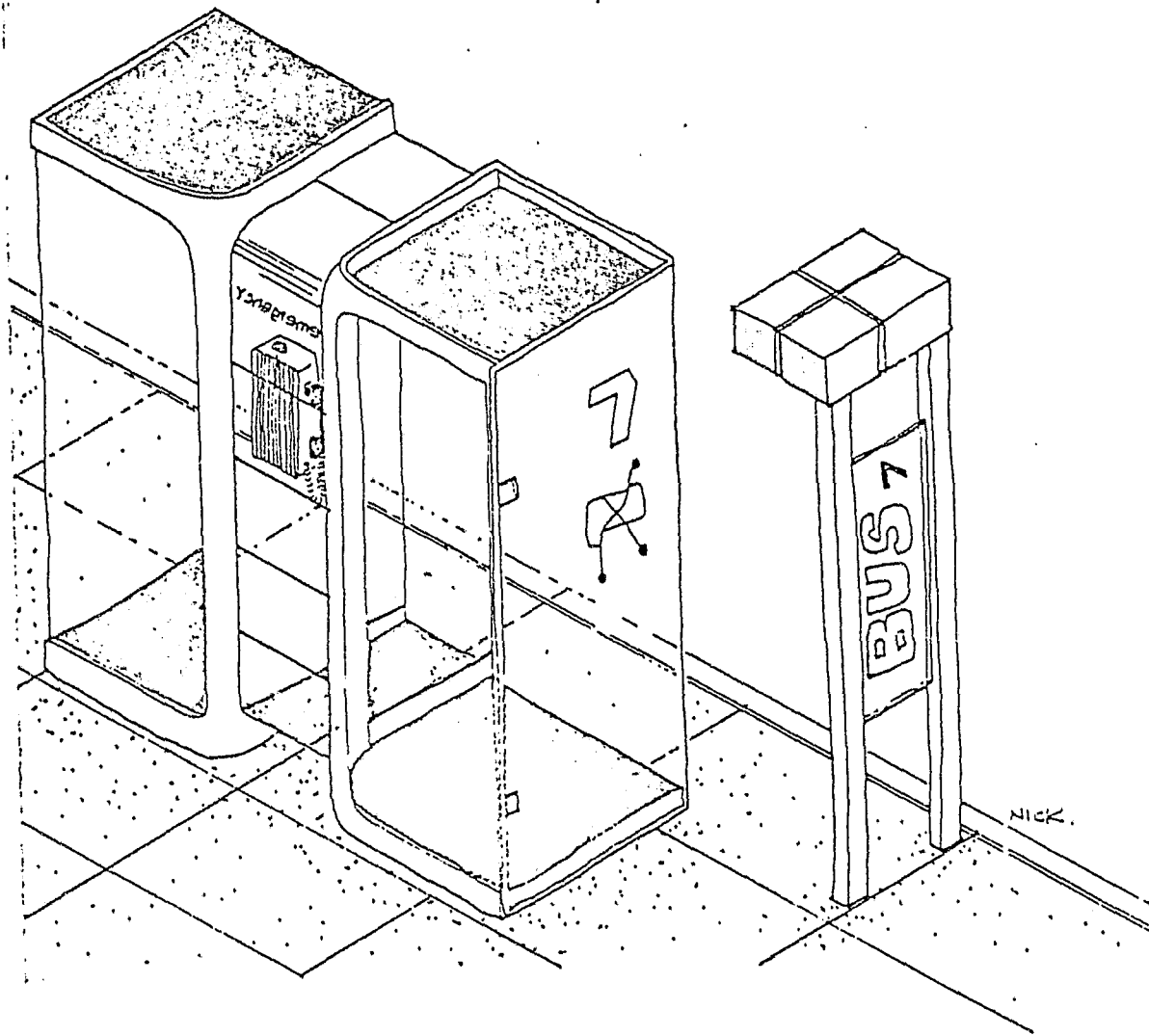


Figure 2-4. Provide Attractive, Transparent
Bus Shelters and Public Telephone Booths

Strategies (continued):

Classification

- Sponsor flea markets and swap markets on weekends through residential associations. Social
- Sponsor outdoor concerts, plays, art exhibits/sales, and other events through neighborhood schools, business associations, civic organizations, churches, etc. Social
- Provide neighborhood garden areas with spaces assigned to individuals and families who do not have yard space for planting, to support outdoor activity and to promote social interaction. Physical, Social
- Sponsor special shopping trips and tours for elderly citizens to aid them in obtaining essential goods and services, and to provide opportunities for them to meet other residents and overcome fear. Social

Discussion -- Church and civic organizations often provide such services. The excursions may be on a regular basis (e.g., to correspond with receipt of social security funds) or on an as-needed basis.

2.8 Private Security Services

Objective -- Determine appropriate paid professional and/or volunteer citizen services to enhance residential security needs.

Strategies:

Classification

- Encourage residents to pool financial resources to hire a professional security service and/or provide alarms and/or closed-circuit television installations connected with a control center. Social, Physical
- Create paraprofessional security jobs for residents that allow them to work as security aides; employ youths to provide recreation supervision to imbue them with a sense of concern and responsibility. Social, Management
- Provide living quarters for a manager/security person near a key entry location so there is someone available at all times to detect and report crimes. Physical, Management
- Sponsor cooperative escort programs for vulnerable people such as the elderly and infirm. Social

Strategies (continued):

Classification

- Initiate a "buddy system" whereby neighbors keep watch over and report suspicious events on each others' premises. Social
- Determine the most useful type of service personnel for the particular environment and problem (e.g., contract guard service or specially created security force recruited from residents, ex-policemen, veterans). Law Enforcement

Discussion -- See Section 2.11.

- Determine training requirements (i.e., are guards intended to apprehend offenders with a potential show of force?; will they need to be familiar with individual tenants to determine who does or does not belong?; is the prime objective to deter crime by their uniformed appearance?). Law Enforcement

References -- (60, 159, 175, 200).

- Determine the best locations for security staff (e.g., doorman in Law Enforcement

Strategies (continued):

Classification

lobby; person stationed in a booth with a view of the main exterior approach and parking area or in a control center with a closed-circuit television; or a patrolling guard with or without a dog).

- Concentrate security forces during peak hours in trouble areas. Law Enforcement
- Provide uniforms to enhance visibility, and to instill pride and confidence. Law Enforcement
- Provide communications for rapid response (e.g., electronic pagers, walkie-talkies, special alarms, telephones). Law Enforcement

2.9 Police Services

Objective -- Improve police services to provide efficient and effective responses to crime problems and to enhance citizen cooperation in reporting crime.

Strategies:

Classification

- Provide toll-free emergency telephones at convenient, strategic outdoor locations.

Physical

Strategies (continued):

Classification

- | | |
|--|-----------------|
| • Equip police stations with television monitors of dangerous areas. | Physical |
| • Connect building alarms directly to a control center within the police precinct. | Physical |
| • Install building identification names/numbers in alleys so that police can know where to go when approaching from the rear in response to calls. | Physical |
| • Increase police patrol activities and modify procedures to meet specific crime prevention requirements: | Law Enforcement |

Directives:

- Maximize the number of police patrols (particularly foot patrols) during peak robbery periods (i.e., late afternoons and evenings).

Strategies (continued):

Classification

Directives (continued):

- Periodically inundate high crime neighborhoods with police patrols as a show of force.
- Station police stakeouts (e.g., plainclothes or "decoy" police dressed as likely crime targets) in high-crime-rate locations.
- Provide bicycles and scooters to patrol areas that are not accessible to cars and to approach areas silently.
- Structure or restructure patrol district boundaries to avoid confusion about jurisdictional responsibilities (e.g., avoid placing boundaries in the center of commercial corridors to prevent

Strategies (continued):

Classification

Directives (continued):

confusion about which
patrol should respond
to a call).

Discussion -- *Police presence is a strong deterrent and represents a capability to thwart a crime or make a prompt apprehension. Foot patrols are particularly effective in deterring crime and should be on station in maximum numbers during peak crime periods.*

One way to put more foot patrols on the street during high-crime-rate periods is for civilians and officers to work as two-person teams in fixed-beat areas. A report of evaluation of one project in Rochester, New York, concludes that, while foot patrols cannot be expected to have much impact on crime, the experience can provide a basis for further experimentation to reduce community estrangement (140, 141).

Another tactic is to schedule patrols into high-crime-rate areas in a predetermined multiple of the normal complement at irregular intervals, but during high-crime-rate periods (daily, weekly, seasonally, and by other determinants such as weather). A siege atmosphere should be avoided. The conviction should be conveyed to victim and criminal alike that the police can and will devote the level of effort necessary to gain control of crime, and that the criminal cannot predict when that level of force will be mounted in any given area.

Special crime prevention units can stake out high-crime-rate areas. The police officers may be in uniform or in plainclothes. Low-light-level television is a useful adjunct for surveillance without exposing the stakeout.

In 1974, for example, the Baltimore County (Maryland) Police Department used high-performance, low-light-level television cameras and a receiver monitored by police in a hidden location to observe critical areas and detect attempted illegal entry. The stakeout was prepared to move in and make arrests, including pursuit of accomplice(s).

Alternatively, police dressed in the garb of likely victims may act as decoys, backed up by additional officers. Examples of this method are police officers taking the role of a clerk in a small business, or of a potential victim of street crime.

Responsiveness and effectiveness of police patrol is adversely affected by boundaries, jurisdictional responsibilities, and the "it didn't happen on my watch" syndrome. This problem, and the resultant lack of effectiveness, has become a significant citizen complaint and source of dissatisfaction. Revision of boundaries can improve both police performance and community relations.

Strategies (continued):

- Provide police precinct offices in high crime neighborhoods to increase the number and visibility of law enforcement officers.

Classification

Law Enforcement

Strategies (continued):

Classification

- Create police substations in high-crime neighborhoods and housing complexes as local bases of operations for the regular police department force.

Law Enforcement

Directives:

- Lease building space in complexes or locate trailers on vacant property.
- Arrange for a special police force team to be assigned to one detail, neighborhood, or building complex so that they become very familiar with people and problems.

Law Enforcement

Discussion -- *A special police team can be organized and trained to provide all police services to a fixed area of prospective assignment. Their training is tailored to the characteristics and problems peculiar to the area. Upon assignment, members of the team provide 24-hour-a-day service to the area and have no other duties.*

One report on neighborhood team policing discusses combining the specialized services and equipment of a large urban department and the highly personal community contact of small town departments. An assessment of team policing in 14 cities leads to a generally encouraging finding.

Rochester (New York), the only city to include investigative services in its team capabilities, appears to have been successful in increasing clearance rates and in reducing the overall crime rate. Officers in San Diego, California's, community service teams increased their services to the community and showed more positive attitudes towards their assigned neighborhoods. To define more clearly the advantages and disadvantages of team policing, field tests of model team policing projects in six cities were conducted (191).

2.10 Police/Community Relations

Objective -- Improve police/community relations to involve citizens in cooperative efforts with police to prevent and report crime.

Strategies:

- Promote police/community cooperation programs involving neighborhood meetings, tours with police patrols, etc.

Classification

Social

Discussion -- *Visits to jails, criminal courts, and rehabilitation centers, walking beats, and riding patrols with police officers are mutually beneficial for improving citizen understanding of police problems. Police participation is also desirable in community and business group meetings where the subject is crime. The reasoning process that led to a specific program and an overview of the status of police community relations in Albuquerque (New Mexico) is presented in a 1972 report. It considers police efficiency, responsiveness, and proportional*

representation, as well as public reaction to the police. Recommendations for improving police morale and public satisfaction are also included (111).

Strategies (continued):

Classification

- Sponsor "Buzz with the Fuzz" programs that provide opportunities for citizens to ride along with police patrols.

Law Enforcement,
Social

Discussion -- A "Buzz with the Fuzz" project permits adult citizens to call specified stations to schedule a ride in a patrol car during prearranged duty tours. The citizen has the opportunity to see what the patrolman faces on a daily basis and how he responds to it. The patrolman has an opportunity to interact with the citizen and better understand his point of view and concerns (218).

- Create police storefronts where local residents can talk informally with officers about neighborhood problems and issues.

Law Enforcement,
Social

Discussion -- In areas where police/community relations are not good, numerous tactics can be used to improve the rapport between the police and the community they serve. Recognizing that there is likely to be dissatisfaction on both sides, provide an opportunity for citizen-to-policemen communication in an informal atmosphere. Police storefronts bring the officers into the environment of the citizens. These should

have a pleasant, informal atmosphere, with some reference and display materials available but in low profile. Arrange for civilian neighborhood leaders to attend an informal opening ceremony. Choose officers for the assignment who have records of good rapport with citizens. Instruct them to listen and prepare written reports of interchanges between themselves and visitors. Provide them with some briefing materials, visual aids, and handouts. Encourage informal discussion of issues.

Strategies (continued):

Classification

- Arrange for police representatives to meet with local organizations, talk at schools, and/or be available to meet with individuals and groups upon request to discuss neighborhood problems and issues.

Law Enforcement,
Social

Discussion -- *Foster cooperative police/community relations by organizing meetings in which police and community groups discuss neighborhood crime problems and possible solutions. Institute police-conducted security education courses (19, 59).*

- Sponsor advertising campaigns to promote good police/community relations.

Law Enforcement,
Management

Discussion -- Purchase advertising space in publications having high readership in high-crime-rate areas, especially local publications and newsletters. Use window posters for storefronts, taking care not to block windows needed for surveillance activities. Stress themes that counter negative public perceptions. Solicit business support of advertising by combining a police message with their own or sponsoring a police message. In this effort, police public relations officers must be sensitive to the image and the record of the businesses who sponsor police advertisements.

Strategies (continued):

Classification

- | | |
|--|------------------------------------|
| <ul style="list-style-type: none"> ● Organize police/community events (e.g., police athletic teams to compete with civilians) to promote good will. | <p>Law Enforcement,
Social</p> |
|--|------------------------------------|

Discussion -- There are numerous examples of police community activities nationwide: Police Boys' Clubs and camps, police athletic teams or sponsored athletic teams, drum and bugle corps, motorcycle drill teams, marksmanship teams, weapon safety classes, picnics, and other events. Some of these are combined with fundraising activities such as auctions and raffles for a worthy civic cause.

- | | |
|--|------------------------------------|
| <ul style="list-style-type: none"> ● Provide special courses and/or enroll police officers in university courses to help them learn to work more effectively with citizens. | <p>Law Enforcement,
Social</p> |
|--|------------------------------------|

Discussion -- Improvement of police/community relations requires a high degree of empathy for the community and its citizens on the part of police officers. Sociology and social psychology are areas of study useful for individual officers at all levels of the department. Police patrols in high-crime-rate areas are often assigned to young officers who have not yet developed the understanding and tact that are essential to eliciting citizen cooperation. Training in community relations is particularly important at this level.

Strategies (continued):

Classification

- | | |
|---|----------------------------|
| • Provide neighborhood foot patrols and encourage them to interact with residents in a friendly manner. | Law Enforcement,
Social |
|---|----------------------------|

Discussion -- See Section 2.8, strategy on team policing.

- | | |
|--|-----------------|
| • Ensure that police respond to calls dependably, quickly, and in a professional manner to promote citizen confidence: | Law Enforcement |
|--|-----------------|

Directives:

- Provide for internal checks on responses to calls.
- Acknowledge and respond to citizen complaints promptly.

Strategies (continued):

Classification

- Cooperate with and assist resident patrols:

Law Enforcement,
Social

Directives:

- Provide training and equipment.
- Provide communications interface.

Reference -- (38).

2.11 Community Awareness

Objective -- Create neighborhood/community crime prevention awareness to aid in combatting crime in residential areas.

Strategies:

Classification

- Encourage citizens to secure their homes:

Management

Directive:

- Develop and distribute brochures that describe how to improve residential security.

Discussion -- *Police/community cooperative education programs often include distribution of literature that is instructive and advisory in nature. Brochures and fliers, distributed through bulk mailings, are the most common format. Subjects include: Operation Identification, security*

inspection, suggested family security practices, suggested business policies and procedures to deter crime, crime watch and reporting procedures, target hardening, and security hardware. Usually, literature is developed and distributed as part of a larger project. Literature is used alone most often when time and manpower resources are limited.

Brochures written to the level of the prospective reader assume minimal knowledge of security hardware and practices and are amply illustrated.

An Oakland (California) project for crime reduction through increased citizen awareness and crime prevention efforts included the following elements: Permanent staff, structure to support citizen crime prevention activities, and programs for disseminating crime prevention literature and visual aids. Evaluation showed considerable impact in slowing the increase in crime in Oakland (59). Also, see related information in CPTED Technical Guideline 8, Citizen Involvement in CPTED Projects.

Strategies (continued):

Classification

- Implement security inspection of homes and provide appropriate followups.

Management,
Law Enforcement

Discussion -- Security inspection is a joint citizen/police activity and can be oriented towards single or multifamily residences, commercial, or industrial establishments. Police provide security expertise for conducting inspections of buildings at the request of owners. Inspection includes identifying the vulnerable characteristics of the site and the building (especially its apertures), their surveillability, and barriers

to illegal entry, for the purpose of recommending corrective action. Frequently, information is provided to the owner on the merits, installation, and use of various types of security hardware (such as doors, locks, hinges, windows, grilles, and grates). Recommendations can include removal of bushes, barrels, walls, and other obstructions to surveillance, an addition or change in external and internal lighting, erection of fences and lockable gates, and practices relating to handling of money, keys, and other critical items.

A number of reports that describe inspection projects in various cities are available. However, there are little data available on compliance, which is a major determinant of success (19, 20, 151, 187).

Strategies (continued):

Classification

- Sponsor property identification programs. Physical

Discussion -- See similar strategy in Section 2.6.

- Initiate security education programs that bring in local and outside expertise to discuss specific security problems/solutions with residents: Management, Social

Directives:

- Hold meetings with police to discuss cooperative programs.

Strategies (continued):

Classification

Directives (continued):

- Offer classes in self defense.

Discussion -- A variety of projects have been undertaken in many cities to increase community awareness of the effectiveness of citizen preventive efforts. Civic and commercial groups have cooperated with police to produce and distribute crime prevention materials. Seminars, panels, and meetings have been held, frequently led by outside experts (which tends to improve attendance). Specific topics discussed include: Security standards and building codes, security inspections, target hardening, property identification, blockwatch, and crime and suspicious action reporting. Related literature is usually distributed and visual aids are used (including actual or mock-ups of hardware). Demonstrations of equipment are useful (19, 33, 177).

- Train individual police officers or a team to work with builders, architects, and planners to provide security advice. Management, Law Enforcement

Discussion -- Police officers trained in security technology are assigned to security consultant or inspector duty to work with, provide guidance to, or evaluate adequacy of design and construction by architects, planners, and builders. The purpose is to implement informal security standards or administer building security ordinances or codes.

Strategies (continued):

Classification

- Arrange for committees and/or social service professionals to meet with new families and familiarize them with local conditions and resources:

Social

Directives:

- Use brochures, community newsletters, and visual aids.
- Hold periodic meetings to welcome and inform new arrivals to neighborhood.

- Initiate public awareness programs to familiarize people with the importance of and specific procedures for reporting potential or actual crimes.

Law Enforcement,
Social

Discussion -- Citizen crime reporting is one of the most important functions in crime prevention and reduction. It is perhaps the highest level of general citizen involvement and, therefore, a prime indicator of the sense of responsibility among the members of a community. Many efforts have been made by citizens and/or police units to get general acceptance of crime reporting in their respective communities. It has

frequently been difficult, and seldom highly successful, indicating the reluctance of individuals to become personally involved.

It often is necessary to build community consciousness, pride, and commitment through projects requiring lower levels of involvement before undertaking crime reporting projects. Public-awareness crime reporting can begin with reports of successful campaigns elsewhere and a description of what is entailed and what the prospective consequences can be. Depending on the reception, the public information program can then direct appeals to individuals to participate and provide specific instructions for observing and reporting procedures, or advertising can be used to support an organized approach to gain high initial participation in one or more localities (where expectation of success is highest). Advertising can take the form of news reporting, business and civic association advertisements in the media, and distribution of specifically designed brochures.

Citizens can assume responsibility for crime reporting on an individual basis or as members of a collective effort. The latter has a higher probability of success where the level of citizen involvement, pride, and sense of responsibility is not high. Neighborhood Alert projects have been undertaken in many cities with varying results. Citizen organizations are the usual vehicle for areawide campaigns to educate and motivate the public to report crimes in progress, information useful in solving crimes, and suspicious persons and events.

A Citizens' Alert Program sponsored by the Sacramento County (California) Sheriff's Department and several business and civic organizations is aided by special citizens' committees. The committees encourage and instruct area citizens not only to report crime but also to protect their homes and businesses (19).

Buffalo (New York) has a community radio watch that involves the use of CB radios of business vehicles operating in the city. Forty-six firms and 2,500 drivers participate by reporting any emergency.

Citizen crime reporting projects are described by type, and an assessment of their impact and recommendations for the future is presented in a recent evaluation. Just as successful citizen crime reporting depends on citizen commitment and involvement, it also tends to increase that involvement, improve relations with the police, improve community cohesiveness, and reduce unrealistic fear of crime. However, few citizen crime reporting projects have had evaluation components (185).

See section on citizen crime reporting in CPTED Technical Guideline 8.

Strategies (continued):

- Provide special communication

links with the police:

Directives:

- Create and advertise anonymous crime-reporting telephone numbers to protect the identify of observers.

Classification

Law Enforcement

Strategies (continued):

Classification

Directives (continued):

- Provide dial-free emergency telephones at strategic locations along streets to enable people to quickly report crimes, fires, and accidents.

Discussion -- Telephone companies and cities can cooperate to place telephones with emergency, toll-free, features in outdoor phone booths to enhance crime reporting and emergency services.

An example is the Washington, D. C., Metropolitan Area Dial Tone First program. Beginning in the early 1970's, outdoor public telephones were equipped with a feature that permitted callers to dial the operator without depositing a coin. This feature has now been incorporated in all public telephones in Northern Virginia and will be installed throughout the Washington, D. C., metropolitan area. The '0' number is answered by a telephone company operator, who is aware that the call is being placed from a pay phone and has been instructed in emergency procedures. Eventually, this feature will be installed nationwide.

Nationwide capability also exists for implementing the 911 emergency number, but the local expense to cities involved in equipping and manning emergency operator stations has forestalled widespread participation to date.

See related information in CPTED Technical Guideline 8.

Strategies (continued):

Classification

- | | |
|---|-----------------|
| • Provide crime reporting stickers that can be posted on windows, telephones, etc. | Law Enforcement |
| • Initiate blockwatch programs through local residential and business associations. | Social |

Discussion -- Blockwatch is a widely practiced procedure in both inner-city areas and suburbs. The formality of organization and degree of local civic/police organization support varies. Typically, concerned civic or business organizations, in cooperation with law enforcement agencies, sponsor a blockwatch project. An organizational meeting may be preceded by some interest-generating publicity and followed by preparatory committee work, recruitment, and education prior to a formal kick-off meeting. It is important to determine the value of the project; therefore, an evaluation phase should be planned and implemented from the outset.

Like the closely related Neighborhood Alert projects, blockwatch entails crime reporting, and requires instruction in observation and reporting procedures. It also requires a similarly high order of citizen commitment and involvement.

Crime reporting stickers may be provided to participants. Blockwatch programs all include some level of organized and scheduled watch tours, together with such basic security procedures as routine periodic

checks of the residences of absent neighbors. A citizen undertakes the responsibility of watching a set number of residences or businesses, and agrees to report unusual occurrences to police.

Some publications are available that provide guidelines for implementing a neighborhood responsibility program (19, 64, 108, 109).

Other reports describe projects that include various crime prevention components (such as property identification) along with blockwatch activities. Evaluation shows varying results -- from "no effect" in four out of five implementation areas (42), to a 32.8 percent decline in burglary (177).

One program described is located in Montgomery County, Maryland. It includes Operation Identification and security procedures training. It is organized on a block basis, with a block captain and block watchers whose duties are specific.

See related information in CPTED Technical Guideline 8.

Strategies (continued):

Classification

- Provide "safe refuge" homes that post signs to advertise safe shelter for persons who feel threatened (see Figure 2-5):

Social

Directives:

- Provide sufficient refuges so that potential victims can realistically expect to reach one when necessary.

Discussion -- The safe refuge project is very often an extension

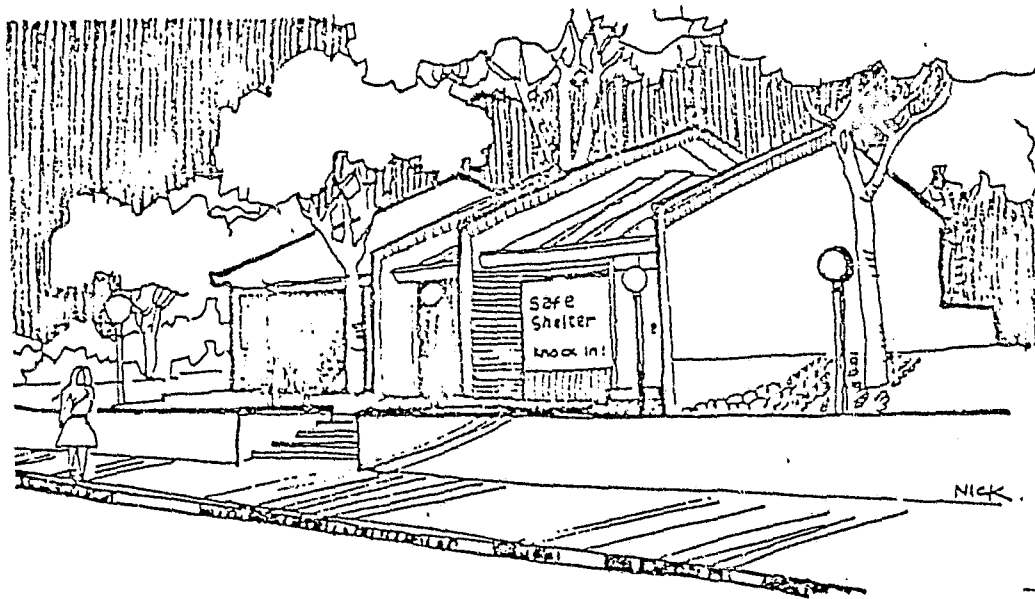


Figure 2-5. Provide "Safe Refuge" Homes

of the Blockwatch program. Neighbors post notices on their houses indicating that people who feel threatened will be offered safe refuge in that home until further help arrives. A special education and public relations effort is necessary to encourage potential victims to use the safe refuge homes and to convince them that the homes are safe.

Strategies (continued):

Classification

Directives (continued):

- Provide refuges that are dependably available and easily accessible.

- Initiate citizen security patrol programs through private and public organizations to work closely with police to report suspicious events.

Social,
Law Enforcement

Discussion -- Organize (under police sponsorship) voluntary or compensatory resident patrols or street patrols. In apartment complexes, tenant patrols contribute to security by screening visitors, inspecting halls, checking on the elderly and infirm, and running errands for the shut-ins. Some members of citizen street patrols have become actively involved in law enforcement by joining police reserve units. Organizational and operational control of civilian patrols is not a simple matter, and it is not universally agreed that their advantages outweigh their problems and disadvantages.

Two-person civilian/police teams patrol fixed beats in selected

urban areas in Rochester (New York), responding to service calls, aiding mobile patrols, deterring crime, and improving community relations during high-crime hours, seven days a week (141).

Self-defense groups exist in cities throughout the United States. Organizational problems, the relationship of self-defense groups to police and the legal system, and their legitimacy in the eyes of the community served are sensitive issues (92).

One report classifies 28 groups into supplemental or adversarial categories in regard to existing law enforcement institutions, and classifies police response to them from outright encouragement to opposition and complete suppression. A review of a Boston (Massachusetts) organization covers the support of the group and citizen willingness to assist or join the group. It is concluded that civilian/police groups are not likely to become permanent factors in law enforcement systems, but that their emergence is indicative of dissatisfaction with official crime prevention programs (38, 60).

Any citizen patrol should be aware of local ordinances so that they do not unwittingly violate laws, such as trespassing. The legal status and liability of such organizations should also be established prior to implementation. See also related section in CPTED Technical Guideline 3, Citizen Involvement in CPTED Projects.

Strategies (continued):

Classification

- Create tenant organizations and committees to work with management to determine security needs

Social

Strategies (continued):

Classification

and measures.

- Organize tenant patrols to report suspicious behavior and regularly survey maintenance requirements that might affect crime (e.g., broken windows, faulty doors and locks, inoperative lights).

Social

2.12 Territorial Identity

Objective -- Differentiate private areas from public spaces to discourage trespass by potential offenders.

Strategies:

Classification

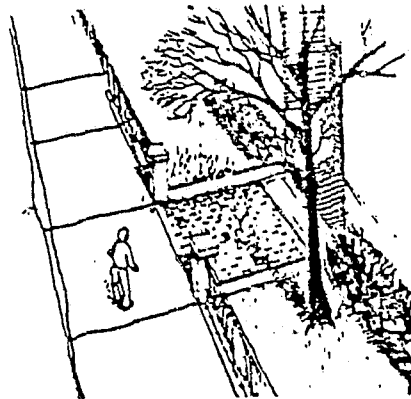
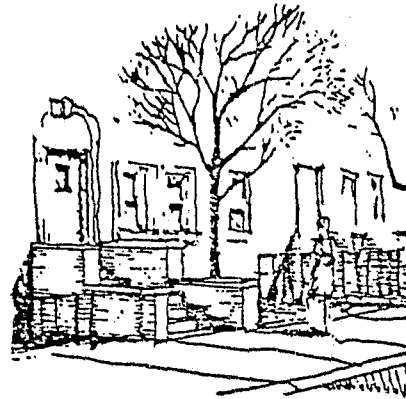
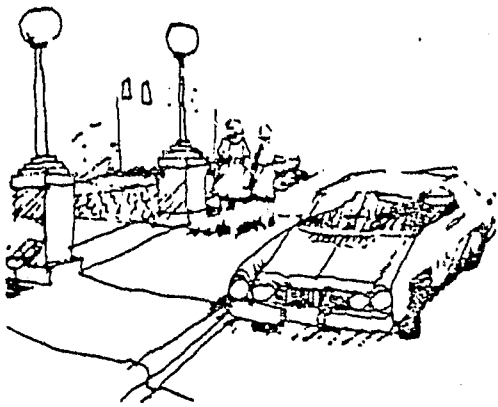
- Provide symbolic boundaries that identify the site and/or areas within the site as private places that should not be casually entered (see Figure 2-6).

Physical

Reference -- (175).

- Provide amenities that support resident or authorized user activities to identify areas as private territories and that promote natural surveillance (e.g., children's play equipment, gardens).

Physical



Source: Design Guidelines for Creating Defensible Space.

Figure 2-6. Provide Symbolic Boundaries

<u>Strategies (continued):</u>	<u>Classification</u>
● Post notices that specific areas are private.	Physical
● Provide private access routes to private areas.	Physical
● Provide planters and other elements that communicate occupant interest in and use of the space as part of his/her "territory."	Physical

Discussion -- There are numerous techniques for designating private and semiprivate areas. Most manipulate various design features (175).

2.13 Neighborhood Image

Objective -- Develop positive neighborhood image to encourage resident investor confidence and increase the economic vitality of the area.

<u>Strategies:</u>	<u>Classification</u>
● Assign responsibilities for neighborhood representatives to meet with developers and real estate agents to familiarize them with strong neighborhood qualities. (This can be done through residential association activities.)	Management
● Provide low-cost loans through development commissions, the U. S.	Management

Strategies (continued):

Classification

Small Business Administration,
and private lenders.

- Communicate good-news develop-
ments in the neighborhood to the
public media to offset news of
crime problems.

Management

CHAPTER 3. CPTED STRATEGIES FOR THE COMMERCIAL ENVIRONMENT

This chapter presents a comprehensive array of objectives and strategies that address crime problems in commercial areas. The crimes most common to these areas include robbery, burglary, theft, and assault. Table 3-1 presents a summary list of the objectives for the commercial environment.

Many of the strategies included in this section are identical to those presented for the residential environment. Therefore, in many cases, the discussion section for selected strategies contains a reference to the appropriate section in Chapter 2.

3.1 Access Control

Objective -- Provide secure barriers to prevent unauthorized access to building grounds, buildings, and/or restricted building interior areas to deter and detect potential offenders.

<u>Strategies:</u>	<u>Classification</u>
• Erect barriers to impede access to the site through vacant lots, adjacent structures, etc.	Physical
• Restrict access to delivery areas, material and equipment storage areas, and other vulnerable places within the site through the use of tall and attractive fences or walls with lockable gates (see Figure 3-1).	Physical

Table 3-1

Objectives for Commercial Environment

1. Access Control: Provide secure barriers to prevent unauthorized access to building grounds, buildings, and/or restricted building interior areas.
2. Surveillance Through Physical Design: Improve opportunities for surveillance by physical design mechanisms that serve to increase the risk of detection for offenders, enable evasive actions by potential victims, and facilitate intervention by police.
3. Mechanical Surveillance Devices: Provide businesses with security devices to detect and signal illegal entry attempts.
4. Design and Construction: Design, build, and/or repair buildings and building sites to enhance security and improve quality.
5. Land Use: Establish policies to prevent ill-advised land and building uses that have negative impact.
6. Owner/Management Action: Encourage owners and managements to implement safeguards to make businesses and commercial property less vulnerable to crime.
7. User Protection: Implement safeguards to make shoppers less vulnerable to crime.
8. Social Interaction: Encourage interaction among businessmen, users, and residents of commercial neighborhoods to foster social cohesion and control.
9. Private Security Services: Determine necessary and appropriate services to enhance commercial security.
10. Police Services: Improve police services in order to efficiently and effectively respond to crime problems and to enhance citizen cooperation in reporting crime.
11. Police/Community Relations: Improve police/community relations to involve citizens in cooperative efforts with police to prevent and report crime.
12. Community Awareness: Create community crime prevention awareness to aid in combatting crime in commercial areas.
13. Territorial Identity: Differentiate private areas from public spaces to discourage trespass by potential offenders.
14. Neighborhood Image: Develop positive image of the commercial area to encourage user and investor confidence and increase the economic vitality of the area.

References -- (157, 175, and CPTED Technical Guidelines 7 and 9).

<u>Strategies (continued):</u>	<u>Classification</u>
<ul style="list-style-type: none">● Upgrade construction materials at gates, doors, and windows; install improved mechanical locking devices; and/or add to the heights of fences and walls to increase the security offered by existing barriers.	Physical
<ul style="list-style-type: none">● Avoid the use of fences with large mesh perforations and walls with very rough surface textures that can provide footholds and handholds.	Physical
<ul style="list-style-type: none">● Provide scaling deterrents at the tops of fences and walls (see Figure 3-2).	Physical

Discussion -- See Section 2.7.

- Remove branches on trees and other physical objects near fences and walls that might be used as ladders.

References -- (157, 159).

- Provide additional barriers for vulnerable openings on lower floor levels and openings that are accessible from outdoor stairs



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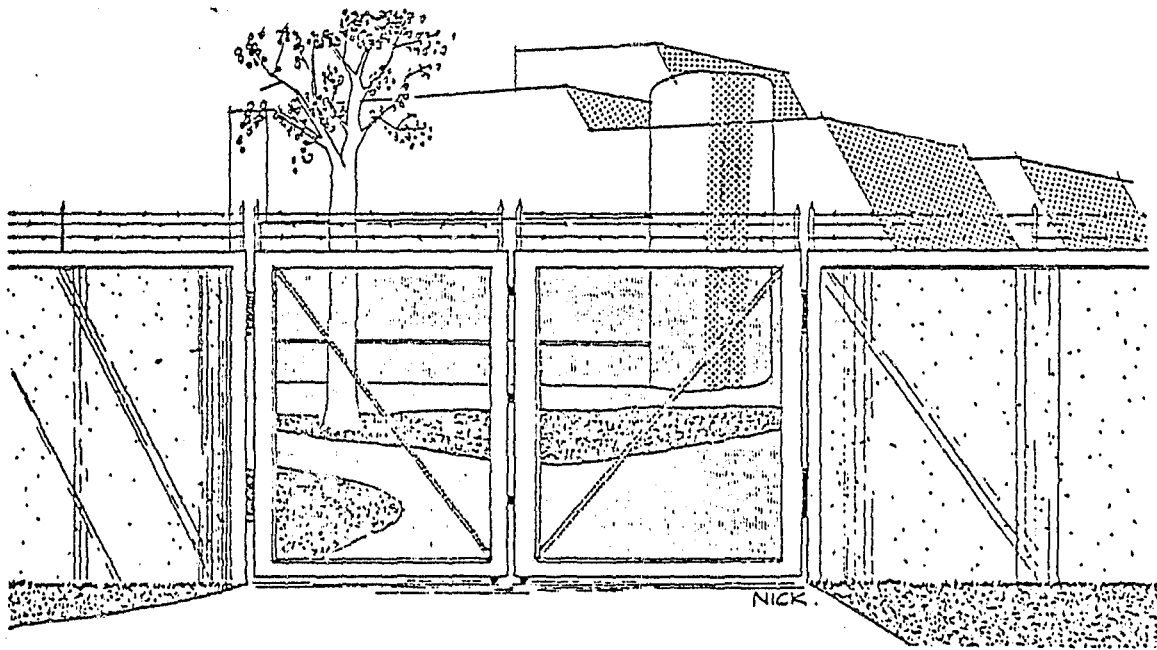


Figure 3-1. Restrict Access to the Site through the Use of Tall Fences with Lockable Gates

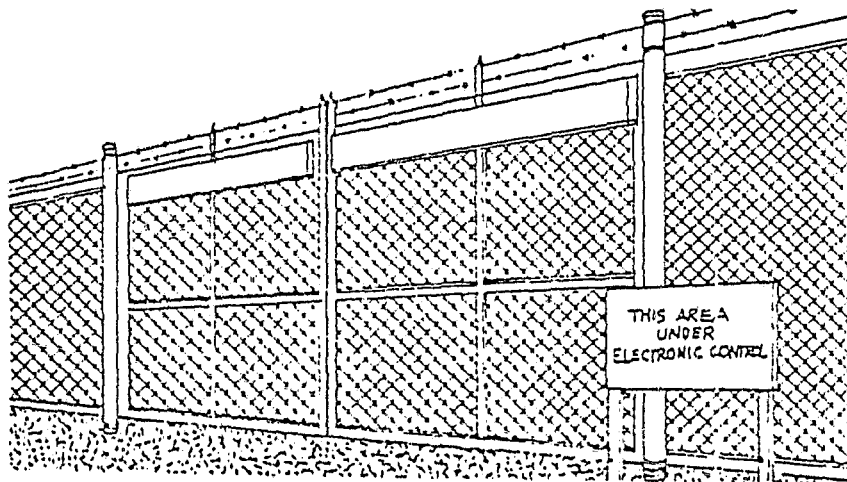


Figure 3-2. Provide Scaling Deterrents at the Tops of Fences and Walls

Strategies (continued):

Classification

and roofs (e.g., grilles and bars on windows, transoms, and ventilation outlets).

Discussion -- See Section 2.1.

- Remove exterior door handles and/or provide panic hardware on fire doors that are not intended for general use. Physical
- Block off access routes from windows or roofs of adjacent structures that could be used to reach windows or roofs of the structure in question (see Figure 3-3). Physical
- Provide bollards (posts or similar obstacles, often of concrete) to prevent people from crashing cars through building fronts to gain entry (see Figure 3-4). Physical
- For extreme security situations, provide double walls to protect valuables. Physical
- Provide secured areas and/or immobile storage facilities such as walk-in vaults or safes embedded Physical

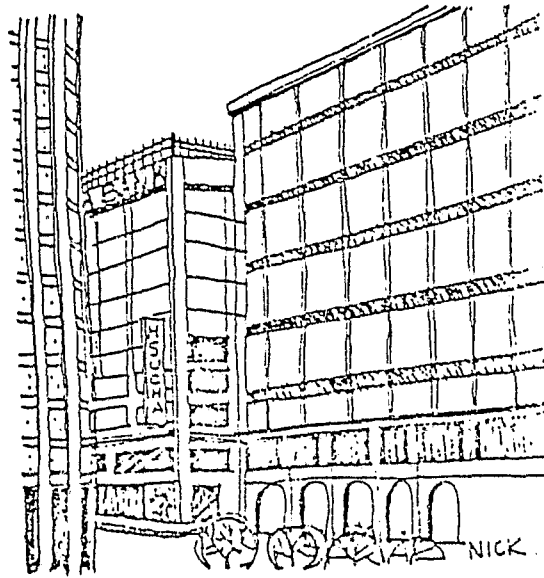


Figure 3-3. Block Access Routes from Roofs of Adjacent Structures

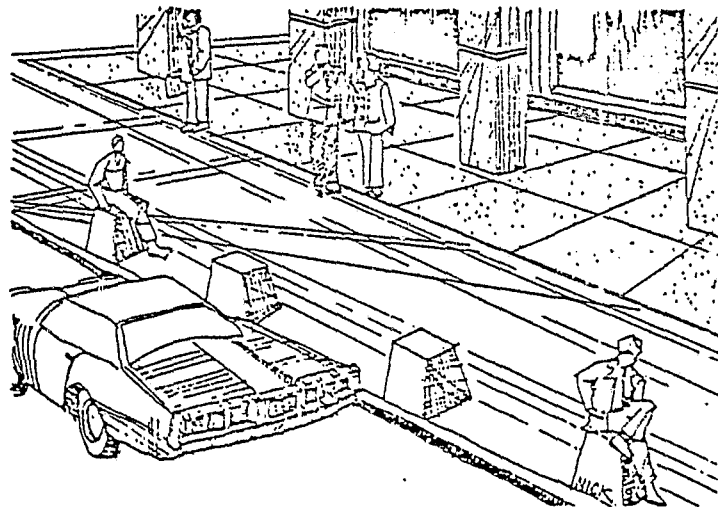


Figure 3-4. Provide Bollards to Prevent People From Crashing Cars through Building Fronts to Gain Entry

Strategies (continued):

Classification

in cement, for valuable items.

Discussion -- Successive interior barriers should be provided commensurate with the threat and the protection required. Metal doors and frames, double masonry or concrete walls, and high-quality hinges and locks are sufficient for most purposes. A vault within the room or a safe embedded in the concrete building structure provides an alternative or additional delay (66).

Some ordinances require specific measures. In Oakland (California) a Class "E" safe is mandated where \$1,000 or more is kept after business hours (157).

- Provide bulletproof glass booths, Physical
metal cages, etc., for employees
handling large sums of money.

Discussion -- Some self-service gas stations in Washington, D. C., are equipped with a bulletproof glass and brick or steel cashier's booth, which the cashier never leaves. There are no apertures opening directly into the cage (i.e., straight line). Much like some bank teller cages, money is passed through a rotating drum.

- Provide secure doors and locks Physical
on office doors that lead to
shared interior corridors:

Directives:

- Replace springbolt locks and

Strategies (continued):

Classification

Directives (continued):

- key-in-knob locks with
- mortise locks with dead bolts.
- Use a double cylinder in
place of a thumb turn on the
inside for doors with windows.
- Use locks with at least six
pins.
- Maintain key control.

Discussion -- See Section 2.1. Also, references 66, 79, 102, and
175.

- Provide electrically activated Physical
locks and an intercom system that
enable interrogation of visitors
from offices before permitting
entry to an interior corridor.
- Prevent access to corridors from Physical
emergency firestairs by removing
door handles in stairwells.

Discussion -- See Section 2.1 for above strategies.

- Provide building occupants with Physical
personal keys for private access
to restrooms and other rooms that
are located off of shared corridors.

Strategies (continued):

Classification

- Provide keyed elevators for access to corridors from unsecured areas such as parking locations in basements. Physical

Discussion -- Elevators are frequently targets of vandalism and the locale for highly feared crimes of confrontation. Keyed elevators restrict use to authorized persons. However, key control is difficult to maintain in large buildings, or those with transient tenants.

3.2 Surveillance Through Physical Design

Objective -- Improve surveillance by physical design mechanisms that serve to increase risk of detection for offenders, enable evasive actions by potential victims, and promote intervention by police.

Strategies:

Classification

- Orient points of entry to the site to be directly accessible and clearly visible from areas of street and pedestrian activity whenever possible. Physical
- Provide well-defined pedestrian access corridors that channel flows for good natural surveillance. Physical
- Eliminate unnecessary visual barriers that can conceal Physical

Strategies (continued):

Classification

unauthorized entry attempts.

Discussion -- See Section 2.4.

- Orient windows on nearby buildings within the site development to look out over entrances and vulnerable grounds areas (see Figure 3-5). Physical
- Locate activities in nearby buildings within the site development to look out over entrances and vulnerable grounds areas. Physical
- Remove unnecessary obstacles that obscure natural surveillance of vulnerable areas from the street and/or interior locations (e.g., window posters). Physical

Discussion -- See Section 2.2

- Enhance surveillance where obstacles cannot be removed by using devices such as parabolic mirrors mounted inside the elevators and at corners in corridors. Physical

Strategies (continued):

Classification

- Provide a common entrance Physical
that gives access to multiple-
occupant spaces rather than
separate exterior entrances

(see Figure 3-6):

Directives:

- Keep passageways clear of large
objects or boxes.
 - Eliminate alcoves in corridors.
 - Straighten corridors (avoid
bends) where possible.
 - Eliminate vestibules.
- Design interior circulation paths Physical
to improve natural surveillance
overall and/or at specific check
points:

Directives:

- Direct all persons entering or
leaving a building past a guard,
receptionist, or doorman.
- Create traffic paths that are
direct, straight where possible,
and short.

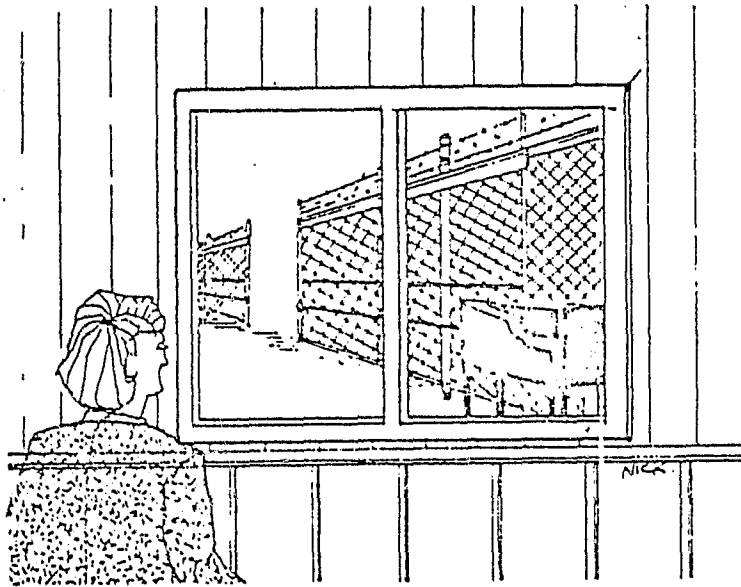


Figure 3-5. Orient Windows to Look Out Over Entrances and Vulnerable Grounds Areas

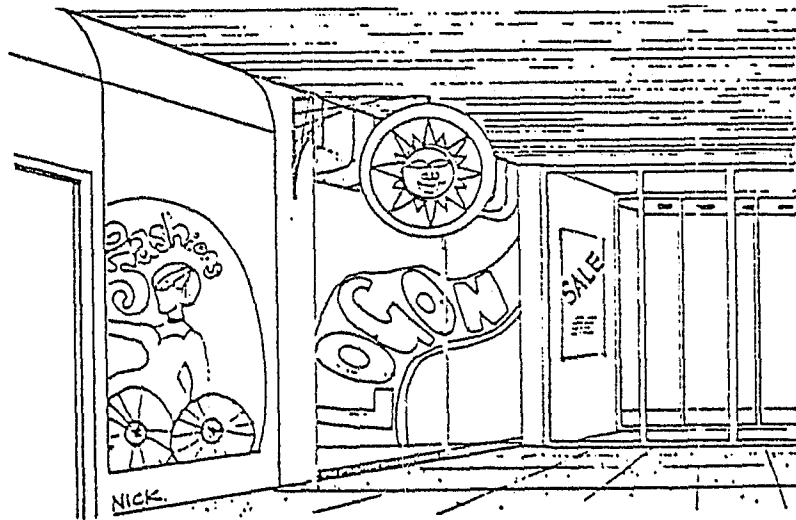


Figure 3-6. Provide a Common Entrance that Gives Access to Multiple-Occupant Spaces

Discussion -- For more information on designing circulation paths for large buildings or institutions, see CPTED Technical Guideline 9, Security Engineering.

Strategies (continued):

Classification

- Locate areas containing valuables (merchandise, equipment, and cash) for optimum outside and interior surveillance.
- Provide secure windows in walls and/or doors that obstruct visibility of dangerous areas (such as interior fire stairs):

Physical

Physical

Directives:

- Use vandal-resistant transparent materials.
- Open up space, whenever possible, to increase visibility.
- Expose or partially expose stairways to corridors if fire safety codes permit.

Discussion -- See Section 2.2.

- Seal off vulnerable areas or provide activities that attract

Physical

Strategies (continued):

Classification

new uses to increase natural
surveillance:

Directives:

- Seal or block off unprotected doors or windows, if not needed or required by code.
- Seal off basement areas except for a protected entrance for use of authorized personnel.
- Lock or remove the doors from closets and other potential hiding places.
- Redesign areas that cannot be sealed off, and shift activities to provide additional surveillance.
- Trim or remove shrubbery and trees that interfere with natural surveillance of problem areas. Physical
- Undertake demolition of derelict structures that can provide hiding places for offenders. Physical
- Fence off problem areas between or Physical

Strategies (continued):

Classification

behind buildings that are not intended for public use.

- Survey lighting requirements and supplement or replace existing street and alleyway lights as required. Physical

Discussion -- *Street lighting improvement is among the most obvious deterrents to crime. Projects have been undertaken in cities of all sizes throughout the country (159). For more detailed information, see CPTED Technical Guideline 7, Planning Public Outdoor Areas.*

Strategies (continued):

Classification

- Encourage businesses to provide area lighting for their premises. Physical
- Locate parking lots in areas where they are close to locations of vehicular and/or pedestrian activity, or areas where they are clearly visible from the interiors of inhabited buildings. Physical

Discussion -- *For specific security design considerations, see section entitled "CPTED Focus on Parking Lots" in CPTED Technical Guideline 7.*

<u>Strategies (continued):</u>	<u>Classification</u>
<ul style="list-style-type: none"> ● If parking lots are located in areas isolated from active locations, provide well-lighted access corridors that channel and maximize traffic levels. 	Physical
<ul style="list-style-type: none"> ● Provide benches and other amenities to encourage pedestrian traffic in appropriate areas (such as along streets that connect activity nodes with transit stops). 	Physical
<ul style="list-style-type: none"> ● Close off streets to create pedestrian arcades, malls, or parks that concentrate pedestrians for surveillance purposes and restrict access/egress to the areas (see Figure 3-7). 	Physical
<ul style="list-style-type: none"> ● Eliminate on-street parking to maximize opportunities for police surveillance. 	Physical
<ul style="list-style-type: none"> ● Provide both front and rear vehicle access to commercial strips to facilitate police patrol surveillance. 	Physical

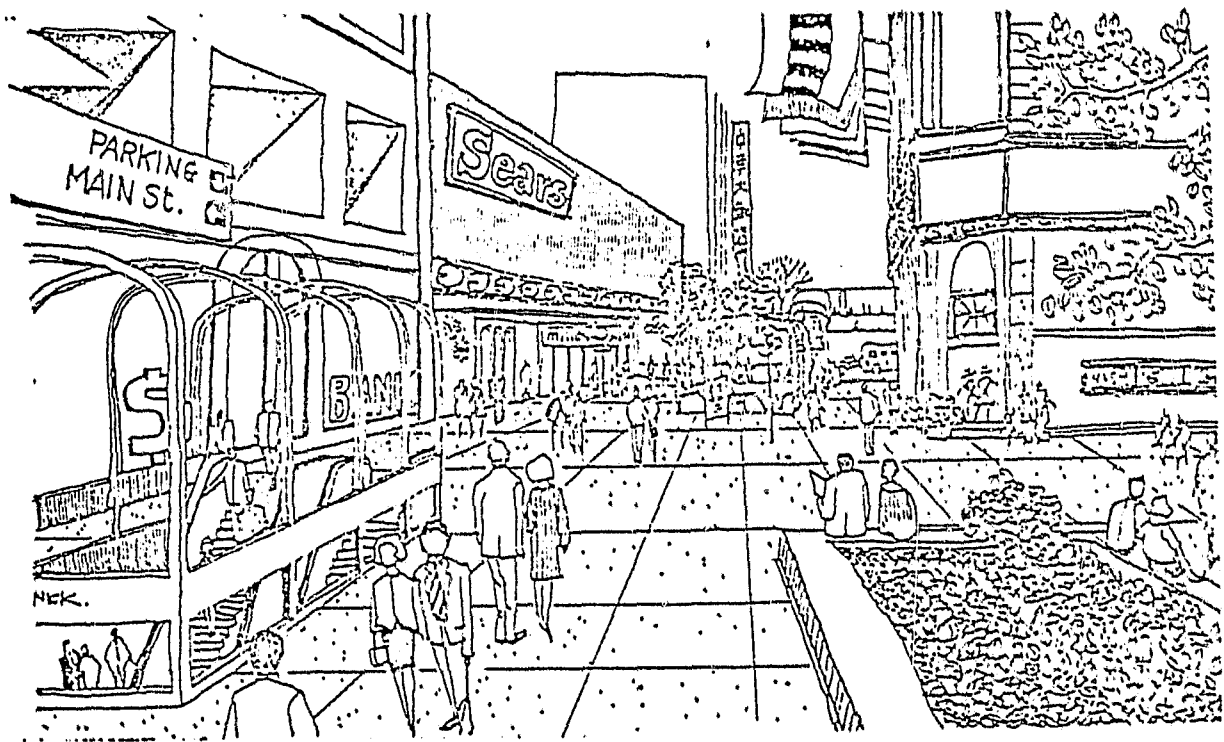


Figure 3-7. Create Pedestrian Arcades, Malls, or Parks

Strategies (continued):

Classification

- Cluster commercial establishments those with similar operating hours are located together to promote both high and low pedestrian traffic densities which avoid "zones of critical intensity."

Physical

Discussion -- A critical intensity zone is created in public areas when there are just enough people on the scene to attract the attention of potential offenders but not enough people to provide continuous surveillance (25).

Strategies (continued):

Classification

- Diversify land use along commercial strips to attract different types of people at different times, encouraging a continual flow of pedestrians throughout the day and evening.

Physical

Reference -- (70).

- Locate business or other facilities that attract potential offenders (i.e., teenage hangouts) in the midst of heavily trafficked areas where natural surveillance is

Physical

Strategies (continued):

Classification

maximal, or isolate those business enterprises or facilities to avoid endangering other activities.

3.3 Mechanical Surveillance Devices

Objective -- Provide businesses with security devices to detect and signal illegal entry attempts.

Strategies:

Classification

- | | |
|---|----------|
| • Provide perimeter lighting along fences and walls, at building entrances, and in interior areas visible from entrances. | Physical |
| • Provide special lighting at gates. | Physical |
| • Provide lighting of interior ground areas. | Physical |

Discussion -- See Section 2.3.

- | | |
|---|----------|
| • Provide electronic trespass detectors and silent or deterrent types of alarm systems at gates, doors and windows off of corridors, and at other strategic interior locations. | Physical |
|---|----------|

Discussion -- See Section 2.3. Also, building code provisions for intrusion detection devices in several Southern California counties, as reported in a crime prevention bulletin issued by the Southern California Association of Governments, include the following (157):

"Both Monterey Park and Los Angeles County stipulate that detection devices specifically approved for a particular installation by the appropriate law enforcement agency may be used in lieu of other anti-intrusion devices normally required.

"The Oakland ordinance, however, provides that the Oakland Police Chief may require intrusion detection devices in addition to the other devices specified in the ordinance, if he feels the particular establishment requires it.

"In addition, the ordinance itself requires establishments having specific inventories to install and maintain certain types of burglar alarms. (Refer to the ordinance for the list of establishments requiring various anti-intrusion devices)."

In addition to required installation, the following recommendations are offered:

a. "Hold up alarms which cannot be inadvertently set off and which do not allow the robber to see any unusual movement of the victim should be installed in those types of establishments where robberies often occur, e. g. financial establishments, liquor stores.

b. "In that same type of establishment where robberies tend to occur, the installation of photographic cameras or a videotape system should be recommended. The cost of a videotape system is much higher initially, but the tape can be reused every day and allowed to run throughout the business day.

c. "In those places where a watchman is employed, the installation of closed circuit television can help the watchman in his surveillance of the premises."

Motion detectors, which signal when intruders are moving about a building, are sometimes used in commercial settings but are relatively expensive.

Strategies (continued):

Classification

- Construct protected observation areas to house special security staff or business operators/ employees.

Physical

- Provide interior lighting:

Physical

Directives:

- Keep corridors and lobbies well-lighted at all times.
- Use door-actuated light switches for rooms not normally lighted at all times.

Discussion -- Interior lighting is a major deterrent to crime. Lighting can be used in vulnerable interior areas (e.g., at cash register stations in stores) to make them more visible from the street. Alarms should be connected to light circuits to signal when lights have been turned off. Utility companies frequently provide lighting advisory service (157, 175).

Strategies (continued):

Classification

- Provide closed-circuit television to survey entry points and vulnerable interior areas. Physical
- Provide parabolic mirrors mounted at sufficient height to facilitate open area surveillance. Physical

Discussion -- See Section 2.3. Also, for commercial uses, CCTV may have wider application (189).

3.4 Design and Construction

Objective -- Design, build, and/or repair buildings and building sites to enhance security and to improve visual quality.

Strategies:

Classification

- Develop minimum security standards for adoption by State and municipal building code officials. Management, Law Enforcement

Discussion -- See Section 2.4.

- Compel building owners to make necessary improvements to their properties through strict enforcement of public safety codes. Management

Discussion -- See Section 2.4.

Strategies (continued):

Classification

- Provide low-interest loans for security improvements. Management

Discussion -- These could include Federal-, State-, or local government-guaranteed, low-interest loans, a revolving fund of public money for direct loans, or provisions by local lending institutions for lower-than-commercial-rate loans for security improvements in shopping centers and other commercial areas.

- Require compliance with minimum security standards as a necessary condition for securing new-business and business-improvement loans. Management
- Lobby for insurance rate reductions, tax incentives, and other measures for businesses that comply with minimum security standards. Management
- Obtain security hardware for businesses at reduced costs through bulk purchase programs. Management

Discussion -- See Section 2.4.

- Conduct and publish cost/benefit evaluations for security improvements initiated through building security inspection programs. Management

Discussion -- Evaluate a variety of commercially available alarm and sensor systems and components by class; determine their applicability to types of threats and structures; establish their cost, and rate the cost effectiveness.

A report established a key role for alarm systems in burglary and robbery reduction. Security system requirements were established for several classes of users. A large number of products were evaluated for performance, reliability, design, and cost. Equipment was ranked for cost-effectiveness. Recommended systems were shown with itemized costs and floor plans for typical application in houses, apartments, and small businesses (56).

Strategies (continued):

Classification

- Initiate paint-up/fix-up programs with volunteers provided and supervised through private or public organizations (i. e., local chapter of the National Association of Retired Persons):

Directive:

- Sponsor youth programs that employ young people after school and during summer vacations to paint and repair businesses through private or public organizations.

Strategies (continued):

Classification

- Encourage the municipality to trim trees and make street and sidewalk improvements to improve visual quality. Management
- Urge public utility companies and city officials to remove telephone and power poles and provide underground lines. Management
- Establish sign ordinances to prohibit the proliferation of unsightly signs and billboards. Management
- Create design review committees that include security experts to evaluate crime-related implications of proposed developments. Management

Directives:

- Consider potential impacts upon victim and offender populations (e. g., who will they attract?; how will they be used?).
- Consider potential short- and long-term impacts upon the social and economic character of the area.

Strategies (continued):

Classification

Directives (continued):

- Consider security requirements relative to existing law enforcement resources.

Discussion -- *Potential crime problems can be avoided in the planning and design stages of proposed commercial development, either new construction or renovation (45, 66, 157).*

3.5 Land Use

Objective -- Establish policies to prevent ill-advised land and building uses that have negative impact.

Strategies

Classification

- Establish and enforce zoning ordinances that prevent land uses that are incompatible with the security interests of the community (i. e., "X-rated" establishments in residential or school areas).

Management

Discussion -- *Bus stops and public telephones should be in the open and protected by transparent shelters. Businesses should be clustered to provide full services. Customers should not have to run a gauntlet of crime-prone commercial ventures to reach shopping, public transportation, or recreation.*

3.6 Owner/Management Action

Objectives -- Encourage owners and management to implement safeguards to make businesses and commercial property less vulnerable to burglary and robbery.

Strategies:

Classification

- Provide a key employee (e. g., manager, switchboard operator) with work space suited to surveillance (e. g., opposite cash register or on a mezzanine level) and equip with an alarm, phone, or other means of summoning police in case of robbery. Physical
- Avoid, if possible, having a lone employee on the premises during peak robbery periods. Management
- Provide psychological deterrents to both robbery and burglary by advertising security precautions (e. g., notices that the premises are protected by attack dogs, conspicuous television cameras, etc.). Physical

Strategies (continued):

Classification

- Provide living quarters in the building so there is someone available during night hours to detect and report crime. Physical
- Restrict access during peak robbery hours (late afternoon and evening) by requiring customers to ring a doorbell for admittance (practical only for smaller specialty businesses, such as jewelry stores). Physical
- Coordinate, if possible, opening and closing hours with those of neighboring businesses to maximize numbers of available witnesses in event of robbery. Management
- Provide interior night lighting, and avoid covering front windows with advertisements, to facilitate police surveillance. Physical
- Secure valuables (with chains, in vaults, etc.) after business hours. Physical

Strategies (continued):

Classification

- Avoid accumulations of large amounts of cash by encouraging use of credit cards, requiring exact change after certain hours (e. g., gas stations), depositing cash supplies promptly in banks or other secure locations, and limiting check cashing services. Management
- Vary procedures for handling cash (e. g., do not make bank deposits regularly on the same day at the same time). Management
- Diversify locations of cash during operating hours. Management

3.7 User Protection

Objectives -- Implement safeguards to make shoppers less vulnerable to crime.

Strategies

Classification

- Encourage people not to carry cash: Management

Directives:

- Create simplified banking systems and provide customer

Strategies (continued):

Classification

Directives (continued):

education and assistance

programs that cater to the needs of elderly, young, and illiterate subscribers.

- Create safe, simple, and versatile alternatives to cash transactions (e. g., books of travelers checks at low service rates that can only be cashed by the owners and do not require checkbook balancing).
- Create a subscriber identification program that extends eligibility for check cashing to persons who have not previously owned identification cards.
- Provide special bill-paying services as a subscription incentive whereupon the bank pays regular monthly bills upon direct deposit of Social Security, welfare, or other checks.

Strategies (continued):

Classification

Directives (continued):

- Provide people with special buttons or other devices that can be carried on purses or clothing to signify that they are not carrying cash (see Figure 3-8).
- Encourage local businesses to promote and support cash-off-the-streets projects. Management
- Use public news media to promote alternatives to carrying cash. Management

Discussion -- A project that was planned to combine all of these features is Cash-off-the-Streets (COTS). The objective of COTS is to provide services to minimize the need to carry cash and, thus, reduce incentives for committing such crimes-of-opportunity as street robbery and pursesnatch). The model was developed with a specific group in mind -- the elderly citizens who are frequent targets of these crimes. Many of the elderly do not use checks as an alternative to cash because they do not trust or understand banks and are not eligible or able to carry out check transactions. This may also apply to other groups, such as people who are not fluent in English.

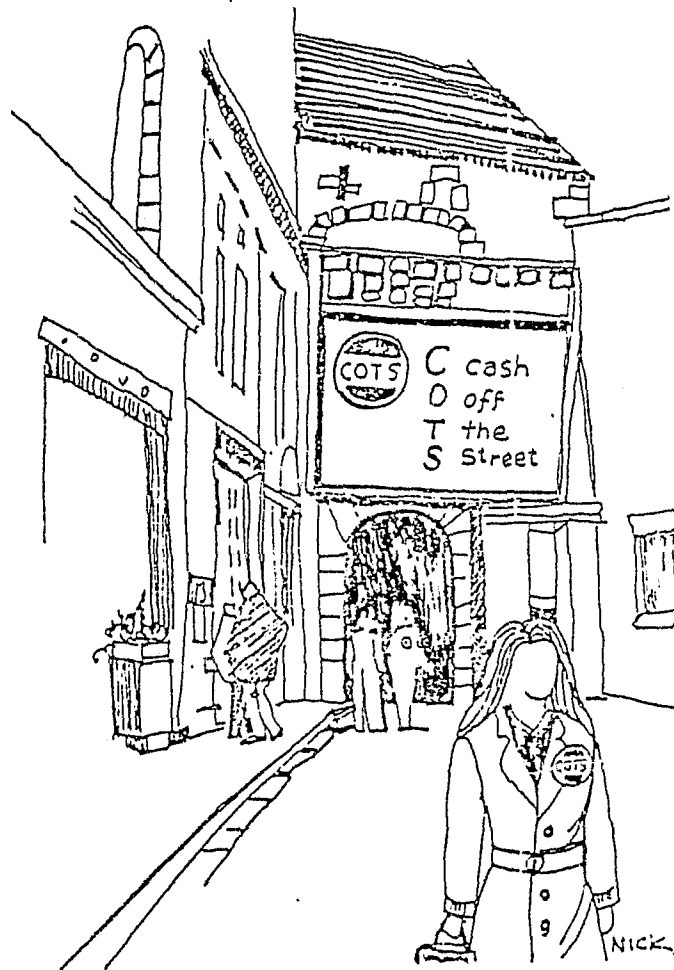


Figure 3-8. Provide People with Special Buttons to Signify that They are Not Carrying Cash

For a program of this type to succeed, local banking facilities must be totally cooperative. Business sponsorship and participation, and public information components are also essential. However, if support is inadequate for implementation of a comprehensive program, selected elements can be used. For example, if people do not avail themselves of bank checking account services due to a lack of understanding of how they function, civic groups can provide information and instruction independent of participation by the banking institutions.

3.8 Social Interaction

Objective -- Encourage interaction among businessmen, users, and the residents of commercial neighborhoods to foster social cohesion and control.

Strategies:

- Cluster buildings to provide protected outdoor commons areas where people can talk, eat lunch, garden, or engage in other recreational activities together.
- Provide incentives for employees to participate in local community affairs (e. g., through school programs, organized softball teams, cultural events) to improve community relations.

Classification

Physical

Management

Strategies (continued):

Classification

- Hire personnel from the surrounding community to improve community relations. Management
- Create pleasant sitting and/or child play areas (mini-plazas) in secure locations at bus waiting areas, near activity centers, etc. (see Figure 3-9). Physical
- Provide attractive bus shelters and public telephone booths that are transparent and vandal-resistant, to increase pedestrian comfort, and security (see Figure 2-4). Physical
- Provided well-designed street furniture, trash receptacles, fountains, and landscaping that complement existing buildings and enhance the comfort of pedestrians. Physical

Discussion -- For more information on landscaping for park and recreation areas, see Technical Guideline 7, Planning Public Outdoor Areas.

Strategies (continued):

Classification

- Provide well-designed pedestrian scale and area lighting fixtures. Physical

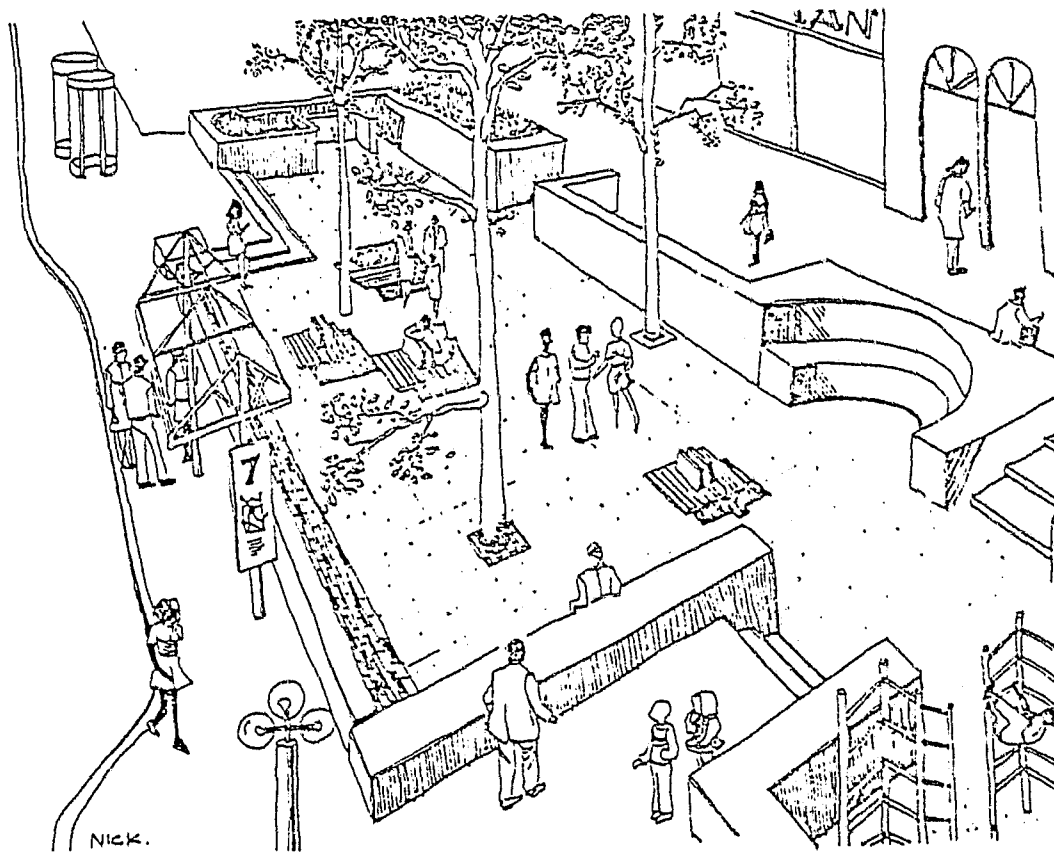


Figure 3-9. Create Pleasant Sitting and/or Play Areas in Secure Locations

Strategies (continued):

Classification

- Provide community information kiosks and historical markers/monuments that reflect current and past events that make the neighborhood a special place. Physical
- Organize a special program through business associations to promote well-designed, coordinated signs and canopies, and general guidelines for improving the appearance of buildings. Physical, Management
- Sponsor outdoor concerts, plays, art exhibits/sales and other events. Social

Discussion -- See Section 2.7.

3.9 Private Security Services

Objective -- Determine necessary and appropriate services to enhance commercial security.

Strategies

Classification

- Encourage businesses to pool financial resources to hire a well-trained professional security service and/or provide alarms and/or closed-circuit Social

Strategies (continued):

Classification

television installations
connected with a control
center.

- Provide living quarters for a manager/security person near a key entry location so there is someone available at all times to detect and report crimes. Physical, Management
- Sponsor cooperative escort programs to take vulnerable people (such as the elderly and infirm) to necessary destinations. Social
- Coordinate hours of operation of businesses to enable optimum use of security services and to maximize the number of available witnesses in event of robberies. Management
- Initiate a "buddy system" whereby neighboring shop owners keep watch over and report suspicious events on each others' premises. Social
- Determine the best type of service personnel for the particular type of environment and problem (e. g., Law Enforcement

Strategies (continued):

Classification

doorman in lobby, person stationed in a booth with a view of the main exterior approach and parking area, or a patrolling guard, with or without a dog).

- Concentrate forces during peak hours in trouble areas. Law Enforcement
- Provide uniforms to enhance visibility and to instill pride and confidence; or avoid uniforms to enable inconspicuous surveillance. Law Enforcement

Discussion -- Increased visibility is desirable when the object is to deter crime, while decreased visibility (avoiding uniforms) is preferable when the object is to apprehend the offender.

- Provide communications for rapid response (i.e., electronic pagers, walker-talkies, special alarms, telephones, etc.). Law Enforcement

3.10 Police Services

Objective -- Improve police services to respond efficiently and effectively to crime problems and to enhance citizen cooperation in reporting crime.

Strategies

Classification

- Provide toll-free emergency telephones at convenient, strategic locations along the street. Physical
- Equip police stations with television monitors of critical areas. Physical

Discussion -- Police detection and response time can be improved by installing television monitors connected to cameras in critical areas at police stations or stakeout locations.

The Cat Burglar Project, conducted in 1974 by the Baltimore County (Maryland) Police Department, demonstrated the use of high-performance, low-light-level television cameras and monitoring to observe critical areas and detect attempted illegal entry.

- Connect building alarms directly to a control center within the police precinct. Physical

Discussion -- Alarms connected directly to police precincts are monitored continuously, and the communications time lapse is minimal. Resulting police response time is sharply reduced, which should produce a higher percentage of apprehensions.

Projects using this method have been initiated in several cities (189). Descriptions of types of devices, methods of applications, advantages and disadvantages, and cost estimates of various alarm systems are available (34).

Strategies (continued):

Classification

- Install building identification names/numbers in alleys so that police can know where to go when approaching from the rear in response to calls. Physical
- Increase police patrol activities and modify procedures to meet specific crime prevention requirements: Law Enforcement

Directives:

- Maximize the number of police patrols (particularly foot patrols) during peak robbery periods (i. e., late afternoons and evenings).
- Periodically inundate high-crime-rate neighborhoods with police patrols as shows of force.
- Station police stakeouts (e.g., plainclothes or "decoy" police dressed as likely crime targets) in high-crime-rate locations.
- Provide bicycles and scooters to patrol areas that are not accessible to cars and to approach areas silently.

Strategies (continued):

Classification

Directives (continued):

- Structure or restructure patrol district boundaries to avoid confusion about jurisdictional responsibilities (e. g., avoid placing boundaries in the center of commercial corridors to prevent confusion about which patrol should respond to a call).

Discussion -- See Section 2.9.

- Provide police precinct officers in high-crime-rate neighborhoods to increase the number and visibility of law enforcement officers, build local confidence, and deter offender activities. Law Enforcement
- Create police substations in high-crime-rate neighborhoods and housing complexes as local bases of operations for the regular police department force. Law Enforcement

Directive:

- Lease building space in complexes, or locate trailers on vacant property.

Discussion -- The New York City Police Department has established a substation in a vacated commercial space in Times Square, a high-crime-rate area that is heavily populated by tourists and known offenders.

Strategies (continued):

Classification

- | | |
|---|-----------------|
| <ul style="list-style-type: none">● Arrange for a special police force team to be assigned to one detail, neighborhood, or building complex so that they become familiar with the problems common to that particular setting. | Law Enforcement |
|---|-----------------|

Discussion -- See Section 2.9.

3.11 Police/Community Relations

Objective -- Improve police/community relations to involve citizens in cooperative efforts with police to prevent and report crime.

Strategies

Classification

- | | |
|---|--|
| <ul style="list-style-type: none">● Create police storefronts where local residents can talk informally with officers about neighborhood problems and issues.● Arrange for police representatives to meet with local organizations, talk at schools, | Law Enforcement,

Social

Law Enforcement,

Social |
|---|--|

Strategies (continued):

Classification

and/or be available to meet with individuals and groups upon request to discuss neighborhood problems and issues.

- Sponsor advertising campaigns to promote good police/community relations. Social
- Organize police/community events (e. g., police athletic teams to compete with civilians) to promote good will. Social
- Provide special courses and/or enroll police officers in university courses that will help them learn to work more effectively with citizens. Law Enforcement, Social
- Provide neighborhood foot patrols, and encourage them to interact with residents in a friendly manner. Law Enforcement
- Ensure that police respond to calls dependably, quickly and in a professional manner to promote citizen confidence in police. Law Enforcement

Discussion -- For all strategies in this section, see the discussions of corresponding strategies in Section 2.10.

3.12 Community Awareness

Objective -- Create community crime prevention awareness to aid in combatting crime in commercial areas.

Strategies

- Encourage citizens to make their business facilities more secure.

Directive:

- Develop brochures that tell businesses how to improve security.

Classification

Management

Discussion -- See Section 2.11.

- Initiate security education programs that bring in local and outside expertise to discuss specific security problems/solutions; conduct meetings with police to discuss cooperative programs; offer classes in self-defense, etc.

Management,
Social

Discussion -- See Section 2.11.

- Train individual police officers or a team to work with builders, architects, and planners to provide advice.

Management

Discussion -- Police officers trained in security technology can be assigned to security consultant or inspector duty. In addition to providing guidance and evaluation, they can implement informal security standards or administer building security ordinances.

Strategies (continued):

Classification

- Arrange for committee and/or social service professionals to meet with new businesses and familiarize them with local conditions and resources:

Directives:

- Use brochures and visual aids.
- Hold periodic meetings to welcome and inform new arrivals to the neighborhood.

- Initiate public awareness programs to familiarize people with the importance of, and specific procedures for, reporting potential or actual crimes.

Discussion -- See Section 2.11.

- Provide special communications links with police:

Strategies (continued):

Classification

Directives:

- Create and advertise anonymous crime-reporting telephone numbers to protect the identity of observers.
- Provide dial-free emergency telephones at strategic locations along streets to enable people to quickly report crimes, fires, and accidents.

Discussion -- See Section 2.11.

- | | |
|---|-----------------|
| ● Provide crime-reporting stickers that can be posted in windows, on telephones, etc. | Law Enforcement |
| ● Instruct employees on appropriate procedures to follow in case of a robbery. | Management |
| ● Encourage employees to observe and report suspicious behavior. | Management |
| ● Hire personnel specially trained in security practices (cost effective only for larger businesses). | Management |

Strategies (continued):

Classification

- Initiate blockwatch programs through local residential and business associations. Social

Discussion -- See Section 2.11.

- Provide "safe refuge" businesses with signs advertising safe shelter for persons who feel threatened. Social

Directives:

- Provide sufficient refuges so that potential victims can realistically expect to reach one when necessary.
- Provide refuges that are dependably available and easily accessible.
- Initiate citizen security patrol programs through private and public organizations to report suspicious events to the police. Law Enforcement,

Discussion -- See Section 2.11.

3.13 Territorial Identity

Objective -- Differentiate private areas from public spaces to discourage trespass by potential offenders.

Strategies:

- Use wall graphics and other interior design features to symbolically demarcate transitional and private areas.

Classification

Physical

Directives:

- Use portable partitions.
- Use steps and landings.
- Change intensity of lighting.

- Post notices that specific areas are private.

Physical

- Provide private access routes to private areas.

Physical

- Provide planters and other elements that communicate occupant interest in, and use of, the space as part of his/her "territory."

Physical

3.14 Neighborhood Image

Objective -- Develop a positive image of the commercial area to encourage user and investor confidence and increase the economic vitality of the area.

Strategies:

Classification

- Prepare a neighborhood business investor's guide through joint chamber of commerce, planning department, and civic organization activities; discuss geographic advantages, available sites and buildings, etc. Management
- Assign responsibilities for neighborhood representatives to meet with developers and real estate agents to familiarize them with strong neighborhood qualities. (This can be done through residential and business association activities.) Management
- Meet with municipal government representatives to discuss possible relocations of municipal offices into local buildings to generate neighborhood business. Management
- Provide low-cost business loans through development commissions, the U. S. Small Business Administration, and private lenders. Management

Strategies (continued):

Classification

- Communicate good-news developments in the neighborhood to the public media to offset news of crime problems.

Management

CHAPTER 4. CPTED STRATEGIES FOR THE SCHOOLS ENVIRONMENT

This chapter presents a comprehensive array of objectives and strategies that address school crime problems. The most common types of school crime are theft, breaking-and-entering, assault, and vandalism. The subenvironments within school complexes that are particularly vulnerable to crime include parking lots, locker rooms, restrooms, corridors, classrooms, vocational shops, kitchens, and "areas where equipment and records are stored."

Table 4-1 presents a summary list of the objectives for the schools environment.

4.1 Access Control

Objective -- Provide secure barriers to prevent unauthorized access to school grounds, schools, and/or restricted interior areas.

Strategies:

- Use tall and attractive fences or walls with lockable gates.

Classification

Physical

Directives:

- Lock access gates during periods when public access is not authorized.
- Provide a guard at school grounds entry gates to restrict access to authorized

Table 4-1

Objectives for Schools Environment

1. Access Control: Provide secure barriers to prevent unauthorized access to school grounds, schools, and/or restricted interior areas.
2. Surveillance Through Physical Design: Improve opportunities for surveillance by physical design mechanisms that serve to increase the risk of detection for offenders.
3. Mechanical Surveillance Devices: Provide schools with security devices to detect and signal unauthorized entry attempts.
4. Congestion Control: Reduce or eliminate causes of congestion that contribute to student confrontations.
5. Psychological Deterrents: Provide psychological deterrents to theft and vandalism.
6. User Monitoring: Implement staff and student security measures at vulnerable areas.
7. Emergency Procedures: Provide teachers with means to handle emergency situations.
8. User Awareness: Initiate programs to promote student awareness of security risks and countermeasures.
9. User Motivation: Encourage social interaction, social cohesion, and school pride by promoting extracurricular activities, providing amenities, and upgrading the visual quality of the school.
10. Territorial Identity: Highlight the functional identities of different areas throughout the school to increase territorial identity and reduce confusion.
11. Community Involvement: Promote public awareness and involvement with school, faculty, and student achievements and activities.

Strategies (continued):

Classification

Directives (continued):

individuals during times of
use.

Discussion -- *Barriers should be attractive as well as effective.*

It is desirable to avoid creating a fortress atmosphere.

Gates that are secured by conventional locks should be monitored by a member of the school security staff or a police officer. Gates that are automatic (e.g., parking area entries that are accessed by coded plastic card) should also be monitored periodically. Gates should be recoded annually and new cards issued accordingly (159).

Guards must know for whom and for what purposes gates can be opened at other than scheduled times (157, 175).

- Upgrade construction materials Physical
at gates, doors, and windows:

Directives:

- Install improved mechanical locking devices.
- Add to the heights of fences and walls to increase the security offered by existing barriers.
- Use break-resistant glass.

Discussion -- Door and window frames should be of sturdy construction. Fill spaces behind hollow steel door frames with concrete to strengthen and to prevent forcing the strike plate away from the bolt (159).

Schools in Los Angeles have replaced glass with Lexan when breakage occurs. In Virginia, there is a requirement for mullions between pairs of exterior doors (135).

Strategies (continued):

Classification

- | | |
|--|---------------------------------|
| <ul style="list-style-type: none">● Avoid the use of fences with large mesh perforations and walls with a very rough surface that can provide footholds and handholds for scaling.● Provide scaling deterrents at the tops of fences and walls. | <p>Physical</p> <p>Physical</p> |
|--|---------------------------------|

Discussion -- See Section 2.1.

- | | |
|--|-----------------|
| <ul style="list-style-type: none">● Remove branches on trees and other objects near fences and walls that could be used as a ladder. | <p>Physical</p> |
|--|-----------------|

References -- (79, 135).

- | | |
|--|-----------------|
| <ul style="list-style-type: none">● Cluster school buildings to create secure outdoor court areas that are defined by building walls to protect vulnerable | <p>Physical</p> |
|--|-----------------|

Strategies (continued):

Classification

equipment (e.g., outdoor furniture, athletic equipment).

Discussion -- Courts bounded on 2 or more sides are subject to surveillance from inside buildings. Totally enclosed courts are suitable for activity nodes. Courts accessible from the outside can provide concealment for theft, vandalism, student violence, or illegal entry (159).

- Provide high-quality barriers and locking mechanisms for isolated structures located on the school grounds (e.g., tool sheds, pump houses, field sports equipment/dressing areas). Physical
- Restrict unauthorized access to parking lots. Physical, Management

Directives:

- Provide fences and gates to seal off parking lots.
- Issue permanent or temporary parking permits.

Discussion -- Control access to parking areas by issuing parking permits to each person, or to each vehicle, depending on the degree of control required. To be effective, this requires a guard to verify the identity of each driver or vehicle entering the area.

An automatic (card-controlled) gate provides less security but more flexibility. If properly engineered, it should also be less costly than a gate requiring full-time guard service (157).

Strategies (continued):

Classification

- Secure doors, door vents, hatches, etc. with hardware that cannot be removed from the outside. Physical

Discussion -- Use hasps and hinges that cover the heads of attaching screws when doors are closed. For other hardware, use one-way screws or round-headed carriage bolts. Hinges should have nonremovable hinge pins.

Use mortise-type door locks wherever practical. Protect the bolt and latch of doors opening out by an escutcheon plate, and with an angle iron, if necessary. Wherever practical, secure from the inside, leaving no hardware subject to attack outside (79, 159). (See also Discussion, Section 2.1).

- Provide additional barriers for vulnerable openings on lower floor levels and openings that are accessible from outdoor stairs and roofs. Physical

Directives:

- Install grilles and bars on windows, transoms, and ventilation outlets.

Strategies (continued):

Classification

Directives (continued):

- Provide reinforced skylight domes or provide additional protection through the use of attractive light-diffusing grilles.

Discussion -- *If a fixed barrier can be placed over an opening, rendering it useless for access, it may be permissible to seal the opening (i.e., replace the frame and closure with masonry). A number of large school jurisdictions, including Los Angeles and the State of Virginia, have taken action to reduce the size or number of windows or to eliminate windows entirely. The Pennsylvania Department of Public Instruction has modified building specifications to allow construction of windowless, air conditioned buildings. Kansas City has expanded use of metal guards on ground floor openings, replacement of broken glass with nonbreakable material, and is eliminating transoms and other unnecessary openings. Atlanta is eliminating decorative windows beside doors (135, 157, 159). (See also Discussion, Section 2.1.)*

- Provide self-closing and -locking devices on exterior doors. Physical
- Remove exterior door handles and/or provide panic hardware on fire doors that are not intended for general use. Physical

Strategies (continued):

Classification

- Provide lockable deposits for, or anchor down, all elements that could be used as ladder substitutes (e.g., trash receptacles, benches). Physical

- Block off access routes for windows or roofs of adjacent structures that could be used to reach windows or roofs of the structure in question. Physical

Discussion -- Most school buildings are freestanding and not close enough to the property boundary to make access from adjacent buildings a threat. However, school complexes may be comprised of clusters of buildings that are frequently connected by covered passages permitting easy movement from roof to roof. If roof access is a problem, bar the vulnerable or offending windows and install a fence along the edge of the roof of the vulnerable building. For more information on special security measures for institutions, see CPTED Technical Guideline 9, Security Engineering.

- Provide additional protection for plate glass doors or doorless entries leading to interior corridors. Physical

Directive:

- Use folding curtain-type

Strategies (continued):

Classification

Directive (continued):

or wall-hidden metal mesh
barriers.

References -- (157, 159).

- | | |
|--|-------------------------|
| • Provide circulation alternatives that circumvent problem areas. | Physical,
Management |
| • Cluster school spaces assigned for staff and operational uses (e.g., administrative offices, storage rooms) to minimize access control requirements. | Physical |

Discussion -- *In large schools, there will be a requirement for several administrative office complexes, which is advantageous in that it provides focal points of activity throughout the building.*

Teaching supplies (including training aids and class reference material) must be close enough to the teachers requiring it to permit ready access. In large buildings, this dictates several supply points. Consideration should be given to combining them with the administrative subcenters.

Athletic equipment, building and grounds maintenance equipment, and supplies will have their own storage complexes that can be physically colocated with the facilities they support. Location of the security guard office should be selected with the most vulnerable targets and most troublesome areas in mind (157).

Strategies (continued):

Classification

- Provide specific entry points so that various functional areas can be sealed off from classrooms.

Physical

Directives:

- Provide a visitor entrance.
- Provide access routes for school supplies and/or cafeteria deliveries.
- Provide access to sports/social activity areas.

Discussion -- Where existing floor plans would require significant, costly modifications, the use of collapsible gates should be considered to accomplish internal access control. For example, the State Department of Education in Hawaii recommends the use of gates on the first floor of multistory schools to limit movement throughout the buildings after-hours (135).

- Minimize the number of entrances leading to interior corridors to keep observation task demands at a minimum.

Physical

Reference -- (159).

Strategies (continued):

Classification

- Provide secure vaults, lockable cabinets, and lockable desks for storing valuable items that can be moved. Physical
- Secure equipment that cannot be readily moved with lockable chains, floor anchorage, etc. Physical
- Provide access to locked offices from a special corridor or a secretarial pool that can be locked off to provide two "lines of defense." Physical

References -- (157, 159).

- Install folding gates at restroom entrances and arrange to have them locked during times when supervised activities are not occurring nearby. Physical

Discussion -- *Alternatives to collapsible gates include installation of swinging half-doors, removal of doors, or locking doors in an open position during the day. An anteroom provides privacy, but risk of detection serves to deter vandalism and other problems. Broward County (Florida) has used the open-door tactic, and has further enhanced the sense of safety by removing the upper portion of anteroom walls.*

Strategies (continued):

Classification

- Restrict unauthorized access to kitchen/cafeteria area.

Physical

Directives:

- Provide kitchen entrances with lockable doors of secure construction.
- Provide wire mesh for windows opening on delivery areas.
- Provide added protection for utensils and food processing equipment through highly secured storage rooms and lockable cabinets.
- Provide lockable shutters for food delivery windows.
- Provide collapsible partitions to enclose self-service and cashier counters.
- Implement good locker security.

Physical,
Management

Strategies (continued):

Classification

Directives:

- Make students aware of the need for good padlocks.
- Provide students with padlocks of good quality.
- Seal off locker areas during specified periods by closing off sections of corridors and locking dressing areas when not in authorized use.
- Implement measures to enable bicycle and motorcycle security. Physical, Management

Directives:

- Provide well-designed bicycle racks and motorcycle parking areas in convenient and highly visible locations to allow surveillance throughout the school day.
- Promote awareness of the importance of tamper-resistant chains and locks for bicycles and motorcycles.
- Fence off bicycle and motorcycle

Strategies (continued):

Classification

Directives (continued):

compounds and provide monitors
to restrict access to students
with permits during specified
periods.

4.2 Surveillance Through Physical Design

Objective -- Improve opportunities for surveillance by physical design mechanisms that serve to increase risk of detection for offenders, enable evasive actions by potential victims, and facilitate intervention by staff and students.

Strategies:

Classification

- Locate vulnerable areas near places of continuous supervised use:

Physical

Directives:

- Locate/relocate parking lots so that they are visible from supervisory staff offices.
- Locate high-risk areas where vulnerable equipment is stored near locations of staff activity to improve surveillance.
- Locate corridor locker areas near locations of student and staff

Strategies (continued):

Classification

Directives (continued):

- activity to deter forcible
break-in attempts.
- Locate/relocate bus loading
areas so that they are clearly
visible from supervisory
staff offices.
 - Locate/relocate informal
group congregation areas so
that they are visible from
supervisory staff offices.
 - Locate/relocate staff offices
near problem areas (such as
entrances to stairwells).

References -- (157, 159).

- Orient buildings and windows so
that they overlook vulnerable
areas. Physical
- Provide well-defined pedestrian
corridors that channel flows for
good natural surveillance. Physical
- Remove unnecessary visual barriers
(such as tall shrubbery) that can
interfere with natural surveillance
from supervisory locations. Physical

Discussion -- See Section 2.2.

Strategies (continued):

Classification

- Minimize building entrances and orient them to be directly accessible and clearly visible from areas of internal and external activity whenever possible. Physical
- Provide glass walls or perforated barriers (such as open metal work) to enable surveillance of inner spaces from external vantage points. Physical

Discussion -- Extensive use of glass is useful for two-way surveillance but it is vulnerable to attack and energy inefficient. Open work grilles not only are good partitions but also permit two-way observation. Where weather permits, open work decorative partitions are a good means of providing some privacy and surveillance.

- Locate/relocate parking lots for public or school vehicles to avoid having vehicles block the visibility of entries. Physical
- Avoid locating emergency exit doors where they open onto Physical

Strategies (continued):

Classification

unsupervised public areas
(e.g., the street) unless pro-
tected by an alarm system.

Discussion -- Safety considerations, including the number and location of emergency exits, have a very high priority in school design. Accepting that priority, emergency exits should open onto courts and fenced areas. This facilitates exit from the building to safety without permitting emergency exits to be used as an avenue of escape.

Alarm protected doors will alert attendants to the fact that an emergency door has been opened. It is probable that false alarms will be numerous (159).

- Install windows in classrooms and faculty/staff offices to enable observation of corridor activities from room interiors.

Physical

Discussion -- Modifications have been made in one Broward County (Florida) high school to adapt this strategy. Large windows were installed in two corridor walls, and windows in classroom doors were enlarged.

- Remove unnecessary obstacles that can obscure

Physical

Strategies (continued):

Classification

surveillance of vulnerable areas from interior locations.

Directives:

- Keep corridor turns, door recesses, and floor level changes to a minimum to avoid blind spots.
- Remove entrance doors to restrooms, and eliminate unnecessary portions of anteroom walls.
- Elevate the teachers' "stage" to provide improved surveillance of the students
- Provided living quarters for family or security person on the school grounds to provide around-the-clock surveillance opportunities (e.g., a mobile home site). Physical, Management

Discussion -- A family, or one or more guards, can be housed in a prefabricated structure or mobile home on the school grounds. Depending on the number of persons thus employed and the security needs, they could serve as night watchmen only, conduct 24-hour station patrols, be employed on a part-time basis and work elsewhere during the day, or various other arrangements.

The State of Hawaii found that partial surveillance by a resident custodian was useful in reducing theft and vandalism losses (135).

Strategies (continued):

Classification

- Improve interior and exterior lighting to increase opportunities for problem detection.
- Physical

Directives:

- Provide vandal-proof perimeter lighting along fences and walls.
- Provide vandal-proof special lighting at entry points.
- Provide vandal-proof lighting of vulnerable interior grounds areas.

Discussion -- Break-resistant lighting fixtures and sodium vapor lights provide relatively secure, even, low-glare illumination. Higher fixtures are less vulnerable than those within reach from the ground, but there should be 5 to 10 foot-candles of illumination measured at ground level. Normally, illumination is effective over an area equal to approximately twice the height of the light source.

Wall lighting must be positioned to illuminate the outer surface of the wall and the grounds in the immediate vicinity. Alcoves, recessed doorways, and similar areas need supplemental illumination.

Many jurisdictions require adequate lighting of school grounds. Particularly when used in combination with target hardening and surveillance strategies, lighting is an effective deterrent to vandalism and theft (157, 159).

Strategies (continued):

Classification

Directives (continued):

- Provide night lighting to facilitate surveillance of rooms from corridors and/or outdoor areas.

Discussion -- Interior lighting should illuminate evenly and without shadow those portions of the interior visible from doors and ground floor windows.

Interior lighting is difficult to protect from vandalism. It is hard to place it out of reach of vandals without significantly restricting illumination. Bulbs or tubes should be protected by break-resistant covers -- and, where practical, further protected by a heavy wire grille. Transparent covers permit illumination but the visible bulb is an inviting target. Translucent covers diffuse light, reduce shadows, and "hide" the light source, but they require higher power lights to achieve the same illumination.

Locate lights so that they illuminate alcoves, recessed doorways, and open-faced closets (159). For more details on lighting, see CPTED Technical Guideline 7.

Strategies (continued):

Classification

- Extend functional and temporal use of the school building (e.g., hold evening classes). Physical, Management

Discussion -- Increased use of school facilities enhances surveillance and reduces the opportunity for crime. The Los Angeles County School District found that use of schools for adult evening classes reduced vandalism to a large degree. The Archdiocese of San Francisco found a high correlation in inner-city schools between school services to the community and the absence of vandalism. It was observed that neighboring public schools were plagued by vandalism. The Philadelphia School District concluded that use of school facilities for community programs can be effective if the leadership has been able to develop a spirit of community involvement. However, in Detroit and New York City, the most heavily used schools are the most seriously vandalized (135).

- Close off blind spots or unused areas that cannot be opened up for surveillance (e.g., areas under stairs) or convert them into locked storage spaces. Physical

4.3 Mechanical Surveillance Devices

Objective -- Provide schools with security devices to detect and signal unauthorized entry attempts.

Strategies:

Classification

- Provide electronic trespass detectors and silent or deterrent types of alarm systems at gates, within grounds interiors, at doors and windows, and along roof perimeters.

Physical

Discussion -- See Section 2.3.

- Provide vandal-proof and/or concealed closed-circuit:television camera installations to scan entry areas and vulnerable locations,

Physical

Discussion -- See Section 2.3.

- Provide parabolic mirrors mounted at sufficient heights to facilitate open-area scanning.

Physical

Reference -- (159).

- Provide alarm-connected panic bars or doors on fire exits that are intended exclusively for emergency use.

Physical

4.4 Congestion Control

Objective -- Reduce or eliminate causes of congestion that contribute to student confrontations.

<u>Strategies:</u>	<u>Classification</u>
• Remove benches and other physical objects that constrain traffic flows in corridors.	Physical
• Increase the sizes of interior stairs or provide separate up and down stairs to reduce crowding and conflicts between students moving in opposite directions.	Physical
• Increase time allowances between classes to eliminate confusion that occurs when students rush from one area to another.	Management
• Revise class scheduling to create staggered lunch period shifts to reduce congestion and supervision ratios.	Management
• Control activity at bus loading zones by limiting the number of students permitted to enter the areas at a given time.	Management

Discussion -- For example, in one Florida high school a bus loading zone was created in a surveillable area and limited to a 4 or 5 bus capacity. It was located on the opposite side of the school from student parking areas, thus reducing congestion and confusion caused by the entire student body attempting to exit in one area.

4.5 Psychological Deterrents

Objective -- Provide psychological deterrents to theft and vandalism.

Strategies:

- Implement property identification program.

Classification

Physical,
Management

Directives:

- Paint equipment in bright colors.
- Engrave and/or label appropriate school property.

Discussion -- See Section 2.6.

- Provide conspicuous trespass detectors.

Physical,
Management

Directives:

- Install closed-circuit television cameras.
- Post alarm system notices.
- Use landscaping elements as a

Physical

Strategies (continued):

Classification

psychological deterrent.

Discussion -- Landscaping can help define territorial perimeters and aid in deterring trespassing. The use of plants that have prickly branches or an unpleasant smell can discourage potential offenders. Landscaping can also serve as a physical barrier if tall or wide enough. For more detailed information on the uses of landscaping in schools, see "Special CPTED Focus on Schools" in Technical Guideline 7, Planning Public Outdoor Areas.

- Set up a police substation with problem schools or in a trailer on school grounds. Law Enforcement

Discussion -- Such a trailer substation was set up on school grounds adjacent to three schools in Broward County, Florida. The trailer is clearly visible to all students as are the police inside. The trailer and continuing presence of police cars coming and going serves not only as a psychological deterrent but also as an assurance in the case of an emergency.

4.6 User Monitoring

Objective -- Implement staff and student security measures at vulnerable areas.

Strategies:

Classification

- Require restroom passes. Management

Strategies (continued):

Classification

- Provide for teachers on monitoring assignments at bus loading zones to direct the movement of buses and limit the numbers of students that can enter the areas at a given time (not to exceed a single busload).
Management
- Require bus drivers to allow students to enter or leave their buses only when in a specified loading zone.
Management
- Provide teacher monitors and/or bus drivers with radios to enable them to summon assistance if behavior at bus loading zones gets out of control.
Physical,
Management
- Provide security staff, teacher, or student monitors to watch over parking lots during scheduled periods of ingress and egress.
- Assign responsibility to security
Management

Strategies (continued):

Classification

staff or teacher/monitor to randomly tour potential problem locations.

Discussion -- *The California Association of School Business Officials reports that a junior college district used law enforcement students to patrol the campus to good advantage, favorable loss experience, and insurance rates.*

In one California jurisdiction, the security staff was on duty 24-hours-a-day, 7-days-a-week, but patrolled only when school and custodial staff were off duty. A marked improvement in loss experience was reported.

Another California jurisdiction combined dog equipped night patrols with custodians working through the night in large schools. Both techniques were effective. The use of dogs in Prince George's County (Maryland) reduced loss but had to be dropped because of cost.

A plant facilities patrol was organized in Philadelphia schools. It consists of 15 men, most with police experience. They wear uniforms but are not armed. They ride in unmarked, radio-equipped cars and conduct inspections of school grounds from 4 p.m. to 8 a.m. on weekdays and around the clock on weekends (135).

- Provide monitors with radios to summon rapid assistance. Physical, Management

Strategies (continued):

Classification

- Promote self-policing programs that reward responsible student behavior. Management
- Provide amenities (such as snack facilities and lunch hour movies), and revoke privileges if breakdown of self-control occurs. Management

4.7 Emergency Procedures

Objective -- Establish procedures to handle emergency situations in a consistent and efficient manner.

Strategies:

Classification

- Provide teachers who have large, troublesome classes with silent alarm buttons to summon rapid assistance, if required. Physical
- Provide teachers who hold classes in remote locations with two-way radios to contact administrative and security staff. Physical

Discussion -- *Intercom or walkie-talkie radio communication can be a very important aid to maintaining control in a troublesome class, if there is prompt, effective response to calls for assistance. Not only does it*

deter troublemakers, but it also reassures teachers who have been subject to abuse by students.

Walkie-talkies have been used successfully in ~~the~~ high school in Broward County (Florida), where there is a 40-acre campus. With radios and intercoms in all rooms, there is rapid communication. A teacher can report a problem over the intercom to the dispatcher, who, in turn, notifies key personnel on their walkie-talkies.

<u>Strategies (continued):</u>	<u>Classification</u>
• Ensure that all behavioral/ criminal incidents are reported and responded to in a swift and just manner to avoid recurrences.	Management
• Notify police and/or fire department of any emergency situation.	Law Enforcement

4.8 User Awareness

Objective -- Initiate programs to promote student awareness of security risks and countermeasures.

<u>Strategies:</u>	<u>Classification</u>
• Create a security awareness committee in the school.	Management
• Implement an Operation Identification program to encourage students to mark most frequently stolen items.	Management, Physical

Discussion - See Section 2.6.

Strategies (continued):

Classification

- | | |
|---|-------------------------|
| • Encourage students not to leave valuables in automobiles. | Management |
| • Promote use of automobile alarms. | Management,
Physical |

Discussion -- Automobile alarms can be installed in driver education cars for demonstration purposes.

4.9 User Motivation

Objective -- Encourage social interaction, social cohesion, and school pride by promoting extracurricular activities, providing amenities, and upgrading the visual quality of the school.

Strategies:

Classification

- | | |
|---|--------|
| • Sponsor musical and other types of events that are oriented to mixed ethnic/racial tastes and interests. | Social |
| • Emphasize the importance of non-academic activities as well as scholarly pursuits in the school curriculum and reward achievements accordingly (i.e., offer awards for art, music, and athletic accomplishments). | Social |

Strategies (continued):

Classification

- Provide transportation arrangements for bused-in students to enable them to participate in extracurricular activities that take place after school. Management
- Provide incentives for teachers that encourage them to supervise extracurricular activities. Management
- Sponsor dances, film showings, and other events during lunch periods to constructively occupy student time, encourage interaction, and discourage idleness and aimlessness that can precipitate problematic behavior. Social
- Provide functional activities (such as ticket sales and snack concessions) in unused or misused areas. Management

Discussion -- One example, implemented in Broward County (Florida), is the use of two portable booths with walls suitable for use as bulletin boards. The use of the booths increases legitimate activity and surveillance in problem areas.

Strategies (continued):

Classification

- Create attractive outdoor snack/smoking areas that are designed with small tables and benches for small (4-6) groups. Provide amenities (such as snack privileges) that will draw all segments of the student population to encourage interaction and cohesion (see Figure 4-1).

Physical,
Social

Discussion -- Unused interior courtyards or adjacent grounds areas can be transformed into miniplazas to attract and support informal social activity. Functional activities, such as the sale of snacks, provide the opportunity for added surveillance and control of the area.

- Provide portable audiovisual systems to enable various areas within the school to be used as temporary "theaters" for films, plays, and other events (see Figure 4-2).
- Make it clear that students must self-police the amenities or lose the privilege.

Physical,
Social

Management

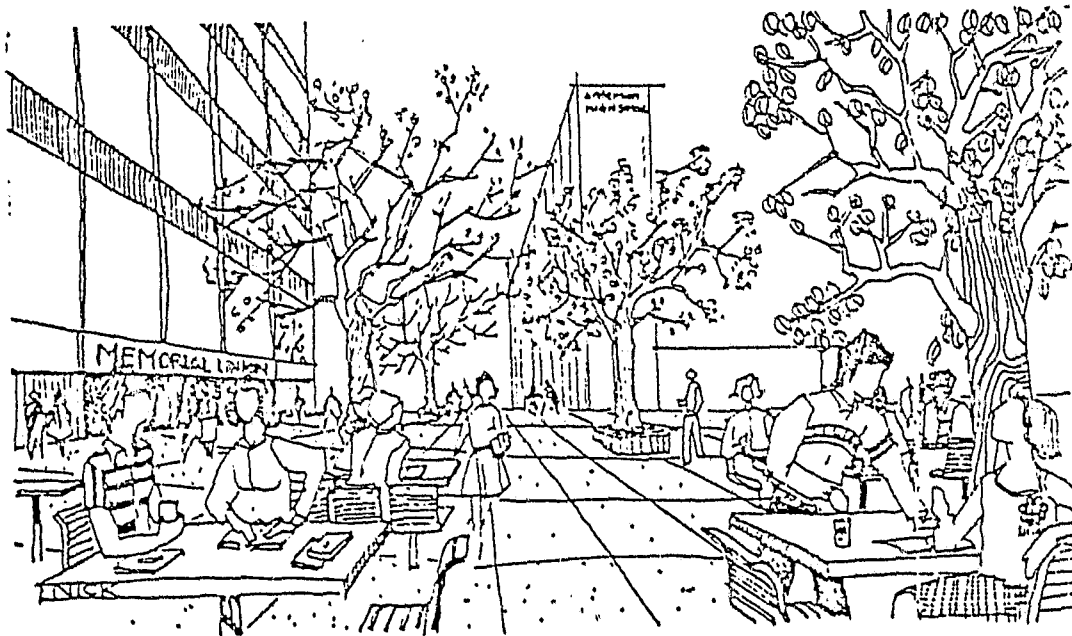


Figure 4-1. Create Attractive Outdoor
Snack/Smoking Areas

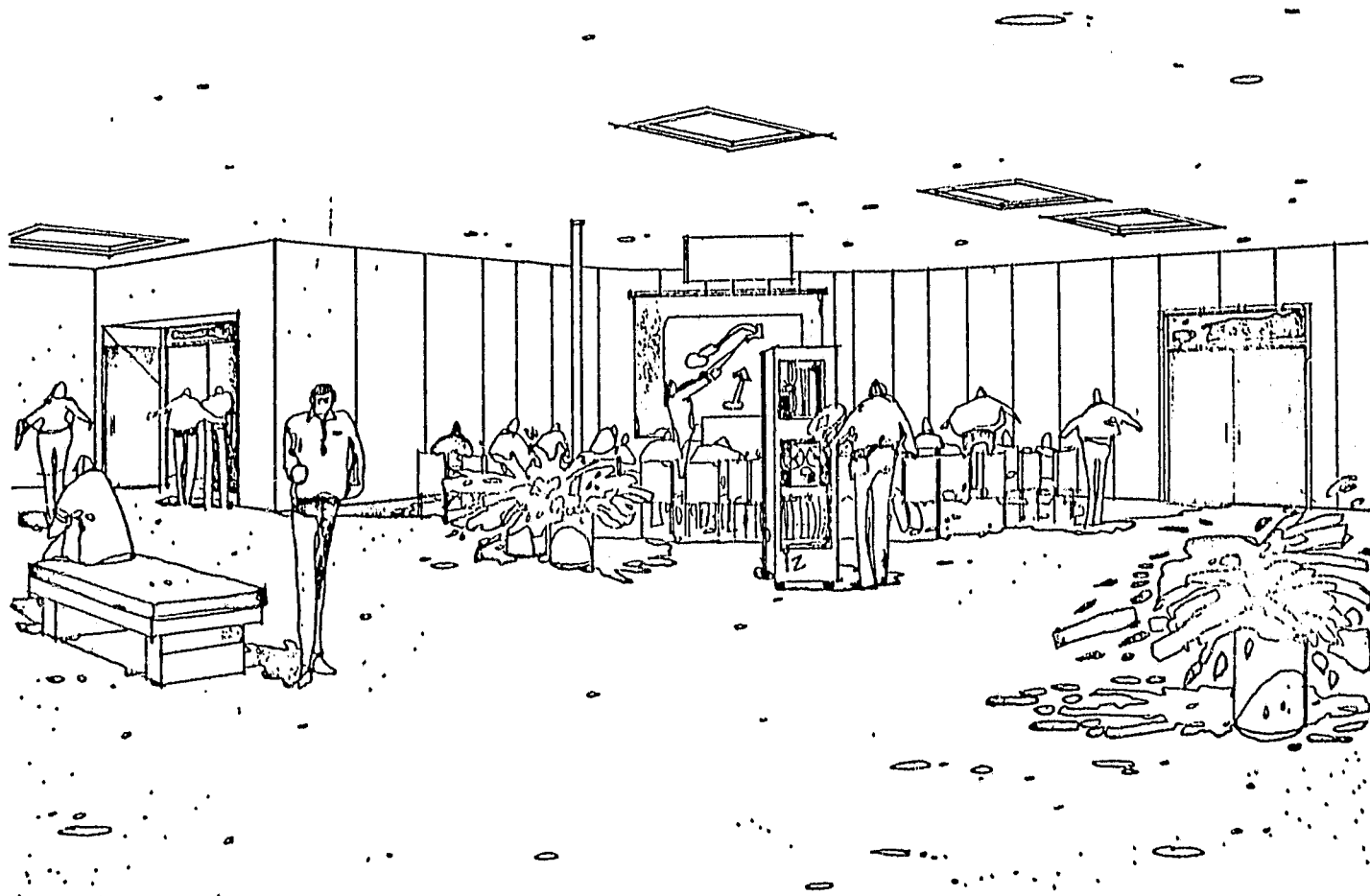
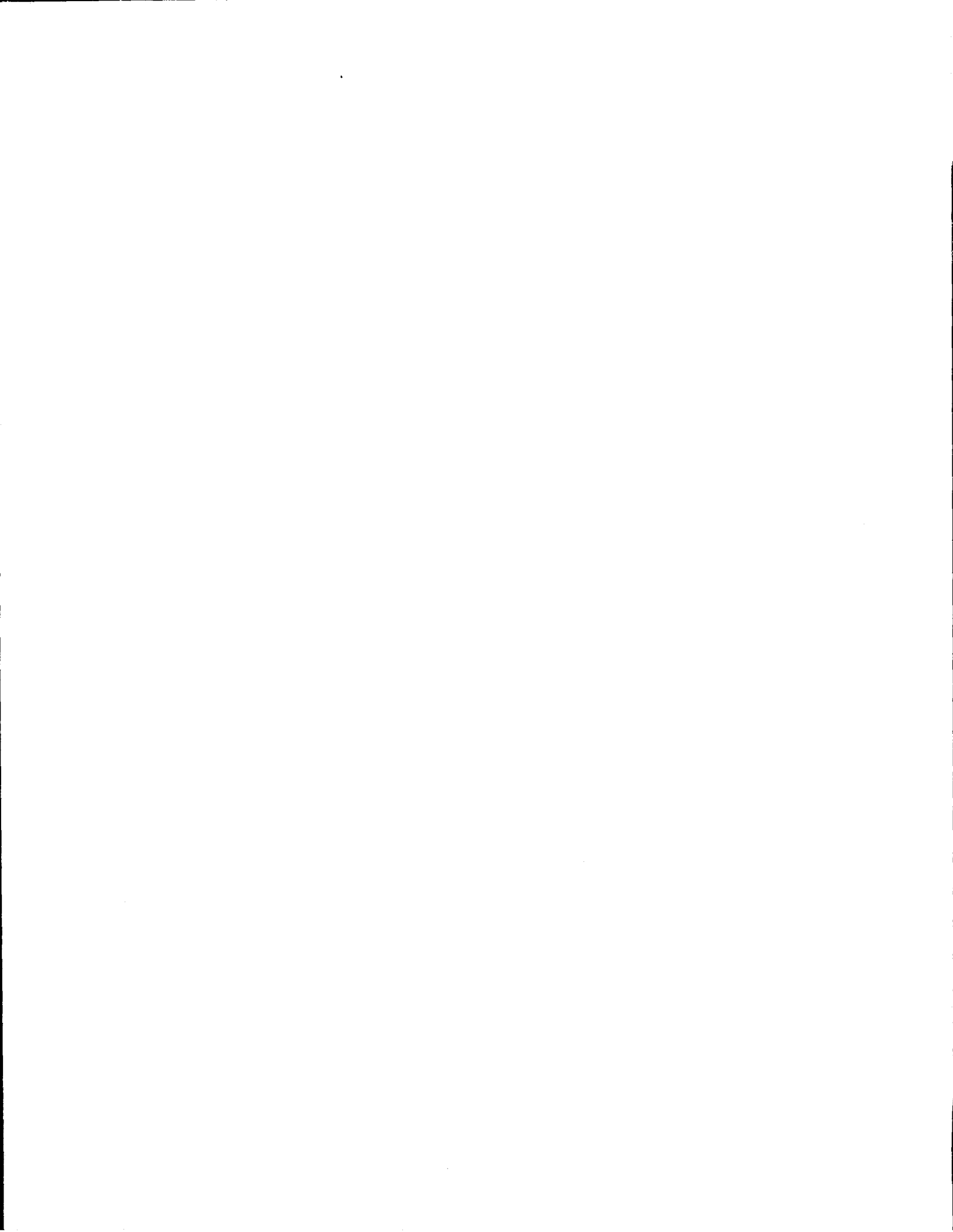


Figure 4-2. Provide Portable Audiovisual Systems for Use in Temporary Theaters



Strategies (continued):

Classification

- Provide bright, interesting, and attractive graphic treatments on the walls of circulation and large-group gathering areas to color-code and otherwise identify different functional areas and to humanize the environment (see Figure 4-3). Physical
- Provide well-designed and coordinated signs to identify major functional areas and provide visitor information. Physical
- Provide cheerful lighting in corridors to improve the visual atmosphere (and increase surveillance opportunities). Physical
- Provide attractive (but durable) outdoor landscaping, benches, trash receptacles to upgrade the appearance of the school. Physical
- To the maximum extent possible, involve students in the design and implementation of all physical improvements to promote a Management

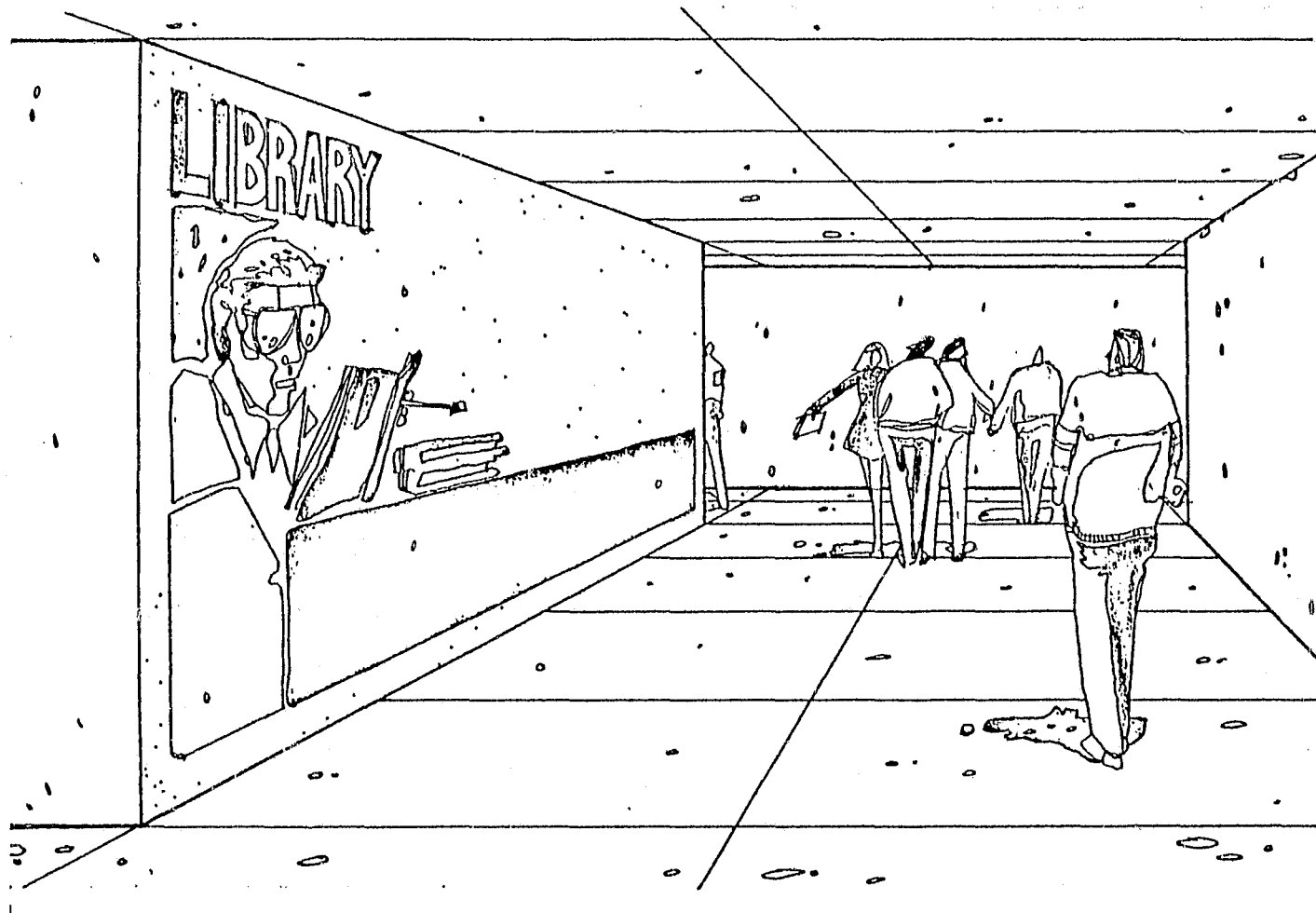
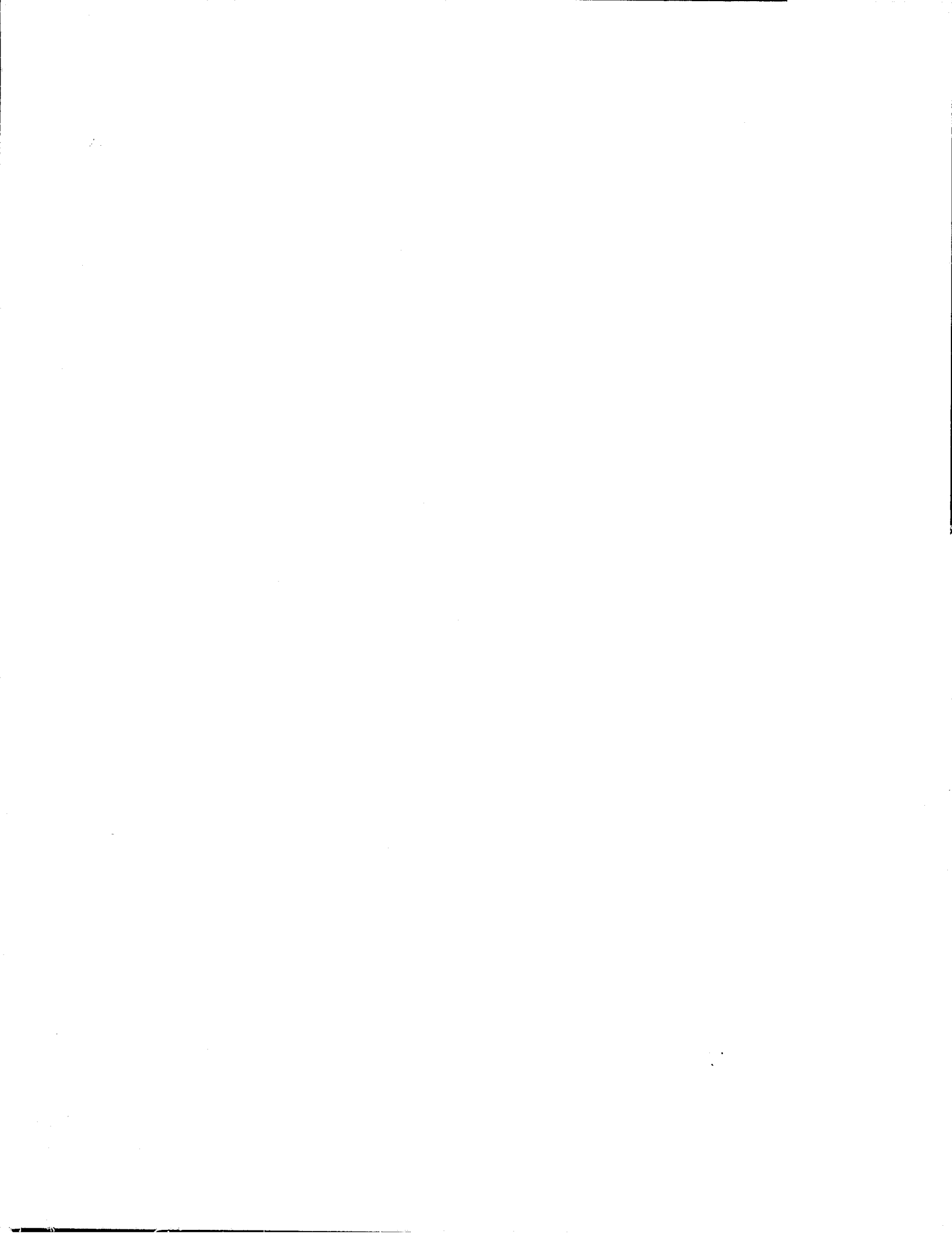


Figure 4-3. Provide Attractive Graphics on Walls to Identify Different Functional Areas



Strategies (continued):

Classification

sense of pride of achievement and identification with the school.

Discussion -- Students can be involved in many CPTED activities. For example, art classes may help in the design and actual painting of wall graphics while horticulture classes could aid in planting and landscaping of school boundaries or mini-plazas. School shop classes could also be involved in the latter project. One of the most basic involvements for students is offering their ideas on crime prevention through school security committees. Similarly, CPTED ideas can be disseminated through a student newsletter. Students can also serve as monitors in parking lots and other vulnerable areas of the school.

4.10 Territorial Identity

Objective -- Highlight the functional identities of different areas throughout the school to increase territorial identity and reduce confusion.

Strategies:

Classification

- Use color-coding, attractive thematic graphic treatments, and built-in display cases and bulletin boards.

Physical

Discussion -- Wall graphics have been used successfully in some Florida schools. In addition to identifying functional areas and thereby improving traffic flow, they appear to attract less vandalism than conventional signs.

Strategies (continued):

Classification

- Assign lockers by section separately for each class so authorized users become known to one another. Management, Physical
- Color-code locker sections uniquely for each class to reinforce recognition of bonafide users. Physical
- Upgrade landscaping to improve grounds appearance and to help define school perimeters. Physical

Reference -- "CPTED Focus on School Grounds" in Technical Guideline 7, Planning Public Outdoor Areas.

4.11 Community Involvement

Objective -- Promote public awareness and involvement with school, faculty, and student achievements and activities.

Strategies:

Classification

- Promote good relations in advance of emergency situations with the local police and fire departments. Law Enforcement
- Create active public information channels to the local news Management

Strategies (continued):

Classification

- media to ensure that constructive activities and achievements of staff and students are recognized by the community.
- Create a school newsletter that actively collects information about events and achievements and disseminates the information to parents and other interested parties. Social, Management
 - Create permanent display areas in corridors and lounges where art work, science projects, and the products of other school activities can be exhibited (see Figure 4-4). Physical
 - Create portable display systems that enable unused or under-utilized areas to be temporarily converted into exhibition areas for art contests and special events. Physical
 - Promote special events such as concerts and lectures that Social, Management

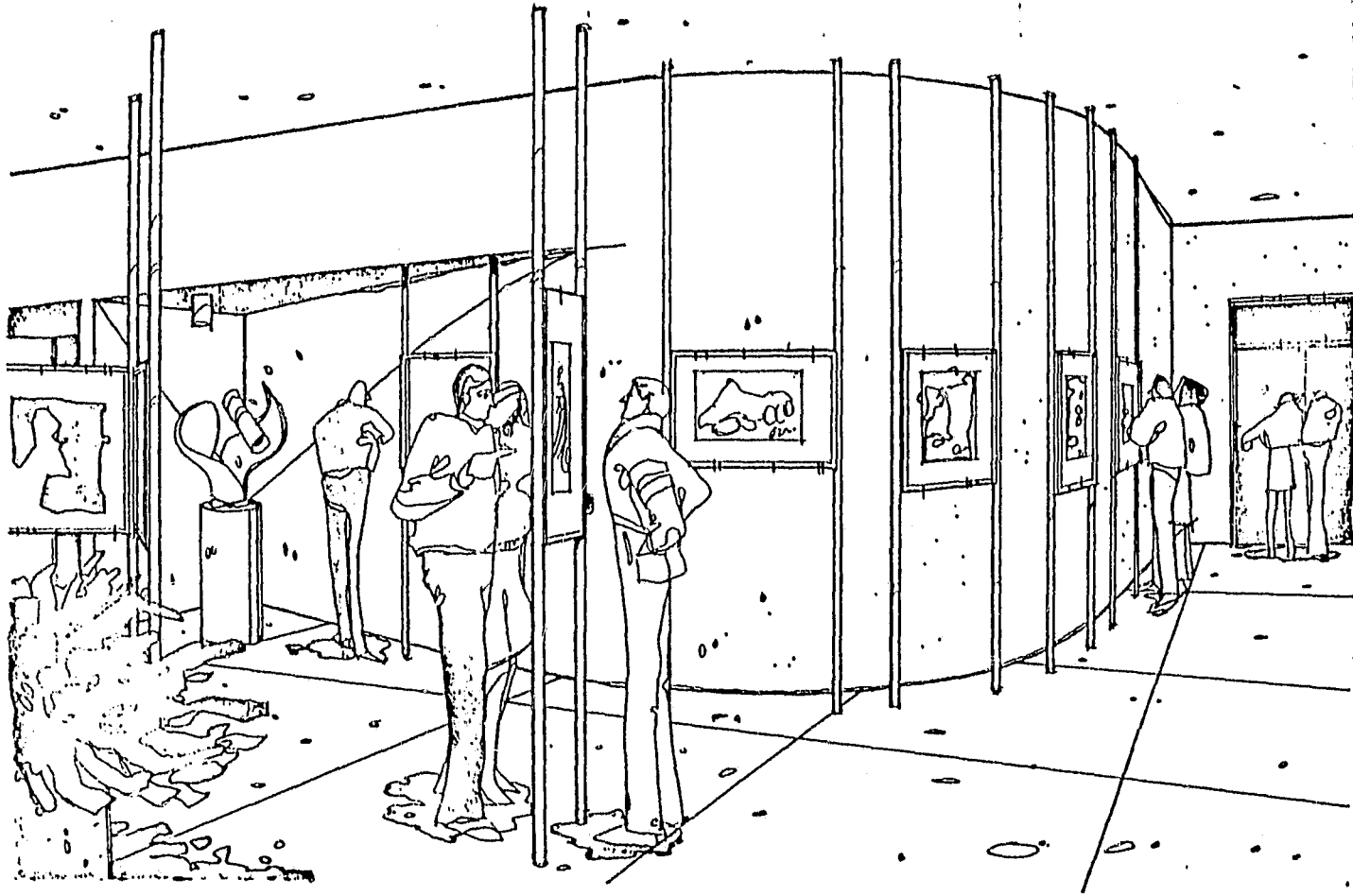


Figure 4-4. Create Permanent Display Areas.

Strategies (continued):

Classification

encourage mixing of students
with other residents of the
community in the school
setting.

- Promote student-sponsored and
-produced events that demon-
strate talents and interests of
the school body, as well as raise
funds to support student club
activities and finance equip-
ment purchases and environmental
improvements.

Social,
Management

APPENDIX A

CPTED Annotated Bibliography

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

ANNOTATED BIBLIOGRAPHY

Revised December 1977

Prepared by

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CONTINUED

2 OF 3

INTRODUCTION

The purpose of this bibliography is to provide the reader with a list of selected source materials that address the concept of Crime Prevention Through Environmental Design (CPTED). The concept has been defined as a method of reducing predatory crime and the fear of crime through the planning, design, and effective use of physical space. This approach makes it possible to create physical and social conditions that will promote citizen surveillance and the effective use of environments (such as business districts, residential neighborhoods, schools, and public spaces). This will result in the prevention of crimes of opportunity, an increased sense of social control of these environments, and support of those law enforcement activities designed to improve detection and crime reporting.

The CPTED Annotated Bibliography was developed under a program conducted by a consortium headed by Westinghouse Electric Corporation and sponsored by the National Institute of Law Enforcement and Criminal Justice, the research arm of the Law Enforcement Assistance Administration.

The bibliography was written by W. D. Wallace and Lynne Helfer Palkovitz from source materials compiled by the staff of Urban Systems Research & Engineering, Inc., and from additional research conducted by Ms. Palkovitz and R. K. Cunningham of Westinghouse. Grateful acknowledgement is given to Ms. Ruth R. McCullough, Supervisor of the Technical Information Center at the Westinghouse Defense and Electronic Systems Center, at the Westinghouse Defense and Electronic Systems

Center, Baltimore, and to Mr. Morton Goren, Librarian of the National Institute of Law Enforcement and Criminal Justice, for their technical guidance and constructive criticism in the preparation of this document.

The source materials presented here do not represent an exhaustive compilation of the literature. Rather, they have been selected from a much larger corpus that was evaluated for relevancy to practitioners in the field.

The entries are presented alphabetically by corporate author, and are further indexed by title, subject, and individual author. Notes on the availability and source of listed documents follow this Introduction.

For additional sources, particularly articles from popular magazines, we also direct the reader to a bibliography published by the U.S. Department of Housing and Urban Development: Defensible Space and Security Bibliography, Washington, DC: HUD, 1976.

DOCUMENT SOURCES

The source of a publication is indicated in the citation. However, there are three categories of publications especially designated at the lower right hand corner of the entry. Use of these designators, which generally signify ready availability, will facilitate the procurement of the cited documents.

Those entries bearing the acronym NTIS followed by a two-letter, six-digit number beginning with PB or AD can be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Be sure to include the number when ordering.

Those entries bearing the acronym ERIC followed by a two-letter, six-digit number beginning with EA can be purchased from the Educational Resources Information Center, University of Oregon, Eugene, OR 97403. Be sure to include the number when ordering.

Those entries bearing a stock number (S/N), which has been provided when known, can be purchased from the Superintendent of Documents, Government Printing Office, Washington, DC 20401. Be sure to include the stock number when ordering.

A list of selected addresses follows to aid in the procurement of cited documents.

American Society for Industrial Security, 404 NADA Building, 2000 K Street,
NW, Washington, DC 20006

The Analytic Sciences Corporation, 6 Jacob Way, Reading, MA 01867

Bureau of Social Science Research, Inc., 1990 M Street, NW, Washington,
DC 20036

California Council on Criminal Justice, 7171 Bowling Drive, Sacramento,
CA 94823

Community Research Incorporated, Room 444, 333 W. First Street, Dayton,
OH 45402

Dillingham Corporation, SUA Division, 10880 Wilshire Boulevard, Los Angeles,
CA 90024

Educational Facilities Laboratories, Inc., 447 Madison Avenue, New York,
NY 10022

GTE Sylvania Incorporated, Security Systems Department, P. O. Box 188,
Mountain View, CA 94040

Malt (Harold Lewis) Associates, Inc., 3417-1/2 M Street, NW, Washington,
DC 20007

Michigan Department of State Police, 714 S. Harrison Road, East Lansing,
MI 48823

National Education Association of the United States, 1201 Sixteenth Street,
NW, Washington, DC 20036

National School Boards Association, State National Bank Plaza, Evanston,
IL 60201

National School Public Relations Association, 1801 N. Moore Street,
Arlington, VA 22209

New York City Rand Institute, 545 Madison Avenue, New York, NY 10022

Panhandle Regional Planning Commission, P. O. Box 9257, Amarillo, TX 79105

Police Foundation, 1909 K Street, NW, Washington, DC 20036

Portland State University, Urban Studies Center, P. O. Box 751, Portland,
OR 97207

Public Systems, Inc., Sunnyvale, CA 94088

Rehabilitation Research Foundation, P. O. Box 1007, Elmore, AL 36025

Research Analysis Corporation, McLean, VA 22101

Research Triangle Institute, Research Triangle Park, NC 27709

Santa Clara Criminal Justice Pilot Program, 106 East Gish Road, San Jose,
CA 95112

Southern California Association of Governments, Suite 400, 111 West Sixth
Street, Los Angeles, CA 90017

Stanford Research Institute, Menlo Park, CA 94025

Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL
60062

Western Behavioral Sciences Institute, 1150 Silverado, La Jolla, CA
92037

1. Aerospace Corporation. Law Enforcement Development Group. The Crime of Burglary. Draft. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. El Segundo, CA: Aerospace Corporation, March 1974.

Reviews existing literature on the crime of burglary to determine the feasibility of a burglar alarm system for small businesses and residences. Included in the study are discussions of the burglary offense itself, an offender profile, a victim profile that includes residential area traits, a section on "threat" or modus operandi, and a discussion of the "defense" or strategies that can be used against those threats.

2. Alabama. University. Strategies for Delinquency Prevention in the Schools and Other Recommendations for Phase III in Criminal Justice Programs and Planning, by S. L. Brodsky and R. D. Knudten. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. University, AL: University of Alabama, 1973.

Contains a survey of local and State boards of education to determine measures being undertaken to prevent juvenile delinquency in the Nation's schools. Strategies are categorized and identified by school departments, and consist primarily of those approaches that can be implemented by existing faculty and administrative personnel, using their own professional skills.

3. American Society for Industrial Security. ASIS Foundation, Inc. Academic Guidelines for Security and Loss Prevention: Programs in Junior Colleges. Prepared in cooperation with the American Association of Junior Colleges. Washington, DC: American Society for Industrial Security, 1972.

Documents a combined effort to establish a philosophical and practical approach to the development of academic courses of study in security and loss prevention.

4. Amir, Menachem. "Forcible Rape," Federal Probation, 31(1):51-58, March 1967.

Summarizes an empirical study of 646 Philadelphia rapes, and focuses on the social characteristics and relationships of both victims and offenders, as well as on the act itself. The data are analyzed in terms of race, time, place, and circumstances of the act.

5. . Patterns in Forcible Rape. Chicago, IL: University of Chicago, 1971.

Presents a study of the social characteristics and relationships of the rape offender and victim, the modus operandi, and likely situations of rape occurrence, based on a study of existing literature as well as on statistical analysis of all cases of forcible rape reported in the Philadelphia Police Department files from 1958 to 1960. Concludes with a sociological theory of causation that proposes that rape results from a subculture of violence in which aggression is emphasized and condoned.

6. Analytic Sciences Corporation. Cooperative Police -- Community Projects for Burglary Prevention, by B. Kadets and R. Martel. Prepared for West Newton, Mass., Police Department. TIM 206-7. Reading, MA: The Analytic Sciences Corporation, October 28, 1971.

Describes several police/community relations projects and emphasizes that the public must become involved in burglary prevention programs, as the application of new police technology by itself has only marginal impact on the burglary rate. Describes a property identification project, a security inspection service for commercial establishments, and a public information service.

7. . Implementation Plan I: Random Saturation Patrol for Countering B(reaking) and E(ntering) Crimes, by B. Kadets and E. Terry. Prepared for West Newton, Mass., Police Department. TIM 206-5 Reading, MA: The Analytic Sciences Corporation, October 1, 1971.

Describes a detective saturation patrol technique for countering breaking and entering crime, using random selection of patrol areas and the principle of concentration of forces. Recommends that the patrol technique be implemented on an experimental basis for a period of one year.

8. Banham, Reyner. "Parkhill Revisited," Architecture Plus, 2(3):109-115, May/June 1974.

Asserts that it is difficult to document any statistical or causal relationship between better design and social amelioration. Directly criticizes the conclusions of Newman's Defensible Space, and offers the proposition that good management and a "caring" attitude are more important in preventing crime. Contends that defensible space modifications are ineffective unless a style of public service that promotes understanding precedes such innovations. Offers Parkhill in England as an example.

9. Bartok, Bonnie. "Vandalism Increases 47% in Scottsdale Schools," Arizona Republic, August 14, 1973.

Discusses the dollar loss of external and internal vandalism in the Scottsdale School District, comments on the success or failure of recent approaches to apprehend vandals, and comments on possible reasons for Scottsdale school vandalism.

10. Bell, L. S. and K. C. O'Kane. "Portland Curbs Crime through Urban Design." Reprinted from Planning, November 1977, for the Westinghouse National Issues Center. Chicago, IL: American Society of Planning Officials, November 1977.

This article discusses the crime prevention demonstration efforts being conducted along Portland, Oregon's, Union Avenue Corridor as part of the LEAA-funded Crime Prevention Through Environmental Design Program.

11. Blanchard, Janelle. "Proposal for a Model Residential Building Security Code," p. 1-25. In U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, Deterrance of Crime In and Around Residences. (See 188.)

Deals with the physical design elements that might be incorporated into building codes as a means of residential crime prevention. Emphasizes the need for uniform building codes to improve industrialized housing, but states that security codes must recognize differing needs.

12. Boggs, S. L. "Urban Crime Patterns," American Sociological Review, 32:899-908.

Challenges the validity of crime occurrence rates, which have traditionally represented the number of crimes in an area relative to the size of the population in that area. Shows that the use of this traditional approach produces spuriously high crime rates for central business districts, which contain small numbers of residents but large numbers of such targets as merchandise on display, people on the streets, etc.

13. Boston, Mass. Mayor's Office of Justice Administration. Crime in Boston: An Analysis of Serious Crime Patterns Within 81 Neighborhoods, by A. P. Cardarelli. Boston, MA: Mayor's Office of Justice Administration, 1971.

Examines the nature and extent of robbery, assault, burglary, and auto theft as they occur in neighborhoods in Boston, with the emphasis placed on the geographical specificity. Shows crime types and rates to be area related.

14. _____ . Mayor's Safe Streets Act Advisory Committee. Victims: A Study of Crime in a Boston Housing Project, by Deborah Blumin. Boston, MA: Mayor's Safe Streets Act Advisory Committee, 1973.

Stresses the acute need for clarification of the role of police, housing management, and tenants in control of crime. Also points out the psychological, design, and socioeconomic factors contributing to a high sense of insecurity among tenants.

15. Brenner, R. A. Security in Multi-Family Housing: Neighborhood Watch. Paper presented at the Security in Multi-Family Housing Conference in Washington, D. C., September 10-12, 1973, sponsored by the U. S. Department of Housing and Urban Development. Washington, DC: National Sheriff's Association, 1973. (Duplicated.)

Suggests that the neighborhood organize to provide home security checks, to promote the display of decals on windows or doors to alert potential thieves that the resident has a "defensible" attitude, and to publicize security and neighborhood watch techniques.

16. "Bright Answer to the Crime and Energy Question," Police Chief, 41(6): 53-55, June 1974.

Discusses four types of lighting (i.e., fluorescent, sodium vapor, mercury vapor, metal halide) in view of their ability to provide the most economical and efficient street lighting that will aid in reducing crime.

17. Brill, W. H. "Security in Public Housing: A Synergistic Approach," p. 26-43. In U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, Deterrence of Crime In and Around Residences. (See 188.)

Looks toward a mix of project security improvements, including target hardening approaches and measures to increase the social cohesion of the residents, and which together would produce a synergistic effect. Mentions the Innovative Modernization Project (IMP), in which were tested and evaluated ways to improve the quality of life in public housing.

18. Bureau of Social Science Research, Inc. A Study of the Deterrent Value of Crime Prevention Measures as Perceived by Criminal Offenders, by L. H. Goodman et al. Prepared for the Institute for Defense Analyses. BSSR:393. Washington, DC: Bureau of Social Science Research, Inc., October 21, 1966.

Addresses the question of how convicted felons perceive and respond to deterrents, especially those that are inherently part of police operations, in order to test the tenability of certain of the assumptions that underly the crime suppression strategies employed by police departments.

19. California. Council on Criminal Justice. Selected Crime Prevention Programs in California. Sacramento, CA: California Council on Criminal Justice, March 1973.

Surveys California programs for crime prevention. Includes a brief review of a program recommendation to involve law enforcement personnel in community development planning, a security recommendations and inspection program, and a similar program specifically for commercial establishments.

20. _____ Council on Criminal Justice Review. Evaluation of Crime Control Programs in California: A Review. Sacramento, CA: California Council on Criminal Justice Review, April 1973.

Provides a discussion of various crime prevention projects conducted in California (e.g., block watch, property identification).

21. _____ Department of Justice. Attorney General's Building Security Commission. Building Security Standards -- Preliminary Report to the California Legislature. Sacramento, CA: Department of Justice, January 1973.

Defines the problem of creating and maintaining physical security, and establishes a logical approach for developing building security standards. Concentrates on the physical aspects of elements in barrier systems, with emphasis on window and door elements as being the most frequently attacked.

22. _____ Office of Criminal Justice Planning. Crime-Specific Burglary Prevention Handbook, by System Development Corporation. Sacramento, CA: Office of Criminal Justice Planning, May 1974.

Presents a handbook for law enforcement personnel interested in establishing burglary abatement programs in their jurisdictions. The major approaches tested are public education, security, improved surveillance, investigation, and decreasing the receiver market. Each of these approaches is dealt with according to underlying hypotheses, objectives, procedures and techniques, and findings.

23. _____ University. Economic Crimes -- Their Generation, Deterrence, and Control: An Econometric Study of the Factors Contributing to Crime Against Property and the Factors Determining the Effectiveness of Law Enforcement Activity Directed Against Those Crimes, by H. L. Votey, Jr., and Llad Phillips. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Santa Barbara, CA: University of California, 1969.

Summarizes the findings of an analysis of national Index crimes, crime trends, and law enforcement activities toward the end of increased efficiency in allocating criminal justice resources.

NTIS(PB-194 984)

24. _____ University. Center on Administration of Criminal Justice. The Prevention and Control of Robbery, by Floyd Feeney and Adrienne Weir (eds). 5 v + Summary. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, and the Ford Foundation. Davis, CA: University of California, 1973-1974.

Vol. I, The Robbery Setting, the Actors and Some Issues, by Floyd Feeney and Adrienne Weir (eds).

Vol. III, The Geography of Robbery, by Susan Wilcox.

Vol. IV, The Response of the Police and Other Agencies to Robbery, by Floyd Feeney and Adrienne Weir (eds).

Documents a study of the nature and patterns of robbery in Oakland, California. Finds that the picture of robbery differs significantly from what is generally assumed, as shown by the location and time of robberies. For example, the crime rate variance within the city is particularly great. In a 3-year period in which the robbery rate in Oakland was one of the highest in the Nation, two-thirds of the half-block-sized areas in the city had no robberies or pursesnatches at all. Thus, for most areas, robbery was a very rare event.

25. _____ University. Space Sciences Laboratory and Center for Planning and Development Research. Discouraging Crime Through City Planning, by Shlomo Angel. Prepared for the National Aeronautics and Space Administration. Working Paper No. 75. Berkeley, CA: University of California, February 1968.

Evaluates the relationship between the physical characteristics of Oakland and its crime experience, and considers crimes of violence taking place in, or visible from, public areas and involving a stranger-to-stranger relationship. Hypothesizes that areas become unsafe when the number of people on the scene is sufficient to constitute a deterrent in the form of potential witnesses.

26. Caporale, Rocco. Toward the Formulation of Crime Indicators: Robberies in Los Angeles County. Paper presented at the Annual Meeting of the American Sociological Association in New York, August 28, 1973. Jamaica, NY: St. John's University, 1973. (Duplicated.)

Questions the utility of uniform crime rates and follows with an exploratory study of comparative incidence of robberies in the differential susceptibility to high or low rates of robberies in these communities. Study findings indicate that crime-specific and comparatively originated indices are more meaningful than indicators derived through aggregation of statistics and geographical sites.

27. Cedar Rapids, Iowa. Police Department. Evaluation of the Effect of a Large Scale Burglar Alarm System. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration National Institute of Law Enforcement and Criminal Justice. Cedar Rapids, IA: Cedar Rapids Police Department, (n.d.).

Evaluates the use of burglar alarm systems in 350 Cedar Rapids, Iowa, businesses for cost, maintenance, and effectiveness. Formulates alarm specifications, company bidding, and selection of installation locations. Includes an itemized list of project expenditures, a form for burglary analysis, and the proposal for installation of the Police Alarm Notification System.

NTIS(PB-22 936)

28. . Police Department. Installation, Test, and Evaluation of a Large-Scale Burglar Alarm System for a Municipal Police Department -- Second Phase Completion Report. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Cedar Rapids, IA: Cedar Rapids Police Department, December 1971.

Describes the effectiveness of a simple and inexpensive central station burglar alarm system installed under police supervision in 350 businesses in Cedar Rapids. Interim results from the program indicate that the alarms are effective in improving police arrest and clearance figures, but not necessarily effective in deterring burglars.

29. Center for Residential Security Design. Design Directives for Achieving Defensible Space, by Oscar Newman. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. New York, NY: Center for Residential Security Design, June 1973.

This is a handbook for housing officials, architects, and urban planners. Gives instructions for providing residential security through employment of hardware and security personnel, and is directed toward the initial design and programming of new residential developments. Discusses building codes and the problems the present code structure creates in providing security.

30. Chappell, D., et al. "Explorations in Deterrence and Criminal Justice," Criminal Law Bulletin, 8(6):514-538, July/August 1972.

Points out gaps in existent information on deterrence and proposes research to fill these gaps. Identifies as a major issue the lack of research on the crime of burglary and the methods for its prevention.

31. Chicago, Illinois. Mayor's Committee for Economic and Cultural Development. Fifty-first and State: A Pilot Security Plan for Inner City Commercial Centers. Prepared for the Illinois Law Enforcement Commission. Chicago, IL: Mayor's Committee for Economic and Cultural Development, (n.d.).

This report discusses the appropriate methods of designing and constructing inner-city shopping and medical centers, and office complexes to enhance security.

32. Cizanckas, V. I. "Prescription for Vandalism: Junior Housing Inspectors," Nation's Cities, 12(3):16-18, March 1974.

Describes the mechanics of a successful community program. Faced with serious vandalism to Federally repossessed homes in one section of Menlo Park and adjacent East Palo Alto, the Menlo Park Police Department's Community Relations Department instituted a program that the author credits with generating new community pride and stopping 90 percent of the vandalism.

33. Cleveland, Ohio. Impact Cities Program. Public Information Project. Deterrence, Detection and Apprehension Operating Program: Evaluation Report. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration. Cleveland, OH: Cleveland Impact Cities Program, August 1974.

Presents an analysis of project performance toward increasing citizens' awareness about the program and cooperation with criminal justice agencies and crime reduction programs; increasing the number of potential and past offenders seeking community assistance; and increasing the employment of ex-offenders through the use of mass media publicity, crime prevention workshops, and public presentations. Contains a sample newsletter, a sample public relations poster, and public information project workshop scripts on burglary and assault prevention.

34. Cole, R. B. Protect Your Property: The Applications of Burglar Alarm Hardware. Springfield, IL: Charles C. Thomas, 1971.

Describes, evaluates, and discusses various types of alarm systems, including methods of application, advantages, disadvantages, and cost estimates of each device. In addition, provides broad guidelines to alert the user to improper installation and service.

35. College of St. Thomas. Property Crime as an Economic Phenomenon, by D. L. Sjoquist. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. St. Paul, MN: College of St. Thomas, December 1970.

Applies the Von Newman-Morganstern risk/maximum utility hypothesis to common property crimes. Finds that the amount of such crimes is inversely related to the probability of arrest, conviction, and punishment, and to the gain obtainable from legal activity.

NTIS(PB-203 144)

36. Community Research Incorporated. Crime and Community: Crime Prevention Policies, by J. B. Cordrey. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Dayton, OH: Community Research Incorporated, January 1973.

Applies multiple regression techniques to data obtained from the 1970 census for Dayton, Ohio, and from Dayton Police Department records in order to correlate rates of assault, robbery, burglary, larceny, and auto theft with income, homeownership, and racial composition. Concludes that the number of crimes in each of these categories can be reduced by increasing the number of home owners, increasing the general income level, reducing the number of persons below the poverty level, and increasing the effectiveness of drug programs.

NTIS(PB-223 450)

37. Utilization of Statistical Techniques in Criminal Justice Decision Making, by J. B. Cordrey. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Dayton, OH: Community Research Incorporated, January 1973.

Describes for criminal justice planners with little or no experience in quantitative analysis how statistical techniques and the use of computers can aid in such tasks as measuring the incidence of specific crimes, testing certain hypothesis, and deciding upon the allocation of available resources. Provides a basic introduction to the applications of statistical techniques.

NTIS(PB-223 446)

38. Conklin, J. E. Impact of Crime. New York, NY: Macmillan, 1975.

Discusses the types of social conditions and public attitudes that can affect the commission of crime.

39. _____ . Robbery and the Criminal Justice System. Philadelphia, PA: Lippincott, 1972.

Examines the careers of robbery offenders, including their decision to rob, their arrests, and their convictions. Brings into focus both the robbery offender and the criminal justice system, and finds increasing crime rates influenced by increasing opportunity for gain.

40. _____ and E. Bittner. "Burglary in a Suburb," Criminology, II(2):206-232, August 1973.

Presents a study of all commercial and residential burglary data contained in the police department records of a suburb of approximately 100,000. Provides statistics and supportive analysis on crime rates, types of burglaries, crime correlates (time, amount of loss), reporting practices, and clearance rates. Examines the use of alarm systems as a preventive measure; they are considered to be of limited effectiveness.

41. Cooper, Clare. "St. Francis Square: Attitudes of Its Residents," AIA Journal, 56(6):22-27, December 1971.

Treats the effect of environmental design on attitudes of residents of a city housing project, and provides an example of the apparently successful incorporation of "territorial" design principles in housing projects.

42. Delaware. Agency to Reduce Crime. Wilmington Crime Specific Program: A Project Evaluation, by T. R. DeCampli. Wilmington, DE: Delaware Agency to Reduce Crime, 1975.

Assesses the impact of coordinated projects aimed at reducing robbery and burglary in selected high-crime target areas. Individual program components include the home project, Mr. Victim, education of the storekeeper, commercial alarm system, identification engraving, high-visibility patrol, and neighborhood watch.

43. Denver, Colorado. Anti-Crime Council. Operation Identification, by John Carr. Denver High Impact Anti-Crime Program Interim Evaluation Report. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration. Denver, CO: Denver Anti-Crime Council, August 29, 1974.

Discusses the impact of the Operation Identification project as implemented in Denver, Colorado.

44. "Dictionary of Anti-Intrusion Devices for Architects and Builders: Basic Information for the Security Layman in Easy-to-Use Format," Security World, 10(10):30-33,35, November 1973.

Provides information on the principles, operation, and uses of the major types of intrusion or hazard detection devices (e.g., photoelectric beam, microwave, compression sensors). Also included are questions and answers pertaining to security devices and systems.

45. Dillingham Corporation. SUA Division. A Study of Crime Prevention Through Physical Planning. Prepared for Southern California Association of Governments. Los Angeles, CA: Dillingham Corporation, September 17, 1971.

Provides information on existing or proposed techniques for achieving security in future residential, commercial, industrial, institutional, and recreational developments through the manipulation of the physical characteristics of these developments. Focuses on the planning of future developments, and urges that similar efforts be directed toward modification of existing structures.

46. Educational Facilities Laboratories, Inc. Designing Schools to Minimize Damage from Vandalism and Normal Rough Play. Schoolhouse Newsletter No. 15. New York, NY: Educational Facilities Laboratories, Inc., 1974.

Based upon a study conducted by Professor John Zeisel, Graduate School of Design, Harvard University, briefly describes four categories of vandalism and suggests possible design responses to minimize the burden of cost resulting from vandalistic activities.

47. Educational Resources Information Center. ERIC Clearinghouse on Educational Management. School Security, by Nan Coppock. Educational Management Review Series No. 23. Eugene, OR: University of Oregon, October 1973.

Explores briefly the general dimension of crime in public schools, inventories the types of antivandalism techniques in current use, and cites data on the incidence of crimes against persons occurring in schools.

ERIC(EA 005 372)

48. Fabbri, John. "Crime Prevention -- Before or After the Fact," FBI Law Enforcement Bulletin, 42(1):20-24, January 1973.

Posits an obligation on the part of the police to participate in the decisionmaking processes of government and private business, of industrial and community planners.

49. Festinger, Leon, et al. Social Pressures in Informal Groups: A Study of Human Factors in Housing. Stanford, CA: Stanford University Press, 1967.

Finds the development of friendships and formation of social groups are facilitated by the functional proximity of individual members. Furthermore, the groups thus formed have the power to impose conforming behavior on members.

50. Fortune, Thomas. "Schools Equipped With 'Ears' to Fight Vandalism," Los Angeles Times, September 5, 1973.

Describes a sound monitoring intrusion alarm system being installed in the Placentin, Orange, and Santa Ana unified school districts to prevent vandalism and burglary. The commercially available system utilizes a public address speaker that is set to trip a light at police headquarters when noise exceeds a predetermined level, allowing the dispatcher to listen in on whatever triggered the alarm.

51. Gardiner, R. A. "Crime and the Neighborhood Environment," HUD Challenge, 8(2):9-13, February 1976.

Outlines the recent research findings on the relationship of environmental design and urban crime, and notes that the neighborhood designs that promote feelings of community territoriality are most safe.

52. Gastor, C. E. "Break-Ins are Reduced by Plainfield's Burglary Prevention Code," New Jersey Municipalities, 52(6):6-7, 27-30, June 1975.

Discusses the impact of Plainfield, New Jersey's, municipal code that requires security hardware (excluding electronic alarms) to be used on all openings in commercial establishments, garden apartments, and townhouses. The text of the ordinance is reproduced in the article.

53. Grealy, J. I. "Safety and Security in the School Environment," Security World, 11(2):1-2, February 1974.

Provides historical background information on the founding of the National Association of School Security Directors, and presents guidelines to school administrators who are considering setting up a school security component.

54. Greenbank, A. Survival in the City. New York, NY: Harper and Row, 1974.

This is a "do's and don't's" manual for protecting oneself from being a victim of crime in an urban environment.

55. Grenough, J. L. "Crime Prevention: A New Approach -- Environmental Psychology and Criminal Behavior," Journal of Police Science and Administration, 2(3):339-343, September 1974.

Discusses the theory, implications, and applications of crime reduction through the design of environments and their affect on human behavior. The means by which environment may affect human behavior are discussed and examples of employing these design factors to reduce crime are provided.

56. GTE Sylvania Incorporated. Security Systems Department. An Evaluation of Small Business and Residential Alarm Systems, by T. P. Chleboun and K. M. Duvall. 2v. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration. M-1442. Mountain View, CA: GTE Sylvania Incorporated, June 1972.

Presents a comprehensive discussion of the role of various alarm systems, including information about offenders and an analysis of the crime risk characteristics of various categories of alarm users. Evaluates alarm systems in terms of "threat probability," and presents a shopping list of applicable equipment. Provides offender and victim profiles, correlated with variations on a particular crime deterrent (alarm system).

NTIS(PB-219 795 [v 1])
(PB-219 796 [v 2])

57. Gulinello, Leo. Security -- The City and the Housing Authority. Paper presented at the Department of Housing and Urban Development Conference on Security in Multi-Family Housing, Washington, D. C., September 10-12, 1972. Boston, MA: Boston Housing Authority, (n.d.). (Duplicated.)

Describes the difficulties local housing authorities have in providing adequate security manpower to public housing projects. The author believes this difficulty stems from the fact that the State statutes that govern most housing authorities create a political limbo for the authorities, since they are not clearly definable as either State agencies or city agencies.

58. Harries, K. D. The Geography of Crime and Justice. McGraw-Hill Problems Series in Geography. New York, NY: McGraw-Hill, 1974.

In this text, a geographer applies the perspectives of his discipline to the problems of crime and justice. The work is directed towards crime of the FBI Uniform Crime Reports Index type.

59. Hart, G. T. "Home Alert: Crime Prevention Through Police-Citizen Cooperation," Crime Prevention Review, 1(4):18-24, July 1974.

Describes the development, background, and programs of the Oakland, California, Police-Community Cooperation Project, which sought to reduce crime through increased citizen awareness and crime prevention efforts. This Project was based largely on the concepts of two earlier crime prevention programs: Operation Crime Stop, involving extensive police/public education efforts on the nature of crime and crime prevention techniques; and Home Alert, involving the formulation of neighborhood groups to observe and protect the community.

60. Harvard University. Joint Center for Urban Studies. Community Police Patrols: An Exploratory Inquiry, by G. T. Marx and D. Archer. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration. Cambridge, MA: Harvard University, 1972.

Discusses public attitudes toward police patrols and the social characteristics of persons who are opposed or indifferent to patrols. Among the areas considered are when and how communities mobilize around issues of crime and law enforcement; how people determine when law enforcement action is needed; how and where community patrols emerge; how police view community patrol efforts; and the social, political, and economic barriers to community mobilization.

NTIS(PB-220 332)

61. Hawaii. University. Offenses and Environments: Analysis of Crime in the City and County of Honolulu. Honolulu, HI: University of Hawaii, 1974.

This study examines the possible relationships between specific crimes and the environment in which they occur.

62. Healy, R. J. Design for Security. New York, NY: Wiley, 1968.

Analyzes the optimum security layout for industrial facilities, starting with the premise that security can, at best, provide only physical controls that act as "impediments to the undetermined." In the context of this book, security is intended not only as protection against common-law crimes such as theft but also against industrial espionage and sabotage.

63. Hemphill, C. F., Jr. Security for Business and Industry. Homewood, IL: Dow Jones-Irwin, 1971.

Emphasizes minimizing business losses due to theft, vandalism, fire, etc., through managerial techniques and adequate hardware.

64. Henke, S., and S. Mann. Alternative to Fear: A Citizen's Manual for Crime Prevention through Neighborhood Involvement. Walnut Creek, CA: Lex-Cal-Tex Press, 1975.

Explains the concepts that provide the framework and context for community crime prevention programs and provides guidelines for their planning and implementation. Also provides job descriptions for neighborhood committee staff positions, sample forms, and guidance on neighborhood data collection.

65. Holcomb, R. L. Protection Against Burglary. Iowa City, IA: State University of Iowa Institute of Public Affairs, 1973.

Describes to potential victims the things they can do to thwart burglars and to reduce their losses in the event of burglary. Concludes with surveys for use in commercial buildings and residences.

66. Hughes, M. M. (ed.). Successful Retail Security: An Anthology. Los Angeles, CA: Security World Publishing, 1973.

Presents articles (reprinted from the professional security magazine, Security World) on methods and programs that retailers have used to counter a broad range of crimes and other hazards.

67. Illinois. University at Chicago Circle. An Evaluation of Operation Identification as Implemented in Illinois, by H. W. Mattick et al. Prepared for the Illinois Law Enforcement Commission. Chicago, IL: University of Illinois, September 1974.

Discusses the impact of Operation Identification projects in the State of Illinois.

68. Inciardi, J. A. "Visibility, Societal Reaction, and Animal Behavior," Criminology, 10(2):217-233, August 1972.

Presents an explanation of why some forms of deviant and criminal behavior have been able to persist in spite of social coercion and control, and others have not. Professional theft is selected as an example and basis of comparison with other forms of deviant behavior, since it represents a complex of activities that historically have elicited a low societal response. "Visibility" in this context refers to social awareness or concern, not physical visibility.

69. Institute of Traffic Engineering. "Pedestrian Overcrossings -- Criteria and Priorities," Traffic Engineering, 43(1):34-39.

Presents approaches to designing pedestrian overpasses, and describes and evaluates possible criteria for such structures. Stresses that underpasses are more subject to crime and vandalism than overpasses.

70. Jacobs, Jane. The Death and Life of Great American Cities. New York, NY: Vintage Books, 1961.

Attacks the current city planning procedure of functional separation of types of land use. Maintains that, in designing new urban environments, planners ignore the most basic structure of the city -- the intricate and closely connected diversity of uses that constantly reinforce one another economically and socially.

71. Jeffery, C. R. Crime Prevention Through Environmental Design. Beverly Hills, CA: Sage Publications, 1971.

Surveys the history of western thought over the past several centuries toward the end of providing a state-of-the-art summary of crime control theories and a foundation for innovation in the area of crime prevention. Summarizes developments in such areas as sociology, psychology, criminal justice, and urban planning since these developments may influence the design of more effective strategies against crime.

72. Johnstone, T. H. "Elements of Enclosed Controlled Passage Systems," National Locksmith, 42(1):9-12, January 1971.

Provides technical considerations to be observed when designing lock systems.

73. Kentucky. University. College of Engineering. Office of Research and Engineering Services. Proceedings of the 1973 Carnahan Conference on Electronic Crime Countermeasures, Lexington, Kentucky, May 1-3, 1972. Compiled by J. S. Jackson and R. W. DeVore. Prepared in cooperation with the Institute of Electrical and Electronics Engineers. Lexington, KY: University of Kentucky, 1973.

Presents a compendium of papers on the design and applications of various electronic surveillance, alarm, and information processing systems.

NTIS(PB-220 223)

74. Kingsbury, A. A. Introduction to Security and Crime Prevention Surveys. Springfield, IL: Charles C. Thomas, 1973.

Provides a reference text for police officers, professional security consultants, and college level students of security. Offers step-by-step guidelines for conducting on-site examination and analysis of premises to identify physical opportunities for crime and to develop methods for reducing such opportunities.

75. Kobetz, R. W. "Juvenile Vandalism -- The Billion Dollar Prank," Police Chief, 50(6):32-34-35, June 1973.

Describes police/community relations programs to control vandalism, and discusses programs that have been successfully implemented.

76. Lewis, C. A. "People and Plants Interact to their Mutual Benefit," Journal of Housing, 31(4):171-173, April 1974.

Discusses a gardening program instituted in New York City housing projects as a countermeasure against project-oriented crime.

77. Liechenstein, Michael. Designing for Security. Paper presented at the American Institute of Aeronautics and Astronautics Urban Technology Conference, New York, NY, May 24-26, 1971. P-4633. New York NY: The Rand Corporation, (n.d.).

Suggests the need for cooperation among architects, security experts, social psychologists, and government agencies during the planning phases of new buildings. Critical to crime prevention is the demarcation, arrangement, and hierarchy of public and private areas at the building's conception. The high post-construction costs of implementing security measures are stressed, as is the benefit of multifunctional integrated design units providing fire, burglary, robbery, and utility protection.

78. Lipman, Ira A. How to Protect Yourself from Crime: Everything You Need to Know to Guard Yourself, Your Family, Your Home, Your Possessions and Your Business. New York, NY: Atheneum SMI, 1975.

Contains guidelines and checklists for home, business, and personal security.

79. "Lock Security." Santa Cruz, CA: Davis Publications, 250 Potrero Street, Santa Cruz, California 95060

Pamphlet describes the operating principles of various key and combination locking devices, and explains the effectiveness and manner in which each can be manipulated or neutralized.

80. Los Angeles County, Calif. Sheriff's Department. Project Sky Knight: A Demonstration in Aerial Surveillance and Crime Control. Report of the Institute for Police Studies, Department of Criminology, California State College (Long Beach), by C. R. Guthrie. Prepared for U. S. Department of Justice, Office of Law Enforcement Assistance. Los Angeles, CA: Los Angeles County Sheriff's Department, May 1968.

Describes a demonstration project utilizing helicopters for routine around-the-clock police patrol in an effort to provide data on the techniques and capabilities of aerial surveillance. This type of surveillance is chiefly valuable because it does not involve any appreciable increase in manpower. It produces a greater feeling of citizen security and increasing satisfaction with police services, as well as serving to deter crime and speed the apprehension of suspects.

NTIS(PB-221 854)

81. Loth, David. Crime in the Suburbs: An In-Depth Study of Why Affluent Teenagers and Adults Turn to Crime. New York, NY: Tower Publications, 1970.

Examines crime indigenous to the suburban life, which the author considers conducive to materialism, defiance, and boredom. Scrutinizes youth crimes (vandalism, auto theft, burglary, and shoplifting) in light of specifically suburban problems. Recommends coordination of and communication between schools and police departments, together with greater community organization and action.

82. Louisville and Jefferson County Crime Commission and Louisville Regional Crime Council. Burglary -- Louisville Region. Louisville, KY: Louisville and Jefferson County Crime Commission and Louisville Regional Crime Council, July 24, 1972.

Uses police records to evaluate offense and offender rates within various census tracts/subareas in the Louisville region. Finds a correlation between offender rates and low-income racially mixed populations.

83. "Louisville Makes Own Alarms," Security Systems Digest, 4(12):1-2, June 6, 1973.

Highlights the use of a home-made device that reduced vandalism in schools.

84. Lower Roxbury Community Corporation. A Safe Place to Live: Security in Multi-Family Housing. Prepared for Boston, Mass. Mayor's Safe Street Act Advisory Committee. Roxbury, MA: Lower Roxbury Community Corporation, (n.d.).

Focuses on the concept of residential security -- both actual and perceived -- and identifies the three areas contributing to security as relationship to neighborhood, physical characteristics of the housing development, and management.

85. Luedtke (Gerald) and Associates. Crime and the Physical City, by Gerald Luedtke et al. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Detroit, MI: Gerald Luedtke and Associates, 1970.

Analyzes the importance of selected physical features to the crimes of robbery and burglary, including the conditions and maintenance of buildings, streets and alleys, lighting, mixtures of land use, rates of pedestrian flow, landscaping, visibility of entrance and exit points. The data base used is an inventory of physical features in 289 structures in which crimes have been recorded by the Detroit Police Department.

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86. Madison, Arnold. Vandalism: The Not So Senseless Crime. New York, NY: Seabury, 1970.

On the basis of his belief that acts of vandalism are voluntary and expressive, the author probes for the causes of what he classifies as "erosive," "fun," and "angry" types of vandalism to suggest fruitful ways of dealing with them. Cites the de-personalization of present urban/suburban environments as a root cause of "erosive" vandalism. Suggests measures to encourage a sense of community and personal responsibility programs, including the need for involving the young in neighborhood patrol, school, or community "commission"-type programs.

87. Malt, H. L. Furnishing the City. New York, NY: McGraw Hill, 1970.

Discusses and illustrates how cities could be made more functional and aesthetically pleasing through the imaginative design of street accessories (e.g., traffic signs, paving, trash receptacles, light fixtures). Discusses the establishment of an emergency-reporting telephone system and community emergency communications center.

88. Malt (Harold Lewis) Associates, Inc. Operation STREETScape: A Demonstration Furnishing the City Street. Prepared for the City of Cincinnati, Ohio, Department of Urban Development. Washington, DC: Harold Lewis Malt Associates, Inc. 1973.

Reports on the development of an integrated system of "street furniture" (ranging from trash receptacles to street lighting). States that the project has proved that streets can be more habitable and safe through a unified street furniture system which also gives greater visual satisfaction and contributes to a sense of community identity. Also discusses postinstallation evaluation.

89. _____ . Tactical Analysis of Street Crimes, by H. L. Malt et al. Prepared for City of Jacksonville, Fla., Office of the Sheriff. Washington, DC: Harold Lewis Malt Associates, Inc., 1973.

Examines the relationship between the physical street environment and street crime, specifically whether certain environmental indicators (e.g., bushes, abandoned buildings) affect the location and incidence of street crime; whether users, offenders and policemen are aware of this effect; and whether their behavior is influenced by their perception of the environmental indicators.

90. Mandelbaum, A.J. Fundamentals of Protective Systems: Planning/Evaluation/Selection. Springfield, IL: Charles C. Thomas, 1973.

Provides a basic survey and comparative evaluation of the protective systems currently available to both business establishments and private systems. Emphasizes security devices as opposed to design factors.

91. Mandell, Mel. Being Safe: The Complete Guide to Protecting Your Person and Your Property -- What to Do, What to Buy, and What to Do with It. New York, NY: Saturday Review Press, 1972.

Describes various deterrents to crimes against property (e.g., devices for doors and windows, lighting, dogs, and electronic security systems) to private homes, apartments, automobiles, and businesses. Also contains recommendations on how to buy security products and services.

92. Marx, G.T., and Dane Archer. "Citizen Involvement in the Law Enforcement Process: The Case of Community Police Patrols," American Behavioral Scientist, 15(1):52-72, September/October 1971.

Explores questions and issues arising from the recent emergence

of self-defense, vigilante, security patrol, community patrol, and other such citizen groups. On the basis of available descriptive data on 28 self-defense groups, the authors formulate a typology of groups (supplemental or adversarial to the policy, encouraged or opposed by the police) and discuss problems with which each type of group must deal.

93. Massachusetts Institute of Technology. Urban Systems Laboratory. The Dial-A-Ride Transportation System. 10 v. Prepared for U.S. Department of Transportation, Urban Mass Transportation Administration. Cambridge, MA: Massachusetts Institute of Technology March 1971.

Summary Report. USL-TR-70-10.

Economic Considerations for Dial-A-Ride. USL-TR-70-11.

Vehicle Communications for Dial-A-Ride. USL-TR-70-15.

Site Selection for a Dial-A-Ride Demonstration, by Alan Altshuler and Thomas Melone. USL-TR-70-16.

Implications of Dial-A-Ride for the Poor, by Douglas Gurin and John Wofford. USL-TR-70-18.

Dial-A-Ride. An Overview of a New Demand -- Responsive Transportation System. USL-TR-71-03.

These documents provide detailed description of the operation and impact of the Dial-A-Ride Transportation System, which is an innovative, moderate-cost public transportation system.

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94. Mathias, W.J. "Perceptions of Police Relationships with Ghetto Citizens -- Part 2," Police Chief, 38(4):78:85, April 1971.

Surveys attitudes towards crime and law enforcement in the Model Cities area of Atlanta, Georgia. Respondents were questioned about their perceptions of crime in their own neighborhoods. Divides those surveyed into race-sex groups for analysis.

95. Maurer, E.C. "Housing Project Safety Restored," Journal of Housing, 28(6):282, June 1971.

Indicates that lighting proved effective in one housing project in reducing vandalism, muggings, and other crimes.

96. Michigan. Department of State Police. The Evaluation of a Police-School Liaison Program, by D.H. Bouma et al. Prepared for the U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. East Lansing, MI: Department of State Police, October 21, 1970.

Evaluates the effectiveness of the Police-School Liaison Program of the Michigan Department of State Police operating in two public schools. The program involves assigning police officers to schools in public relations roles.

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97. _____ . University. Impact of Street Lighting on Street Crime, by Roger Wright et al. 2 v. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Ann Arbor, MI: University of Michigan, May 1974.

Describes an investigation of the crime deterrent effects of upgrading street lighting from incandescent to mercury and sodium vapor in selected high-crime commercial and residential areas in Kansas City, Missouri. The two areas are commercial, located in the central core, and residential, in an adjacent zone. Effectiveness is assessed by comparing changes in crime rates before and after installation in both relit and nonrelit areas. Crimes of violence are significantly deterred, while crimes against property are largely unaffected.

98. _____ . University. Center for Research on the Utilization of Scientific Knowledge. Institute for Social Research and Educational Change. Alternative Responses to School Crisis and Experimental in Police/School Relations, by M.A. Chesler and Pat Graham. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Ann Arbor, MI: University of Michigan, 1969.

Discusses the social parameters of secondary school social conflicts (student unrest and disruption) during the late 1960's. Presents the results of efforts of a staff of

academic researchers to implement and evaluate three models designed to effectively manage high school social conflict.

99. Misner, G. E. "Community Involvement in Crime Prevention," p. 44-51. In U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, Deterrence of Crime In and Around Residences. (See I88.)

Describes the tenant-based and tenant-staffed Security and Order Maintenance Officer System (SOMO) in St. Louis housing projects. The system is established on the premise that security and crime prevention cannot be achieved without heavy community involvement.

100. Missouri. Law Enforcement Assistance Council. Region 5. St. Louis High Impact Crime Displacement Study, by W. W. Stenzel. St. Louis, MO: Missouri Law Enforcement Assistance Council, September 1974.

Presents the results of a study conducted to determine whether crime prevention programs undertaken in St. Louis may have an effect upon crime displacement.

101. _____ University. Center of Community and Metropolitan Studies. An Analysis of Burglary Based on the Social Facts Relative to the Crime, by Peter Richman. Prepared for the Missouri Law Enforcement Assistance Council. St. Louis, MO: University of Missouri, December 15, 1971.

Describes an analysis of burglary in University City, Missouri, in which 740 reported burglaries in 1970 are examined. Hypothesizes that direct relationships exist among the elements of time of occurrence, land use of the targets, and location of the target. Suggests that target-hardened environments do not prevent burglary, and concludes that society must look to social stimuli operating in the community -- type and location of targets -- as a potential deterrent.

102. Moolman, V. Practical Ways to Prevent Burglary and Illegal Entry. New York, NY: Cornerstone Library, 1970.

Describes various modus operandi of burglars, with concise and practical descriptions of security hardware and measures for burglary protection and prevention; discusses aspects of security ranging from architectural design to effective use of lighting; describes designs and operations of locking devices and recommendations for their proper use; explains different types of alarm systems. Theft prevention measures covered include applications to residential, commercial, and automobile security.

103. National Association for the Care and Resettlement of Offenders. Architecture, Planning, and Urban Crime, by M. Ash et al. Proceedings of a conference held on December 6, 1974. London, England: National Association for the Care and Resettlement of Offenders, 125 Kennington Park Road, London, SE11, England, 1975.

Contains conference papers, reviews trends in architecture and planning and their implications on crime, and suggests future architectural planning to impact on crime prevention. Presents an analysis of creating "communities of interest," those in which, as a result of architecture and planning, create feelings of commonality and protectiveness among residents.

104. National Education Association of the United States. References on Vandalism and Security Systems in Public Schools. Washington, DC: National Education Association, January 1974.

Explores causes for vandalism as well as countermeasures. Contains bibliographic citations to approximately 40 works on school vandalism, most of which are articles taken from professional teaching journals.

105. National League of Cities. Public Safety and Criminal Justice Program. "Crime Prevention Through Environmental Design: A Special Report," by T. Moody et al. Reprinted from Nation's Cities, December 1977. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, and the Westinghouse National Issues Center. Washington, DC: National League of Cities, December 1977.

This report discusses several crime prevention demonstration projects being conducted in various cities under the concept of crime prevention through environmental design (i.e., a combination of changes in the physical environment with changes in people's reaction to their environment -- in other words, a combination of effective design and use of the environment). Areas discussed include CPTED as it relates to commercial, residential, and schools settings; street lights; mass transit; public works departments; law enforcement activities; city planning agencies; and public policy.

106. National School Boards Association. Educational Policies Service. School Board Policies on School Safety and Security. School Board Policy Development Kit No. 73-34. Evanston, IL: National School Boards Association, July 1973.

Formulates a set of questions and answers for elected and administrative school officials concerning a wide variety of

school problems. Cites model safety policy statements with respect to buildings and grounds safety, emergency operating plans, bomb threats, and school security.

107. National School Public Relations Association. Vandalism and Violence: Innovative Strategies Reduce Cost to Schools, by Elmer Wells. A special report by the staff of Education U.S.A. Arlington, VA: National School Public Relations Association, 1971.

Treats the local dollar loss and social implications of disruption, violence, and vandalism in the public school system. Discusses the techniques and methods currently being used to cope with the problems.

108. National Sheriff's Association. National Neighborhood Watch Program: Final Report for the Period December 22, 1973, to March 22, 1975. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration. Washington, DC: National Sheriff's Association, 1975.

Reviews Program activities, including informational materials distributed and other public educational efforts that were carried out designed to alert citizens to the crime of burglary and larceny and to explain the means by which citizens can protect their property and their neighbors' property.

109. National Neighborhood Watch Program: Information Packet. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration. Washington, DC: National Sheriff's Association, 1975.

In an effort to stimulate a variety of community activities and citizen participation to reduce residential and commercial property crimes, this packet contains sample self-help crime tests in the areas of residential, commercial, senior citizen, child, and personal security; Program decals and telephone stickers; restaurant placemats containing crime protection tips; a home inspection booklet; a Program implementation plan; additional crime prevention suggestions; and sample news releases for Program publicity.

110. New Mexico. University. Institute for Social Research and Development. Analysis of Armed Robbery in Albuquerque, by William Parras and J. W. Pedroncelli. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Albuquerque, NM: University of New Mexico, July 1, 1973.

Describes a study in Albuquerque to define trends in armed robbery over a 5-year period, together with patterns of armed robbery during a 2-1/2-month period. Finds that armed robbery increased 374 percent over the 4-year period and that armed robbery is a seasonal crime.

111. _____ . University. Institute for Social Research and Development. Police/Community Cooperation and Understanding Evaluation Project, by W. R. Partridge and F. W. Koehne. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration. Albuquerque, NM: Univeristy of New Mexico, 1972.

Explains the process that led to specific recommendations for improving police/community relations in Albuquerque. Considers police efficiency, proportional representation, and responsiveness, as well as responsiveness of the public to the police. Suggests ways to counter future threats to personal safety, improve citizen satisfaction with police, and improve morale of police officers.

112. _____ . University. Institute for Social Research and Development. Transfer Potential of Crime-Specific Programs to Metropolitan Albuquerque, by G. S. Metarelis. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration. Albuquerque, NM: University of New Mexico, November 1972.

Discusses recent techniques used to counter crime, and describes crime prevention programs in seven large cities with respect to methods and results. Includes model building-security ordinances for Seattle and Oakland.

113. "New York," Security Systems Digest, 4(9):10-11, May 9, 1973.

Discusses the Office of School Safety within the New York City Board of Education.

114. New York City Housing Authority. Police Department. High-Rise Policing Techniques, by R. Ledee. New York, NY: New York City Housing Authority, 1974.

This report presents a history and description of the New York City Housing Authority Police Department, which has full jurisdiction on Authority property. In addition to covering the patrol function in detail, the report discusses training, recruitment, and volunteer tenant organizations. Also examines some of the problems encountered by the Department, such as community centers, youth gangs, racial tensions, and building design.

115. New York City Rand Institute. Improving Public Safety in Urban Apartment Dwellings: Security Concepts and Experimental Design for New York City Housing Authority Buildings, by William Fairley and Michael Liechenstein. R-655-NYC. New York, NY: The Rand Corporation, June 1971.

Addresses the reduction of crime in the New York City Housing Authority's existing public housing facilities. The three crimes of particular interest are vandalism, robbery, and burglary. The purposes of this project are to define the problem and security alternatives, develop guidelines for estimating the cost effectiveness of security alternatives, and develop experimental models to evaluate the estimated effectiveness of different security measures.

116. Some Effects of an Increase in Police Manpower in the 20th Precinct of New York City, by S.J. Press. R-704-NYC. New York, NY: The Rand Corporation, October 1971.

Describes an analysis to determine the effect of additional manpower (an increase of 40 percent in the 20th Precinct) on reported crime rates. Crimes in several categories are found to decrease in the 20th Precinct following the increase in police manpower, and crime rates in precincts adjacent to the 20th Precinct are analyzed to determine the extent of displacement effects.

117. New York University. Institute of Planning and Housing. Project for Security Design in Urban Residential Areas -- Final Report, by Oscar Newman. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. New York, NY: New York University, January 31, 1973.

Presents the results of regression analysis of a correlation of physical characteristics, an intercom effectiveness study, and a crime data study.

118. Newman, Oscar. "Architectural Design for Crime Prevention," p. 52-65. In U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, Deterrence of Crime In and Around Residences. (See 188.)

Describes defensible space as a form of crime prevention that, while basically mechanical, also acted as a form of corrective prevention, alleviating some of the causes of criminal behavior.

119. Defensible Space: Crime Prevention Through Urban Design.
New York, NY: Macmillan, 1972.

Develops the concept of residential security predicated on a positive correlation between architectural design and behavior. While the author does not claim that design can mandate behavior, he posits that the forms of an environment can elicit responses from the inhabitant of that environment that can enhance his security. On the simplest level, architects can create or prevent encounters. Latent attitudes of territoriality, the acknowledgment that a space is a domain that warrants protection, and the increased awareness of "spheres of influence" on the part of the young will operate to inhibit crime both "mechanically" and "correctively." This territoriality, fostered by physical means -- grouping dwellings in a residential complex, defining and differentiating grounds, providing means for natural surveillance, positioning routes -- is essential to a self-defending community. Crime is deterred when the easy opportunity to vandalize, rob, burglarize, or rape is thwarted by the territorial prerogative of residents.

120. Normandeau, Andre. Trends and Patterns in Crimes of Robbery (With Special Reference to Philadelphia, Pennsylvania, 1960 to 1966). Dissertation (PhD in Criminology), University of Pennsylvania, 1968.

Describes an in-depth investigation of robberies reported to the police in Philadelphia, from 1960 to 1966, to discover whether the crime exhibits certain trends, patterns, or uniformities that, if more fully defined and understood, might aid in the development of programs to counter robbery. Identifies trends and patterns with regard to: The spatial and temporal distribution of the crime, social characteristics and behavior of victims and offenders, circumstances surrounding the act that constitute an opportunity, incidence of detection and clearance, and other factors.

121. North Carolina. University. Institute of Government. Mecklenburg Criminal Justice Pilot Project. Catalog of Approaches to Controlling Burglary and Larceny: A Background Paper Prepared for the Mecklenburg Criminal Justice Planning Council, by D.R. Gill, Prepared for the U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Chapel Hill, NC: University of North Carolina, October 10, 1972.

Suggests approaches in four main categories: Decreasing the attractiveness of burglary and larceny, intervening in criminal careers, reducing opportunities, and assisting victims. Factors that affect the choice of an approach include types of burglary

and larceny, causes and effects of these crimes, and types of burglary and larceny offenders.

122. "Operation Identification Survey: Preliminary Results," National Crime Prevention Institute Bulletin, 2-3, January 1974.

This article discusses the results of a survey conducted to assess the impact of Operation Identification projects.

123. Panhandle Regional Planning Commission. A Study of Building Codes as Related to Crime Prevention, by Peat, Marwick, Mitchell and Company. Prepared for U.S. Department of Housing and Urban Development, and for Texas Criminal Justice Council. Amarillo, TX: Panhandle Regional Planning Commission, September 1972.

This document is the report of a HUD/Texas Criminal Justice Council pilot study to determine the relationship between building codes and crime prevention. Part I presents a general survey of trends of burglary and related offenses nationwide and in the Panhandle area. In Part II, the findings to date of research programs in the field are summarized.

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124. Peel, J.D. Training, Licensing and Guidance of Private Security Officers: A Practical Handbook for Community Security Planning. Springfield, IL: Charles C. Thomas, 1973.

Details the techniques for improving the quality and performance of private security officers. Provides step-by-step guidelines from planning to evaluating such a force. Appended materials include position descriptions, text suggestions for a public information manual, and a training course outline.

125. Pennsylvania. University. Protective Device Systems, by E.S. Krendel. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Philadelphia, PA: University of Pennsylvania, September 10, 1970.

Suggests that social organization rather than hardware development offers the key to improving protection, and provides opinion surveys, user assessment materials, and a bibliography to support this viewpoint. Recommends that programs in which sensor/communications technologies are supplemented by cooperative citizen efforts be initiated, and that such protective systems be compatible with cultural traditions and present-day lifestyles.

126. Police Foundation. Team Policing: Seven Case Studies, by L.W. Sherman et al. Washington, DC: Police Foundation, August 1973.

Describes a study undertaken to examine the team policing experience on a case-by-case basis and to get some preliminary indications of why team policing has worked well in some places and less well in others. Most programs studied included among their basic elements maximum communication among team members and the community. Participation of community members in police work is generally seen as important. The study notes the frequent confusion by police officers between "community relations" and "public relations."

127. Portland State University. Urban Studies Center. Robbery and Burglary Victimology Project: A Study Prepared for the High Impact Crime Program. Prepared for the City of Portland, City-County Justice Planning Office. Portland, OR: Portland State University, November 1972.

Describes a study to identify what characteristics the victims of robberies and burglaries (persons, dwelling units, or businesses) have in common.

128. Post, R.S. (ed.). Combatting Crime Against Small Business. Springfield, IL: Charles C. Thomas, 1972.

Presents a collection of essays, most of which are extracted from Small Business Administration publications, that contain some suggestions for crime control.

129. _____ and A.A. Kingsbury. Security Administration -- An Introduction. Springfield, IL: Charles C. Thomas, 1973.

Presents an introductory text on the background, components, and programming of government and proprietary security activity for security and law enforcement personnel.

130. Public Systems, Inc. Report on a Study of Property Numbering Identification Systems Used in "Operation Identification," by K.R. Martensen and J.W. Greene. Prepared for the U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Sunnyvale, CA: Public Systems, Inc., December 1973.

Discusses the various types of possible numbering systems and their varying effects for use in property identification projects.

131. Rehabilitation Research Foundation. Experimental Manpower Laboratory for Corrections. The Measurement and Prediction of Criminal Behavior and Recidivism: The Environmental Deprivation Scale (EDS) and the Maladaptive Behavior Record (MBR), by W.O. Jenkins et al. Prepared for U.S. Department of Labor, Manpower Administration, Office of Research and Development. RRP-905-12-18-72. Elmore, AL: Rehabilitation Research Foundation, December 1972.

Provides brief descriptions of two instruments that have been proven to have high validity in predicting criminal behavior and recidivism.

(NTIS(PB-213 738))

132. Reppetto, T.A. "Crime Control Management and the Police," Sloan Management Review, 14(2):46-54, Winter 1972-1973.

Suggests that the broad strategic questions generally applied to businesses should be applied to management of crime prevention, detection, and apprehension institutions. Discusses the role of the police and crime control management, and analyzes the limitations of police patrol and detection in terms of police resource allocations and criminal behavior. Recommends coordinated strategies based on an understanding of crime patterns, offender operations, and victimization.

133. _____ . Residential Crime. Cambridge, MA: Ballinger, 1974.

Focuses on residential crimes in the Boston Metropolitan area. This analysis emphasizes the relationships among income, geographic location, and vulnerability and crime. The author discounts the ability of the criminal justice process to deter and contain criminal activity, and concludes that future research must be directed toward developing a model that blends the deterrent effect of the criminal justice system with citizens' anticrime efforts and improved physical designs of buildings and environments. Crime displacement, whether geographic or functional, looms as a major obstacle to any strategy for control of crime and must also be considered.

134. Research Analysis Corporation. Comprehensive Research Program in Crime Prevention, by R.E. Kirkpatrick and R.C. Stevens. Prepared for the Metropolitan Washington (D.C.) Council of Governments. RAC-R-78. McLean, VA: Research Analysis Corporation, August 1969.

Describes the identification of major crime problems in Metropolitan Washington and the definition of research projects that address major elements of preventive activity. Examines the target categories of larceny, burglary, auto theft, indoor

robbery, and vandalism from the point of view of offender, incentive, and target. Recommends a unified program, outside conventional law enforcement, involving school training and public education, increased protection of property, and research on crime data analysis in crime prevention programs.

NTIS(AD-691 805)

135. _____ . Public Communications and Safety Department. A Survey of Techniques Used to Reduce Vandalism and Delinquency in Schools, by H.C. Olson and J.B. Carpenter. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. RAC-CR-26. McLean, VA: Research Analysis Corporation, January 1971.

Presents a profile of the school vandalism problem, and provides a compilation of opinions and suggestions of school administrators to lessen the problem. The survey sample consists of 1048 secondary schools in 50 states in 1971. Vandalism is examined for aspects of facilities, surveillance, operations, and environment. Statistics are cited on vandalism, its distribution, and costs.

NTIS(PB-197 556)

136. Research Triangle Institute. Center for the Study of Social Behavior. A New Project Focus, by J.R. Williams and K.D. Nash. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Research Triangle Park, NC: Research Triangle Institute, January 3, 1974.

Redefines the Targets of Opportunity study (q.v.) to consider factors or characteristics associated with certain individual crimes, such as burglary and robbery. The more narrowly defined objectives preclude emphasis on the concepts of "targets of opportunity," and limit the scope of the study to "seized opportunities for crime" (the set of crimes that actually occur, such as robbery of a gas station, burglary of a home).

137. _____ . Center for the Study of Social Behavior. Targets of Opportunity -- Progress Report, by J.R. Williams. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Research Triangle Park, NC: Research Triangle Institute, August 31, 1973.

Describes the development of a classification scheme for criminal opportunities to serve as a guideline for drawing data from other research. Subsequently, details those data gathering efforts.

138. _____ . Center for the Study of Social Behavior. Targets of Opportunity -- Progress Report No. 2, by J.R. Williams et al. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Research Triangle Park, NC: Research Triangle Institute, October 13, 1973.

Describes an initial attempt at fitting empirical data to a classification scheme. Data in given categories (urban/suburban; urban on-the-street/off-the-street; type of premises; and land use) are summarized against crime.

139. Rhode Island. University. The Crime-Related Area Model: An Application in Evaluating Intensive Police Patrol Activities, by F.S. Budnick. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Kingston, RI: University of Rhode Island, October 1972.

Describes the development and potential uses of a statistical model designed to estimate crime levels in one section of a city from the knowledge of the levels in statistically similar areas elsewhere in the city. Estimates of crime derived from the model can be used as a baseline against which to evaluate in a retrospective fashion the effect of different patrol strategies. The model is also a potential aid in evaluating such crime control programs as manpower studies, helicopter patrol programs, and high-intensity lighting.

NTIS(PB-220 716)

140. Rochester, New York. University. Police-Civilian Foot Patrol: An Evaluation of the PAC-TAC Experiment in Rochester, New York, by T.S. Smith et al. Prepared for the U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Rochester, NY: University of Rochester, 1975.

Presents an analysis of data collected and analyzed as part of the overall evaluation of the PAC-TAC Program, which paired police officers and citizens to walk beats in selected neighborhoods.

141. _____, University. Graduate School of Management. Rochester-Monroe County Criminal Justice Pilot City Program. "PAC-TAC" -- Police and Citizens -- Together Against Crime: Experimental Action Program. Prepared for U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Rochester, NY: University of Rochester, June 1973.

Describes an experimental program in which civilians and police officers work as two-person teams, patrolling fixed beat areas in selected urban neighborhoods. These teams work in responding to service calls, aiding regular mobile patrols in their duties, deterring criminal activity and civilian victimization, and developing better community relations. The PAC-TAC experiment takes place at times of high crime and service call activities, in evening hours, 7 days a week.

NTIS(PB-227 682)

142. Rosenthal, S.J. "An Approach to Neighborhood Security," HUD Challenge, 5(3):18-20, March 1974.

Discusses the importance of community involvement in making neighborhoods secure, stressing the need for community organization and informed citizen participation.

143. Rykert, Wilbur. "Crime Is a Thief's Business. Prevention Is Yours," p. 66-77. In U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, Deterrence of Crime In and Around Residences. (See 188).

Discusses aspects of police operational strategies in community crime prevention.

144. Salama, Ovadia, and Alexander Tzonis. "Strategies for Defense," Progressive Architecture, (4):72-75, April 1974.

Describes the development of a framework for generating crime-reducing features in a variety of environments and transferring Newman's findings from the area of public housing to other environments.

145. San Luis, Edward. Office and Office Building Security. Los Angeles, CA: Security World Publishing, 1973.

Discusses those areas most likely to be identified as criminal activity (i.e., burglary, robbery, arson, violence, and industrial espionage). Evaluates security techniques that have

proven most successful in identifying and defending against problem areas quickly and efficiently.

146. Santa Clara Criminal Justice Pilot Program. Burglary in San Jose. Technical Report for the Period January - April 1971. Prepared for the U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. San Jose, CA: Santa Clara Criminal Justice Pilot Program, February 1972.

Discusses intervention techniques on the basis of data on burglaries reported to the San Jose Police Department. Finds that burglary is a highly time-specific crime, occurring largely in private dwellings, with differing levels of force used according to time of day and type of premises. Provides information on offender/victim characteristics, including data on drug and alcohol involvement of burglary offenders and victims.

147. Crime in San Jose. Prepared for the U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. San Jose, CA: Santa Clara Criminal Justice Pilot Program, December 1971.

Describes the initial phase of the baseline offense reporting system and includes data necessary for focusing crime reduction efforts and developing intervention techniques. Delineates the city's high-crime areas by location and type of premise, identifies the most frequent crime targets by type and value, and describes day and hour of occurrence. Also discusses the importance of the discoverer of crimes -- citizens whose calls trigger police action. Additional material describes victim/offender relationships, ages, sex, race, and number, and the role of the victim and the victim's compliance.

148. Scarr, H. A. "The Nature and Patterning of Residential and Non-Residential Burglaries," p. 78-112. In U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, Deterrence of Crime in and Around Residences. (See 188).

Describes the crime of burglary in terms of offender, the citizen, and the political jurisdiction, based on a study conducted in three jurisdictions in the Metropolitan Washington, D. C., area.

149. Sears, H. "Crime, Vandalism and Design." Paper presented at the Crime Prevention Workshop, University of Toronto, Centre of Criminology, May 21-22, 1975. Toronto, Canada: University of Toronto, 1975.

Examines the relationship between crime and environmental design, and explores the means by which physical environments can be designed and modified to reduce crime.

150. Seattle, Washington. Law and Justice Planning Office. Burglary Reduction Program: Final Report. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration. Seattle, WA: Seattle Law and Justice Planning Office, February 24, 1975.

Describes the efforts used to reduce burglaries through the use of block watch organizations, property identification, and home security inspections.

151. _____ . Law and Justice Planning Office. Community Crime Prevention -- Burglary Reduction: Evaluation of First-Year Results, by K. E. Mathews, Jr. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration. Seattle, WA: Seattle Law and Justice Planning Office, 1974.

Demonstrates the success of reducing burglaries through the use of blockwatch organizations, property identification, and home security inspections.

152. Slaybaugh, D. J. "School Security Survey (1973), School Product News," 12(6):10-14, June 1973.

153. _____. "School Security Survey (1974), School Product News," 13(6):14-16, June 1974.

154. _____ and V. L. Koneval. Schools in Crisis: The Cost of Security. 1971 School Security Survey by the Staff of School Security News. Cleveland, OH: Industrial Publishing Company, 1971.

155. _____ and V. L. Koneval (eds.). The High Cost of Vandalism. A Report by the Editors of School Product News. Cleveland, OH: Industrial Publishing Company, 1970.

These describe an annual nationwide survey initiated in 1970 to determine the dollar-loss statistics regarding vandalism and to identify the major hardware strategies used by school districts to counter fire damage, property destruction, glass breakage, and equipment theft.

156. Sommer, Robert. Personal Space: The Behavioral Basis of Design. Englewood Cliffs, NJ: Prentice-Hall, 1969.

Discusses the psychology of designing space. The basic premise is that spatial relationships affect user behavior in a quantifiable fashion and in other more complex and less measurable ways. The treatment is philosophical and speculative; however, specific studies of the effect of spatial arrangements on social interaction are described.

157. Southern California Association of Governments. Handbook of Crime Prevention Bulletins: Crime Prevention Through Physical Planning. Los Angeles, CA: Southern California Association of Governments, 1971.

Contains draft of 16 single-topic bulletins that provide information on how to prevent crime through the planning and design of physical characteristics and their application to specific projects, such as apartment complexes, industrial parks, commercial recreation developments, and public buildings.

158. St. Louis, Mo. Board of Police Commissioners, St. Louis Police Department. The Use of an Incident Seriousness Index in the Deployment of Police Patrol Manpower -- Methods and Conclusions, by N. B. Heller and J. T. McEwen. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. St. Louis, MO: St. Louis Police Department, January 1972.

Evaluates the use of crime seriousness information in the deployment of police resources. The statistics resulting from this study "give the first full-scale glimpse of crime from the point of view of the harm incurred by victims."

NTIS(PB-213 157)

159. St. Paul, Minn. Metropolitan Council. Victimization Study in the Minneapolis Model Cities Neighborhood, A Memorandum. St. Paul, MN: St. Paul Metropolitan Council, July 13, 1972.

Presents survey data indicating that there is a very high incidence of unreported crime in the neighborhood, even for serious crimes of violence. Young people between the ages of 8 and 15 experience the largest share of all kinds of victimization, particularly in the form of assault, robbery, larceny, and malicious mischief; they rarely report these crimes to the police. The study finds an even lower rate of reporting than previous studies. Only 11 percent of all incidents are reported. Only 4 out of 10 serious crimes are reported, and 75 percent of these never appear in official police statistics.

160. Stanford Research Institute. School Vandalism: A National Dilemma, by Bernard Greenberg. SRI Project no. 077531-034. Menlo Park, CA: Stanford Research Institute, October 1969.

Presents comprehensive research on the scope of school vandalism. Discusses social and environmental characteristics of known offenders, based upon previous research studies.

161. Stanford University. Department of Psychology. Social-Psychological Analysis of Vandalism -- Making Sense of Senseless Violence, by P. G. Zimbardo. Prepared for U. S. Department of the Navy, Office of Naval Research. ONR-TR-Z-05. Palo Alto, CA: Stanford University, December 1970.

Suggests that acts of destructive aggression reflect a variety of rational social-psychological causes, or wanton behavior.

NTIS(AD-719 405)

162. _____ . Department of Sociology. Laboratory for Social Research. The Expansion of the Autonomy of Youth: Responses of the Secondary School to Problems of Order in the 1960's -- Final Report, by J. W. Meyers et al. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Stanford, CA: Stanford University, August 1971.

Describes a survey of the problems of crime violence and disorder in the schools, and finds that they are not so significant as had been expected, nor are they seen as such by school administrators. Suggests that the problem is best seen as youth in society, not students in school. Suggests that it would be unwise to mount a national effort to deal with school crime and disorder as a distinctive problem.

163. Syracuse, N.Y. Police Department, and General Electric Company, Electronics Laboratory. Crime Control Team -- Final Report, January 1, 1970 to June 30, 1970. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Syracuse, NY: Syracuse Police Department, 1970.

Describes the crime control team as the basic operational element of a formal organizational structure of a municipal police department. The structure was suggested to assign the responsibility and, hence, accountability for the control of crime to specific individuals within the department. This structure also permits the police to adopt an offensive strategy towards crime, as opposed to the defensive strategy of the conventional department.

164. "Teacher Opinion Poll," Today's Education, 62(1):7, January 1973.
165. "Teacher Opinion Poll," Today's Education, 63(3):105, September/October 1974.

Reports of polls of public school teachers on the frequency of student violence against teachers.

166. Tsampilou, J. N. "Graffiti Problem: How Philadelphia Is Coping With It," Police Chief, 30(7):28, 30, July 1972.

Describes methods used by the 20-man graffiti squad to identify and arrest offenders, and to provide surveillance to prevent acts of vandalism. Discusses possible motivations of graffiti vandals and the problem of removing graffiti from surfaces.

167. Underwood, E. W., et al. "Ways of Fighting Vandalism (Opinions Differ)," Today's Education, 57(9):28-32, December 1968.

Describes some of the strategies that teachers, school administrators, and community resource groups have put into operation to counter the threat of school vandalism.

168. Underwriters Laboratories, Inc. Burglary Protection and Signaling Department. Certificated Central Station Type Burglar Alarms: 1973 Field Service Record. Bulletin No. 34. Northbrook, IL: Underwriters Laboratories, Inc., (n.d.).

Issued annually, this report provides brief summaries of the findings of UL's program to assess the effectiveness of central station alarm systems and observe trends in burglary attacks. Data from a sample of 35 to 40 percent of U. S. cities of 100,000 to 10 million in population are analyzed and presented in tabular form.

169. United Federation of Teachers. Security in the Schools: Tips for Guarding the Safety of Teachers and Students. New York, NY: United Federation of Teachers, 1973.

Provides a set of self-protective guidelines to New York City teachers. Includes an appendix of materials containing procedures for security, visitor control, and maintenance order in schools.

170. U. S. Congress. Senate. Crime Against Small Business. A Report of the Small Business Administration Transmitted to the Select Committee on Small Business. S. Rept. 91-14, 91st Congress, 1st Session, 1969.

Provides a benchmark of current problems and solutions to crime, so as to encourage optimum use of existing crime prevention measures (particularly, protective devices, architectural design, and managerial systems) and to encourage the provision of more effective crime insurance. The main orientation of the study is specifically the small businessman and real-world remedies on a cost/benefits basis.

171. U. S. Department of Health, Education, and Welfare. National Institute of Mental Health. Juniper Gardens Project: A Study in Community Crime Control. Washington, DC: Government Printing Office, 1974.

Describes the project established in an urban housing development to instill a sense of community by finding social mechanisms that enable residents to work together to investigate and solve community problems. Discusses the tenants' organization and some of the policies, procedures, etc. established thereby (e.g., standards of behavior for the community, residents' code, security patrol). Descriptions are provided to develop an urban observation battery, which quantifies data on the appearance of the project and on recreation facilities.

(S/N 1724-00385)

172. U. S. Department of Housing and Urban Development. Career Ladder and Curriculum Guide Instructor's Manual: Housing Management, Resident Selection and Occupancy Trainee -- Resident Security Aide, Resident Security Officer, Security Officer II, Community Security Aide (Cover Title), by Center for Social Policy and Community Development, School of Social Administration, Temple University, under contract to Shaw University. Washington, DC: Department of Housing and Urban Development, April 1973.

Presents guidelines for designing a system of paraprofessional jobs in security for residents of housing projects. The program would train residents to assist the local housing authority in matters of security and mobilization of the community for greater security.

173. _____, Security Planning for Multi-Family Housing: A HUD Handbook (Draft). Washington, DC: Department of Housing and Urban Development, August 1973. (Duplicated.)

Outlines the role of management, law enforcement agencies, residents, and social services in attacking the root causes, treating the effect, and controlling the problem in crime. The methodology recommended is for managers to identify options for developing a comprehensive residential security program.

174. _____ . Environment and the Community: An Annotated Bibliography. Washington, DC: Government Printing Office, April 1971.

Emphasizes problems of environmental degradation in America cities and settled communities. Prepared for city planners, architects, builders, and other concerned citizens.

175. _____ . Office of Policy Development and Research. Division of Building Technology. A Design Guide for Improving Residential Security, by Oscar Newman; Center for Residential Security. HUD Guideline 2. Washington, DC: Government Printing Office, December 1973.

Presents the thesis that a well-designed residential security system is one with a functioning interrelationship between the various component parts. Each element is examined in separate chapters. This text directs its attention primarily to the creation of fortifications because, "it is the easiest to implement after the act of building is completed, whereas defensible space concepts are best achieved in a project's inception."

176. U. S. Department of Justice. Federal Bureau of Investigation. Uniform Crime Reports for the United States. (Issued annually, cover title varies.) Washington, DC: Government Printing Office, Annual.

Compiles crime data submitted by approximately 10,000 law enforcement agencies to depict the crime problem in the U. S. The crimes of concern are FBI Part I Index offenses.

177. _____ . Law Enforcement Assistance Administration. Community Involvement Study: LEAA-Funded State-of-the-Art Study, by S. Marshall. Washington, DC: Government Printing Office, (n.d.).

Examines programs and projects oriented toward identified community needs and training personnel to meet those needs, as well as to determine the effectiveness and usefulness of various program strategies. General project categories include programs in community education to encourage involvement in crime control, reduction, and prevention; academic or interdisciplinary training; public attitude surveys; community-based corrections; evaluation; research and development; and minority recruitment.

178. _____ . Law Enforcement Assistance Administration. National Criminal Justice Information and Statistics Service. Crime in Eight American Cities: National Crime Panel Surveys of Atlanta, Baltimore, Cleveland, Dallas, Denver, Newark, Portland, and St. Louis, Advance Report, by Bureau of the Census. Washington, DC: Department of Justice, July 1974.

Highlights criminal victimization surveys conducted in eight major cities and presents comparisons of victim characteristics and overall incidents among those cities. Approximately 9700 households and 2000 commercial establishments are surveyed in each city to obtain victimization information on rape, robbery, assault, and robbery for the personal sector; burglary, larceny, and auto theft for the household sector; and burglary and robbery for the commercial sector.

179. _____ . Law Enforcement Assistance Administration. National Criminal Justice Information and Statistics Service. Crimes and Victims: A Report on the Dayton-San Jose Pilot Survey of Victimization, by C. B. Kalish and D. D. Nelson. Washington, DC: Department of Justice, June 1974.

Describes a pilot victimization survey by the Bureau of Census for the National Crime Panel as a test of survey instruments on the general population. Personal interviews conducted in a representative sample of homes and businesses in the urbanized portions of Montgomery County, Ohio, and Santa Clara County, California. The survey classifies crimes as rape, robbery, assault, burglary, and larceny including auto theft. The definitions are compatible with the Uniform Crime Reports.

180. _____ . Law Enforcement Assistance Administration. National Criminal Justice Information and Statistics Service. Criminal Victimization Surveys in the Nation's Five Largest Cities: National Crime Panel Surveys of Chicago, Detroit, Los Angeles, New York and Philadelphia. Report of the Bureau of the Census, by G. M. Dickerson et al. SN-NCP-C-3. Washington, DC: Department of Justice, April 1975.

Focuses on the similarities and differences in criminal victimization experienced by residents, households, and businesses of the Nation's five largest cities. Presents the findings of victimization surveys conducted in approximately 10,000 households and 3500 commercial establishments in each city for incidents that occurred during 1972.

181. _____ . Law Enforcement Assistance Administration. National Criminal Justice Information and Statistics Service. Criminal Victimization in the United States: A National Crime Panel Survey Report. Report of the Bureau of the Census, by R. W. Dodge. SD-NCP-N-2. Washington, DC: Government Printing Office, May 1975.

This report is the second to present findings from the National Crime Panel for the United States as a whole and the first to publish data for an entire year. Data used for the survey are incidents that occurred during 1973. Interviews were conducted twice during the year (at six-month intervals) with approximately 60,000 households and 15,000 commercial establishments in the 50 States and Washington, DC.

(S/N 027-000-00322-2)

182. _____ . Law Enforcement Assistance Administration. National Criminal Justice Information and Statistics Service. Criminal Victimization Surveys in 13 American Cities: National Crime Panel Surveys in Boston, Buffalo, Cincinnati, Houston, Miami, Milwaukee, Minneapolis, New Orleans, Oakland, Pittsburgh, San Diego, San Francisco, Washington, D.C. Report of the Bureau of the Census, by G. M. Dickerson et al. SD-NCP-C-4. Washington, DC: Government Printing Office, June 1975.

Presents selected findings of victimization surveys conducted in each of 13 cities on approximately 10,000 households and 1500 commercial establishments. The surveys covered incidents that occurred during 1973.

(S/N 027-000-00324-1)

183. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. An Inventory of Surveys of the Public on Crime, Justice, and Related Topics, by A. D. Biderman et al; Bureau of Social Science Research, Inc. PR 72-16. Washington, DC: Government Printing Office, October 1972.

Provides an uncritical survey and classification of published and unpublished work involving the interviewing of the general public for opinions concerning civil disorders, delinquency, crime, etc. Includes a topical index study, descriptions, and conventional abstracts, and sample questions excerpted from the survey.

(S/N 2700-00166)

184. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Architectural Design for Crime Prevention, by Oscar Newman; New York University, Institute of Planning and Housing. Washington, DC: Government Printing Office, March 1973.

Updates the observations on environmental design originally presented in Newman's Defensible Space (q.v.). Discusses the concept of "defensible space" and human territorial instincts, and reviews the works of other authors, as they relate to defensible space. Relies heavily on pictorial rather than tabular presentation.

185. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Citizen Crime Reporting Projects: Phase I Report, by Leonard B. Bickman et al.; Loyola University. National Evaluation Program, Series A, Number 14. Washington, DC: Government Printing Office, April 1977.

This report summarizes the current state of knowledge about projects that encourage citizens to report suspicious/criminal activities to law enforcement agencies.

(S/N 027-000-00506-3)

186. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Crime and School Security. A National Criminal Justice Reference Service Bibliography, by J. M. Edgar and Robert King. Washington, DC: Department of Justice, (n.d.). (Duplicated.)

Includes approximately 120 citations on topics such as vandalism, school disturbances, tort liability, juvenile delinquency, and police-in-the-schools.

187. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Crime Prevention Surveys: Phase I Report. National Evaluation Program, Series A, Number 8. Washington, DC: Government Printing Office, January 1977.

This report summarizes the crime prevention effectiveness of surveys conducted to promote citizen awareness of property protection.

188. _____, Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Deterrence of Crime In and Around Residences. Papers on Related Topics Presented at the Fourth National Symposium of Law Enforcement Science and Technology, Washington, D.C., May 1-3, 1972. NILECJ Criminal Justice Monograph Series. Washington, DC: Government Printing Office; June 1973.

See Blanchard, Janelle (11)
Brill, W. H. (17)
Misner, G. E. (99)
Newman, Oscar (119)
Rykert, Wilbur (143)
Scarr, H. A. (148)
Ward, Benjamin (223)

189. _____, Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Early-Warning Robbery Reduction Projects: Phase I Report, by Warren A. Eliot et al.; Mitre Corporation. National Evaluation Program, Series A, Number 4. Washington, DC: Government Printing Office, March 1976.

This report presents a preliminary assessment of the value of installing police-owned alarm systems in stores to signal police when a robbery is in progress to expedite the apprehension of the offender at or near the scene of the crime.

190. _____, Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Minimum Building Security Guidelines and Cost Estimate for the Security Features. Initial Draft. Prepared in cooperation with the Federal Insurance Administration, Department of Housing and Urban Development. Washington, DC: Department of Justice, May 14, 1971.

Contains a model security code covering minimum standards for doors, windows, safes, and alarms for commercial and residential buildings. Standards are expressed largely in design rather than performance factors.

191. _____, Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Neighborhood Team Policing: Phase I Report, by William G. Gay et al; National Evaluation Program, Series A, Number 13. Washington, DC: Government Printing Office, February 1977.

This report presents an assessment of the impact of Team Policing based on studies carried out in 14 cities.

(S/N 027-000-00480-6)

192. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. NILECJ Standard for Magnetic Switches for Burglar Alarm Systems. A Voluntary National Standard Promulgated by the National Institute of Law Enforcement and Criminal Justice. NILECJ-STD-0301.00. Washington, DC: Government Printing Office, March 1974.

Prescribes performance criteria and test methods for magnetically actuated electrical switches used in intrusion alarm systems.

193. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Operation Identification Projects: Assessment of Effectiveness -- Phase I Summary Report, by N. B. Heller et al.; The Institute for Public Program Analysis. 4v. National Evaluation Program, Series A, Number 1. Washington, DC: Government Printing Office, August 1975.

Vol. 1, Summary Report.

Vol. 2, Operation Identification: A Review of General Knowledge and Past Findings.

Vol. 3, A Telephone Survey of Operation Identification Projects: Methodology and Results.

Vol. 4, A Field Survey of Operation Identification: Methodology and Results.

This report summarizes the advantages and disadvantages of Operation Identification projects based upon past findings and the collection and analysis of other project performance data.

194. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Patterns of Burglary. 2nd ed. By H. A. Scarr et al.; Human Sciences Research, Inc. NILECJ Criminal Justice Research Series. Washington, DC: Government Printing Office, June 1973.

Describes "patterns" of burglary, the "circumstances" of burglary victims, and perceptions about offenders and the court/police system. Focuses on the description and analysis of residential and nonresidential burglary offenses recorded by the police in 1967 through 1969 in three Metropolitan Washington, D.C., jurisdictions. Of the 85,292 burglaries

reported to the police by these jurisdictions, 56,962 are included in this analysis. These data are then described as well as correlated with selected census data.

(S/N 2700-00207)

195. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Planning Guidelines and Programs to Reduce Crime. Washington, DC: Department of Justice, (n.d.). (Duplicated.)

Contains guidelines to assist Impact Program participants in setting up crime-specific projects aimed at the reduction of stranger-to-stranger crime and burglary. Covers such areas as prevention and postadjudication, community action, police action, the adjudication process, and Impact Program publicity campaigns.

196. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Residential Security, by Arnold Sagalyn et al. NILECJ Monograph Series. Washington, DC: Government Printing Office, December 1973.

Contends that risk of crime to the individual can be reduced by decreasing the vulnerability of his home or reducing crime pressure in the area. While assorted hardware and electrical devices (alarms) may help to secure the home, only public policy is capable of addressing the fundamental social problems that produce and aggravate crime, and countering the effect of displacement. Argues for the need to determine the cost/benefit effectiveness of security options before these options are implemented.

(S/N 2700-00235)

197. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Scope, Nature, and Prevention of Vandalism, by Q. Y. Kwan. Washington, DC: Government Printing Office, 1972.

Presents short- and long-range approaches to the problem of vandalism. Architectural and environmental design considerations figure prominently into the short-range proposals; behavioral modification plans figure into the long-range proposals.

198. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Summary of Institute Research Results and Recommendations on Housing Security for the Elderly. Washington, DC: Government Printing Office, 1972.

Although this report focuses on crimes against the elderly, the majority of recommendations relate to crime prevention and deterrence measures that are applicable to all age groups. Special attention is given to public housing projects in the areas of architectural and building design, residential security, security and surveillance systems, and community involvement.

199. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. The Crime of Robbery in the United States: An Assessment of Studies and Related Data from 1965-1970, by Arnold Sagalyn; Arthur D. Little, Inc. ICR 71-1. Washington, DC: Government Printing Office, January 1971.

Assesses significant reports, papers, and articles on robbery published 1965-70 toward the end of formulating recommendations for improving means of deterring and apprehending robbery offenders. Provides a general summary of such background information. Stresses the dearth of the limitations of available data, and offers recommendations pertaining to types of further research and data-gathering efforts which might be funded. Provides an extensive bibliography of materials on robbery dating through the 1960's.

200. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. Urban Design, Security, and Crime. Proceedings of a Seminar in Washington, D.C., April 12-13, 1972. Compiled by R. M. Rau. Washington, DC: Department of Justice, January 1973.

Focuses on security measures for preventing burglary and stranger-to-stranger crimes in and around residences and businesses in the urban community. Reviews the state-of-the-art, and develops proposed research and action ideas for the future.

NTIS(PB-219 026)

201. _____ . Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice. The Use of Probability Theory in the Assignment of Police Patrol Areas, by Wayne Bennett and J. R. Dubois; Edina, Minn., Police Department and North Star Research and Development Institute. PR 70-2. Washington, DC: Department of Justice, July 1970.

Describes a project to develop a system of random patrol that would reduce the time required for a police officer to respond to a call. However, no differences in response time between random patrol and routine patrol are found. This is attributed to the intense competition that developed between officers on routine patrol and those on random patrol.

202. U. S. Department of the Army. Physical Security. FM 19-30. Washington, DC: Department of the Army Headquarters, February 17, 1965.

Presents material that is applicable to the security problems of industry. Includes a physical security checklist.

203. U. S. Department of Transportation. Federal Railroad Administration. Vandalism. Report of the Naval Ammunition Depot, Department of the Navy, by Mark Sanders and John Welton. Crane, IN: Naval Ammunition Depot, July 10, 1972.

Defines the nature of the vandalism problem for long-distance railroads (primarily freight), and recommends research areas for future consideration. Includes an extensive bibliography covering general works on vandalism as well as materials specific to other environments.

NTIS(PB-214 136)

204. _____ Office of the Secretary. Cargo Security Handbook for Shippers and Receivers. DOT P 5200.5 Washington, DC: Government Printing Office, September 1972.

(S/N 5000-00059)

205. _____ Office of the Secretary. Guidelines for the Physical Security of Cargo. DOT P 5200.2. Washington, DC: Government Printing Office, May 1972.

Presents guidelines to assist transportation management in stemming the over-\$1-billion annual loss due to cargo theft and pilferage. Because analysis of these problems revealed that 85 percent of cargo stolen is removed by authorized persons or vehicles, the guidelines are directed toward methods against internal threats.

206. U. S. Interagency Committee on Transportation Security. Technical Coordination Subcommittee. Cargo Security Equipment Applications Guide. Prepared with the assistance of the Mitre Corporation. Washington, DC: Department of Transportation, June 1, 1972.

Provides an inventory of intrusion detection equipment applicable to cargo security, together with application guidelines.

207. U. S. National Advisory Commission on Criminal Justice Standards and Goals. A National Strategy to Reduce Crime. Washington, DC: Government Printing Office, 1973.

Summarizes the other five reports issued by the LEAA-appointed commission to formulate crime prevention and reduction standards and goals at the state and local levels. Also includes materials on national criminal justice goals and priorities, criminal code reform, and handgun legislation. Addresses crime prevention in the broadest sense, and discusses programs concerning court systems, correctional institutions, and rehabilitation programs.

(S/N 2700-00204)

208. _____ . Task Force on Community Crime Prevention. Community Crime Prevention. Washington, DC: Government Printing Office, 1973.

Describes a broad concept of community crime prevention, encompassing such diverse topics as youth service bureaus, drug treatment, employment, education, recreation, religion, conflicts of interest, political finances, government procurement of goods and services, zoning and assessment, and government corruption. The central theme of this work is the need for a sense of community of all levels of society -- from neighborhood to Nation.

(S/N 2700-00181)

209. _____ . Task Force on Police. Police. Washington, DC: Government Printing Office, January 23, 1973.

Discusses primarily police operational considerations (such as patrol, team policing and specialized units), and administrative matters (such as recruitment, training, and discipline). Acknowledges that much of the work in mechanical crime prevention has been largely speculative rather than definitive.

(S/N 2700-00174)

210. U. S. National Commission on the Causes and Prevention of Violence. Crimes of Violence. Staff Report, by D. J. Mulvihill et al. 3 v. (Volumes 11, 12, and 13 of the Staff Reports.) Washington, DC: Government Printing Office, December 1969.

Presents the findings of the Commission with respect to the question of how much violent crime presently exists in the United States. Discusses problems in crime classification, appraises the Uniform Crime Reports system, and examines levels and trends of violence in the United States in terms of several variables such as geographical locale, characteristics of offenders, degree of urbanization, and age structure of the population. Reports findings with respect to such characteristics as specific location, prior relationship between offender and victim, racial relationship between offender and victim, motivation, use of weapon, and infliction of injury.

211. _____ . Firearms and Violence in American Life. Staff Reports, by G. D. Newton, Jr., and F. E. Simring. (Volume 7 of the Staff Reports.) Washington, DC: Government Printing Office, 1969.

Discusses civilian ownership and acquisition of firearms in the U. S.; the role firearms play in accidents, suicide, crime, collective violence, and self-defense; and the regulation of firearms.

212. _____ . Task Force on Historical and Comparative Perspectives. Violence in America: Historical and Comparative Perspectives. Staff Reports, by H. D. Graham and T. R. Gurr. 2v. (Volumes 1 and 2 of the Staff Reports.) Washington, DC: Government Printing Office, June 1969.

Provides a panoramic historical view of violence in America and other societies, positing that the study of U. S. development as a nation and comparison with the experience of other societies will enable the people to better understand the genesis, processes, and ultimate effects of violence in contemporary American society.

213. _____ . Task Force on Law and Law Enforcement. Law and Order Reconsidered, by J. S. Campbell et al. New York, NY: Bantam Books, 1970.

Attempts to determine the extent to which certain characteristics of America's institutions are themselves the causes of violence and to suggest ways in which these characteristics can be eliminated. Much of the research material and the

task force proposals deal with restructuring of city governments, provision of an agency in each city to oversee the administration of criminal justice, and abolishment of laws against the so-called "victimless crimes."

214. U. S. President's Commission on Law Enforcement and the Administration of Justice. A National Survey of Police and Community Relations. Report of the National Center on Police and Community Relations, School of Police Administration and Public Safety, Michigan State University, by J. E. Angell et al. Field Surveys V. Washington, DC: Government Printing Office, January 1967.

Presents a broad survey of the field of police/community relations. Provides a general assessment, based upon examination of representative city departments across the country, of the gravity of and causes of police/community problems and of means of lessening these problems. Finds that those departments that exercise extremely aggressive repression as their main technique of crime control suffer from the most serious problems in community relations and also fail in mitigating their crime problems. Recommends programs that make crime prevention a community enterprise.

215. _____ . Criminal Victimization In the United States: A Report of a National Survey. Report of the National Opinion Research Center, by P. H. Ennis. Field Surveys II. Washington, DC: Government Printing Office, May 1967.

Describes a study designed to measure the amount of criminal victimization in the United States, based on interviews conducted in 10,000 U. S. households covering the year 1965. Presents data on both the actual and incident and the attitudes of the victims.

216. _____ . Report on a Pilot Study in the District of Columbia on Victimization and Attitudes Toward Law Enforcement. Report of the Bureau of Social Science Research, Inc., by A. D. Biderman et al. Field Surveys I. Washington, DC: Government Printing Office, 1967.

Describes a study conducted to design and field test methods of surveying the public, primarily for gaining information on both the incidence of crime and its impact in terms of fear and changes effected in day-to-day life and, secondarily, for estimating the nature and incidence of unreported crime. Data are presented on the nature of the public's contacts with and attitudes toward police and other law enforcement agencies, and on the degree to which the public is informed about crime and law enforcement matters.

217. _____ . Studies in Crime and Law Enforcement in Major Metropolitan Areas. Report of the University of Michigan, by A. J. Reiss. 2 v. Field Surveys III. Washington, DC: Government Printing Office, 1967.

Presents in Section I a study of patterns of behavior in police and citizen transactions, conducted to examine the influence, on the behavior of police and citizens in encounters, of the interplay of a variety of political and socio-economic factors. Presents in Section II a study of career orientations, job satisfaction, and the assessment of law enforcement problems by police officers. This second study focuses on the perceptions and attitudes of police officers.

218. _____ . The Police and the Community: The Dynamics of Their Relationship in a Changing Society -- Sections III and IV. Report of the School of Criminology, University of California, by J. D. Lohman and G. E. Misner. 2 v. Field Surveys IV. Washington, DC: Government Printing Office, 1967.

Describes a study to elicit the attitudes of the police and various elements of the public toward one another. Its purpose is to develop specific findings and recommendations for action to deal with the development of an increasingly threatening polarity between police and community in U. S. urban areas. San Diego and Philadelphia are selected for study as being representative of large cities yet offering contrasts for comparative purposes.

219. _____ . Task Force on Science and Technology. Task Force Report: Science and Technology, by Institute for Defense Analyses. Task Force Reports. Washington, DC: Government Printing Office, 1967.

Presents material pertaining to the role of science and technology in criminal justice and, to some degree, the role of criminal justice in science technology. Generally of a technical nature, the material contained in the study is intended to supplement and amplify the material in the report, The Challenge of Crime in a Free Society, in which the recommendations of the Commission are set forth.

220. "Violence and No Security Force Alabama Teachers to Bring Guns to School," Security Systems Digest, 5(3):8-9, January 30, 1974.

Presents views of teachers and administrators regarding their perceived need to bring guns to school.

221. Virginia Commonwealth University. Department of Psychology. Behavior of the Victim in Defense of Personal Space -- Final Report, by C. D. Noblin et al. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Richmond, VA: Virginia Commonwealth University, September 3, 1971.

Presents the results of a series of controlled laboratory experiments to determine how closely a person will allow a potentially hostile stranger to approach him or her.

NTIS(PB-206 927)

222. Virginia Polytechnical Institute. Transit Passenger Shelters: Basic Design Principles, by Frank Ehrenthan. Prepared for U. S. Department of Transportation, Urban Mass Transportation Administration. Blacksburg, VA: Virginia Polytechnic Institute, January 1973.

Develops a list of design criteria for passenger shelters and a prototype shelter design. Considers each element of user welfare separately in light of the constraints imposed by environmental fit and cost. Also presents a survey of shelters in use throughout the United States.

NTIS(PB-220 303)

223. Ward, Benjamin. "The Search for Safety -- A Dual Responsibility," p. 113-125. In U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, Deterrence of Crime In and Around Residences. (See 188.)

Emphasizes the cooperation that must exist between police and civilian for community crime control. Describes an auxiliary police force in New York City, which is an outgrowth of the civil defense impetus of the 1950's. In 1972, over 3500 men and women were actively serving, with an additional 900 officers in training.

224. Washington, D. C. Metropolitan Police Department. Crime Reduction Through Aerial Patrol. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. Washington, DC: Metropolitan Police Department, 1973.

Describes the formulation of an evaluation plan for measuring helicopter effectiveness in the apprehension of suspects. The basic assumption of the study is that the presence of a helicopter will decrease the crime incidence by increasing the criminal's fear of being apprehended.

NTIS(PB-215 711)

225. Washington (State). Planning and Community Affairs Agency. Law and Justice Planning Office. Crime in the State of Washington, by C. F. Schmid and S. E. Schmid. Olympia, WA: Washington Planning and Community Affairs Agency, 1972.

Analyzes data on the trends, patterns, and correlates of the Index crimes on a national scale and for the State of Washington and its largest cities. Extensive crime data, primarily from the Uniform Crime Reports, are presented in a large number of tables and figures.

226. Wayne County, Mich. Planning Commission. Urban Crime and Urban Planning: A Pilot Study of the Role of Planning in a Comprehensive Approach to Crime Control and Prevention, by H. G. Locke. 2 v. Prepared for U. S. Department of Housing and Urban Development. Detroit, MI: Wayne County Planning Commission, 1969.

Describes a study of the criminal justice system in Wayne County, focusing on deterrent and rehabilitation programs, particularly those programs appropriate for youthful offenders. Volume I deals with the planning concept relating to the problem of crime control and prevention, making 29 specific recommendations for a more effective, coordinated approach. Volume II pursues the proposition that many persons who first come under the scrutiny of the law as youthful offenders can be identified and "rehabilitated" before their criminal careers are firmly established.

NTIS(PB-195 655 [v 1])
(PB-195 656 [v 2])

227. Weber, T. L. Alarm Systems and Theft Prevention -- An Expert Says: "Think Like a Thief." Los Angeles, CA: Security World Publishing, 1973.

Discusses top-security alarm systems, the methods by which they are being defeated, and the countermeasures currently available against such methods. Explains the economics of

alarm system choice, as well as the problems of police-connected alarms, the types of safes that can prevent successful attacks, and the pros and cons of the proprietary alarm located on the premises.

228. Western Behavioral Sciences Institute. Robbery Prevention: What the Literature Reveals, by M. McCormick. Prepared for the U. S. Department of Justice, Law Enforcement Assistance Administration. La Jolla, CA: Western Behavioral Sciences Institute, 1974.

A literature review and annotated bibliography dealing with robbery, the robber, and traditional and innovative methods of robbery prevention. Covers such aspects of the robbery problem as definitions, reasons for increases, motives, victims, conventional deterrence, and crime prevention through urban planning and environmental change.

229. "Why Public Housing Fails -- And a Hope for the Future," Building Design and Construction, 14(3):28-31, March 1973.

Presents the modification plans for a crime-ridden public housing project. Reduction of population density and introduction of complex surveillance and control procedures are the core of the security program.

230. Wood, Elizabeth. Housing Design, A Social Theory. New York: Citizens' Housing and Planning Council, 1961. Reprinted in Gwen Bell and Jaqueline Tyrwhitt (eds.), Human Identity in the Urban Environment, Baltimore, MD: Penguin, 1972, p. 327-351.

Contends that the present design of housing projects underwrites a philosophy of "sophisticated family individualism." Instead of furthering the development of social structures in which people can create their own social controls and do their own self-policing, the design of project housing appears to minimize or to prevent accidental and casual communications or informal gathering. It is this widespread acquaintanceship and general recognition of a community of feeling about the project, not only as a physical entity but as a society, that gives rise to social control and stimulates maintenance of the community.

231. Wright, K. G. Cost-Effective Security. New York, NY: McGraw Hill, 1973.

Presents a general introduction to securing all types and sizes of businesses against internal pilferage and crimes against property perpetrated by outsiders. Addressed to business managers, it discusses in layman's terms many issues pertaining to security.

232. Yale Univeristy. Methodological Studies in Crime Classification -- Final Report, by A. J. Reiss, Jr. Prepared for U. S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice. New Haven, CT: Yale University, June 1, 1972.

Describes a study of Detroit Police Department records for larceny/theft over the period 1965-1969, and concludes that the records are unreliable. Unreliability is attributed primarily to the lack of data on level of coercion, inaccurate estimates of the dollar value of items stolen, and the impact of inflation on estimated value.

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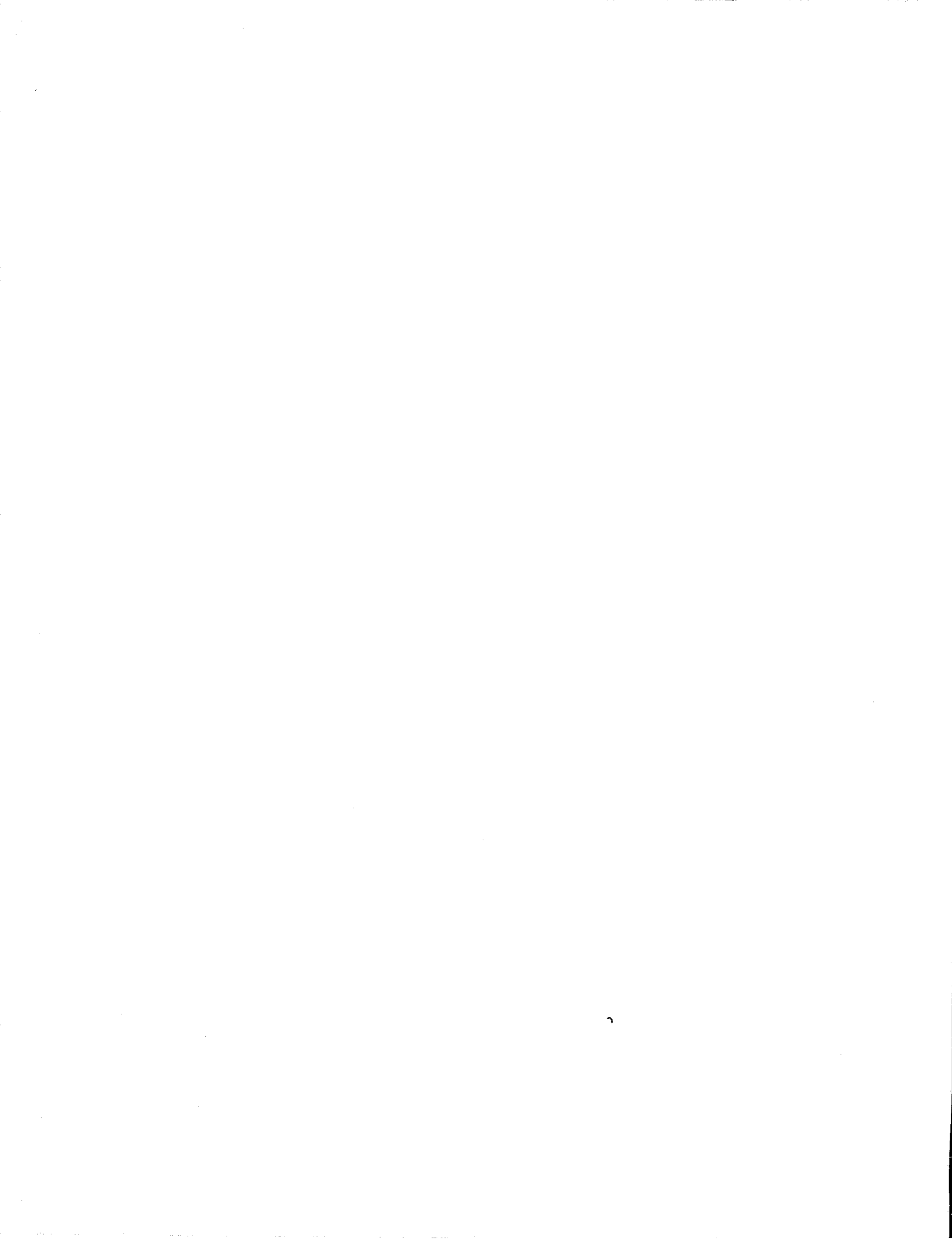
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