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COMMUNITY ORIENTED POLICING SERVICES
U.S. DEPARTMENT OF JUSTICE

Problem-Oriented Guides for Police
Problem-Specific Guides Series
No. 43

Burglary at Single-Family House Construction Sites

by
Rachel Boba
Roberto Santos





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About the Problem-Specific Guides Series

The *Problem-Specific Guides* summarize knowledge about how police can reduce the harm caused by specific crime and disorder problems. They are guides to prevention and to improving the overall response to incidents, not to investigating offenses or handling specific incidents. Neither do they cover all of the technical details about how to implement specific responses. The guides are written for police—of whatever rank or assignment—who must address the specific problem the guides cover. The guides will be most useful to officers who:

- **Understand basic problem-oriented policing principles and methods.** The guides are not primers in problem-oriented policing. They deal only briefly with the initial decision to focus on a particular problem, methods to analyze the problem, and means to assess the results of a problem-oriented policing project. They are designed to help police decide how best to analyze and address a problem they have already identified. (A companion series of *Problem-Solving Tools* guides has been produced to aid in various aspects of problem analysis and assessment.)
 - **Can look at a problem in depth.** Depending on the complexity of the problem, you should be prepared to spend perhaps weeks, or even months, analyzing and responding to it. Carefully studying a problem before responding helps you design the right strategy, one that is most likely to work in your community. You should not blindly adopt the responses others have used; you must decide whether they are appropriate to your local situation. What is true in one place may not be true elsewhere; what works in one place may not work everywhere.
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- **Are willing to consider new ways of doing police business.** The guides describe responses that other police departments have used or that researchers have tested. While not all of these responses will be appropriate to your particular problem, they should help give a broader view of the kinds of things you could do. You may think you cannot implement some of these responses in your jurisdiction, but perhaps you can. In many places, when police have discovered a more effective response, they have succeeded in having laws and policies changed, improving the response to the problem. (A companion series of *Response Guides* has been produced to help you understand how commonly-used police responses work on a variety of problems.)
 - **Understand the value and the limits of research knowledge.** For some types of problems, a lot of useful research is available to the police; for other problems, little is available. Accordingly, some guides in this series summarize existing research whereas other guides illustrate the need for more research on that particular problem. Regardless, research has not provided definitive answers to all the questions you might have about the problem. The research may help get you started in designing your own responses, but it cannot tell you exactly what to do. This will depend greatly on the particular nature of your local problem. In the interest of keeping the guides readable, not every piece of relevant research has been cited, nor has every point been attributed to its sources. To have done so would have overwhelmed and distracted the reader. The references listed at the end of each guide are those drawn on most heavily; they are not a complete bibliography of research on the subject.
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- **Are willing to work with others to find effective solutions to the problem.** The police alone cannot implement many of the responses discussed in the guides. They must frequently implement them in partnership with other responsible private and public bodies including other government agencies, non-governmental organizations, private businesses, public utilities, community groups, and individual citizens. An effective problem-solver must know how to forge genuine partnerships with others and be prepared to invest considerable effort in making these partnerships work. Each guide identifies particular individuals or groups in the community with whom police might work to improve the overall response to that problem. Thorough analysis of problems often reveals that individuals and groups other than the police are in a stronger position to address problems and that police ought to shift some greater responsibility to them to do so. Response Guide No. 3, *Shifting and Sharing Responsibility for Public Safety Problems*, provides further discussion of this topic.

The COPS Office defines community policing as “a policing philosophy that promotes and supports organizational strategies to address the causes and reduce the fear of crime and social disorder through problem-solving tactics and police-community partnerships.” These guides emphasize problem-solving and police-community partnerships in the context of addressing specific public safety problems. For the most part, the organizational strategies that can facilitate *problem-solving* and *police-community partnerships* vary considerably and discussion of them is beyond the scope of these guides.

These guides have drawn on research findings and police practices in the United States, the United Kingdom, Canada, Australia, New Zealand, the Netherlands, and Scandinavia.



Even though laws, customs and police practices vary from country to country, it is apparent that the police everywhere experience common problems. In a world that is becoming increasingly interconnected, it is important that police be aware of research and successful practices beyond the borders of their own countries.

Each guide is informed by a thorough review of the research literature and reported police practice and is anonymously peer-reviewed by line police officers, police executives and researchers prior to publication.

The COPS Office and the authors encourage you to provide feedback on this guide and to report on your own agency's experiences dealing with a similar problem. Your agency may have effectively addressed a problem using responses not considered in these guides and your experiences and knowledge could benefit others. This information will be used to update the guides. If you wish to provide feedback and share your experiences it should be sent via e-mail to cops_pubs@usdoj.gov.

For more information about problem-oriented policing, visit the Center for Problem-Oriented Policing online at www.popcenter.org. This web site offers free online access to:

- the Problem-Specific Guides series
 - the companion *Response Guides* and *Problem-Solving Tools series*
 - instructional information about problem-oriented policing and related topics
 - an interactive problem-oriented policing training exercise
 - an interactive *Problem Analysis Module*
 - a manual for crime analysts
 - online access to important police research and practices
 - information about problem-oriented policing conferences and award programs.
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The Problem of Burglary at Single-Family House Construction Sites

What This Guide Covers

This guide begins by describing the problem of burglary at single-family house construction sites and reviewing the factors that increase its risks. It then identifies a series of questions that can help analyze your local burglary problem. Finally, it reviews responses to the problem of burglary at single-family house construction sites as identified through research and police practice.

Burglary at single-family house construction sites is but one of a larger set of problems related to burglary and to construction sites. This guide focuses on burglary of building materials, tools, appliances, and small equipment from single-family house construction sites. Although there are many similarities between burglaries at single-family house sites and those at multifamily or commercial sites, the varying physical and logistical characteristics of the two types of sites require the utilization of very different crime prevention techniques. In addition, the theft of heavy construction equipment, such as backhoes and loaders, from single-family sites poses a unique crime prevention problem because of the size, cost, and mobility of such equipment. Related problems not directly addressed in this guide, each of which requires separate analysis, include:

- burglary and theft at commercial, apartment, and condominium construction sites
 - burglary of single-family houses
 - theft of heavy construction equipment
 - theft of scrap metal
 - stolen goods markets
 - vandalism at construction sites
 - insurance fraud.
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General Description of the Problem

Burglary at single-family house construction sites is the taking of property from houses under construction or from the area immediately surrounding the house. Depending upon whether the person who stole the property was lawfully on the premises or not, the crime is either defined as burglary or theft. For convenience sake, this guide will refer to both crimes as construction site burglary.

There is far less research on construction site burglary than there is on residential burglary.¹ However, construction site burglary has been recognized as a significant problem in the United States and elsewhere in the world, including Canada, Australia, Europe, and Japan.² Estimates from the United States indicate that between \$1 billion and \$4 billion worth of materials, tools, and construction equipment are stolen every year.³ The wide range of estimates is attributable to the lack of reporting to police and insurance companies by builders and contractors.⁴ Between 5 percent and 20 percent of the cost of building a residential subdivision goes to the burglary of tools and equipment.⁵ In addition to property losses, there are indirect expenses that also impact the cost of construction; these include job delays, downtime for operators, higher insurance premiums, and cancellation of insurance.⁶ These direct and indirect losses to builders and contractors are passed on to house buyers, resulting in an average increase of 1 percent to 2 percent in the price of a new house.⁷



Factors Contributing to Burglary at Single-Family House Construction Sites

Understanding the factors that contribute to the problem of single-family house construction site burglary will help to frame local analysis, to determine good effectiveness measures, to recognize key intervention points, and to select appropriate responses. The following factors make such construction sites particularly vulnerable to burglary.

Construction Material Costs

The high cost of construction materials induces some people—including some contractors—to steal materials from construction sites in order to reduce their own building costs. In recent years, there has been a dramatic increase in the price of construction materials. For example, from January 2003 to May 2004 the price index of 11 key construction materials more than doubled.⁸ Thus, the local home building economy affects construction site burglary rates. Local material shortages, including those caused by natural disasters, will similarly affect the nature and amount of construction site property stolen.⁹

Lax Builder Practices

Certain practices by building contractors can contribute to burglary. For example, delivering appliances to a site before they can be secured in the house increases the opportunity for burglary. Lax tool tracking practices can also lead to theft. Builders and contractors may save time by not checking tools in and out daily, but a lack of control and oversight can give employees the impression



that their employer does not care if tools are taken or may convince them that burglars are unlikely to be caught and prosecuted.¹⁰ Finally, many builders treat burglary as an unavoidable cost of business¹¹ and seek to offset their losses by increasing house prices.

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In this house under construction, the front door was left wide open with appliances left uninstalled in the kitchen.

Burglars

Burglars commit burglary, quite naturally, for the money. The decision to burgle is influenced by the perception of the ease with which a crime can be committed; in addition, burglars are commonly influenced by others.¹² Burglars often know their victims, who can include casual acquaintances, neighborhood residents, people to whom they have provided a service, or the friends or relatives of close friends. Burglars either do not give much weight to the potential consequences of their actions or believe that there is little chance of getting caught. And in fact they are correct: burglars are rarely caught; national burglary clearance rates are only around 13 percent.¹³ Clearance rates for construction crime in particular are not recorded nationally, but these offenders seem to be caught even less often.¹⁴



Although little specific research has been done, some researchers have classified construction site burglars into three categories: amateur opportunists, insiders (such as employees and rival contractors), and professional thieves.¹⁵ Common to all of these types is the ability to blend in with regular construction workers.¹⁶ There follows a more detailed discussion of each type of construction site burglar.

Amateur opportunists: Amateur opportunists live or travel near construction sites, see property on the site, and take it based upon an immediate evaluation of rewards and risks. They do not typically plan their crimes in advance, but rather act upon an immediate opportunity. However, they may also take property after seeing it unprotected for a long period of time as they travel past the construction site. Burglary of smaller materials and tools at times when workers are not present may indicate this type of offender.

Professional thieves: Professional thieves make their living burglarizing property and selling stolen goods. They plan their crimes in advance and tend to have an intricate knowledge of the areas where their crimes are committed. Larger hauls or the theft of high dollar items may signify an organized burglary effort.

Insiders: Insiders work for builders, contractors, or rival companies. They either have knowledge of a specific builder's construction practices and access to keys, tools, and materials, or they have a general knowledge of construction practices, such as how to disassemble an air conditioning unit or the stage at which appliances are typically delivered. Generally, a high percentage of employee thefts begin with opportunities that are regularly presented to them. If security is lacking and management is indifferent, the temptation to take items that are



improperly secured or accounted for may be too much for these individuals to resist.¹⁷ Daytime burglaries, the theft of goods with tight schedules between delivery and installation, or burglaries where complex deinstallations occur with minimal property damage may indicate that crimes are being committed by insiders.

Physical Environment of Single-Family House Construction Sites

Construction sites are interesting places. People passing by may stop to see what is being built or may even walk through the site. The simple curiosity that draws many people to construction sites also increases the probability that some people will then trespass or take unprotected property from the site.

The physical environment can affect the opportunities for crime at a particular location.¹⁸ For example, in planning their crimes, residential burglars consider occupancy cues (for example, the presence of cars, residents, and voices or other noises), surveillability cues (for example, whether they can be seen by neighbors or passersby), and accessibility cues (for example, how well the site is protected by doors, fences, or locks).¹⁹ Nearly all the cues that would prevent an offender from committing a residential burglary are typically lacking at single-family house construction sites: both the house under construction and the houses surrounding the construction site are generally unoccupied; at certain stages of construction the house has neither windows nor locking doors; and so forth. The following are specific physical features that render single-family house construction sites vulnerable to burglary.



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Example of large scale building materials being left unprotected during the early stages of a construction site.

- **Construction sites are transitional by nature.** Individual construction sites as well as entire subdivisions in which houses are under construction are transitional by nature. At each of the different stages of construction—laying the foundation, installing the roof, installing the doors and windows, locking the house—a different set of criminal opportunities is presented, because different materials are necessary and vulnerable at various times. In addition, the speed at which houses and subdivisions are built can affect the amount of time at which the construction site is at risk.
 - **Houses under construction are neither occupied nor easily watched.** A house under construction is unoccupied, so it does not have the usual level of guardianship. Whether in a subdivision or at an individual site, a house under construction may be isolated from view because it is set back from the road, situated on a large lot, or located next to nonresidential land, such as a park, waterway, or wooded area. This reduces the chance that neighbors or passersby will see or hear a burglar.
-



- **Houses under construction are easily accessed.** Houses under construction typically do not have fencing or other mechanisms that deter trespassing. Property left on the site is often left unprotected—lying on the ground, in open garages, or in a partially constructed, unsecurable house. Some property, such as air conditioner units, are vulnerable even when installed because they are located outside the house, where they are virtually unprotected.

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Example of a construction site with building materials and uninstalled doors left unprotected.

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Example of an air conditioning unit delivered and left uninstalled.



Repeat Victimization §

Patterns of repeat victimization for burglary at single-family house construction sites may not be obvious. Although a particular construction site might not be victimized repeatedly, a particular builder may be.²⁰ For example, a comprehensive study in Port St. Lucie, Florida found that although only 12 of 254 individual sites were burglarized twice, 20 percent of builders accounted for nearly 70 percent of burglaries.²¹

§ See the Problem-Solving Tools Guide on *Analyzing Repeat Victimization*.

Goods Stolen

Property taken in construction site burglaries is rarely recovered.²² However, the type of goods that are taken may indicate the motivations of the offender. Amateur opportunists may take generic building materials for use in their own houses, such as plywood, lumber, or ladders. Professional thieves may take property that can be sold in an unregulated second-hand market, such as ceramic tiles, faucets, toilets, doors, and windows.²³ Insiders may be more likely to take tools and small equipment or items that take some skill or effort to remove.

Times, Days, and Seasons

Unlike residential and commercial burglaries, there is little research that indicates when construction site burglaries predominantly occur. And in fact, because of the lack of guardianship and the large number of workers that frequent a site, it would seem that construction site burglaries could occur at any time of day and on any day of the week. However, analyzing local burglary data may allow you to determine whether burglars prefer a particular time or day, which in turn will allow you to develop responses tailored to your local circumstances.



Because there are typically no witnesses to these crimes, the exact time of occurrence may be difficult to determine. Thus, it can be helpful to analyze the length of time that the property was left as risk.

The time period after a house has lockable windows and doors but before the house is occupied is a particularly vulnerable construction stage, because a large number of desirable types of property (for example, washers, dryers, and refrigerators) are in the house during this time. Burglaries in subdivisions may occur more often during the early construction stages (such as after the laying of the foundation), but before the first residents start moving in because of the availability of desirable construction materials and the lack of guardianship. Once again, because there is no research on this topic, it is important to determine when houses under construction are most vulnerable within your community. Lastly, construction cycles and schedules vary considerably by region, due to factors such as weather and national and local economics. Anticipating booms in construction based on these factors may assist in identifying a potential problem or in determining if an existing problem will continue.



Understanding Your Local Problem

The information above is only a generalized description of burglary at single-family house construction sites. You must combine these basic facts with a more specific understanding of your local problem if you hope to design an effective remedial strategy.

Stakeholders

In addition to criminal justice agencies, the following entities have an interest in thwarting burglaries at single-family house construction sites and ought to be considered in connection with your information-gathering and problem-solving efforts:

- house builders, including both general contractors and subcontractors
- house buyers
- mortgage lending companies
- insurance companies
- neighboring homeowners
- building inspectors.

Analytical Methods

The following methods will likely be helpful in analyzing the problem of burglaries at single-family house construction sites.

Reading Police Reports

Police reports will provide a first look at your local problem. However, it can sometimes be difficult to identify burglaries that occur at construction sites,²⁴ because reports of interest might be classified as “theft,”



“vandalism,” or “criminal damage to property,” depending upon local statutory requirements and reporting protocols. Moreover, your records system may make it difficult to separate offenses occurring at single-family house construction sites from those occurring elsewhere. If standard reports do not capture the information you need, ask investigating officers to collect additional information when they make their initial police reports; for example, you might ask them to note whether there were any neighboring residences or what stage of construction the house had reached when it was burgled.

Observing Sites

Visiting and observing single-family house construction sites can help you understand the construction practices and environmental features that contribute to the burglary problem.

Crime Pattern Analysis and Mapping

Because construction site burglary is typically concentrated geographically, crime mapping can be a particularly useful analytical tool. Construction site burglary patterns that detail the method of the crime, time of day, day of week, type of property stolen, and any other important characteristics can inform patrol officers, builders, inspectors, neighborhood watches, and homeowners of recent activity in a particular area and encourage them to be on the alert for suspicious behavior.



Interviewing Detectives and Officers

Detectives and patrol officers often have undocumented knowledge about the crimes they have investigated. This information can often be elicited through personal interviews. For example, you might ask officers what they know about burglary operations they have observed or what measures they think might help in preventing burglaries.

Interviewing Builders

Interviewing builders and contractors can be crucial, because many opportunities for construction site burglaries arise through site management and mismanagement. Understanding individual and industry reporting procedures, site supervisor responsibilities, crime prevention initiatives, the relationship between builders and subcontractors, and industry-wide views on crime and victimization will factor directly into understanding your local problem. In addition, such interviews will allow you to gather firsthand information on the efficacy of particular anticrime initiatives, such as the use of security guards and fencing, the initiation of reward programs, the utilization of burglary alarms and locking containers, and the delayed installation of appliances.²⁵ Interviews should not be done haphazardly; rather, key questions should be developed beforehand to facilitate the information-gathering process. The questions listed in the following section can provide direction for these interviews.



§ The Port St. Lucie (Florida) Police Department developed a scale to rate the difficulty of each burglary. The scale took into account the amount of skill, the type of transportation, and the time necessary to complete the crime, as well as the accessibility of the stolen property within the site. For additional details, see Boba (2005).

Interviewing Local Building Inspectors

Local building inspectors and other government personnel may be able to provide information about municipal policies and regulations that directly affect burglary opportunities. They may also have insights into industry practices that are effective in preventing burglary.

Asking the Right Questions

There follow some critical questions you should ask when analyzing your local burglary problem. Your answers to these and other questions will help you choose the most appropriate set of responses later on.

Incidents

- How many burglaries at single-family house construction sites are reported?
 - What proportion of these burglaries is reported to police? Does a sizable proportion of burglaries go unreported? If so, why?
 - What is the clearance rate for these burglaries?
 - What methods are used to commit these burglaries? Forced entry? Unforced entry? Burglars posing as construction workers? Employee theft?
 - How much property is typically stolen? Quantity? Dollar values?
 - What other costs are incurred because of these burglaries? Repair costs? Lost business? Increased insurance premiums?
 - How difficult are the burglaries to commit?§
 - Are there patterns that link offenders, builders, subcontractors, or types of property across cases?
 - Are new houses or renovated houses more likely to be targeted?
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Premises

- How exposed are the burgled houses? How close are they to major thoroughfares, parks, or other public spaces?
- What is the nature of the surrounding neighborhood?
- What type of fencing exists?
- What types of security do the sites have? What types of security are in use?
- What types of houses under construction are burglarized? One-story or two-story? Large or small?
- Are the houses in major subdivisions under construction or in individual lots spread throughout the community?
- At what stage of building is the property at the time of the burglary?
- Was the house securable at the time of the burglary? Was it actually secured?

Property

- What type of goods are stolen? Appliances? Tools and small equipment? Building materials? Wiring and other metal that can be sold for scrap?
 - What is the actual value of the property? What is the value of the property on the stolen goods market?
 - How do burglars take the goods from the scene? In a vehicle? On foot?
 - Are tools needed to remove the stolen items?
 - Are the stolen items installed or uninstalled?
 - How do burglars dispose of the goods? Private sales? Barter? Pawn shops? Second-hand building materials shops?
 - How often is property recovered? How is it typically recovered?
-



Builders

- Are certain builders more likely to be victimized than others? If so, why? (Calculating a burglary rate that accounts for the number of burglaries and the quantity of houses built by each builder can be helpful in answering this question.)
- How long have the builders been in business? Are experienced or inexperienced builders more likely to be victimized?
- Do builders have their own employees or do they use subcontractors?
- How many construction sites are potential targets?
- What crime prevention strategies do the builders use?
- Is there a builder liaison group?
- Is there meaningful supervision of construction sites?
- What are delivery and installation practices for appliances and building materials?
- What are the employee and subcontractor policies for theft and equipment management?
- Is there evidence of collusion between employees and burglars?
- Who holds the insurance policy for property loss or damage at the house? The builder or subcontractor? The finance company? The homeowner? Are claims typically filed for theft and damage?
- Are insurance companies aware of the problem? If so, what measures have they taken to reduce their losses?

Offenders

- Do burglars know either the builder or the homeowner?
 - Are there many different offenders involved or is a small group of prolific offenders responsible?
 - Do burglars belong to any particular group? Age? Ethnicity? Occupation?
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- Why do the burglars offend? To exchange the stolen property for cash? To acquire and use the stolen property?
- Do the crimes show evidence of planning or did the burglars take advantage of easy opportunities?
- Do burglars appear to know the burgled premises? If so, how do they get their information?
- Where do burglars live, work, or hang out?
- Where are burglars coming from and how do they get to the burglary locations? On foot? In vehicles?
- Are burglars drawn to the area by burglary opportunities or for some other reason?
- How do burglars dispose of stolen goods? Home use? Sale? Exchange?

Locations/Times

- When do the burglaries occur? During the work day or after hours?
 - How long do burglaries take? How long is property left at risk? What is the time span during which burglaries can occur?
 - On what days of the week do burglaries occur? Weeks of the month? Months of the year?
 - Are there seasonal variations in the burglaries? Are there seasonal variations in construction?
 - Where do burglaries occur? Is the problem concentrated in one area or do they affect the whole jurisdiction?
 - Are individual sites repeatedly victimized?
 - Is the construction site located near other sites that have previously been burglarized?
-



Measuring Your Effectiveness

Measurement will allow you to determine the degree to which your efforts have succeeded and may also suggest how your responses can be modified to produce the intended results. In order to determine how serious the problem is, you should first measure the extent of the problem before you implement responses; in that way, measuring the problem after responses have been implemented will allow you to determine whether your solutions have been effective. All measures should be implemented in both the target area and the surrounding areas. For more detailed guidance on measuring effectiveness, see Problem-Solving Tools Guide No. 1, *Assessing Responses to Problems: An Introductory Guide for Police Problem-Solvers*.

When evaluating a response, you should use measures that specifically reflect its impact. In that regard, it is important to remember that when a response is initially implemented the reporting of crime may rise because of an increased awareness of criminal activities and increased cooperation with police.

The following are potentially useful measures of the effectiveness of responses to burglary at single-family house construction sites.

- Reduced number of burglaries in the target area. Comparing the target area with surrounding areas will allow you to determine whether your response is working or whether local events are part of a larger general trend. Remember, however, that the number of reported burglaries may increase after burglary prevention efforts are initiated due to increased public awareness and more rigorous reporting standards.
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- Reduced number of burglaries for individual builders. If the response is focused on the builders who are suffering the most crime, compare their victimization rates to those of other builders.
- Reduced number of builders burglarized.
- Reduced dollar value loss, due either to fewer total burglaries or to the loss of fewer high-value items.
- Changes in the difficulty of burglaries. An increase in difficulty might indicate that sites are being better secured, thus causing burglars to redouble their criminal efforts. Conversely, a decrease in difficulty might indicate that crimes are being committed by burglars with inside information and easy site access.
- Decreased financial losses and insurance claims.

The following criteria, although not necessarily indicative of a successful outcome, may indicate that your responses have had the intended effect.

- Increased proportion of builders following recommended crime prevention practices, such as tightening delivery schedules or locking up tools and materials.
 - Increased number of burglary arrests and burglaries cleared.
 - Increased number of burglary prosecutions and convictions.
 - Increased amount of stolen goods recovered. Note, however, that such increases are more likely to reflect a specific focus on stolen property recovery than on burglary reduction efforts.
 - Greater perception of security among builders, supervisors, police, and homeowners.
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Responses to the Problem of Burglary at Single-Family House Construction Sites

Analyzing your local problem will give you a better understanding of the factors that contribute to it. Once you have analyzed your local problem and established a baseline for measuring effectiveness, you can consider possible responses to the problem.

The following responses will provide a foundation for addressing your particular burglary problem. These strategies are drawn from research studies and police practice and are generally based on opportunity blocking. It is critical that you tailor responses to local circumstances and that you can justify each response based upon reliable analysis. Several of these strategies may apply to your local problem; and in fact, an effective remedial strategy will likely involve the implementation of several different responses.

Because law enforcement alone is seldom effective in reducing or solving the problem, do not limit yourself to considering only what police can do; rather, carefully consider whether others in your community share responsibility for the problem and whether they can help respond to it. In some cases, responsibilities may need to be shifted toward those who have the capacity to implement more effective responses. (For more detailed information on shifting and sharing responsibility, see Response Guide No. 3, *Shifting and Sharing Responsibility for Public Safety Problems*). Building partnerships and working towards a collective response with the various stakeholders is essential to success.[§] This is particularly true in regard to construction site burglaries, because so many of the factors that contribute to the problem are related to building practices.

[§] See Problem-Solving Tools Guide No. 5 on *Partnering With Businesses to Address Public Safety Problems*.



General Considerations for an Effective Response Strategy

There is little research evaluating responses to the problem of construction site burglaries. Therefore, the responses discussed below emphasize appropriate and practical opportunity blocking. Blocking criminal opportunities often has a greater direct effect on offenders than do other crime prevention strategies.²⁶

Police should establish cooperative working relationships with builders. In turn, builders should share information about burglary problems and patterns, local building practices, and loss prevention efforts. Builders should be encouraged to provide police with after-hour contact numbers, documentation of stolen appliances, and tool serial numbers.

If it can be established that certain houses are at a high risk for victimization, response measures can be concentrated at those locations. For example, the Port St. Lucie (Florida) Police Department determined that houses in the final stages of construction were at a higher risk of burglary and used this information to target police attention.²⁷

Specific Responses to Reduce Burglary at Single-Family House Construction Sites

Improving Builder Practices

1. Limiting the number of construction sites supervised. In order to provide meaningful supervision of construction sites, builders should limit the number of sites for which each supervisor is responsible. This



will allow supervisors a better opportunity to monitor materials, workers, and deliveries. In an example of such a program, the Port St. Lucie (Florida) Police Department convinced a builder to reduce each supervisor's responsibility from 30 to 35 houses to 15 to 20 houses.²⁸

2. Coordinating delivery and installation. Coordinating deliveries of materials and appliances so that they are delivered and installed close to the time that the items will be secured or the house will be occupied can reduce their exposure to theft. Materials left unattended or unsecured for long periods of time can entice both opportunistic burglars and construction workers. Builders should install expensive high risk items as close to the end of construction as possible; in some cases it may even be possible to install the items after the house is occupied. A project in Charlotte, North Carolina focused on delaying the installation of plug-in appliances until immediately prior to or just after occupancy.²⁹

Examples of poor coordination of deliveries include:

- framework and roof trusses being delivered before the slab has been laid
- windows being delivered before the roof has been installed
- bricks being delivered before the frame stage has been started
- dishwashers, ranges, refrigerators, and other appliances being delivered before locking doors and windows are installed.

3. Screening and training workers and subcontractors.

Whenever possible, builders should screen prospective employees and subcontractors, including both criminal and financial background checks. Builders should clarify, emphasize, and enforce rules that prohibit the taking of construction tools, materials, and property that have



[§] The microchip tags used by Celebrity Houses were supplied by tool maker Bosch, whose Safe and Sound tool tracking system is an alternative to the common practice of engraving or marking (O'Malley, 2005).

been delivered for use onsite. Workers should be taught to recognize and report suspicious activity and signs of burglary and reminded of crime prevention measures that they themselves can take.

4. Limiting the hiring of subcontractors. Builders should be encouraged to maintain a consistent workforce that is familiar with their rules, practices, and attitudes toward misappropriation of property. Builders who use subcontractors who in turn hire other subcontractors are likely to be at a higher risk of being burglarized.

5. Having a system for tracking tools. There are various tool tracking systems that can be used to limit opportunities for burglary. Some builders designate one person to track the use of tools, which can help instill a sense of accountability in workers and reinforce the perception that management is watching over inventory. Others builders, like Celebrity Homes in Omaha, Nebraska, fit their tools with microchips. The site foreman scans the tools before they are issued, recording information such as the date, time, and the name of the worker to whom the tool is issued; the foreman then scans the tools again when they are returned.^{30, §} Yet other builders provide each site supervisor with a budget for tools and hold the supervisor to account—through bonuses or penalties—at the completion of the job.³¹

6. Encouraging the hiring of loss prevention personnel. Large builders especially should be encouraged to retain the services of professional loss prevention specialists who have expertise in preventing and solving burglaries and who can work closely with police and other builders to control burglary.



7. Employing onsite private security patrols. The construction industry regards the use of security patrols as one of the most effective means of reducing and preventing construction site crime.³² Security patrols are a visible, proactive burglary deterrent. This form of guardianship can increase a potential offender's perception that he is likely to be apprehended. In fact, burglars say that security guards pose the greatest threat to their activities.³³

8. Establishing an employee hotline to report crime. Many individual builders and builder associations have established hotlines that allow callers to report crime anonymously. Callers can receive cash awards if the information leads to an arrest.³⁴ Employee hotlines have not been systematically evaluated; however, recent research indicates that employees are less likely to steal when they believe there is a high probability of apprehension. The study found that the threat of being punished by coworkers had a greater deterrent effect than did the threat of punishment by management.³⁵ Thus, it is reasonable to believe that hotlines have the potential to increase an offender's perception of apprehension if other tradespeople have a mechanism to report them and are encouraged to do so.

Some companies have found that hotlines are a cost effective way to control theft.³⁶ In Northern California, a hotline system that rewards individuals up to \$1,000 is funded through membership dues, association contributions, and a grant. In 2003, the system paid out \$8,000 in rewards and recovered over \$2 million in stolen property.^{37, §}

§ A survey conducted of ten large U.S. retail companies, which represented almost 50 percent of U.S. stores, found that a hotline with some sort of rewards (for example, cash) was effective in convincing employees to report theft. The survey indicated that successful programs create a supportive environment in which reporting mechanisms and participation incentives are sufficient to encourage employees to report theft or other inappropriate behavior by their coworkers (Scicchitano, Johns, and Blackwood, 2004). See Scicchitano, Johns, and Blackwood (2004) for a summary of the use of toll-free hotlines for reporting dishonesty, techniques for encouraging the use of the hotlines, and recommendations for companies that want to implement hotlines.



9. Adopting and enforcing antitheft policies.

Construction site workers who are tempted to steal are likely to be deterred by the threat of being fired. Offenders who are convicted of construction site crime should be fired and restricted from obtaining other positions in the industry. This message should be consistently reinforced: for example, contractors can require newly hired employees to sign a no-stealing contract; builders can speak out publicly on these issues at meetings or in the media; workers can be reminded of specific policies through company newsletters or via signs posted at the construction sites; and so forth.

Target Hardening

10. Improving lighting at construction sites. Proper lighting can deter burglars both by illuminating security measures in place at the construction site and by increasing the ability of passersby and police to observe suspicious activity at the site. A systematic review of the effects of improved street lighting on reducing crime indicated some promise. Although an evaluation of 13 studies from the United States and Great Britain had mixed results—some studies indicated a reduction while others did not—an analysis of all 13 studies showed an overall 20 percent reduction in the crime rate.³⁸

The Casey city council in Victoria, Australia initiated a policy that mandated street lighting for construction areas. Prior to the initiative, street lighting was activated when the first occupants moved in, which meant that there was no street lighting during construction in unoccupied areas. The new policy authorized the activation of street lights at the time of the release of each subdivision.³⁹



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Example of target hardening of construction equipment.

§ See Response Guide No. 4 on *Video Surveillance of Public Places*.

§§ See Problem-Specific Guide No. 5 on *False Burglar Alarms*.

11. Installing and monitoring closed circuit television.

Closed circuit television (CCTV) has been shown to be effective in deterring property crime. Evaluations of CCTV reveal that it is effective where an adequate number of cameras cover a particular area as well as on sites with limited and controlled access points.^{40, §} In order to provide such coverage, portable towers equipped with cameras can be placed at strategic site locations.⁴¹

12. Installing alarm systems. Alarm systems can be a cost-effective deterrent in high risk areas. There are a number of different alarms available, including wireless systems that can be adapted to the environment (for example, for use in onsite storage containers). Some wireless alarms can be installed at any stage of the construction, without the need for pre-wiring or other electrical work.⁴² Signs indicating that alarms are in use should be prominently displayed to reinforce the deterrent effect. However, care should be taken to ensure that false alarms do not drain police resources.^{§§}



13. Using portable storage units. Properly secured storage units should be used for materials that are kept at construction sites overnight. These units should be equipped with wireless audible alarms and locks that prevent the use of bolt cutters.

14. Installing fencing. Properly constructed and secured fences can control access to construction sites. Temporary wire fencing may be the most appropriate and cost effective for larger construction sites. A temporary fencing system can be easily erected, dismantled, and reused. Fencing also serves as a deterrent by clearly identifying site boundaries.

15. Marking property. Marking property with identification helps control burglary in three ways: it warns burglars that owners are monitoring their property, it discourages potential buyers of stolen property, and it increases the probability that recovered property will be returned to its rightful owner. However, property marking efforts have had mixed results. Property marking appears to be most effective when extensive efforts to enlist participation and cooperation are combined with a media campaign warning burglars that marking will reduce the property's value and make disposal difficult.⁴⁵ Ideally, all portable building materials, including doors, windows, bricks, and tiles, should be marked at the point of manufacture with specific builder or construction site identification. The markings from each construction site should then be recorded. Signs should be prominently posted on the construction site indicating that items have been marked.



16. Installing global positioning satellite locator chips.

Global positioning satellite (GPS) locator chips can be used to track and recover high-end appliances and equipment. If the property is stolen, the chip allows the builder or the police to monitor its movement by computer. This is most useful for high risk property when a specific crime pattern has been identified or when information has been received from a confidential informant.

17. Displaying crime prevention signage. Prominently and strategically displayed signage can inform potential burglars that builders and police are working to reduce theft from construction sites. Well-designed, sturdy signs that can easily be modified and used at different sites can be a cost-effective prevention measure.⁴⁴

Port St. Lucie (Florida) Police Department



Template of a sticker placed on major appliances to increase the perception of risk of being caught.



Police Responses

[§] See Response Guide No. 5 on *Crime Prevention Publicity Campaigns*.

18. Enhancing natural surveillance. Once a construction site burglary problem has been identified, police can contact residents, builders, and other groups and individuals likely to be in the area and request their assistance in reporting suspicious behavior. “Reverse 911 systems,” including those that use autodialers, can be used to communicate efficiently with a large but targeted population.

19. Making use of publicity.[§] Many police agencies and other groups have developed publicity campaigns aimed at combating construction site crime. These campaigns publicize crime detection and prevention efforts in a variety of ways: through newspaper articles designed to increase community awareness and to remind residents to be on the look out for suspicious behavior; through brochures detailing the nature of the problem and delineating crime prevention tips; and through informational letters to builders and homeowners in high risk areas.⁴⁵ In addition, local mass media programs such as Crime Stoppers can be useful for soliciting tips about construction site burglaries. Publicizing the arrest of burglars can also enhance general deterrence and discourage builders from hiring these individuals. Police should consult local legal counsel about the proper wording of such notices.



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Insiders top suspects in construction site thefts, report says

By Will Greenlee
staff writer

PORT ST. LUCIE — Insiders, including builders and subcontractors, are widely suspected of being responsible for local construction site burglary and theft-related incidents, but the number of crimes is relatively small, a recently-obtained report claims.

The report, written by Rachel Boba, an assistant professor at Florida Atlantic University, made a variety of suggestions to combat the issue, such as focusing on repeat victims and pattern identification.

"There's so many construction sites in various stages of construction, to try to monitor all of them would be very, very difficult," Assistant Police Chief Brian Reuther said Wednesday. "That's why it requires the contractors and the subs and everyone to get on board and try to eliminate this problem."

There were 266 construction site burglary and theft-related activities last year, or an average of 22 per month. This appears to be a small number considering more than 6,000 homes are being built at any time.

The crimes seem to occur in the middle of a block in isolated areas with few neighbors. The majority happen in the city's western and southwestern sections — where most of the building is occurring.

Of those analyzed in the report, 20 percent of builders victimized account for almost 70 percent of the crimes.

Most of the crimes committed aren't in gated communities and require a great level of skill, while the analysis and the experience of builders, the building department and officers suggest insiders are responsible.

"These crimes tend to take an elevated level of skill, the property is not easily accessible and they occur when the house is securable," the report states. "The types of property taken are those types that insiders might easily use in their work or have specific knowledge about the installation timing and skills needed to remove the property."

The report, which included a lengthy section on institutionalization of problem analysis at the department to better fight crime, suggested contrasting the top five victimized builders with those that have few burglaries and many sites.

Boba said police met recently with several builders, including Renar Homes, which had the largest number of reported incidents last year. She said Renar has changed some of its practices, and reduced crimes.

- will.greenlee@scripps.com
- Post a comment on TCPalm.com

This article was published along with other tailored responses in the community.



20. Disrupting stolen goods markets. Although there is little research on its effectiveness, requiring pawnshops to keep adequate records of the goods they purchase is regarded as a sensible measure geared toward disrupting stolen goods markets.⁴⁶ In many jurisdictions, the recording of such information and its transmission to police has been automated. Strategies for disrupting the sale of stolen goods include conducting surveillance of stores suspected of dealing in stolen property, encouraging stores that buy used property to display signs stating that they are part of a program designed to prevent the sale of stolen goods, and enacting ordinances that require stores to establish the ownership of used goods before they are purchased.

Responses With Limited Effectiveness

21. Police patrolling of construction sites. Research suggests that preventative police patrolling is an ineffective measure for dealing with the problem of construction site burglary.⁴⁷ Because of the large number of potential targets, general police patrols of construction sites are unlikely to deter crime or apprehend offenders. Focused patrols of particular subdivisions or of houses that are at vulnerable stages of construction may be a more useful response.

22. General surveillance and “bait” operations. General surveillance and bait operations are very expensive and have limited effectiveness in apprehending offenders. However, if used tactically with established patterns or confidential informants, they may be successful and cost effective.



23. Conducting fencing “sting” operations. Sting operations, in which police set up bogus fencing operations, are both expensive and time-consuming. In addition, research suggests that they often generate more crime than they prevent.⁴⁸

24. Increasing penalties for burglars. The chance of a residential burglar getting caught and sentenced is about 5 percent; for construction site burglars the percentage can be even lower. One study suggests that increased penalties alone do not deter burglars from offending; rather, increased penalties deter offenders only if they are combined with an increased perception of risks or a decreased anticipation of reward.⁴⁹



Appendix: Summary of Responses to Burglary at Single-Family House Construction Sites

The table below summarizes the responses to burglaries at single-family house construction sites, the mechanism by which they are intended to work, the conditions under which they ought to work best, and some factors that should be considered before a particular response is implemented. It is critical that you tailor responses to local circumstances and that you can justify each response based upon reliable analysis. In most cases, an effective strategy will involve implementing several different responses; law enforcement alone is seldom effective in reducing or solving the problem.

Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
<i>Changing Building Practices</i>					
1	22	Limiting the number of construction sites supervised	Increases the amount of meaningful guardianship over individual construction sites	. . . there is an adequate number of employees	Supervisors may be able to handle a higher number of sites in subdivisions where houses are centrally located, as opposed to sites that are spread out across a large geographical area
2	23	Coordinating delivery and installation	Decreases the time between delivery and installation to reduce opportunity for theft; eliminates the opportunity for theft when installation is delayed until occupancy	. . . the time between delivery and installation is as short as possible; immediate installation after delivery or installation after occupancy is preferable	Check state and local requirements relating to the installation of appliances; it is sometimes the case that the financier requires appliances to be installed before the closing of construction



Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
3	23	Screening and training workers/ subcontractors	Promotes trustworthy employees and helps them recognize and report criminal behavior	. . . there is low employee turnover and a minimal number of subcontractors	Where permitted by law, employers should conduct criminal and financial background checks of both potential employees and subcontractors
4	24	Limiting the hiring of subcontractors	Promotes trustworthy employees who know a builder's policies and procedures	. . . there are an adequate number of workers and subcontractors in the local market	In some locales, this may not be possible because of a small workforce or a high volume of construction
5	24	Having a check out system for tools	Records data on individuals responsible for tools; instills both a sense of accountability and the perception that management is watching inventory	. . . one person at a site or subdivision is responsible for the system	Consistent use of the system
6	24	Hiring of loss prevention personnel	Devotes individual attention to preventing and solving burglaries; the specialist can also be a liaison between police and other stakeholders	. . . the company can afford a full-time loss prevention specialist	May be difficult to convince builders who believe that losses due to burglary are merely a cost of doing business



Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
7	25	Employing onsite private security patrols	Produces a visible, pro-active deterrent, which may discourage offenders from committing burglaries	. . . sites are clustered together or are located in a subdivision	Communication, guidelines, and reporting procedures are essential to maximizing the benefits of security patrols. Patrols should be periodically evaluated to ensure they are being used properly. For the cost-conscious, it may be possible to create a perception of security through signage that says “Protected by Acme Security Company” or “Beware of Guard Dogs”; fake security cameras can also be an effective deterrent
8	25	Establishing an employee hotline to report crime	Increases an offender’s perception of being apprehended by providing an anonymous way for coworkers to report criminal behavior	. . . the builder encourages use of the hotline and provides cash rewards or other incentives	A successful reporting program provides the mechanisms, incentives, and environment to encourage employees to report theft or other inappropriate behavior by their coworkers



Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
9	26	Adopting and enforcing antitheft policies	Enforces a zero tolerance position on crime and lets potential offenders know criminal behavior is not acceptable	. . . the message is consistently and regularly presented to employees and the policies are strictly enforced	May be difficult for builders to enforce when there is a high volume of construction and a shortage of workers
<i>Target Hardening</i>					
10	26	Improving lighting at construction sites	Indicates security measures are in place at the construction site; increases observation of the site by passersby; allows people to observe incidents without taking personal risks	. . . there is appropriate lighting for the environment	Electricity may not be available
11	27	Installing and monitoring closed-circuit television	Deters potential offenders; provides evidence of offending for apprehension and prosecution	. . . cameras are portable, well-positioned and not easily disabled; there is adequate lighting at night	Expensive, but can be motion sensitive; most useful in high risk areas
12	27	Installing alarm systems	Deters potential offenders; quickly alerts builders and police	. . . if triggered alarms are promptly investigated	High percentage of false alarms; signs indicating the use of an alarm should be displayed to reinforce the deterrent effect



Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
13	28	Using portable storage units	Stores materials that will be kept at the construction site overnight	. . . the construction sites are in a subdivision	Can be equipped with an alarm and a lock that is resistant to bolt cutters
14	28	Installing fencing	Provides a visible deterrent by clearly identifying site boundaries; controls access to the site	. . . used in larger construction sites or subdivisions	Limiting access may frustrate employees
15	28	Marking property	Deters potential offenders from taking property that they believe builders are monitoring; allows police to return recovered property	. . . desirable property can be marked	Requires builder participation and investigative follow up; publicity increases the benefits
16	29	Installing global positioning satellite (GPS) locator chips	Enables builders to track and recover larger appliances and equipment	. . . the builder has reason to believe that property will be taken (for example, from a confidential informant)	System must be monitored and can be expensive



Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
17	29	Displaying crime prevention signage	Can convince potential burglars that builders and police are monitoring sites and enacting crime prevention measures	. . . signage is professionally designed and produced as well as prominently and strategically displayed	Signage alone may be a cost-effective deterrent to novice offenders; however, its deterrent effect can deteriorate over time
<i>Police Responses</i>					
18	30	Enhancing natural surveillance	Requests assistance of neighborhood residents and other groups likely to be in a particular area	. . . a construction site burglary problem has been identified in a particular area	“Reverse 911,” including those with autodialers, can be used to communicate with a targeted population
19	30	Making use of publicity	Influences a potential offender’s perception of risk; provides information about defining and reporting suspicious behavior	. . . campaigns are carefully timed	Any attempt to use publicity to prevent or deter crime must be credible
20	32	Disrupting markets for stolen goods	Reduces rewards for offenders by preventing them from profiting from their crimes	. . . the goods are being sold in second-hand markets	Can be difficult to obtain information about how and where offenders sell or exchange stolen goods; stings are expensive and time-consuming



Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
<i>Responses With Limited Effectiveness</i>					
21	32	Police patrolling of construction sites	Increases guardianship	. . . patrols are focused on sites and subdivisions at the most vulnerable stages of construction	Difficult for officers to apprehend offenders
22	32	General surveillance and bait operations	Property is placed to tempt offenders; police stake out the crime scene or place GPS locators on the property	. . . used tactically with established patterns or confidential informants	The equipment is expensive
23	33	Conducting fencing sting operations	Police set up bogus operations to buy stolen property	. . . police have specific information about a large theft operation	Research suggests that these operations may generate more crime than they prevent
24	33	Increasing penalties for burglars	Raises the penalties for burglary; specifically deters criminals	. . . offenders are apprehended	Increased penalties deter offenders only if combined with greater perceived risks or fewer anticipated rewards



Endnotes

- ¹ Clarke and Goldstein (2002).
 - ² Alberta Report (1999); Berg and Hinze (2005); Lambertson (2005).
 - ³ Barrios (2005); Berg and Hinze (2005); Lambertson (2005); Sanchez (2000).
 - ⁴ Barrios (2005); Bellet (2004); Lambertson (2005).
 - ⁵ Heselbarth (1999).
 - ⁶ Berg and Hinze (2005).
 - ⁷ Alberta Report (1999); O'Malley (2005); Patton (2005); Sanchez (2000).
 - ⁸ Bouffard (2004); Bradley (2005); Scarcella (2005).
 - ⁹ Barrios (2005).
 - ¹⁰ Berg and Hinze (2005).
 - ¹¹ Clarke and Goldstein (2002).
 - ¹² Piquero and Rengert (1999).
 - ¹³ FBI (2004).
 - ¹⁴ Boba (2005).
 - ¹⁵ Boba (2005); Clarke and Goldstein (2002); Hansen (1999).
 - ¹⁶ Clarke and Goldstein (2002); Wright (1994).
 - ¹⁷ Fennelly (1996).
 - ¹⁸ Felson and Clarke (1998).
 - ¹⁹ Cromwell, Olsen, and Avary (2002); White (1990).
 - ²⁰ Boba (2005); Duff (1999).
 - ²¹ Boba (2005).
 - ²² Berg and Hinze (2005); O'Malley (2005).
 - ²³ Bradley (2005).
 - ²⁴ Clarke and Goldstein (2002); Barrios (2005); Boba (2005).
 - ²⁵ Clarke and Goldstein (2002).
 - ²⁶ Eck (2002).
 - ²⁷ Boba (2005).
 - ²⁸ Santos and Boba (2005).
 - ²⁹ Clarke and Goldstein (2002).
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- ³⁰ O'Malley (2005).
³¹ Heselbarth (1999).
³² Crime Prevention Victoria and City of Casey (2003).
³³ Butler (1994).
³⁴ Anderson (1999); Construction Industry Crime Prevention Program (2005); Construction Industry Advancement Program of New Jersey (2005); Heselbarth (1999).
³⁵ Parilla, Hollinger, and Clark (1988).
³⁶ Traub (1996); Greenberg (1997).
³⁷ Construction Industry Crime Prevention Program (2005).
³⁸ Farrington and Welsh (2002).
³⁹ Crime Prevention Victoria and City of Casey (2003).
⁴⁰ Painter and Tilley (1999); Welsh and Farrington (2004); Gill and Spriggs (2005).
⁴¹ Roberts (2005).
⁴² Crime Prevention Victoria and City of Casey (2003).
⁴³ Laycock (1991).
⁴⁴ Crime Prevention Victoria and City of Casey (2003).
⁴⁵ Crime Prevention Victoria and City of Casey (2003).
⁴⁶ Fass and Francis (2004).
⁴⁷ Weisburd and Eck (2004).
⁴⁸ Langworthy and LeBeau (1992).
⁴⁹ Decker, Wright, and Logie (1993).
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About the Authors

Rachel Boba

Rachel Boba is an assistant professor of Criminology and Criminal Justice at Florida Atlantic University. She teaches methods of research, criminal justice systems, crime prevention, problem solving, and analysis in policing, as well as conducting research in the areas of problem solving, accountability, problem analysis, and crime analysis. Previously, Dr. Boba was Director of the Police Foundation's Crime Mapping Laboratory, where she directed federally funded grants in the areas of crime analysis and crime mapping, problem analysis, and school safety. She has also worked as a crime analyst at the Tempe, Arizona Police Department, where she conducted a wide variety of crime analysis. Most recently, Dr. Boba has published the book *Crime Analysis and Crime Mapping* with Sage Publications, Inc., one of the first crime analysis books for undergraduate and graduate students. Dr. Boba holds a doctorate and master's degree in sociology from Arizona State University.

Roberto Santos

Roberto Santos is currently detective sergeant of the persons crime section and team leader of the crisis negotiation unit at the Port St. Lucie (Florida) Police Department. He has held positions in patrol, SWAT, criminal investigations, and narcotics. Prior to his law enforcement career, Sergeant Santos was a sergeant in the United States Marine Corps. In addition, he has instructed at the police academy and is an adjunct professor at Florida Atlantic University. He has extensive experience in police problem solving and problem analysis and has conducted numerous trainings sessions and seminars around the country. Sergeant Santos has a master's degree in criminology and criminal justice from Florida Atlantic University and a bachelor's degree in business from Barry University.



Recommended Readings

- **A Police Guide to Surveying Citizens and Their Environments**, Bureau of Justice Assistance, 1993. This guide offers a practical introduction for police practitioners to two types of surveys that police find useful: surveying public opinion and surveying the physical environment. It provides guidance on whether and how to conduct cost-effective surveys.
- **Assessing Responses to Problems: An Introductory Guide for Police Problem-Solvers**, by John E. Eck (U.S. Department of Justice, Office of Community Oriented Policing Services, 2001). This guide is a companion to the *Problem-Oriented Guides for Police* series. It provides basic guidance to measuring and assessing problem-oriented policing efforts.
- **Conducting Community Surveys**, by Deborah Weisel (Bureau of Justice Statistics and Office of Community Oriented Policing Services, 1999). This guide, along with accompanying computer software, provides practical, basic pointers for police in conducting community surveys. The document is also available at www.ojp.usdoj.gov/bjs.
- **Crime Prevention Studies**, edited by Ronald V. Clarke (Criminal Justice Press, 1993, et seq.). This is a series of volumes of applied and theoretical research on reducing opportunities for crime. Many chapters are evaluations of initiatives to reduce specific crime and disorder problems.



- **Excellence in Problem-Oriented Policing: The 1999 Herman Goldstein Award Winners.** This document produced by the National Institute of Justice in collaboration with the Office of Community Oriented Policing Services and the Police Executive Research Forum provides detailed reports of the best submissions to the annual award program that recognizes exemplary problem-oriented responses to various community problems. A similar publication is available for the award winners from subsequent years. The documents are also available at www.ojp.usdoj.gov/nij.
 - **Not Rocket Science? Problem-Solving and Crime Reduction**, by Tim Read and Nick Tilley (Home Office Crime Reduction Research Series, 2000). Identifies and describes the factors that make problem-solving effective or ineffective as it is being practiced in police forces in England and Wales.
 - **Opportunity Makes the Thief: Practical Theory for Crime Prevention**, by Marcus Felson and Ronald V. Clarke (Home Office Police Research Series, Paper No. 98, 1998). Explains how crime theories such as routine activity theory, rational choice theory and crime pattern theory have practical implications for the police in their efforts to prevent crime.
 - **Problem Analysis in Policing**, by Rachel Boba (Police Foundation, 2003). Introduces and defines problem analysis and provides guidance on how problem analysis can be integrated and institutionalized into modern policing practices.
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- **Problem-Oriented Policing**, by Herman Goldstein (McGraw-Hill, 1990, and Temple University Press, 1990). Explains the principles and methods of problem-oriented policing, provides examples of it in practice, and discusses how a police agency can implement the concept.
 - **Problem-Oriented Policing and Crime Prevention**, by Anthony A. Braga (Criminal Justice Press, 2003). Provides a thorough review of significant policing research about problem places, high-activity offenders, and repeat victims, with a focus on the applicability of those findings to problem-oriented policing. Explains how police departments can facilitate problem-oriented policing by improving crime analysis, measuring performance, and securing productive partnerships.
 - **Problem-Oriented Policing: Reflections on the First 20 Years**, by Michael S. Scott (U.S. Department of Justice, Office of Community Oriented Policing Services, 2000). Describes how the most critical elements of Herman Goldstein's problem-oriented policing model have developed in practice over its 20-year history, and proposes future directions for problem-oriented policing. The report is also available at www.cops.usdoj.gov.
 - **Problem-Solving: Problem-Oriented Policing in Newport News**, by John E. Eck and William Spelman (Police Executive Research Forum, 1987). Explains the rationale behind problem-oriented policing and the problem-solving process, and provides examples of effective problem-solving in one agency.
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- **Problem-Solving Tips: A Guide to Reducing Crime and Disorder Through Problem-Solving Partnerships** by Karin Schmerler, Matt Perkins, Scott Phillips, Tammy Rinehart and Meg Townsend. (U.S. Department of Justice, Office of Community Oriented Policing Services, 1998) (also available at www.cops.usdoj.gov). Provides a brief introduction to problem-solving, basic information on the SARA model and detailed suggestions about the problem-solving process.
 - **Situational Crime Prevention: Successful Case Studies**, Second Edition, edited by Ronald V. Clarke (Harrow and Heston, 1997). Explains the principles and methods of situational crime prevention, and presents over 20 case studies of effective crime prevention initiatives.
 - **Tackling Crime and Other Public-Safety Problems: Case Studies in Problem-Solving**, by Rana Sampson and Michael S. Scott (U.S. Department of Justice, Office of Community Oriented Policing Services, 2000) (also available at www.cops.usdoj.gov). Presents case studies of effective police problem-solving on 18 types of crime and disorder problems.
 - **Using Analysis for Problem-Solving: A Guidebook for Law Enforcement**, by Timothy S. Bynum (U.S. Department of Justice, Office of Community Oriented Policing Services, 2001). Provides an introduction for police to analyzing problems within the context of problem-oriented policing.
 - **Using Research: A Primer for Law Enforcement Managers**, Second Edition, by John E. Eck and Nancy G. LaVigne (Police Executive Research Forum, 1994). Explains many of the basics of research as it applies to police management and problem-solving.
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