



Property Risk Consulting Guidelines

THEFT

INTRODUCTION

Theft losses can occur in unattended or unsupervised areas that have no security services. Implement physical security measures to prevent or deter theft.

Thefts are most frequently reported from small storage areas, unattended office buildings and outside yard areas.

POSITION

Provide the following burglary protection:

- Management controls;
- Inventory accounting procedures;
- Physical security program;
- Employee screening process including thorough references checking procedure.

Design burglary risk management techniques to provide practical, cost-effective solutions to prevent losses.

Know what items are most likely to be stolen, calculate potential losses, and use cost-effective techniques to reduce the risk.

Evaluate the property for loss potential. Concentrated high values have higher loss potential than general storage warehouses. **A high demand** item is one which can be readily marketed, or because a large consumer market exists for them. **A moderate demand** item may have high unit value but the market for it is more limited. Items may be marketable but resale is more difficult. **A low demand** item has low value or appeals to a very small part of the population. A low demand item may also be one, which is hard to transport. Perishable items are also included in this category.

Guidelines in "Burglary Risk Management" provide one of many approaches found effective in making a detailed theft risk analysis.

To control theft, implement the following strategies.

Inventory and Accounting

Use reporting and accounting procedures to detect slow, deliberate pilfering of goods, parts, supplies and other assets.

Use more specific reporting procedures for particularly valuable materials, such as precious metals.

Physical Security Measures

In campus environments survey all parts of buildings, including the strengths of building structures and outside storage of pallets, boxes of ladders. Store ladders inside to prevent access to upper floor windows or roofs.

Provide fences at least 8 ft (2.4 m) high with a barbed top guard constructed to provide overhangs on the outside, the inside or on both sides. The fence should be taut; securely attach it to rigid metal posts set in concrete. The bottom should reach within 2 in. (50 mm) of hard ground. Close openings created under the fence by irregular land contours with custom fitted fencing, grills or other barriers. Alarm fences with one or more types of sensors.

Remove vegetation, rubbish or other materials on both sides of the fence to provide an unobstructed view. The outside clear zones should extend 20 ft (6.1 m) beyond the fence. The interior clear zone should extend 50 ft (15.2 m) between the fence and the buildings or structures on the inside of the perimeter.

Improve the integrity of most perimeters with fencing, lighting, perimeter sensors, guard forces, building structures, window protections, door protections, lock and key controls, entry controls and alarm systems.

If buildings of less than three stories high form part of the perimeter, install a top guard of fencing or barbed wire along the outside roof coping to prevent access to the roof.

Minimize the number of gates in the perimeter. Securely lock those not in use, illuminate at night, and routinely check by the guard force.

Lighting

Light smaller buildings, rears of building and access alleys so they are free of shadowed areas. Arrange lighting so that that an alarm sounds if lights are turned off or burned out.

Lighting systems should assist guards in carrying out their functions. Lighting should illuminate intruders, but should not interfere with the guard force. Light gates so personnel and vehicles can be easily identified. Eliminate large shadowed areas. Enhance the lighting effect with light colored building exteriors and white sand, shell or gravel on the ground.

Provide a level of illumination for entrance lighting at gate areas so that guards can inspect passes and the interiors of cars and truck cabs. Light the remaining entrance area for about 50 ft (15.2 m) in all directions.

Where the perimeter is defined by a waterway, light the boundary for 50 ft (15.2 m) beyond the fence or waterline to prevent intruders approaching from the water. However, consult the Coast Guard captain of the port when making waterfront lighting installations to prevent interference with marine navigational aids and to avoid causing visibility problems for marine traffic.

Turn lighting on and off by use of a timer. Adjust the timing cycles for seasonal changes. Protect outside lights with wire guards or enclose them to prevent vandals from breaking or removing bulbs.

Window Protection

Protect accessible openings wherever exposure to theft exists. Windows in building walls, which face on a street and form part of the perimeter protection, are particularly vulnerable. When the windows serve no purpose or need, brick up the openings or provide them with permanent closures. Protect needed windows with metal bars, heavy mesh grills or Underwriters Laboratories (UL) listed burglary resistant glazing.

The strength of the installation fastenings must at least equal the strength of the barrier if the protection is to perform satisfactorily.

Door Protection

Properly design door installations and install good quality hardware to provide a reasonable deterrent to burglary. The following materials are not forced entry deterrents: light wood doors of hollow construction; light metal doors; or doors with large windows of conventional glazing materials.

Use solid wood doors of 1¾ in. (45 mm) thick or steel doors of at least 16 gauge material. If the door must be glazed, install burglar resistant glazing.

Door frames of hollow steel construction can be used if the frame is filled with a cement grout to other crush resistant material in the area where the lock engages the frame. Design the door frame so that the door latching mechanism is difficult to reach with tools of any kind.

Use wood framing no less than 2 in. (51 mm) thick. Metal covered wood frames used with metal sheathed wood doors greatly improve the security of a door system.

Use a good quality dead bolt lock. Do not use a lock, knob or other hardware on the outside of doors which are only used as emergency exits or which have very limited special purposes.

Remove doors no longer required for any purpose. Permanently close with brick or other materials.

Lock and Key Controls

Use mechanical locks with multiple pin tumblers and dead locking bolts. Install locks so they cannot be torn from the door by simple tools.

Use a master keyed system to limit access to selected locations, such as management or guard forces for emergencies and inspections. Minimize the number of keys or combination lists issued to prevent them from falling into the hands of potential thieves.

Install magnetic card access systems and door mounted combination locks within protected perimeters to limit access to restricted areas. Issue an access card or combination to personnel who work in the area or have a need to enter.

Entry Controls

Points of entry can include air ducts, ventilation fans, skylights, old air shafts, chimney flues, dumbwaiters and sewer systems. Permanently seal, close or provide grids of steel bars, wire mesh or expanded metal. Reduce openings to a small enough size, no larger than 10 in. × 10 in. (25.4 cm × 25.4 cm), to prevent a person from using them. If protection barriers are not possible, protect the opening with suitable alarms.

Vault, Safe and Cage Controls

Store high value material, equipment or parts in vaults, safes or specially constructed security cages. This additional physical protection limits access to only persons having a specific need to handle the material.

Alarm System

Install a reliable burglar alarm system after taking all reasonable physical precautions listed above to secure the premises. Use listed devices and listed services.

DISCUSSION

Exposure to theft exists if someone can physically remove items from a facility. High value goods, equipment, tools or finished products may all invite theft. Precious metals or popular consumer products, such as televisions and stereo receivers, are particularly attractive to a thief who can quickly convert them to cash. Large theft losses can range from items such as clothing and computer components to construction equipment.

A high loss potential for one company can be a moderate or low loss potential for another.

Location of a property and opportunities for a thief to steal affect exposure. Goods, which can be removed easily, may be more attractive than items more difficult to hide or transport. Items that are susceptible to theft in one region may not be in another.

Inventory Accounting

Well organized reporting can locate missing items and identify responsible parties. Accounting procedures may vary from short term inventories of parts and components to yearly inventories of equipment and furniture. Inventory and reporting procedures also control purchasing and restocking materials and supplies. Theft detection is improved as the frequency of reconciling inventories is increased.

Physical Security Measures

The extent of physical security measures depends largely upon the type of facility, the value and quantities of materials to protect, and the areas where materials are used or stored.

If the plant is in a densely populated urban environment with no values outside the building, the perimeter may be established by the building walls. The type of perimeter protection will relate to the structural integrity of the building.

In industrial park areas fewer potential vandals or thieves may be nearby, but the protection may still be needed at night and on weekends against well organized and equipped thieves.

Fencing

A fence is a deterrent but does not protect a property from organized theft. It is not a substitute for other measures such as adequate lighting or a roving guard force. Although most fences can be penetrated, they slow down thieves.

Many industrial fences are chain-link constructions, 9 gauge (2.9 mm) wire (or heavier).

Lighting

Most burglaries are committed during darkness, and where inadequate or no outside lighting exists.

In many installations floodlights are installed so guards can easily detect intruders without being seen. A glare projection system is typically installed to illuminate an area from 10 ft (3 m) inside of the fence to 200 ft (61 m) outside of the fence. The amount of lighted perimeter would depend on adjacent buildings, roads or operations.

When the faces of a building are located within 20 ft (6.2 m) of the property line, conventional street lighting can illuminate within 50 ft (15.2 m) of the building. When floodlights are used to light the face of the building, a number of small fixtures with overlapping beams can prevent a black void if one light burns out.

Perimeter Sensors

A wide variety of sensors and alarm systems can protect a perimeter against intruders. Photoelectric and microwave beam units can detect an intruder crossing a specified area. Some relatively complex systems will detect movement in a specific area.

Guard Forces

A well trained guard force is one of the most effective security measures available. Management can control the quality and performance of the guard service if it recruits, trains and administers the force itself.

Extended duties can be distracting and adversely affect effective security. Guards should have specific duties and a routine to prevent them from falling asleep or pursuing personal tasks on the job.

Building Structures

The greater the value in a building, the stronger the construction must be to discourage a thief. Many enterprising thieves will attempt to break through light construction to obtain valuables.

Many older type buildings constructed of masonry and concrete can reasonably discourage theft, but cement block construction can be easily penetrated by a truck or forklift. An intruder can disassemble metal paneled walls if there are exterior screws.

If a thief can enter through a wall or ceiling, a burglar alarm system consisting of window and door sensors is of little value. Some form of motion or sound detection sensor will protect an interior space.

Localized Security Measures

Localized security measures such as vaults and safes provide an additional level of protection where establishing high security levels throughout the entire facility may not be practical.

Safes provide various degrees of theft protection. For example, UL listings are classed as to the amount of time they will resist attacks by tools, torches or both. Vault doors and vault panels can also be listed.

Alarm System Controls

The same alarm and control hardware can be used for transmitting signals from both fire detection and burglary systems. However, separate UL certificates for the fire detection and for burglary detection functions are required. One UL certificate does not indicate both functions are covered and certified.

There are many different detection devices used with burglar alarm systems, and they operate on a variety of principles or technologies. Several types of devices for motion detection use infrared, acoustic or ultrasonic technologies to detect tampering or attacks on safes, vaults or security cages.

Transportation Security

Many thefts occur when equipment, materials or products are being transported. Controlling theft of material in transit is an extensive specialized subject. Transportation usually begins and ends at a shipping/receiving facility. Many thefts occur from inadequate accounting controls or poor procedures. While transportation security is a field in itself, security of the shipping/receiving dock must be coordinated with the overall location security. Refer to PRC.16.4 for guidelines.

Natural Disasters

Enterprising thieves can take advantage of natural disasters to steal. Many security systems, particularly alarm systems, depend on uninterrupted power and telephone services. If services are damaged or destroyed, security measures will be compromised. Do not allow security to deteriorate during such emergencies and utility failures. Consider provision of on site independent back up power and additional staffing. Pre-emergency planning to maintain security is required for fire, flood, earthquake, windstorm and power/communications failures. Some well planned and organized thefts have also occurred by thieves disabling alarms and artificially creating emergencies such as fires, power outages and communications failures.

THEFT HAZARD SURVEY GUIDE

1. Are goods transportable?
 - If goods can be removed easily, they are transportable.
 - Smaller items are at high risk.
 - How are goods secured for after business hours?
2. Does the facility experience high theft or burglary losses?
 - Have incidents of employee theft been high?
3. Does the facility produce or store consumer goods?
4. Evaluate the type of construction.
 - Does the facility have many or few accessible openings?
 - A single story building with many openings may provide easy access not only through walls but roofs as well.
 - Are electronic alarm systems provided?
 - Can production equipment be removed from the premises easily?
5. Elements of a good key control program include providing:
 - Key control program administered by responsible management.
 - Records of all key identification numbers.
 - Records for each key indicating dates and individuals to whom the key or duplicates of the key were assigned.
 - Periodic checks to be sure keys issued are only those originally authorized.
 - Procedures to regain keys from employees leaving the company.
 - Procedures requiring locks be rekeyed when keys are missing or where a breach of security is suspected.
 - Master key systems with all key holders limited in their access.
 - Master keys issued only to those individuals with an imperative need.
 - Keys kept in locked cabinets away from the general public or employee traffic.
 - Maintenance of a log of individuals checking out day use or short term key use for keys kept in a key crib.