

ATLAS SAFETY & SECURITY DESIGN, INC.

[\[Back to Publications\]](#)

Security and the ADA: With Liberty and Justice for All

As published in **Security Management Magazine**, Sept 1995

By Randall Atlas Ph.D., AIA

Atlas Safety & Security Design, Inc.

Miami, Florida

In 1990, When the justice department hired design-build contractors to construct a twelve-story, 250,000-square-foot building in Miami, the team faced a special security challenge. It had to address heightened security concerns related to courthouse activities, while complying with requirements regarding accessibility for the disabled. That meant finding ways to both control and enhance public access. The building, which would become the Federal Justice Building, was to serve as a multipurpose facility that would provide space for the U.S. Attorney, U.S. Marshals Service, administrative offices, federal courtrooms, and a detention area for those awaiting trial.

Though the building would be designed and constructed to house federal employees and serve a function of the federal government, the designers and contractors were private companies. The building was, therefore, considered a private sector project and was subject to Americans with Disabilities' Act (ADA) regulations.

Not all government buildings come under the ADA. The act requires, however, that disabled persons be provided access to services, programs, and activities provided by state and local governments. For example, those citizens who use wheelchairs must be able to enter a state government office to pay their taxes or to dispute a traffic ticket.

The security needs of a federal courthouse are substantial. The team designing the

Justice Building determined that the most logical approach to access control for such a facility would be to segregate user populations and direct access for each segment of the population through its own entrance. A main entrance serves the public and staff, another is exclusively for judges, and a third provides separate access for prisoners.

To accommodate disabled persons, the lobby entrance has no threshold exceeding 1 inch in height. The pressure needed to open or close exterior doors does not exceed eight pounds. An exterior ramp allows unaided access from the sidewalk through the front door.

After gaining entry through the lobby, all people are screened for weapons. Screening for the mobility impaired is conducted through an adjacent accessible door by U.S. Marshals using hand-held metal detectors. Able-bodied people walk through a metal detector and package screening device that is built into the architecture of the building. To reach the upper floors, visitors and staff must pass through this access point. However, employees can bypass the metal detector and use a proximity card to pass through a revolving door. The revolving door has a pressure sensitive mat that registers only one person at a time, thus preventing piggybacking. During an emergency, such as a fire, all of the building users can exit through the revolving door, which has a collapsible partition.

Elevator controls and card readers controlling access to restricted floors are thirty-six inches above the floor to accommodate the needs of disabled persons. While controls can be placed as high as forty-eight inches, thirty-six inches is a good height for wheelchair users.

The emergency telephone in the elevator cab has instructions marked in Braille, and emergency assistance can be achieved by picking up the receiver. A red light acknowledges to the user that the phone has been activated in case the user is hearing impaired.

The main security control center is adjacent to the main entrance. From the control center, security officers monitor security alarms, fire alarms, emergency elevator controls, public address systems, and intercoms. All of the power and lighting for the security office has an emergency backup power supply. Alarms are connected to the U.S. Marshals service in the federal courthouse across the street.

Alarms ring in both facilities. If a fire alarm is activated in the Federal Justice Building, an alarm rings in the federal courthouse. While the system causes duplication of alarms, if an emergency or natural disaster disables the security office in one building, the other will be aware of the problem. All emergency exit doors are equipped with

an approved emergency egress system.

All points of entry for utility services and environmental controls are secured. All air intakes, vents, and grills are designed to be inaccessible and secure against projectiles such as smoke bombs. All ducts and vents are secured with 1/2 inch case-hardened steel bars mounted both vertically and horizontally. Glazing along the exterior of the building, especially in the lobby, is protected with glass break and motion detectors.

All exterior hinges, pins, and hasps are non removable, and all perimeter door locks contain a minimum of five pin tumblers-allowing for more combinations and making locks more difficult to pick. All perimeter doors that are not emergency fire exits are fitted with a minimum one-inch deadbolt lock and equipped with lock guards on the exterior to prevent tampering of the latch hardware. Perimeter and emergency doors are monitored with door position switches and have concealed balanced magnetic switches.

Stairwell doors are locked, monitored, and controlled by the alarm system. Under normal conditions, all doors open into the stairwell but permit a person to exit only at the street-level exit. Travel between floors is only possible on a limited basis. The access control system allows opening of selected doors from inside the stairwells. Employees are encouraged to use the stairs to keep elevators free of traffic; those floors that are occupied by staff, such as in the U.S. Attorney's office, have card readers in the stairwells to allow floor-to-floor movement. However, the public is discouraged from using the stairwells; floors that house public facilities such as courtrooms would not be equipped with card readers. Doors have lever exit handles that can be opened by the disabled.

All street level doors - except the main entrance - are monitored with CCTV to prevent the door from being held open to permit unauthorized entry. Some entrances, such as side doors and loading dock entrances, have door position switches that alert security when the door is ajar. Fire exit doors are locked from the outside, and the loading dock entrance has a card reader.

Separate patterns: A critical factor in the building's design is separate circulation patterns for the public, judges, and prisoners. The judges' circulation pattern is arranged so that they may enter the building and go to their chambers or courtrooms without passing through any public space. Prisoners must also enter the building without passing through public areas. Prisoner elevators are remotely controlled by security office or key controlled by U.S. Marshal's officers.

Access control cards that allow employees into the building are located at the public, restricted, and detention entrances. Readers also control entrance to the outside

secured parking, parking garage, and basement elevators. Intercom stations are provided at each card reader's location for communication with the security office. Proximity card readers selected are higher than forty-eight inches to accommodate persons in wheelchairs.

The Justice Building has secured parking for judges, U.S. attorney and other high ranking officials, and staff. The garage is secured by over head rolling doors that are solid and controlled by an access control system. The vehicle barrier device is designed to be a part of the garage access control system to prevent terrorist attack and piggybacking of cars. The exterior and parking lighting systems were designed for security needs. Metal halide fixtures were installed for their full color rendition improved lighting for CCTV surveillance and energy efficiency.

The Justice Building has a restricted entrance from the garage for after use by officials. A secured elevator leads directly to the floors occupied by judicial personnel, permitting judges to bypass the lobby. The garage design also makes it possible for the U.S. Marshal prisoner vehicles to pull up directly to the controlled prisoners' entrance.

Color CCD cameras monitor the outdoor parking lot, the parking garage, and the exterior of the building. All cameras operate from a DC supply with a battery standby and are monitored live by the security office. Security officers constantly monitor the cameras and can also record them on video. Exterior cameras are installed in tamperproof environmental housings while interior cameras are as small and unobtrusive as possible. CCTV coverage includes public areas and prisoner related areas controlled by the U.S. Marshals office.

To protect judges during trials, judges' benches in each courtroom are protected by a bulletproof panel; both the judge's bench and the clerk's desk are equipped with duress alarms. Each courtroom also has emergency lighting and bullet-resistant glass on courtroom door windows.

Public-use spaces: All rest rooms are fully accessible. Sink faucets are equipped with paddle type handles to allow accessible use, and paper towel and toilet paper racks are within reach of disabled patrons.

All other public use spaces such as the library, snack bar, and waiting area have display areas that allow all items to be within the reach of fifteen to forty-eight inches above the floor. All of the electrical outlets are fifteen inches above the floor for use by employees and for visitors needing power for equipment ranging from computers to text display devices for hearing impaired communications.

Signage in the building is in raised Braille. The signage is placed at sixty inches on the

latch side of the door, and written words have at least 70 percent contrast between the background and letters to allow easier visibility for persons with vision impairments.

Final analysis: After construction, the security design consultant toured the facility and found that many of the systems specified in the design did not make it into the final construction. As with any design project, decisions are often made without consultants' knowledge and can affect security design, installation, and operation.

The design specified a safety loop in the garage. The safety loop has sensors to prohibit the barrier from coming up when a car is over it. The safety loop was not installed. Consequently, the vehicle barrier was activated accidentally under a judge's car, shaking up the judge and damaging his car. After the accident, the safety loop was installed at an increased cost and with significant disruption to the operations of the garage.

Security can be designed into accessible functional buildings, but it requires a commitment from the architect to pay for the planning and programming time to develop the range of contingencies for full accessibility. By determining what set of regulations must be complied with and designing the facility to meet the needs of disabled users, security professionals can provide secure and accessible buildings.

(from Security Management Magazine, September 1995)

[\[Back to Top\]](#)