



SAFETY BEYOND BARRIERS

Built environment professionals examine
their role in keeping the public safe.

By KRISTEN POPE

Water spills gently over a raised tabletop in front of the Museum of Jewish Heritage in New York, a soothing feature that also provides unobtrusive security for the building's entrance.

Over the past several years, U.S. communities have been shocked and devastated by deadly acts of violence. Incidents like mass shootings, bombings, and vehicles used as weapons are prompting broader questions about prevention, including what the role of the built environment in public safety is—and should or shouldn't be.

The answers are not clear-cut within planning circles, or without debate. Some believe there is an inherent challenge in using traditional planning approaches to prevent or mitigate violence and that a focus on safety might negatively impact urban design and lead to the creation of what they call “fortress cities.”

“Where it can get quite contentious is when it comes to pronouncements that planners and architects should be responsible for designing out terrorism,” says Jon Coaffee, professor of urban geography at the University of Warwick and director of the Resilient Cities Lab. “Many built environment professionals have recoiled at this thought and do not see it as a role they should be doing or have been trained for.”

However, he says, some planners and urban design professionals “have embraced the challenge and see designing in safety and security as an integral element of public realm improvement.”

Acceptable risk

Planners are not strangers to the concept of planning for safety. Any publicly accessible location can

take steps to prepare for potential violent attacks. The challenge, says Marcel Acosta, executive director of the National Capital Planning Commission in Washington, D.C., is that risk is everywhere. It’s inherent in every activity, from walking down the street to attending a public event to getting on an airplane.

Acosta experienced this lesson firsthand in New York City last October when a driver crashed into a line of parked cars and street trees in front of an outdoor cafe where he was sitting. Though it was not a deliberate act, Acosta observed how parked cars and trees served as a natural barrier that kept him and others from harm. “It goes to show you the street itself, and things that happen on the street, can do a lot to prevent these things,” he says.

It’s virtually impossible to protect every piece of public space fully. It’s important for planners to ask themselves and their communities some difficult questions, such as “What is acceptable risk?” Acosta says.

Many people would rather accept some level of risk in order to live in a more welcoming and

Traditional bollards intermingled with decorative rocks and plants protect the entrance to the National Museum of the American Indian in Washington, D.C.



PHOTO BY BRIAN KINNEY/ALAMY STOCK PHOTO

aesthetically pleasing community. “The public and decision makers need to consider the trade-offs between important goals such as public access, convenience, and security, and think about where security goals fit into the larger framework of other community objectives,” Acosta says.

Lisa Fujie Parks, associate program director for the Oakland, California-based Prevention Institute, agrees that the answers lie not in building an environment that protects people from every possible act of violence. Instead, she says, built environment professionals should be focused on “creating public spaces that reduce anxiety, respond to real human needs, foster meaningful social connections, and promote healing, peace, and unity.”

Beyond bollards

Creating security features that don’t hinder but rather improve the aesthetic environment can be a challenge, but it’s an essential part of Acosta’s work in Washington, D.C. Aesthetics are important in all communities and a crucial element of the design and planning process, promoting placemaking and quality of life for residents.

The nation’s capital is considered a prime target for terrorism, but like many places, it has historic character and beauty that are important for planners to protect and preserve. Urban designers in D.C. must achieve a delicate balance between keeping people safe; creating livable communities with inviting public spaces, a good sense of place, and community involvement; and preserving each neighborhood’s history.

“People have a great expectation in terms of the aesthetics of Washington, D.C.,” Acosta says. “They expect beautiful streets, beautiful landscaping, this very attractive environment.” To meet that expectation, Acosta’s team incorporates attractive bollards, benches, and streetscaping—among other techniques—to strike a good balance.

Elizabeth Miller, AICP, director of NCPC’s physical planning division, notes that her team looks at each individual situation to find the best solution. Monuments and buildings with large lawns can incorporate a wide variety of landscape architecture features that increase safety without necessarily being discernible to visitors.

In New York’s Battery Park, the Museum of Jewish Heritage uses scenic water features to create beauty and provide protection. “It’s a terrific addition to the public space rather than an intrusion,” says Robert Shibley, FAICP, dean of the School of



Planters line the approach to the Piazza San Carlo in Turin, Italy, placed there to protect the space from terrorist attacks using vehicles.

Architecture and Planning at the University of Buffalo. He also points out that any type of elevation change between the street and landscape can offer some level of protection.

Safety gardens are another solution to help create attractive, yet functional means of protection. Large, heavy, bullet-proof planters are often used in place of ugly metal and concrete structures. After attacks in London, people sought to incorporate these greener barriers as a safety measure and a memorial to attack victims. Coaffee says this approach has been in place for over a decade, and these types of planters are popular in Italy and Cardiff, Wales, among other locations.

“This is another example of camouflaging that makes a security [measure] less obtrusive,” he says.

Another framework to guide potential planning solutions is what Shibley calls “run, hide, fight,” which starts with providing ample clear evacuation routes.

That usually means thinking beyond standard safety considerations, such as evacuating people from a building if there is a fire. “There are other catastrophes that happen, and some put different demands on egress than others,” Shibley says. He also emphasizes the importance of having properly trained staff on site who know what to do in an emergency and how to direct others to safety.

He refers to last year’s shooting at an outdoor concert in Las Vegas, where 59 people were killed as a shooter took aim from high in a nearby hotel. He emphasizes the need to provide clear ways for people to evacuate but notes that a secondary approach

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is for people to take cover. “If you can’t run, then you need a place to hide,” Shibley says.

Sculptures, fountains, and other fortified structures can provide cover, though he points out they can also provide cover for attackers. Ultimately, he points to management solutions rather than simply physical planning efforts as a way to keep people safe in these types of scenarios.

Community input

Creating a good quality of life for residents and visitors can be a challenge, let alone addressing the need for security against random acts of violence and terrorism.

Park notes that getting community members involved in any planning process is key, especially when they might have unique knowledge to share. Public safety planning efforts are no different.

She points to a school-based violence prevention program called Shifting Boundaries. Initially implemented in New York City middle schools around 2009, this program brought students into the process of mapping and changing the space within the school. Students were able to point out “hot spots” for violence, and the changes instituted as a result of their knowledge led to a drastic reduction in sexual violence, according to Parks.

But while involving community members can help with placemaking and livability issues, other challenges remain—including predicting the future and anticipating future threats. Julia Koster, AICP, NCPC commission secretary and director of the office of public engagement, says this is difficult because risks evolve over time and it can be quite challenging to plan for the unknown.

“It’s really important to be mindful that you’re planning forward for things you may not even know about . . . as well as trying to address what’s happened in the past,” Koster says. “Here at [National Capital Planning Commission] we’ve tried really hard to keep that balance between addressing known current risks as well as what could happen in the future.”

In the end, there is no correct approach or level of risk tolerance; as with many issues pertaining to urban planning, it is unique to every community. As the conversation around the built environment and planners’ role in public safety evolves, it will be up to planners themselves to determine just what they can do in their work to promote public safety in the event of acts of violence or terrorism. ■

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LESSONS FROM SANDY



IN SEPTEMBER 2016, the new Sandy Hook Elementary School in Newtown, Connecticut, reopened after being razed, redesigned, and rebuilt following the tragic shooting that took the lives of 20 students and six adults four years earlier.

The goal of the redesign was to allow students to feel safer in the space while also incorporating hidden security measures to help prevent potential future acts of violence. A team of educators, architects, landscape architects, and security consultants worked together to find solutions that provide layers of security while at the same time not making students feel like they are locked inside a fortress of high, imposing gates and fences, thick, unwelcoming safety doors, barred windows, and screeching metal detectors.

Richter & Cegan Inc. provided landscape architecture for the project. “One of the things from the very



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HOOK



Fencing and retaining walls (above) emphasize natural changes in grade to control perimeter access (deter and detect). Below, observable bridges are the only access to the building over a bioswale, leading to controlled-access doors (funnel and protect).



beginning was working with Sandy Hook School was to identify the level of threat avoidance they wanted to go through,” Richter & Cegan partner William Richter says. “Because that immediately sets to what degree you have to do things. Then with that was also the key philosophy that we didn’t want the security measures to be evident.”

“Detect, deter, delay, defend” is a common refrain used by security professionals to describe how to respond to an active shooter or other attacker, and the team kept these ideas, along with Crime Prevention Through Environmental Design principles, in mind during the redesign.

The site and building design funnels visitors into controlled and observable environments. Whether people approach the campus on foot or by vehicle, they are being watched and detected, often without even realizing it. The public face of the school includes administrative offices and the library. To enter the classrooms, people must first pass through these areas.

“That whole approach is controlled and observable and gives the front office time to assess whether they’ve got an issue or not,” Richter says.

Security cameras are incorporated in light stanchions, parking lots, and playground areas, providing multiple levels of surveillance and detection. Natural elements such as landscaping and the bioswale serve as “fences” to deter and delay, and access to playgrounds is electronically controlled.

That natural fencing is far better than an eight-foot wire fence that would make it look like a compound rather than a campus, Richter says.

“So we kept all those features relatively simple and scaled to the kids so when you’re out there, you don’t really notice or [are] naturally not aware of the things that are built into how one uses the site.”

Vehicular gates are opened and closed as needed, allowing parents and buses to transport students. When the gates are closed, all visitors must announce themselves before being allowed in. Staff parking and bus loops are controlled and people cannot access these areas without proper credentials.

A bioswale functions as a “moat,” further restricting access, deterring and delaying intruders. Three bridges allow access, and only one bridge, the one that accesses the main offices, is open during the school day. “Each of these bridges became additional control points,” Richter says. The bioswale incorporates an outdoor rain garden and water features so it also functions as an outdoor learning environment. Additionally, the natural features incorporate peaceful, stress-relieving elements into the campus design while also enhancing safety.

Large windows let in ample sunlight, and the main lobby includes a wall of impact-resistant windows to provide natural light as well as clear sightlines and views of anyone who may be approaching. The lobby also contains artful designs and sculptures as well as a tank for the school’s beloved turtle.

The result is an open and welcoming campus that incorporates natural elements, ample sunlight, and artwork, as well as outdoor education components in a secure yet inviting environment.