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PERIMETER HARDENING

Step One for Venue Operators Seeking SAFETY Act Protection

By Akmal Ali and Matt Nebel, P.E.

The SAFETY Act is rapidly becoming a household name among venue security operators across multiple industries. Nothing better illustrates this than the growing number of companies – such as the World Trade Center, St. Louis Cardinals, San Francisco 49ers, Madison Square Garden, LaGuardia Airport, George Washington Bridge, The Southern Company, and Bloomberg – who have already made obtaining SAFETY Act coverage a primary element of their approach to risk management.

SAFETY Act, which stands for Support Anti-Terrorism by Fostering Effective Technologies, was created by the U.S. Congress in 2002, following the attacks of September 11, 2001. Their main objective: create a risk management tool that promotes the fight against terrorism by incentivizing the private sector to take preventative measures to deter and/or mitigate acts of terrorism. Recipients of SAFETY Act coverage receive powerful legal protections that limit or shield companies from third-party liability arising from acts of terrorism. In part, the SAFETY Act was created to address the extraordinarily large third-party liability companies can face following an act of terrorism.

An unfortunate circumstance that has occurred (all too frequently) after a terrorist act is the inability of those who are wrongfully injured to recover from the perpetrators responsible for the injury. Terrorists, by the sheer nature of their modus operandi, make for bad defendants: they are either dead; they have no money/assets by which to pay for damages; or their money/assets are inaccessible. Therefore, companies who are likewise victims of an attack can often find themselves subject to litigation following a terroristic act. Given the destructive nature of terrorist attacks, the third-party liability associated with those lawsuits can be extraordinarily large.

Companies can find themselves named as defendants in lawsuits, even if they put forth a good faith effort to thwart the terrorist attack from occurring in the first place. Thus, the U.S. Congress set out to identify those companies who are truly taking effective steps to com-

bat terrorism and provide them with third-party liability protections to encourage them and others to make investments to advance the fight against terrorism.

The SAFETY Act offers two main levels of coverage: Designation and Certification. Designation is likened to an “A” grade, providing recipients a numerical cap on third-party liability arising out of an act of terrorism. Certification is likened to an “A+” grade, including all of the Designation benefits plus providing recipients immunity from the same type of third-party claims.

To make their case for qualifying for the SAFETY Act, companies must submit a SAFETY Act application to the U.S. Department of Homeland Security’s (DHS) Office of SAFETY Act Implementation (OSAI, or SAFETY Act Office). The SAFETY Act Office, which resides in the Science and Technology Directorate of DHS, is responsible for administering this powerful program. The SAFETY Act Office reviews SAFETY Act applications and makes recommendations to the Undersecretary for the Science and Technology Directorate, who has the ultimate responsibility for awarding SAFETY Act protections.

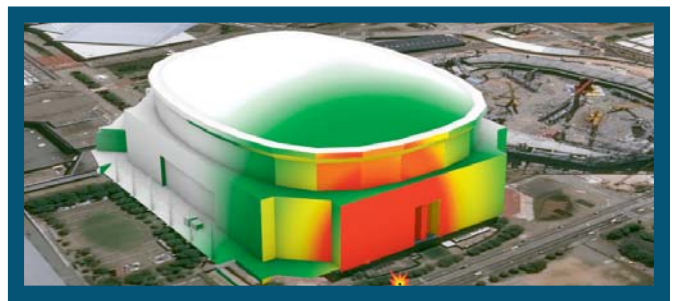
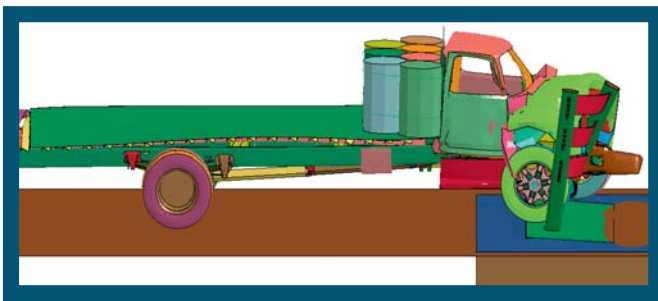
Since both awards (Designation and Certification) provide powerful liability protections, it stands to reason that to earn either award, a company must demonstrate to the SAFETY Act Office that it has taken proven steps to thwart terroristic threats. If you are a venue operator and want to seek SAFETY Act protection, there are several security measures you must deploy, but one of the most critical elements is perimeter hardening.

Given the rise of terrorist attacks incorporating vehicles, DHS has placed an increasing emphasis on understanding what steps venue operators have taken to eliminate and/or mitigate such threats. Terrorist use of vehicles materializes in multiple ways, including vehicle-as-a-weapon/vehicle-ramming and vehicle-borne improvised explosive device (VBIED) attacks.

Each threat type brings unique challenges that must be met with a thoughtful and analytical approach. Although DHS understands that private sector companies do not have a limitless security budget, they do expect companies to take measured, yet effective steps to implement a hardened perimeter. To effectively do this, an entity must first demonstrate understanding of their vulnerabilities and the associated risk those vulnerabilities present.

As a venue owner or operator pursuing SAFETY Act, how do you understand your facility’s vulnerabilities? A sound approach is to involve consultants who specialize in physical security and Anti-Terrorism Force Protection (AT/FP) assessments of facilities, which can include:

- Establishing Design Basis Threats (DBT) for vehicle-ramming and VBIED threats



- Vehicle vector analysis for vehicle-ramming threats (further detailed below)
- Blast analysis for VBIED threats (further detailed below)

Next steps can include:

- Crash-rated perimeter plans (further detailed below)
- Present mitigation strategies to venue operator (further detailed below)
- Additional hardening methods specific to the venue

ESTABLISHING DBT FOR VEHICLE-RAMMING & VBIED THREATS

The selection of appropriate Design Basis Threats (DBT) for vehicle-ramming and vehicle-borne improvised explosive device (VBIED) threats consider

- Aggressor capabilities
- Past history
- Available means and methods
- Target attractiveness, and
- Likelihood of an event to occur.

Vehicle barriers are an effective tool for protecting pedestrians and critical structural elements or infrastructure from malicious DBT vehicle-ramming attacks or accidental vehicle impacts. They also create a defined perimeter for exclusion of VBIED. To determine appropriate locations and ratings for new vehicle barriers, a vehicle vector analysis is performed. This analysis includes a review of adjacent roadway layout to determine potential approaches for attacking vehicle acceleration, roadway restrictions to identify potential vehicle threat parameters and magnitudes (type of vehicle, acceleration capabilities, mass), and operational procedures used to further restrict access and control vehicle movement.

BLAST ANALYSIS FOR VBIED THREATS

Understanding the vulnerabilities from an explosive threat is critical for managing risk for the venue. Significant injuries and death can occur from flying debris, glass, structural failure, and the shockwave of the blast itself. By understanding how the explosive threat size, threat location, and building characteristics affect the blast loading, the client/consultant team can determine the most effective combination of mitigation options to implement.

CRASH-RATED PERIMETER PLAN

Common vehicle barrier impact rating standards include the Department of State (DoS) “K rating” system and the analogous American Society for Testing and Materials (ASTM) “M rating” system. Each of these systems includes a designation to indicate the impact condition (vehicle weight and velocity). Additionally, another designation is typically provided referring to the allowable penetration that a ramming vehicle may achieve when impacting a barrier. Each of these rating systems uses a 15,000-pound vehicle traveling at various velocities as shown in Table 1.

CRASH-RATED PERIMETER PLAN

After establishing the types, locations, and impacts from vehicle-ramming threats and VBIED, the venue owner and consultants can evaluate various recommendations to mitigate the various DBTs. In designing and applying measures to mitigate against the risk of vehicle ramming attacks, it is important to balance the security requirements with the operational and functional needs associated with the typical user of the facility or venue. As a result, a mitigation strategy cannot be a one-size-fits-all approach, and instead must be tailored to the specific physical constraints and functional demands of a given location. **FM**

RESOURCES

- Best Practices in Anti-Terrorism Security (BPATS) for Sports and Entertainment Venues - <https://tinyurl.com/y7nzh54n>
- Vehicle Ramming: Security Awareness for Soft Targets and Crowded Places - <https://tinyurl.com/ybhatgfv>

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Table 1 - Vehicle Barrier Rating Definitions

Vehicle Weight (lbs)	Impact Velocity (mph)	DoS Rating Designation	ASTM Rating Designation
15,000	30	K4	M30
15,000	40	K8	M40
15,000	50	K12	M50