

Security and Resiliency Guide

Counter-Improvised Explosive Device (C-IED)
Concepts, Common Goals, and Available Assistance



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Figure 1: Seals of programs making up the Joint Program Office Property of DHS

Companion Website

To access the most up-to-date C-IED guidance and assistance resources, visit <https://TRIPwire.DHS.gov>. The Technical Resource for Incident Prevention (TRIPwire) is DHS's free, online information-sharing resource on IED incidents, tactics, techniques, and procedures, as well as corresponding IED security and resiliency measures. The TRIPwire website gives users access to:

- A PDF version of this guide for download, printing, or onscreen review;
- A searchable, interactive online version of this guide for easy navigation;
- A searchable catalog of available C-IED assistance resources across the Federal Government, including links; and
- Rich C-IED information, training products, and tools.

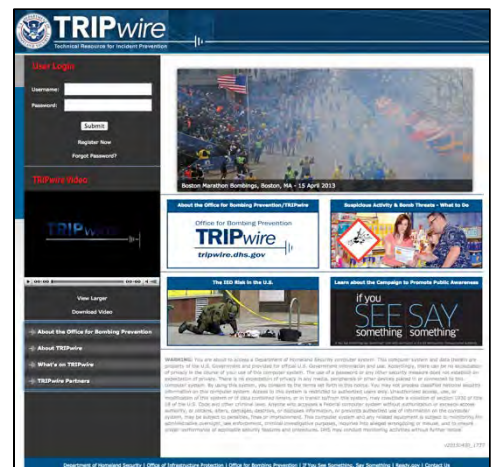


Figure 2: TRIPwire website homepage Source: DHS OBP

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Chapter 1: Introduction

Overview

Bombings using IEDs are a common security concern related to terrorism and violence in the United States (U.S.). High-profile domestic and international incidents are frequently in the news. Globally, the use of IEDs has trended upward in frequency and magnitude since 9/11—now accounting for more than 50 percent of all terrorist attacks¹—and the threat posed to American interests over the coming decade will likely remain high.² Terrorists and criminals will continue to use these weapons in a variety of ways, ranging from bomb threats and hoax devices, to mass-casualty attacks and sophisticated operations. In the U.S., the most significant historical bombings caused devastating physical and economic losses within communities and overwhelmed local authorities. Recent incidents targeting mass transit, houses of worship, and public spaces underscore that IED threats can originate from homegrown violent extremists or be influenced by events and movements overseas. Americans increasingly experience heightened security, like baggage checks, at museums, airports, stadiums, and special events. Many local and state governments, public institutions, and private sector organizations (including critical infrastructure facilities) express concern about IED risks and have sought assistance to enhance preparedness. This guide is designed to help all stakeholders take proactive steps to enhance their security and resilience for potential IED incidents and do so consistent with broader all-hazards preparedness and risk management principles.

Purpose

The *Security and Resiliency Guide: Counter-IED Concepts, Common Goals, and Available Assistance* (SRG C-IED) is intended to assist stakeholders to plan and implement C-IED activities within their overall public safety and emergency management approach. The SRG C-IED builds off of foundational guidance by providing more detailed guidance specific to countering IEDs, including IED risk information and a series of common C-IED goals and associated tasks derived from U.S. C-IED policy and input from subject matter experts. In general, entire communities, individual organizations, and specific facility owner/operators can strengthen their security and resilience for IEDs by using this guide to:

- **Understand the IED risk landscape in the U.S. and your locale**, including the essential characteristics of IEDs and IED incidents (Chapter 2);
- **Apply common IED-specific security and resiliency goals and tasks** designed to prevent incidents from occurring, protect people and infrastructure, and help respond and recover safely (Chapters 3 and 4); and
- **Leverage available U.S. Government programs to build and sustain preparedness**, for example through technical assistance and grant programs in the areas of training, information sharing, planning, exercises, personnel, and equipment (Appendix A).

Stakeholders can use the SRG C-IED in specific ways, such as to:

- **Conduct risk and capability analysis (including Threat and Hazard Identification and Risk Assessment (THIRA)) that considers IED risks.** Understanding how an IED threat may manifest in a community or potential target location helps stakeholders, including owner/operators or public safety planners, assess preparedness needs and drive capability development.

- **Develop or enhance an Emergency Operations Plan (EOP) with IED incident-specific information.** EOPs define the scope of public safety and emergency management preparedness activities necessary for an entire government jurisdiction, within an organization, or at a specific facility.
- **Take action to enhance security and resilience for IED incidents at a facility or venue.** This may include the development of facility-specific IED incident EOP, preparedness improvement plan, or employee training.
- **Develop a security plan for a special event.** Special events can stress the resources of a jurisdiction, organization, or specific facility. Coordinating physical protective measures, screening, and search and detection techniques with local authorities into a comprehensive security strategy reduces site vulnerabilities and strengthens protection of event participants.
- **Provide personal security guidance to personnel, employees, visitors, or patrons.** Some C-IED activities are appropriate for anyone, such as reporting suspicious activity and responding safely to a bomb threat, suspicious item, or IED detonation.

The best way to use this guide to enhance security and resiliency for IED incidents is to build off an existing risk and emergency management approach, including an EOP, for all hazards, which considers all relevant stakeholders, including the private sector and members of the public.

Audience and Format

The guidance is applicable, in whole or in part, to public safety, emergency management, and physical security stakeholders in many jurisdictions, sectors, and communities. Some of the listed goals and tasks in Chapter 3, such as how to recognize and report suspicious packages or act safely in the event of a bomb threat, are applicable to anyone. Everyone can play some role in homeland security, including security and resiliency for bombings. Others are more specific to particular disciplines like law enforcement, emergency medical providers, or facility owners and operators. Readers are encouraged to consider how the guidance is applicable to their particular responsibilities or disciplines, such as:

- Individual stakeholders
- Critical infrastructure facility owner/operators, including commercial businesses
- Public safety officials, including law enforcement, fire service, and emergency medical personnel
- Government or private sector organization planners, including security and emergency managers

While the SRG C-IED focuses on understanding, countering, and responding to IED incidents, much of the guidance is applicable to broader physical security and emergency management challenges. For example, many of the goals and recommendations outlined in Chapter 3 are relevant beyond the scope of the IED threat. They address operational coordination, information sharing and dissemination, and securing and controlling access to potential target sites.

The SRG C-IED also contains information specific to planners. Planning is essential to prepare for potential threats and hazards. The guide will help security planning team stakeholders understand IED risks and methods to incorporate effective IED risk management practices into planning efforts and operations in accordance with the National Preparedness System. The guide can serve as a resource for planners as they begin the planning process and take into consideration the needs of, and engage with, members of the whole community relevant to IED incident preparedness activities. Appendix A of the SRG C-IED identifies Federal Government resources available to assist C-IED stakeholders, especially planners, to enhance their organizations' C-IED capabilities.

Finally, this guidance is applicable to all 16 critical infrastructure sectors and their local stakeholders. Millions of people interact in and around critical infrastructure facilities each day – whether transiting, visiting, or working. Infrastructure is commonly targeted in bombings. Individual infrastructure facilities, or clusters of facilities that are openly accessible to the public can be particularly vulnerable. A set of annexes to the SRG C-IED, developed in conjunction with sector-specific stakeholders, amplify the guidance with additional C-IED information of specific relevance to the following sectors and subsectors:

- **Commercial Facilities Sector**, including the Lodging, Public Assembly, Outdoor Events, Retail, and Sport Leagues and Entertainment Venues Subsectors
- **Emergency Services Sector**, including the Emergency Management, Law Enforcement, Emergency Medical Services, Fire/Rescue Services, and Public Works Subsectors
- **Government Facilities Sector**, including the Education Subsector
- **Transportation Systems Sector**, including the Aviation, Highway/Motor Carrier, Maritime, Mass Transit/Passenger Rail, Pipeline, Freight Rail, Postal/Shipping Subsectors
- **Financial Services Sector**
- **Chemical Sector**
- **Food & Agriculture Sector**



Figure 3: Example content from the stakeholder-specific annexes to the Counter-IED Security and Resiliency Guide. Property of DHS



Figure 4: Example content from the stakeholder-specific annexes to the Counter-IED Security and Resiliency Guide. Property of DHS

Counter-IED Fundamentals

The guidance herein is built on several underlying principles:

- **Whole community participation is important for effective C-IED efforts.** For example, private sector stakeholders can help prevent suspicious purchases of explosive precursor chemicals, facility managers can install protective measures to protect people from blast effects, public safety personnel can deter would-be attackers at major events, and nongovernmental organizations (NGO) can assist with recovery after an incident.
- **A sound C-IED/IED risk management strategy includes efforts to both prevent and mitigate the potential effects of incidents.** U.S. C-IED policy highlights the need to discover and prevent IED incidents before they occur—referred to as “left-of-boom.”

- **An “all-hazards” approach to emergency management should consider C-IED efforts.** Each jurisdiction assesses its risk from IEDs relative to all other threats and hazards, and makes decisions on how to prioritize C-IED efforts accordingly.
- **Jurisdictions and stakeholders may need to share C-IED resources.** IED incidents, and IED preparedness for large special events, may overwhelm the capacity of some jurisdictions. Communities and private sector organizations should be prepared to work with stakeholders to meet C-IED needs and share C-IED resources.

Definitions

The following IED-specific definitions apply within this guide:

- **IED:** A device placed or fabricated in an improvised manner incorporating destructive, lethal, noxious, pyrotechnic, or incendiary chemicals and designed to destroy, incapacitate, harass, or distract.
- **IED Incident:** Any event that involves a real or suspected IED threat, including IED detonations, bomb threats, the use of hoax devices, discovery of bomb-making components, or the theft of explosives or precursor materials.
- **Countering IEDs:** The interdisciplinary process for developing, implementing, evaluating, and adjusting measures to prevent, discover, protect against, mitigate, respond to, and recover from IED incidents and their consequences.

Chapter 2: Risks Posed by IED Incidents

Improvised explosive devices can inflict large numbers of casualties, damage infrastructure, and generate attention for ideological causes. Over the past decade, IED incidents have been on the rise both globally and within the United States. The U.S. Government assesses that terrorists and criminals will continue to use IEDs, because they are cost-effective weapons that fulfill tactical and operational objectives and because the instructions and materials needed to make IEDs are readily available.³ For example, the truck bomb used in the 1995 Oklahoma City bombing cost \$4,500 and took less than one day to build,⁴ yet the attack killed 168 people, wounded 700 more, and resulted in \$650 million in damages.⁵ While large bombs may deliver devastating effects, small and unsophisticated devices may also succeed at disrupting normal activities and incurring large financial costs. Even bomb threats have consequences in terms of disruption of normal activities.

IED Incidents in the United States

Terrorists and criminals with a diverse array of motives have made bomb threats and used IEDs in the U.S. Thousands of terrorist and criminal incidents involving bombings, attempted bombings, incendiary bombings, stolen explosives, and related offenses occur each year in all types of communities. The vast majority are criminal and mischief-related events. History demonstrates that bombings resulting in four or more casualties occur approximately once every three years in the U.S., and that flashpoints of greater frequency and casualties often coincide with periods of social or economic unrest.

In the first half of the 20th century, a variety of groups used IEDs to target government, commercial, and public gathering sites in the U.S. A group assumed to be anarchist dissidents bombed Wall Street in 1920, killing 38 people and wounding around 300.⁶ White supremacists, opposed to the civil rights movement, bombed so many homes and buildings in Birmingham, Alabama, including the Birmingham Baptist Church, that the city received the derisive nickname “Bombingham” in the 1950s and 1960s.⁷ Vietnam War-era protest groups, such as the Weather Underground, used IEDs to attack government and commercial buildings, including the U.S. Capitol Building in 1971⁸ and the Department of State headquarters in 1975.⁹

In the U.S. after the Vietnam War-era, single-issue “lone wolves” and other violent extremists have been responsible for most IED attacks. Ted Kaczynski (“The Unabomber”) carried out a serial bombing campaign that killed three people between 1978 and 1995 to protest industrialization.¹⁰ In 1993, terrorists detonated a bomb in the World Trade Center parking garage, killing six people and injuring more than



1910 – Commercial



1927 – Education



1963 – Religious Institution



1975 – Transportation



1920 – Commercial



1940s-50s – Commercial and Transportation



1970s-80s – Commercial and Education

one thousand,¹¹ an early example of transnational terrorism targeting the homeland from abroad (see Figure 5). The World Trade Center bombing resulted in over \$858 million in insured property damage.¹² Between 1996 and 1998, convicted bomber Eric Rudolph carried out a series of IED attacks against a range of targets, including one near the site of the 1996 Summer Olympic Games in Atlanta.¹³

The current IED threat to the United States ranges along a spectrum from bomb threats and crude devices to refined and sophisticated plots capable of inflicting mass casualties.^{14 15} After September 11, 2001, the majority of bombing-related casualties suffered by U.S. citizens occurred during the conflicts in Iraq and Afghanistan.¹⁶ However, multiple transnational incidents targeting the U.S. homeland have subsequently occurred, including a 2009 Al Qaeda attempt to detonate a bomb on a commercial flight¹⁷ and a 2010 attempt to blow up a U.S.-bound cargo plane.¹⁸ The 2013 Boston Marathon bombing and 2016 New Jersey and New York City bombings demonstrated how homegrown extremists, influenced by global terrorist movements, can use IEDs to inflict mass casualties. Since September 11, 2001, law enforcement agencies in the United States have disrupted dozens of IED-related plots, which had the potential for mass casualties. Many of these plots, along with bombings and other incidents in Boston, San Bernardino, and New Jersey/New York, reflect a shift from centrally organized operations by groups overseas to a more decentralized threat in which bombers are often self-radicalized via the Internet or only loosely affiliated with foreign movements and therefore harder to detect and prevent by traditional intelligence and law enforcement means. Many of these incidents highlight how adversaries exploit the wide availability of products that contain explosive precursor chemicals.

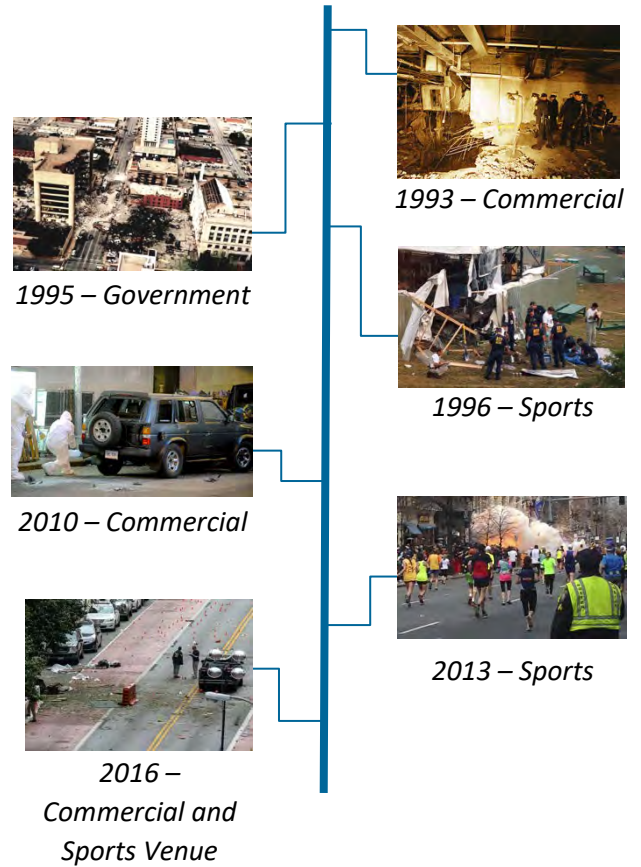


Figure 5: Timeline of major U.S. incidents and associated types of Critical Infrastructure Sector targets.
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IED Characteristics

Depending on the goals and materials available to the bomb-maker, IEDs range from small, crude devices, such as overpressure devices or pipe bombs most often filled with gunpowder, to large vehicle-borne devices containing bulk quantities of explosives. Many IEDs have common characteristics, which can be remembered by the acronym, PIES¹ outlined below:

- **Power source:** A device that stores or releases electrical or mechanical energy to close an IED's switch and activate the initiator.
- **Initiator:** A device, typically a detonator or igniter, used to start the detonation or deflagration (rapid burning) of the explosive main charge by electric or non-electric means.
- **Explosive main charge:** The quantity of high explosive (commercial, homemade, or military-grade chemicals) or low explosive (typically gunpowder) intended to detonate or deflagrate, releasing tremendous energy in the form of an explosion.
- **Switch:** A device for making, breaking, or changing a connection between an IED's power source and initiator. Switches can be configured in many ways and operated on command (e.g., button or radio control), according to time (e.g., digital clock), or by the victim (e.g., tripwire or anti-tamper mechanism).

A container such as a bottle, pipe, or pressure cooker is often used to confine the explosive main charge and the entire IED may also be contained in a bag, box, letter, or vehicle to conceal it.

Enhancements may be deliberately added to IEDs to increase their physical or psychological effects, such as shrapnel (e.g., nails, ball bearings, or BBs) or fuel (e.g., propane or other gas tank) and, in rare cases, a chemical, biological, or radiological agent.

Figure 6 lists several types of commonly constructed IEDs. All can be manufactured from materials readily available through both legal commercial means and black markets, and bombers are constantly adapting their tactics to circumvent law enforcement detection and countermeasures.



Figure 6: Common IED Configurations
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¹ **READER'S NOTE:** More technical stakeholders may use the alternative acronym, SIMPCE, which stands for Switch, Initiator, Main charge, Power supply, Container, and Enhancements.

Typical Event Timeline

Improvised explosive device incidents typically include several stages of a cycle.² The 10 common C-IED Goals presented in Chapter 3 represent risk management strategies that address one or more of these stages; for example, by deterring IED activity outright, by increasing the likelihood of early detection or failure along the timeline, and through resiliency in the event of an actual bomb threat or IED detonation. Figure 7 explains the stages both in terms of adversary actions and opportunities of disruption through the C-IED Goals. More detail is provided in Chapter 3.

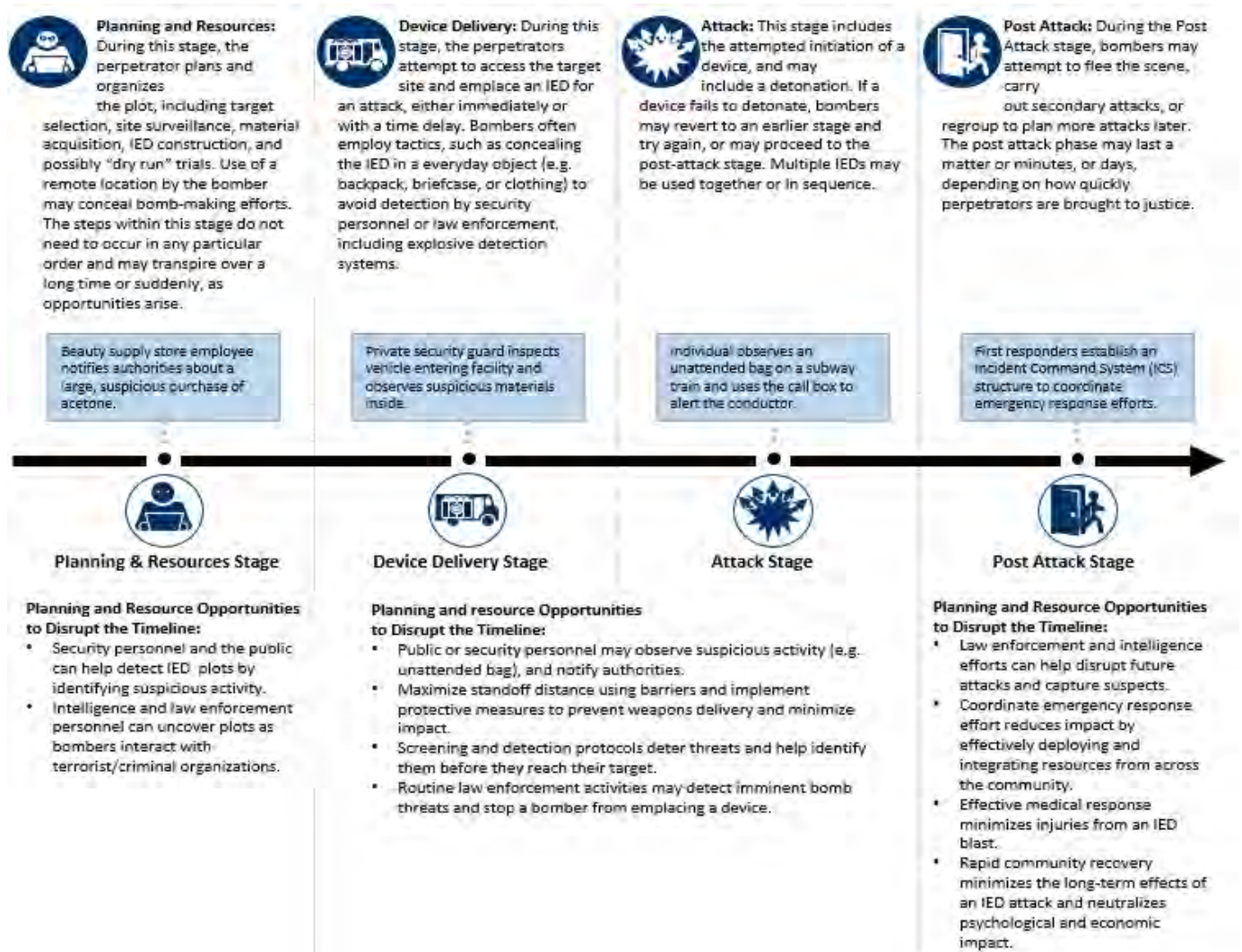








Figure 7: IED Incident Timeline and associated disruption opportunities
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² **READER'S NOTE:** Understanding the terrorist attack planning cycle is a key step in assisting with the potential disruption of nefarious activities; however, the cycle is fluid and steps may be skipped, or repeated. Most terrorist incidents in the West over the last 5-10 years have had limited pre-operational activity compared to attacks prior to 9/11. Therefore, Figure 7 represents a simplified representation of the cycle intended to assist the reader in identifying stages of the planning cycle that are often observable and can offer opportunities to identify plots and prevent attacks. For more information on the full terrorist attack planning cycle, visit the [National Counterterrorism Center's Joint Counterterrorism Assessment Counterterrorism Guide for Public Safety Personnel](#).

Potential Consequences

Understanding the potential consequences of IED incidents will help stakeholders, especially planners, to identify and estimate their C-IED requirements, associated capabilities, and tasks. Predicting injuries and damages resulting from bombings with certainty is difficult, as they vary widely depending on the specific details of the blast.¹⁹ However, IED blast effects generally relate to the size of the explosive charge, whether the IED has fragmentation or enhancements, and its distance from a potential target. Communities should be prepared to deal with a broad spectrum of IED incident consequences. At the low end, IED incidents, including threats and hoaxes, may simply cause disruptions to daily life and commerce. At the high end, a significant incident may cause hundreds of casualties, millions of dollars in damage, and require a prolonged recovery. A hypothetical scenario involving a large truck bomb (20,000 pounds) detonated at street level in a major U.S. city resulted in an estimate of as much as \$30 billion in direct and indirect economic losses.²⁰ Table 1 contains examples of IED incident consequences from the United States.

*Table 1: Examples of IED Consequences
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IED Event		Consequences
	Boston Marathon (2013)	Two small IEDs exploded along the crowded marathon path, killing three, injuring over 260 others, and causing \$25 million in property damage. ²¹
	Times Square (2010)	An attempt to detonate a car bomb shut down Times Square on May 1 and led to the evacuation of thousands of individuals from nearby businesses. ²²
	Atlanta Centennial Park (1996)	A small bomb placed under a bench exploded in Atlanta’s Centennial Park, which was crowded with tourists attending a concert. The blast killed two and injured 112. ²³
	Oklahoma City (1995)	A truck bomb detonated next to the Alfred P. Murrah Federal Building killing 168 people, wounding 700 more, and resulting in \$650 million in damages. ²⁴
	World Trade Center (1993)	A truck bomb detonated in the World Trade Center parking garage, killing six people, injuring more than 1,000, and causing over \$858 million in insured property damage. ²⁵
	United States (1978-1995)	For 17 years, Ted Kaczynski (the “Unabomber”) mailed or hand-delivered a series of bombs that killed three and injured 24 individuals. ²⁶

Causes of Injury and Damage

Pressure waves emanating from an explosion may cause damage and injuries in the area of the blast. The blast wind created by an IED can reach a velocity of more than 500 kilometers per hour (310 miles per hour), double that of a category 5 hurricane.²⁷ The waves weaken dramatically over distance from the blast, so the most severe effects are typically close to the point of detonation. Blast pressures near the explosion may cause windows to shatter or walls and

buildings to collapse, as well as kill individuals or cause serious injury to the ears and lungs. Explosions may also throw people from their feet leading to additional injuries. In urban settings, the reflection and amplification of pressure waves from surrounding buildings can cause additional injury and damage patterns.

Debris thrown by the IED blast may also cause injury and damage. Debris may originate from the IED, as fragmentation from the container or enhancement like BBs added to increase IED lethality, or come from surrounding structures and objects thrown by the blast. Lacerations and puncture wounds from flying glass fragments have been responsible for a significant portion of the injuries during IED incidents. In the Oklahoma City bombing, 40 percent of the survivors cited glass (and window blinds) as contributing to their injuries.²⁸ The 1998 bombing of the U.S. Embassy in Nairobi, Kenya, injured more than 4,500 people, most of whom suffered debris-related injuries.

Size and Distance Effects

The weight and chemical composition of an explosive charge determines the magnitude of the blast that it can generate. Large-scale truck or vehicle bombs may contain the equivalent of hundreds or thousands of pounds of Trinitrotoluene (TNT). Briefcase bombs can hold approximately 20 pounds, and pipe bombs are generally in the range of one pound of TNT equivalent. The distance of an IED from vulnerable targets is also a significant factor in determining potential damages and injuries from the explosion. Devices placed within or immediately next to a target site can cause significantly more damage than those at a distance. Figure 8 illustrates the role of an IED's weight, (equivalent to TNT) and distance from a target on injuries and damage from an IED blast.

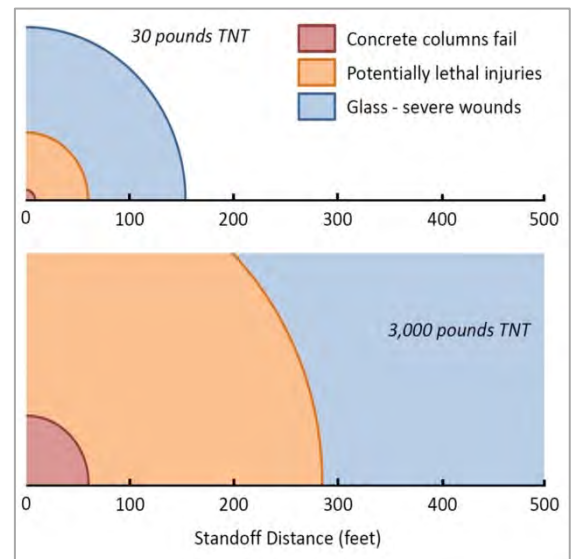


Figure 8: IED Effects by IED Weight and Distance
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Additional Sources of Risk Information

The information provided here is only a starting point to gain perspective on risk posed by IEDs to a given region, jurisdiction, or stakeholder group. More detailed information may be available in THIRAs developed for the large city or state considering C-IED planning. For example, they may include statistics and analysis on the frequency and estimated impact of IED events at the regional-, state-, or local-level based on real-world data and input from experts.

Chapter 3: Common Security and Resiliency Concepts and Goals for IED Incidents

C-IED Goals

Table 2 outlines 10 common C-IED Goals, intentionally covering all preparedness mission areas—Prevention, Protection, Mitigation, Response, and Recovery—and applicable across many jurisdictions, stakeholders, and IED scenarios. Linked to the relevant core capabilities described by the National Preparedness Goal,²⁹ the Counter-IED Goals provide a simple risk management framework to enhance preparedness for IED threats across many stakeholders and, once implemented, seek to disrupt adversary activity along the IED Incident Timeline outlined in Chapter 2. They provide a jump-start for stakeholders new to the issue or looking to enhance existing activities that only address portions of the C-IED risk management spectrum. Many of the recommended actions and steps have applicability beyond IED threats (e.g., active shooters and other terrorism or mass violence threats), particularly with regard to suspicious activity reporting, information sharing, and coordination between stakeholder organizations. Appendix B provides a list of C-IED resources that may assist stakeholders with achieving the goals outlined in this guide.

*Table 2: Common C-IED Goals
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#	Goal
1	Use and share risk information to guide IED-related physical security, law enforcement, and emergency response activities.
2	Identify and report IED-related suspicious activity.
3	Prevent the acquisition of explosives and explosive precursor chemicals used in IEDs.
4	Implement site-specific protective measures to prevent and minimize the impact of IED incidents.
5	Utilize IED screening and detection methods in high-risk environments.
6	Take immediate safety precautions for bomb threats, suspicious items, and IEDs.
7	Safely coordinate response activities at IED incident sites.
8	Request Public Safety Bomb Squad assets to diagnose suspicious items and render-safe IEDs.
9	Provide IED-specific emergency medical response.
10	Reduce the psychological and economic impacts of IED incidents.

Improvised explosive device subject matter experts in relevant technical disciplines of law enforcement, military, physical security, emergency services, and counterparts representing broader emergency management and national preparedness policy stakeholder interests, developed the goals collaboratively to ensure the guidance is relevant and practical. The goals draw upon decades of experience and lessons learned from past bombing incidents and C-IED efforts in the U.S. and overseas, including Iraq and Afghanistan, and closely align with the U.S. Government’s policy for countering IEDs worldwide. Detailed information provided for each of these goals include discussions of why each is important and best practices to assist stakeholders to implement them.

Disrupting IED Incidents

Figure 9 illustrates specific actions on the IED Incident Timeline that each goal seeks to disrupt. The whole community should engage in IED preparedness efforts that target each stage of the IED Incident Timeline through the goals presented within this guide. The following sections outline each stage, with examples of how the C-IED Goals can apply to it. Note that not all goals are relevant to every stage, and some jurisdictions or stakeholders may choose to omit certain goals based on their own planning requirements.

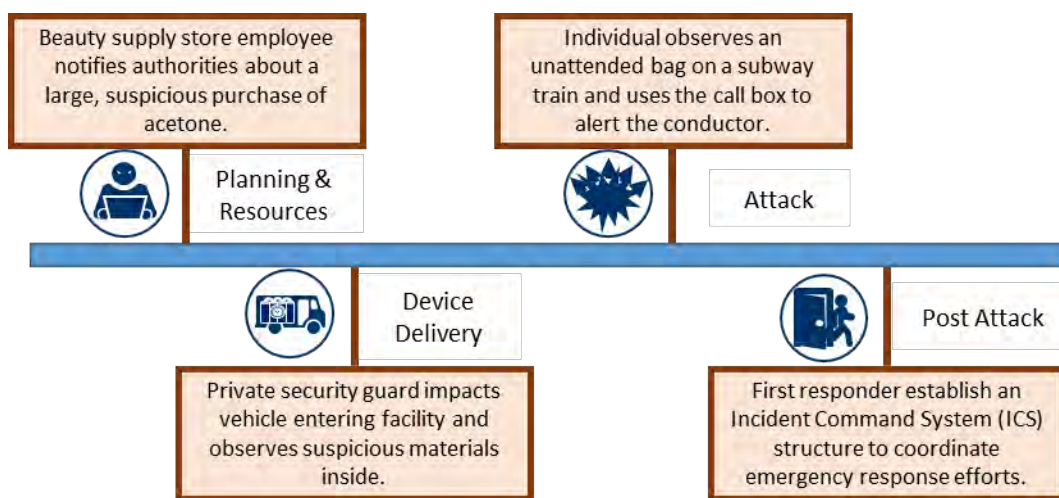


Figure 9: Disrupting the IED Incident Timeline
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Planning and Resources Stage

Target selection, site surveillance, material acquisition, and device construction expose perpetrators to the community, making them vulnerable to detection. It is critical for planners to understand the importance of all community stakeholders in this stage. The Federal Government has acknowledged that a shift is underway in global terrorism, in which individuals and small groups often “self-radicalize” under the influence of extremist propaganda that is increasingly shared via the Internet and social media. This trend makes it more difficult for law enforcement and national security efforts alone to identify threats before they emerge. Unfortunately, radicalization can occur anywhere in today’s interconnected world.

As with other types of threats and hazards, engagement with the whole community is one of the best ways to reduce risk. A study of terrorism in the United States revealed that the most common types of observable “pre-operational” indicators across hundreds of incidents were stated threats, the discovery of weapons, and the acquisition or storage of materials such as explosives.³⁰ The Bomb-Making Materials Awareness Program (BMAP) is an outreach initiative that promotes

private sector point-of-sale awareness and suspicious activity reporting to prevent misuse of explosive precursor chemical IED components. BMAP creates prevention opportunities by establishing a network of vigilant stakeholders. The role of whole community members—especially the public, education and faith-based stakeholders, and private sector businesses—is critical because they may be in the best position to actually observe these indicators of radicalization or criminal activity.

The Nationwide Suspicious Activity Reporting Initiative (NSI) is the collaborative effort between the Federal Government and state, local, tribal, and territorial (SLTT) law enforcement stakeholders to establish national capacity for gathering, documenting, processing, analyzing, and sharing suspicious activity report (SAR) information. Awareness-raising efforts like DHS’s “If You See Something, Say Something™” initiative are frequently used to bring awareness and educate members of the public on how to be engaged. The NSI, in collaboration with local authorities, makes guidance and online training available to whole community stakeholders so that they can contribute to IED risk management at this stage effectively and appropriately.

The C-IED goals at this stage focus on detecting and reporting suspicious activity, including:

- **Example:** Intelligence and law enforcement personnel share information that may uncover plots as bombers interact with terrorist and criminal organizations while selecting a target. (aligns with Goal 1)
- **Example:** Security personnel, as well as the public, may help detect IED plots during the planning and resources stage by identifying suspicious activity. (aligns with Goals 2 and 3)

Device Delivery/Attack Stage

In order to detonate an IED, or leave it for future use, perpetrators must first gain access to the target site and deliver the weapon. The following goals focus on preventing device delivery and attack:

- **Example:** Routine law enforcement activities may detect and prevent imminent bomb threats and stop a bomber from emplacing a device. (aligns with Goal 1)
- **Example:** The public or security personnel may observe suspicious activity, such as someone leaving an unattended bag at a site, and notify authorities. (aligns with Goal 2)
- **Example:** Maximizing standoff distance using bollards and checkpoints and implementing protective measures prevents bombers from delivering weapons to specific areas and helps minimize casualties and damage. (aligns with Goal 4)
- **Example:** Screening and detection protocols deter threats and help identify them before they reach their target destination. (aligns with Goal 5)

Post Attack Stage

After an IED incident has occurred, response and recovery activities seek to minimize damages or other effects. The following goals focus on response and recovery in the aftermath of an IED incident:

- **Example:** Law enforcement and intelligence information sharing after an IED incident can help disrupt future attacks and capture suspects. (aligns with Goal 1)
- **Example:** A coordinated emergency response effort reduces the impact of an IED incident by effectively deploying and integrating resources from across the community. (aligns with Goals 7 and 8)

- **Example:** An effective medical response minimizes potential injuries from an IED blast. (aligns with Goal 9)
- **Example:** Rapidly returning a community to pre-attack status minimizes the long-term effects of an IED attack as well as the psychological and economic impacts. (aligns with Goal 10)

Goal 1: Use and share risk information to guide IED-related physical security, law enforcement, and emergency response activities

Preparedness Mission Areas:	<ul style="list-style-type: none"> • Prevention • Protection
Preparedness Core Capabilities:	<ul style="list-style-type: none"> • Operational Coordination • Intelligence and Information Sharing • Forensics and Attribution • Screening, Search, and Detection • Interdiction and Disruption

Why Is It Important?

It is valuable to understand the context of past and potential IED use in order to determine which aspect of the problem to address. How have IED incidents occurred in the past? What is the current threat? What are the likelihood and consequences of different incidents? Understanding the situation is essential to determining which C-IED goals and preparedness core capabilities are relevant to your needs. Coordination between local, state, tribal, territorial, and Federal stakeholders, as well as the private sector and non-governmental organizations, is critical because it provides an opportunity to share information, expertise, and limited resources.

What You Can Do

- **Leverage the information and intelligence sharing between local law enforcement, State and Major Urban Area Fusion Centers, and Joint Terrorism Task Forces.** This network works to understand how local issues and incidents relate to the national law enforcement and intelligence picture. In the past, seemingly unrelated data from an array of law enforcement, homeland security, intelligence, private sector personnel, and other public safety organizations may lead to the detection of terrorist and criminal plots.
- **Gather, document, process, analyze, and share SAR information consistent with the *Information Sharing Environment (ISE)-SAR Functional Standard*.** Sharing SARs appropriately with other law enforcement stakeholders allows for analysis and potential connection with other law enforcement data that could confirm a threat or reveal important trends. The NSI provides guidance ranging from how to conduct community outreach, to training line officers, to training intelligence analysts at local Fusion Centers in how to process SARs in accordance with standards.
- **Increase awareness of IED-specific information resources.** Federal agencies provide information on IED threats, including incident statistics and bomber tactics, techniques, and procedures (TTPs). Information from these sources may be useful for increasing awareness of IED-related indicators and for community-specific scenarios to assist with planning for IED incidents. Appendix B contains a list of relevant information resources.

- **Establish public-private relationships to share IED-related information.** These relationships provide communities with a forum for IED-related information sharing. Public sector entities provide information on potential threats and trends in IED-related activity. Private sector stakeholders inform counterparts on observed suspicious IED-related activity as highlighted in Goals 2 and 3.

IED Information Resource: TRIPwire

TRIPwire is DHS's free, online information-sharing resource on IED incidents and TTPs, as well as corresponding IED prevention and protective measures. TRIPwire users have access to:

- Daily reporting on IED-related incidents
- Official government reports and products
- Open-source reporting and mapping
- IED incident and device profiles
- Incident quick-look reports
- Fire and rescue notes
- Patrol officer notes



<https://tripwire.dhs.gov>

Goal 2: Identify and report IED-related suspicious activity

Preparedness Mission Areas:	<ul style="list-style-type: none"> • Prevention • Protection
Preparedness Core Capabilities:	<ul style="list-style-type: none"> • Public Information and Warning • Intelligence and Information Sharing • Interdiction and Disruption • Screening, Search, and Detection

Why Is It Important?

Law enforcement efforts have disrupted the vast majority of terrorist plots in the U.S. since September 11, 2001.³¹ In many of these cases, community tips, SARs, and routine law enforcement activities provided the initial information needed to identify those plots. Suspicious activity reports may also disrupt imminent attacks by helping to locate associated persons or networks, preserving life, and minimizing destruction.³² An observant community can help protect against IED threats, and public awareness efforts should educate the whole community, to include individuals,

communities, NGOs, private sector entities, and local, state, tribal, and territorial stakeholders. Recent IED-related plots disrupted because of community tips include:

- After receiving a tip, the FBI disrupted an attempt to bomb the Washington, DC, metro railway system in 2010;³³
- A tip about the perpetrator's increasing radicalism resulted in the disruption of an attempt to bomb a Christmas event in Portland, Oregon, in 2010;³⁴
- Authorities responded to a 2010 attempt to bomb Times Square in New York after street vendors observed and reported smoke coming from a vehicle; and
- Eye-witness tips helped authorities identify and track the Austin bomber's vehicle during the 2018 string of package bombings in Texas.

What You Can Do

- **Increase awareness of indicators of target site reconnaissance.** Gathering information about a potential target is a key step in most IED plots. This may include visits to target sites to gather information on the physical layout, determine where and when an attack could occur, and assess security assets and vulnerabilities. Public awareness campaigns that educate the community about possible indicators of site reconnaissance may lead to the identification of IED plots.
- **Increase awareness of indicators of IED construction** (see Figure 10). Constructing IEDs often requires that plotters engage with the private sector and members of the public to gather necessary material or facilities, providing opportunities for plot detection. Unusual chemical or fuel odors coming from a residence, workplace, vehicle, or person may indicate the manufacture of explosive devices or an IED threat. Bomb-makers also frequently conduct tests using complete IEDs or detonators, which the public may be able to observe and report. Public awareness campaigns that educate the community about indicators of IED construction may identify the development of IEDs prior to their use.

Case Study: 2010 Attempted Bombing in Times Square

In May 2010, a would-be bomber parked a sport utility vehicle (SUV) packed with explosive materials and fuel on a busy street off of Times Square in New York City and left the area. When smoke began to emit from the rear of the vehicle, two nearby street vendors took notice and heard small explosions inside. They immediately notified police who quickly cordoned off and evacuated the area until a bomb squad arrived. While the bomb did not detonate as intended, subsequent tests demonstrated that the quick reaction and reporting of suspicious activity would have undoubtedly saved lives had the IED been properly assembled and functioned.

Possible Indicators of Site Reconnaissance

- Loitering, taking notes, drawing diagrams, or taking many photos or videos at a site
- Using voice recorders, two-way radios, or binoculars, or signaling to others
- Avoiding eye contact, appearing nervous, or using mirrors excessively
- Appearing repeatedly in significant locations or making multiple passes by a site
- Mimicking security procedures or following the movement of personnel at a site



Figure 10: Potential Indicators of IED Construction—laboratory equipment, liquid and/or powder chemicals, measuring tools and scales, refrigeration or ice baths, and filtration tools.

Property of DHS

- Increase awareness of indicators of IED emplacement and potential use.** Identifying emplaced IEDs provides a final opportunity to disrupt plots, and the whole community should consider educating its members about indicators of these imminent IED threats. Public awareness campaigns may be useful in typically high-risk areas, such as government facilities and transportation nodes. Appendix B outlines products that may assist planners with conveying this type of information to specific community groups. Table 3 lists imminent IED incident indicators, with additional information provided in Goal 5 on screening and detection.

Table 3: Potential Indicators of Imminent IED Use

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<p>Unattended bags Unattended bags may indicate an IED threat.</p>	
<p>Suspicious letters and packages Includes items with stains, exposed wires, excessive postage, misspelled words, and missing names.</p>	
<p>Vehicle-borne IEDs (VBIEDs) Includes vehicles parked in unusual locations, headlights or taillights not working, exposed wires, overloaded vehicles, unusually clean areas, cargo concealed by tarp or blanket, or overly cautious drivers.</p>	
<p>Person-borne IEDs (PBIEDs) Clothing out of place with circumstances, excessive sweating, fidgeting, unnatural gait and posture, hands and arms with chemical burns or bleaching.</p>	

- Ensure that suspicious activity awareness campaigns include what to look for and how to report.** Public identification of IED indicators is only useful if they report information to the appropriate authorities. Improvised explosive device indicator awareness campaigns and training aids should include detailed information on how to report activity to law enforcement or public safety officials. The most effective way to do this is to link educational efforts with existing SAR campaigns, including the If You See Something, Say Something™ campaign³⁵.
- Alert the public and high-risk stakeholders during periods of heightened alert to motivate SAR.** By messaging the public where and when they are most at risk, authorities ensure that the public is vigilant in identifying and reporting suspicious activity. This information may be useful for preventing incidents and protecting people and sites. Many stadiums, transit systems, and entertainment facilities already use public address announcements and signage for this purpose nationwide.
- Report IED-related suspicious activity consistent with NSI guidance and standards.** Terrorist and criminal plots may go undetected if authorities do not share suspicious activity information with one another. The NSI is the collaborative effort between the Federal Government and SLTT law enforcement stakeholders to establish capacity for gathering, documenting, processing, analyzing, and sharing SAR information in communities across America in order to prevent terrorism and other related criminal activity. The NSI provides detailed guidance and training resources to assist jurisdictions with establishing SAR-related capability based on national standards. The guidance covers an array of issues and best practices, from community outreach approaches, to training, to privacy concerns.

Case Study: 2007 Fort Dix Plot

Authorities disrupted a plot to attack Fort Dix Army base after an electronics store clerk provided a tip to police. The clerk reported that two men dropped off a video tape for conversion to a DVD, which contained video of them shooting guns and shouting in Arabic.

Goal 3: Prevent the acquisition of explosives and explosive precursor chemicals used in IEDs

Preparedness Mission Areas:	<ul style="list-style-type: none"> • Prevention • Protection
Preparedness Core Capabilities:	<ul style="list-style-type: none"> • Intelligence and Information Sharing • Interdiction and Disruption • Supply Chain Integrity and Security • Physical Protection Measures

Why Is It Important?

The U.S. closely regulates commerce in the professional-grade high explosives used in mining and blasting work, such as dynamite and blasting caps,³⁶ and the Federal Government determines access for users of military-grade explosives. A bomb-maker must either steal these materials or obtain them on the black market.³⁷ Instead, most IEDs in the U.S. contain low explosive materials (such as black and smokeless powders used in firearms and fireworks) that are available commercially but not regulated in the same way as high explosives. Some IEDs contain explosives manufactured entirely from precursor chemicals. Homemade explosives (HMEs) use explosive precursor chemicals found in many common, commercially available household items, with instructions for manufacturing available in books or online. This enables bombers without technical experience to make HMEs by following simple recipes. Individuals and businesses that use, store, sell, and transport all types of explosives and explosive precursor chemicals for legitimate purposes should safely secure them in order to prevent the construction of IEDs. Examples of recent thefts of explosives and attempted purchase of explosive precursors include:

- In 2009, Najibullah Zazi purchased large quantities of hydrogen peroxide from beauty supply stores in order to manufacture explosives to bomb the New York City subway system;³⁸
- In 2013, a serviceman was arrested after attempting to sell a 1.25-pound block of military plastic explosive that he had stolen during an on-base drill;³⁹ and
- In 2014, the theft of 285 pounds of commercial high explosives, including ammonium nitrate-fuel oil (ANFO), explosive boosters, and dynamite from an explosives storage facility by forced entry.⁴⁰

What You Can Do

- **Ensure that explosives permit holders follow rules, regulations, and standards for storing, selling, transporting, and using explosives.** Explosives permit holders should be familiar with laws, regulations, and standards concerning the sale, storage, and use of explosive materials. These include the Federal Explosives Regulations and the Chemical Facility Anti-Terrorism Standards (CFATS), and standards promoted by industry. The ATF provides a list of explosive materials, compliance guidelines, and a guide to explosives laws and regulations. Federal agencies also provide guidance for ammunition and fireworks retailers, including information on identifying and reporting suspicious purchases and activity.
- **Train employees to report the theft, loss, or suspicious purchase of explosives.** The ATF and the Institute of Makers of Explosives (IME) provide guidance on safety and storage guidelines, and the ATF provides information on suspicious activity. The ATF and the U.S. Bomb Data Center (USBDC) provide information on how to report the theft or loss of explosives. Federal agencies also provide guidance for ammunition and fireworks retailers to

Case Study: Texas Interdiction

In February 2011, both a chemical and a shipping company reported a suspicious \$435 order of the chemical phenol by Khalid Aldawsari. The shipping company, a recipient of training materials on IED precursor chemical awareness, contacted both local police and the FBI with a suspicion that the customer did not order the chemicals for normal use. A subsequent investigation revealed that Aldawsari had been researching targets in the Dallas, Texas, area, including the home of former President George W. Bush, and that phenol was the last ingredient necessary for him to produce an explosive charge for an IED.

Case Study: Theft of Commercial Explosives

In April 2016, thieves stole more than 500 pounds of commercial explosives en route via freight train between Chicago and Detroit. After an urgent investigation that included the ATF and tip from the community, Detroit Police found the explosives abandoned in a vacant field near Detroit.

identify potential misuse of explosive powders. Training should include local and Federal points of contact for reporting purposes as well as indicators of suspicious purchases; Goal 1 includes example indicators. Explosives thefts and losses occur in communities of all sizes, with material typically tied to ammunition and fireworks distributors and retailers, construction sites, mining operations, demolition companies, public and private storage facilities, and during transportation. Figure 11 shows examples of commercial explosives and blasting articles. Over a five-year period from 2009 to 2013, the ATF received reports of 124 thefts of explosive materials. Training and reporting capabilities should be consistent with NSI guidance and standards.

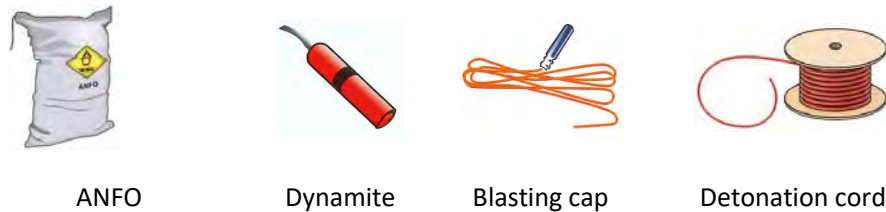


Figure 11: Common Explosive Materials
Property of DHS

- Increase awareness of the potential for diversion of explosive precursor chemicals.** A range of businesses, households, and individuals sell, transport, use, or store legitimate items that contain explosive precursor chemicals. Table 4 lists the most common explosive precursor chemicals that individuals may observe within their community. Public awareness campaigns that target community members who most often use these precursor chemicals may help prevent the diversion of these materials for use in IEDs.

Table 4: Common Explosive Precursors and their Uses
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Retailers	Precursors	Common Uses
Agricultural, garden, hardware, food supply	Aluminum powder	Paint
	Ammonium nitrate	Fertilizer
	Methyl ethyl ketone	Paint remover, solvent
	Potassium nitrate	Salt peter, stump remover
	Sodium chlorate	Herbicide, pyrotechnics
	Sodium nitrate	Fertilizer, food preservative
	Urea	Fertilizer
Drug, beauty supply, cleaning products	Acetone	Nail polish remover, paint remover, solvent
	Hydrogen peroxide	Disinfectant, bleaching agent
	Sulfuric acid	Car batteries, drain cleaner
Chemical supply, pyrotechnic	Nitric acid	Industrial chemical, hydroponics
	Potassium chlorate	Match heads, pyrotechnics
	Potassium perchlorate	Airbag initiators, pyrotechnics
Racing supply	Nitromethane	Racing fuel

- Train employees to secure explosive precursor chemicals and identify and report suspicious use or purchase.**

Planners should work with private sector stakeholders and employees to ensure that adequate training is available. Training should provide a list of explosive precursor chemicals that are present at a site or facility, guidance on how to secure the materials against theft or misuse, possible indicators of suspicious activity, techniques for engaging suspicious customers, and clear instructions for contacting authorities. This training may be part of a larger program that addresses chemical safety. Because explosive precursor chemicals often have legitimate uses, training should focus on suspicious or unusual buying patterns, such as the purchase of multiple precursor chemicals, large quantities of these materials, or purchase for unusual uses. Training and reporting capabilities should be consistent with NSI guidance and standards. Appendix B contains links to a number of government and industry resources for securing chemicals, such as the DHS-DOJ BMAP.

Information Resource: BMAP

BMAP is an outreach initiative that promotes private sector point-of-sale awareness and suspicious activity reporting. BMAP is a capability-building program for states and local governments, law enforcement, and community liaisons. To launch a BMAP initiative in your community, send an email request to: obp@hq.dhs.gov



Table 5: Suspicious Customer Indicators and Engagement Techniques
Property of DHS

Suspicious Customer Indicators	Customer Engagement Techniques
<ul style="list-style-type: none"> • Appears nervous • Gives evasive responses • Lacks knowledge of product proper use • Requests product in unusual amounts • Refuses to purchase a substitute product • Insists on in-store pickup • Makes large cash purchases 	<ul style="list-style-type: none"> • Notice atypical customers • Strike up a conversation • Inquire about the intended usage of the product • Offer product-related advice • Suggest a complementary product or substitute • Offer delivery on bulk purchases • Document the details of any suspicious engagement for accurate future reference

Overpressure Devices

Overpressure devices, sometimes referred to as chemical reaction bombs, use confined chemical reactions to rupture containers. They are commonly made with inexpensive and easy to obtain materials, including drain cleaner (or other strong bases), toilet bowl cleaner (or other strong acids), aluminum foil, dry ice, and plastic bottles. These devices may cause traumatic injury, burns, and inhalation of harmful gas. Instructions for making these devices are readily available on the internet.

Image Source: DHS



- Increase awareness of the risks and penalties associated with the manufacture of HMEs.** Making HMEs from precursor chemicals is a dangerous activity that has killed and injured individuals.⁴¹ In some states, it is also a crime to make explosives without first obtaining a permit. The penalties for making explosives vary depending on the state, and Federal felony penalties apply to manufacturing destructive devices and transferring explosives to or from an individual who does not have a license or permit. Increasing awareness of these penalties through targeted campaigns may deter individuals from using precursor chemicals to make explosives. Contact local or state law enforcement for laws that pertain to your area. Example laws related to the manufacture of explosives include:

 - Possession of materials with the intent to make an explosive without a valid permit is a felony in California, punishable by two to four years imprisonment;⁴²
 - Manufacture of any explosive material without first obtaining a permit from the state fire marshal is a felony in West Virginia, punishable by up to 10 years in prison and a \$5,000 fine.⁴³

Goal 4: Implement site-specific protective measures to prevent and minimize the impact of IED incidents

Preparedness Mission Areas:	<ul style="list-style-type: none"> Protection
Preparedness Core Capabilities:	<ul style="list-style-type: none"> Physical Protective Measures Access Control and Identity Verification Risk Management for Protection Programs and Activities

Why Is It Important?

Site-specific protective measures prevent bombers from accessing intended target sites and protect people and assets should attacks occur. These measures may also deter potential bombers from considering attacks against protected sites because of the challenges that they present. Recent examples of how these types of measures prevented IED incidents or minimized the impact of attacks include:

- Window films designed for blast mitigation protected people inside the Australian embassy in Jakarta from flying glass during an IED attack against the complex in 2004;⁴⁴ and
- In 2007, two individuals drove a Jeep Cherokee loaded with propane canisters into the glass doors of the Glasgow International Airport terminal and set it ablaze, but security bollards outside the entrance prevented the car from entering the terminal.⁴⁵



Figure 12: Glasgow International Airport Incident (2007)
Property of DHS

What You Can Do

- **Review or conduct vulnerability assessments of potential targets and prioritize physical security efforts.** Analysis should weigh benefits, potential impacts to facility operations, and acceptable costs.
- **Include subject matter experts in blast effects, such as engineers and other professionals, on planning teams.** Blast-experienced professionals are accustomed to considering the effects of explosions on structures. These professionals will be able to assist planners with identifying blast-sensitive requirements and developing and implementing IED-specific protective measures. Appendix B lists resources on protecting sites from explosive threats.
- **Ensure sites maximize standoff.** The primary strategy for preventing, protecting against, and mitigating explosive threats is to keep explosive devices as far away as possible, known as maximizing standoff distance. Protective measures that provide standoff distance include physical and natural barriers that prevent IEDs from getting close to buildings and people. This may include vehicle checkpoints and barriers, pedestrian entry control points or screening lines, and mail screening facilities. Figure 13 demonstrates how the level of protection of a site increases as a function of standard distance for a range of explosive weights.

Vulnerability to attack with explosives is most closely related to the standoff, the distance between the building and the closest place to which an explosive device can be delivered.

—FEMA 426: Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings

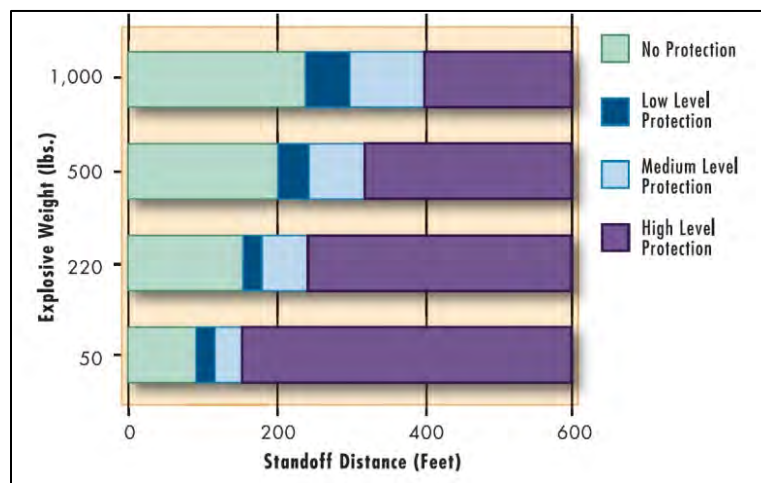


Figure 13: Level of Protection vs. Standoff Distance and Explosive Weight
Property of DHS

- Ensure sites provide a layered defense.** A defense that relies on multiple consecutive layers of protective measures around an asset, illustrated in Figure 14, mitigates manmade threats, including use of IEDs. Layers are mutually independent and designed to reduce the effectiveness of an attack by forcing attackers to penetrate and overcome each security layer.
- Incorporate blast-resistant features and materials into new and existing sites.** In situations where sufficient standoff distance or layered defense is not achievable, structural hardening and use of blast-resistant features and materials is particularly important. Appendix B provides resources for selecting and incorporating blast-resistant features.
- Develop plans for deploying temporary protective measures.** High- or elevated-risk sites may consider deploying assets to extend standoff distance or screen for explosives and IEDs, further described in Goal 5. Additional temporary protective measures include maximizing standoff and layering defense by adding temporary outer, middle, or inner security perimeters to address vehicle, personnel, and item access.

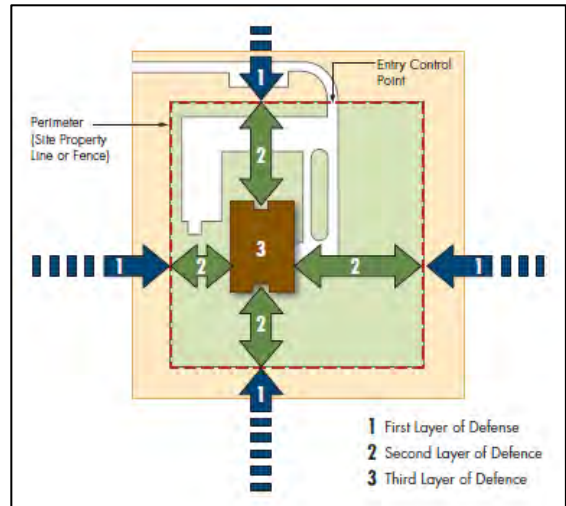


Figure 14: Layered Defense Diagram
Property of DHS

Goal 5: Utilize IED screening and detection methods in high-risk environments

Preparedness Mission Areas:	<ul style="list-style-type: none"> Prevention Protection
Preparedness Core Capabilities:	<ul style="list-style-type: none"> Physical Protective Measures Screening, Search, and Detection Interdiction and Disruption Risk Management for Protection Programs and Activities

Why Is It Important?

Screening and detection methods help facility operators and security stakeholders prevent IEDs and IED components from entering sites and facilities and locate emplaced IED threats. For these methods to be effective, operators must use them in appropriate situations. For example, metal detectors may detect batteries and other metallic components in some bombs, but will be ineffective against nonmetallic IED threats and explosives. Screening and detection methods may deter would-be bombers from planning attacks because of perceived challenges associated with protected sites. Examples of screening and detection successes include:

- In 1972, a canine team detected a bomb on board a flight at John F. Kennedy International Airport after receiving an anonymous bomb threat;⁴⁶
- X-ray screening detected a mail bomb, which was defused, at a courthouse in Chicago in 1995;⁴⁷ and

- In 2013, after an alarm in checked baggage, TSA officers found a 3.2-ounce flask of black powder, 22 feet of fuse, and miscellaneous ammunition in a passenger’s bag.⁴⁸

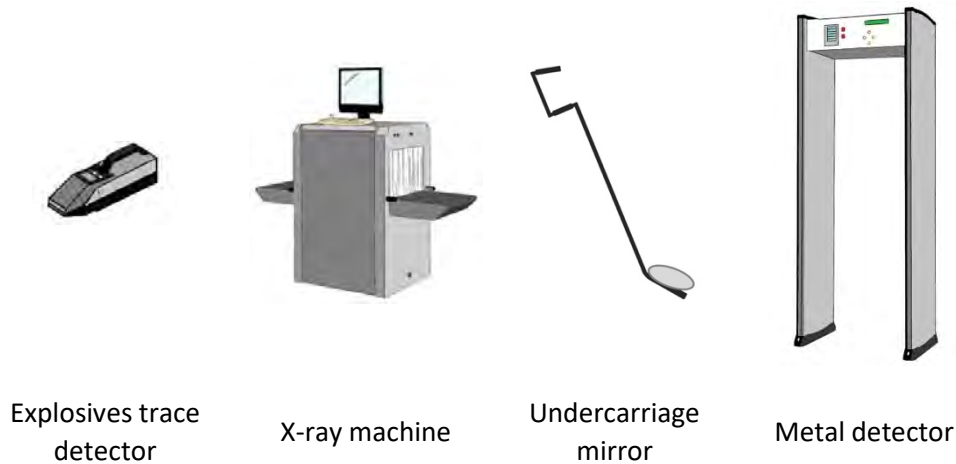


Figure 15: Example IED and Explosive Detection Technologies
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What You Can Do

- Develop a screening strategy.** Figure 16 outlines the process for developing a screening strategy, beginning with an assessment of which types of IED threats pose a risk to the specific site, facility, event, or planning area. Stakeholders, primarily facility operators, next determine screening requirements, including screening location and speed, potential privacy concerns, and acceptable costs. Based on the assessment and requirements, screening stakeholders develop a screening strategy that includes each function necessary to secure the site or event, such as:
 - Wide-area search** for locating emplaced explosives or IEDs in areas open to the public;
 - Search of mass gatherings** for locating threats in large crowds that have not been screened;
 - Checkpoints for people and baggage** for screening people and items before they enter a secured area;
 - Vehicle checkpoints** for screening vehicles for explosives and IEDs; and
 - Mail and package screening** for screening shipped or delivered items before they enter a secured area.
- Employ visual and manual screening methods.** Regardless of technologies used to detect explosives and IEDs, visual and manual screening methods are fundamental to all security efforts. For these methods to be effective, they require good training, standard operating procedures (SOPs), and exercising of response actions. Each screening environment will require different training and response procedures,

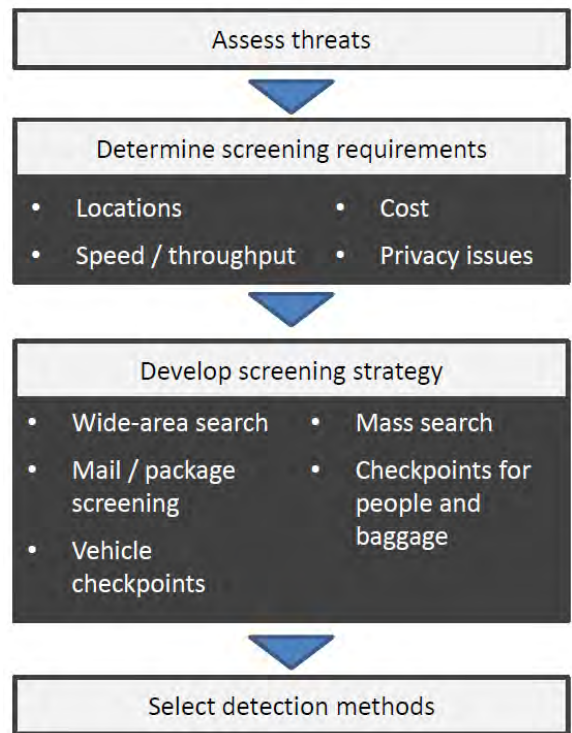


Figure 16: Process for Employing Screening and Detection Methods
Property of DHS

so it is important that security personnel are aware of their responsibilities for the full range of scenarios that they may encounter.

Manual Screening at Checkpoints	
Manual screening tips for personnel checkpoints ⁴⁹	<ul style="list-style-type: none"> • Ensure screening personnel wear appropriate personal protective equipment (PPE); • Ensure there is adequate workspace to conduct operations; • Have people who are being searched remove outer clothing, such as coats, hats, and sweaters; • Remove contents of bags or packages, as necessary, to facilitate the search; • Search for items that may be used to construct an IED; and • Supplement manual search with other detection methods.
Manual screening tips for vehicle checkpoints ⁵⁰	<ul style="list-style-type: none"> • Ensure vehicles being screened do not impede the flow of other traffic; • Have vehicle operators open all large holding spaces for easy inspection; and • Identify type of required screening ahead of time, as that distinction will identify how the screening needs to be accomplished (e.g., guarding against use of a VBIED and/or smuggling of a “placed” IED by car or foot traffic).

- **Select detection technologies.** Stakeholders providing screening must determine which technologies will be most effective for their particular need. The use of technology requires complementary training, well-developed and exercised SOPs, and mechanical and logistic support, such as power, maintenance, and consumables. Stakeholders should consider their ability to provide these resources before incorporating technologies into any security effort. Table 6 matches common screening use cases with appropriate detection technologies. For best results, organizations should leverage both explosive and anomaly detection technologies, along with a sound training program and well-developed SOPs.

Detection Technology Categories

- **Anomaly detection:** These do not detect explosives directly, but detect items that appear similar to explosives, explosive devices, or IED components. This includes enhanced imaging technologies, such as X-ray, Infrared, Millimeter-wave (mm-wave), and Terahertz (THz) imagers; metal detectors; and visual and manual screening techniques.
- **Explosives detection:** These detect explosives directly, through chemical analysis of particles, emitted vapors, or bulk materials, including Explosives Detection Canine (EDC) teams, Ion-Mobility Spectrometers (IMS), Infrared (IR) detectors, Raman detectors, and Colorimetric kits.

Table 6: Appropriate Detection Technologies
Property of DHS

Screening Use Case	Anomaly Detection	Explosive Detection
Wide-area search of sites and facilities	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> EDC Team Colorimetric
Search of mass gatherings	<ul style="list-style-type: none"> Infrared THz 	<ul style="list-style-type: none"> EDC Team
Checkpoint for people and baggage	<ul style="list-style-type: none"> Metal Detector X-Ray Backscatter mm-wave THz 	<ul style="list-style-type: none"> IMS IR Raman EDC Team
Checkpoint for vehicles	<ul style="list-style-type: none"> Mirrors Cameras Anomaly/Density Meter EDC Team 	<ul style="list-style-type: none"> Colorimetric IMS Raman
Mail and package screening	<ul style="list-style-type: none"> X-Ray 	<ul style="list-style-type: none"> EDC Team IMS Raman

Security Screening Strategy Example: Sports Stadium

Assess threats

Security planners assess that there are unacceptable risks posed from VBIEDs before and during the game, PBIEDs during the game, and emplaced IEDs inside the stadium.

Screening requirements

Security can close streets immediately adjacent to stadium, limiting vehicle access to the site. However, some vehicles require direct access for pre-game deliveries. Over a two-hour span before kickoff, approximately 30,000 people will enter the stadium.

Screening strategy

Employ wide-area search of the stadium before securing the site the day before the game. Use vehicle checkpoints at the north and south entrance of the stadium to screen delivery vehicles entering the stadium. Employ 30-40 screening checkpoints for people entering the stadium. Maintain mass search capability during the game as needed.

Security Screening Strategy Example: Sports Stadium

Select detection methods and technologies

- Wide-area search: Two EDC teams search the stadium the night before the game.
- Mass search: Two EDC teams provide mass search as needed.
- Vehicle checkpoints: Undercarriage mirrors at two vehicle checkpoints accommodate the 30 trucks that need to make deliveries in the five hours before the game.
- People checkpoints: 40 screeners use magnetometers to screen four people per minute.
- Mail screening: The U.S. Postal Inspection Service (USPIS) provides screening for explosive threats using X-ray and trace explosive detection.

- **Develop screening and detection protocols.** Screening and detection protocols provide systematic instructions for anyone involved with the screening process, covering the full range of operational needs and constraints, including:
 - Description of each component of the screening strategy and the methods and technologies used;
 - Guidelines for activating security procedures when threats are detected and dealing with people associated with threats; and
 - Information on how to contact security personnel in the event of detection.

Example: Mail and Package Screening Protocol

- Screening of mail and packages by EDC teams before allowing these items inside the screening facility.
- Visual inspection of items for signs they may contain an explosive device.
- Screening of mail at the batch level (tubs or trays) using an X-ray scanner.
- Individual screening of packages with an X-ray scanner.
- Network screening personnel with remote security personnel for technical support as necessary.

Goal 6: Take immediate safety precautions for bomb threats, suspicious items, and IEDs

Preparedness Mission Areas:	<ul style="list-style-type: none"> • Prevention • Protection • Response
Preparedness Core Capabilities:	<ul style="list-style-type: none"> • Planning • Operational Coordination • Screening, Search, and Detection

Why Is It Important?

Bomb threats and IEDs are criminal acts with immediate public safety implications. Managed improperly, a bomb threat or potential IED sighting can cause stress, panic, and associated risks like stampedes. Likewise, a suspicious item may or may not be an IED. It is imperative to understand how to determine if something is suspicious and take appropriate safety precautions.

Schools, government facilities, businesses, and other community organizations may receive bomb threats. The overwhelming majority of these threats do not involve actual devices, yet they are responsible for substantial disruptions in activities. These disruptions, and the associated emergency response, cost millions of dollars each year. Of the more than 1,000 bomb threats in the nation each year, recent examples include:

- A bomb threat near downtown Honolulu required the evacuation of the Federal building and a state courthouse in 2013;⁵¹
- In 2014, a North Carolina teen called in 20 bomb threats in 40 days to four schools, a hospital, several fast food restaurants, a gas station, and a major retail store;⁵² and
- A note found in the restroom of a Michigan manufacturer indicated a bomb threat, leading to an evacuation of 900 employees in 2014.⁵³

Knowing how to effectively react to a bomb threat will increase safety, minimize potential disruptions, and assist law enforcement. Response protocols help maintain calm during a stressful situation and enhance decision-making by facility owners or operators. For example, bomb threats are often received via telephone, email, or mail by a receptionist or front office employee. Having a quick-reference guide available nearby can help them record vital information and assist authorities to make risk management decisions, such as whether to evacuate, search for suspicious items, etc.

If a suspicious item is found, safety protocols should be automatically employed and a bomb squad dispatched to diagnose the threat. People should be evacuated from the surrounding area and a perimeter secured to reduce risk until the situation is resolved. The most important risk management factor for IEDs is distance from the potential threat.

What You Can Do

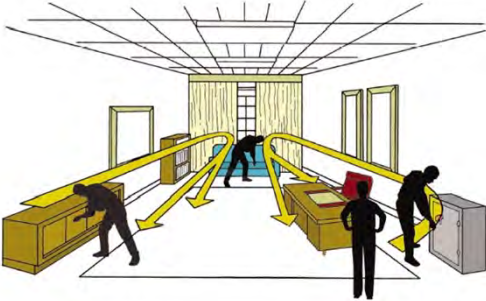
- **Develop facility-specific bomb threat response plans.** Schools, financial institutions, faith-based organizations, malls, and entertainment facilities are among the facilities that receive the most bomb threats. In 2013, schools were the target of half of all bomb threats in the U.S..⁵⁴ Bomb threats have to be taken seriously and demand an organized response, which may require a physical search of a site, an evacuation, or both, depending on the assessed risk. Bomb threat response plans instruct individuals and organizations on how to perform these actions with an emphasis on safety and minimizing disruption to normal activities. The actions typically occur before law enforcement or public safety personnel reach the site.

Bomb threat response plan considerations:

- Planning and preparation
- Building an Emergency Toolkit
- What to do when receiving a bomb threat
- Threat assessment
- Staff response, including searches
- Identification of suspicious items
- Lockdown and evacuation considerations
- Coordination with arriving police and emergency services

- **Apply the H.O.T. principles to determine if an item is suspicious (potential IED) or not:** Not all unattended items are suspicious. Indicators can relate to: what the item looks like; where it is; when it was found/placed; who placed or reported it; and why it came to your attention (5Ws). Consider suspicious any items that are **H.O.T.:** Hidden, Obviously suspicious, or not Typical for the environment.

Table 7: Searching Interiors
Property of DHS

Searching Interiors	
	<ul style="list-style-type: none"> • Individuals who are familiar with the area can help identify objects that are out of place. • Two-person teams often produce the best results. • Divide the room in half and search from floor up. • Search for unfamiliar objects, sounds, and smells. • Minimize the use of wireless communication. • Do not touch suspicious items. • Never assume only one device is present.

If the searchers find a suspicious item, they should apply the R.A.I.N.S. principles and follow instructions. If no guidance is provided, calmly evacuate the area.

- **Apply the R.A.I.N.S. principles to take immediate safety actions upon identifying a suspicious item (potential IED).** Ad hoc procedures for reacting to a suspicious item made in the heat of the moment are rarely good ones. Once you identify an item as suspicious, react as if it is an IED until determined otherwise by a public safety bomb squad (PSBS). Remember:
 - Recognize (based on H.O.T. and/or P.I.E.S.)
 - Avoid (do NOT touch or move the item)
 - Isolate (from people, through a combination of distance, cover, cordoning, and/or evacuation as the situation warrants)
 - Notify (a site decision-maker at the facility or law enforcement)
 - Sspect (the potential risk of secondary IEDs in the vicinity)
- **Employ distance and cover to maximize personnel safety.** Improvised explosive device detonations produce blast pressure waves and can throw fragmentation, shrapnel, and debris that can be lethal. Distance is the best way to reduce the risk posed by blast waves, but distance alone cannot protect against projectiles. The velocity of blast fragmentation, shrapnel, and debris can greatly exceed bullets and defeat common protective equipment (e.g., turnout gear, crash helmets, ballistics vests, and ballistic helmets). On-scene personnel should seek distance and dense cover between the suspicious item or IED, such as masonry walls or heavy vehicles. Materials can also be thrown upward; overhead cover is best.

- **Secure incident perimeters.** Law enforcement should establish a secure perimeter at incident sites to create standoff distance between individuals and potential explosive threats. Perimeters also ensure effective medical and investigative response. Table 8 provides example distances for reference. Consider implementing protocols to positively identify personnel and inspect packages and vehicles.

*Table 8: Example Evacuation Distances
Property of DHS*

Threat Description	Mandatory Evacuation Distance	Shelter-in-Place Zone	Preferred Evacuation Distance
Pipe bomb	70 feet	71-1199 feet	+1200 feet
Suicide bomber	110 feet	111-1699 feet	+1700 feet
Briefcase/suitcase	150 feet	151-1849 feet	+1850 feet
Car	320 feet	321-1899 feet	+1900 feet
SUV or van	400 feet	401-2399 feet	+2400 feet
Delivery truck	640 feet	641-3799 feet	+3800 feet
Moving van or water truck	860 feet	861-5099 feet	+5100 feet
Semi-trailer	1570 feet	1571-9299 feet	+9300 feet

- **Use personal protective equipment (PPE).** Emergency services personnel (law enforcement, fire, and emergency medical services) responding to IED incidents who have PPE such as ballistics vest, helmets, or turnout gear should don it prior to entering the secure hot zone perimeter (inside the mandatory evacuation distance).
- **Increase awareness of the penalties associated with making false bomb threats.** Making a false bomb threat is a Federal offense punishable by up to 10 years in prison,⁵⁵ although the state level may deal with many false bomb offenses. Informing individuals about the penalties associated with these crimes through targeted awareness campaigns may deter them from making false bomb threats. Planners should consult state and local law enforcement to determine the penalties specific to their area and post notices in schools, workplaces, and other sites. Example penalties for making false bomb threats include:
 - In Florida, false reports of planting bombs are second-degree felonies with the possibility of 15 years in prison;⁵⁶
 - In Alabama, terrorist threats that cause the disruption of school activities are Class C felonies punishable by up to 10 years in prison;⁵⁷ and
 - In Michigan, posting a threat through an electronic medium with the intent to terrorize, intimidate, or threaten is a felony carrying a penalty of up to two years in prison.⁵⁸

Goal 7: Safely coordinate response activities at IED incident sites

Preparedness Mission Areas:	<ul style="list-style-type: none"> • Prevention • Protection • Response
Preparedness Core Capabilities:	<ul style="list-style-type: none"> • Operational Coordination • On-scene Security, Protection, and Law Enforcement • Interdiction and Disruption • Forensics and Attribution • Screening, Search, and Detection • Access Control and Identity Verification

Why Is It Important?

Incidents in which the presence of a suspicious item, emplaced IED, or IED detonation has already occurred require a coordinated response effort across a broad range of capabilities, including law enforcement personnel, fire and emergency medical services personnel, government administrators, and other responders. Effectively securing the area, communicating, protecting individuals, and investigating the incident requires close coordination and advance planning because various response disciplines will be operating simultaneously in a high-risk environment. Recent examples of this type of coordination include:

- Police evacuated the apartment building of the accused 2012 Aurora theater shooter after finding multiple IEDs located in his apartment. Law enforcement cordoned off the area while bomb technicians deactivated the devices;⁵⁹ and
- In 2013, reports of explosives at Harvard University led police to evacuate four buildings on campus. Massachusetts State Police, Cambridge Police, Harvard Police, Boston Police, and Transit Police departments, along with the FBI and bomb squad officials, coordinated the law enforcement response to the incident.⁶⁰



Figure 17: 2013 Boston Marathon Bombing
Property of DHS

The nature of multi-discipline incident response, in which the threat of IEDs is present, raises difficult questions. Should life-saving activities be paused until the presence of a potential, but unconfirmed IED is definitively confirmed? If there is a confirmed IED, should other responders wait until bomb technicians render the IED safe, even if it appears small or far away? If the decision is made to proceed with life-saving law enforcement and emergency medical activities despite potential risk, how can the risk be reduced? Incidents in which IEDs pose a threat impose unique challenges to Incident Commanders. New guidance on the integration of response disciplines within the National Incident Management System (NIMS) and Incident Command System (ICS) is available based on lessons learned from incidents like Boston and San Bernardino.

What You Can Do

- **Secure perimeters.** Law enforcement should establish a secure perimeter at incident sites to create standoff distance between individuals and potential explosive threats. Perimeters also ensure effective medical and investigative response. Table 8 provides example distances for reference. Consider implementing protocols to positively identify personnel and inspect packages and vehicles.
- **Integrate ICS structure into emergency response plans and efforts.** The ICS is an incident management approach that enables a coordinated response with clear lines of authority among various jurisdictions and functional agencies, including the private sector. The ICS may require memoranda of understanding (MOU) and Mutual Aid Agreements (MAA) between neighboring jurisdictions to share resources, and may rely on Federal or state assets in certain circumstances. When planning for an IED incident, communities may consider utilizing the ICS to form a Unified Command, which consists of the Incident Commanders from the various jurisdictions or agencies operating together to form a single command structure in the field.
- **Consider establishing a Bomb Management Center (BMC).** Certain large special events and significant IED incidents may benefit by having a designated BMC within the Unified Command structure. The BMC coordinates C-IED resources and activities before and during the event, including:
 - Explosive Ordnance Disposal (EOD) and render-safe activities;
 - Coordination with public safety bomb squad (PSBS), FBI, ATF, local agencies, and others; and
 - Contingency planning for additional EOD and PSBS capability.
- **Consider pre-deployment of Joint Hazardous Materials Assessment Teams (JHAT)/Joint Hazardous Explosive Response Teams (JHERT).** A JHAT/JHERT (sometimes called Hazard Interdiction Teams) is a highly mobile team of technical responders from multiple disciplines (such as Bomb Technicians, Hazardous Materials Technicians, etc.) pre-deployed at special events that can quickly and discreetly assess a reported threat (such as a bomb threat or suspicious item) and coordinate response actions with the Incident Commander and/or BMC as the situation dictates.
- **Increase awareness of secondary attacks and associated security measures.** Remember the R.A.I.N.S. principles. Bombers may detonate, or threaten to detonate, a secondary IED to target first responders and crowds that arrive at the scene or concentrate at evacuation points, hospitals, and police stations. Individuals participating in response efforts may be particularly vulnerable to this type of attack because they are assisting victims or investigating the incident. Instruct first responders, medical personnel, and anyone at the scene of an IED incident not to disturb suspicious items and to immediately report them to law enforcement.

Case Study: Sandy Springs, Georgia (1997)

Eric Rudolph carried out a double bombing in Atlanta, Georgia, in 1997. Rudolph's first IED exploded at the back of a professional building. The second IED exploded in the parking lot one hour later, as medical personnel, firefighters, police, and other first responders worked to secure the scene and evacuate the area.

Secondary Device Considerations

- Anticipate the presence of a secondary device at any incident, including evacuation routes and marshalling areas.
- Search for a secondary device before establishing a Command Post or moving into the incident area.
- Avoid touching or moving anything that may conceal an IED.
- Effectively manage the scene with boundaries and exclusion zones.
- Evacuate victims and nonessential personnel as quickly as possible.
- Preserve the scene for evidence collection and investigation.

- **Plan to adjust security posture at high-risk locations during and following IED incidents.** Public safety officials and facility operators, in concert with law enforcement, should consider elevating the security posture at high-risk locations during and following an IED incident. This is important because individual IED incidents may be part of a larger plot.
- **Provide a coordinated response to complex attacks (attacks including multiple weapons, such as IEDs and firearms).** These types of attacks have the potential to exploit security vulnerabilities, as seen with the recent attacks in Norway and Mumbai.⁶¹ Responders to mass-shooting events should be aware of the potential for IED use.
- **Provide the public with information following an IED incident.** Effective response to IED threats and incidents requires an informed public. Individuals become less fearful if they receive information on the incident and ongoing response efforts. Instructions from community leaders also help safeguard the public, prevent interference with the official response, and increase awareness of the need to report suspicious activities.

Possible Questions Leaders May Receive Following an IED Attack

- What happened?
- How many people were injured or killed?
- What are people doing to assist victims and where are they sending fatalities and the injured?
- What should people do? Assist? Shelter in place? Evacuate?
- Which agencies responded to the incident, and who is in charge?
- What is the level of damage done to the blast site?
- Is this a terrorist attack, and has any terrorist group claimed responsibility?
- Are any of the perpetrators captured/accounted for?
- Have you received reports of other incidents in this community or others?
- Are additional attacks expected, and what actions are underway to prevent them?

- **Consider forensic evidence preservation at IED incident sites.** First responders should be aware that response efforts may contaminate forensic evidence and should attempt to minimize disturbance of the IED incident site. Appendix B contains resources that instruct responders on best practices for preserving IED incident sites.

Goal 8: Request Public Safety Bomb Squad assets to diagnose suspicious items and render-safe IEDs

Preparedness Mission Areas:	<ul style="list-style-type: none">• Prevention• Response
Preparedness Core Capabilities:	<ul style="list-style-type: none">• Interdiction and Disruption• Planning• Operational Coordination• On-scene Security, Protection, and Law Enforcement

Why Is It Important?

Improvised explosive device incidents involving a suspected device require a bomb squad response and capability to diagnose and “render-safe” viable devices, but not every jurisdiction may have the capability or capacity to have their own PSBS. In some cases, the scale of an IED incident may also overwhelm a jurisdiction’s PSBS capabilities. In these cases, jurisdictions may need to share the bomb squad capabilities of a neighboring jurisdiction. A successful bomb squad response to an IED incident requires each PSBS to work effectively with other first responders, including police, fire, and emergency medical personnel, as well as other bomb squads. Goal 7 provides more information on integrated emergency response capabilities. Examples of successful render-safe operations include:

- In 2010, a bomb squad evacuated an area in Escondido, California, and closed down a local interstate while they ignited a controlled fire to burn down a home where a man was discovered creating and storing a large amount of HMEs;⁶² and
- In 2010, police blocked off parts of Times Square after someone left a suspicious item in the area. The NYPD deployed a robot to X-ray the device, and members of the bomb squad suited up before ultimately clearing the package.⁶³

What You Can Do

- **Ensure PSBS capability levels match assessed risk.** In order to effectively respond to IED incidents, bomb squad capabilities must meet the needs of a jurisdiction. This depends on an assessment of the IED-related risk as well as the frequency of bomb squad deployments. Planners should keep in mind that incidents not involving actual devices might need PSBS, as is the case with a majority of reported IED incidents in the U.S. As threat assessments and numbers of deployments change, jurisdictions may need to re-evaluate the addition of local bomb squad capabilities as well as shared regional capability development.
- **Consider establishing a BMC during special events of significant IED-related incidents.** Certain large special events and significant IED incidents may benefit by having a designated BMC within the Unified Command structure. The BMC coordinates C-IED resources and activities before and during the event, including:
 - Coordination with PSBS, FBI, ATF, local agencies, and others;
 - EOD and render-safe activities; and
 - Contingency planning for additional EOD and PSBS capability.

National Counter-IED Capabilities Analysis Database (NCCAD)

The DHS NCCAD program uses a consistent and repeatable analytical methodology to assess and analyze the capabilities of:

- Bomb squads
- EDC teams
- Dive teams
- Special Weapons and Tactic (SWAT) teams

NCCAD assessments measure the capability elements of personnel, equipment, and training required for effective prevention, protection, and response to IED threats. This integrated information provides a snapshot of unit, local, state, regional, and national C-IED preparedness that informs decision-makers on policy decisions, resource allocation for capability enhancement, and crisis management. Contact the DHS OBP to request more information about NCCAD. More information is available at www.dhs.gov/nccad.

Goal 9: Provide IED-specific emergency medical response

Preparedness Mission Areas:	<ul style="list-style-type: none"> • Response
Preparedness Core Capabilities:	<ul style="list-style-type: none"> • Public Health, Healthcare, and Emergency Medical Services • Operational Coordination • Fatality Management Services • Mass Care Services

Why Is It Important?

Improvised explosive device incidents may require a rapid, specialized, medical response to deal with the effects of overpressure- and shrapnel-related injuries that are often associated with these weapons. Overpressure may severely damage the ears, lungs, and other gas-filled cavities within the body and cause blunt-force trauma injuries. Shrapnel from the device, or glass from shattered windows, may also produce serious lacerations and puncture wounds. Examples of IED-specific medical response include:

- Emergency medical services, aided by the Metro-Boston Central Medical Emergency Direction (CMED) system, effectively distributed 30 patients with life-threatening injuries to area hospitals within 18 minutes of the 2013 Boston Marathon bombing to prevent individual hospitals from being overwhelmed; and



*Figure 18: Emergency Medical Response following the Boston Marathon Bombing
Property of DHS*

- In the aftermath of the 2004 Madrid train bombings, response personnel distributed 966 patients across 15 public community hospitals. This included the transport of more than 270 patients to the facility closest to the bombing within three hours.⁶⁴

What You Can Do

- **Develop or revise SOPs for IED incident medical response.** Standard operating procedures for providing emergency medical response during IED incidents should address mass casualty response and the possibility of multiple incident scenes. Consideration should be made for the provision and use of PPE during IED incidents. SOPs should also address contingency plans in the event that additional bomb threats or suspicious packages disrupt emergency medical operations, including at receiving hospitals.
- **Train all first responders in IED-related emergency medical response, particularly in hemorrhage control.** Stopping the bleeding from traumatic injuries associated with IED blasts is critical to minimize further injury and loss of life. Hemorrhages cause more than 35% of pre-hospital deaths following traumatic injury worldwide and more than 90% of survivable battlefield cases in the military, many of which are IED and gunshot wounds.⁶⁵ Studies on the use of aggressive hemorrhage control techniques, especially pre-hospital use of tourniquets, have reported survival rates between 87-100%, with survival rates even in military settings above 90%.⁶⁶ As emergency medical personnel are not always the first to arrive at the scene of IED incidents, train fire, law enforcement, and other first responders how to control hemorrhages to mitigate the consequences of IED-related injuries.
- **Provide medical personnel with information and training on IED-specific injuries.** Medical personnel in the U.S. may not be familiar with IED-specific injuries, including mass casualties, and may benefit from information and instruction on treating these types of injuries, including screening for shrapnel and addressing pressure-induced injuries. Appendix B includes a list of medical-specific information resources.
- **Ensure personnel have access to medical response lessons learned from foreign conflicts and other IED incidents.** Emergency medical personnel in the U.S. have adopted some of the techniques used to address IED-related injuries during the conflicts in Iraq and Afghanistan. These techniques were important during the response to the 2013 Boston Marathon bombing, and Appendix B includes a list of resources that may benefit emergency and medical professionals.

IED Medical Response SOPs

May include guidance on:

- Positioning triage activities within secure areas;
- Coordinating victim transport to identified Level 1 Trauma Centers;
- Elevating medical facility security to protect patients and staff from secondary attacks;
- Surging medical capacity using agreements and MOUs between medical facilities and local, state, tribal, territorial, and Federal stakeholders;
- Dealing with multiple IED incidents; and
- Coordinating medical response with law enforcement and bomb squad activities.

Goal 10: Reduce the psychological and economic impacts of IED incidents

Preparedness Mission Areas:	<ul style="list-style-type: none"> • Mitigation • Recovery
Preparedness Core Capabilities:	<ul style="list-style-type: none"> • Community Resilience • Economic Recovery • Health and Social Services

Why Is It Important?

Improvised explosive device incidents have significant impacts on individuals and communities. Many existing all hazard plans and resources will assist in the recovery from IED incidents. However, IED incidents may produce specific economic and mental health issues. IED incidents also often occur in cities and population centers, which are centers of business and commercial interests. This means incidents frequently produce economic losses through direct damage to property or indirect effects on commerce, such as temporary business closures or employee absences. Individual victims of these incidents and their families may suffer from mental health issues, such as post-traumatic stress disorder (PTSD), anxiety, and depression. Examples of economic and mental health impacts include:

- The 1995 Oklahoma City bombing damaged more than 300 buildings, raising the cost of that incident over \$650 million,⁶⁷ and hundreds of mental health professionals participated in the associated recovery;⁶⁸
- Decreased tourism following the July 2005 London bombings caused an estimated £300 million (\$522.75 million) in lost revenue,⁶⁹ and
- The English National Health Service (NHS) screened 596 individuals after the 2005 London bombings, identifying 217 in need of mental health treatment.⁷⁰

Recovery in Israel

In December 2001, two suicide bombers and a car bomb detonated on Ben Yehuda Street in Jerusalem. The attack killed 13 people and injured 188 more. Just hours after the attacks, shopkeepers had already swept up shattered glass and reopened their businesses. A “rapid return to normalcy” is an important part of the recovery process in Israel. As a shopper at the scene noted, “We must just continue with life. What else can we do?”

What You Can Do

- **Coordinate between government authorities and impacted businesses to reduce recovery time.** Bombing locations are a crime scene that will need to be processed for evidence by law enforcement and often have physical damage that prevents normal operations. Depending on the scale of the incident, these factors may result in business closures.
- **Plan to address IED-specific victim assistance and mental health care needs of individuals and communities.** Bombings are intentional crimes that often result in deaths and/or serious injuries. Crime victims, including surviving family members, benefit from assistance in understanding their rights and the criminal justice process. The FBI’s Victim Assistance Program, accessible through local FBI Field Offices, provides specialists trained to help victims of terrorism and violent crime navigate the aftermath of the incident. Similar programs are available at the local and State levels. More broadly, mental health impacts can affect survivors and first responders and may overwhelm the capacity of cities in the aftermath of an IED incident. Impacted jurisdictions may require a surge of mental health

professionals from other locations. Consider identifying mutual aid networks of disaster-trained professionals that can provide assistance in the event of an attack.

- **Develop economic resilience plans for people, businesses, and communities.** Economic resilience plans include instruction for dealing with business interruptions and relocations. This may include thorough business continuity of operations (COOP) planning and insurance that covers property damage and loss of revenue in the event of natural or manmade disasters.
- **Leverage Federal Government disaster assistance resources.** www.DisasterAssistance.gov is a clearinghouse of resources available to those impacted by incidents in which an Emergency Declaration or Major Disaster Declaration is issued by the President, including terrorism incidents. It includes more than 70 types of assistance available from 17 federal agencies. Many states maintain their own disaster assistance programs, as well.

Chapter 4: Planning Considerations for IED Incidents

Planning is essential for emergency preparedness and one of the key components of the National Preparedness System. To be prepared for the greatest threats and hazards that face a community, organization, business, facility, or even family, planning efforts must integrate all relevant stakeholders—the whole community—across the Prevention, Protection, Mitigation, Response, and Recovery mission areas. The focus on whole community inclusion, combined with a capability-based approach, helps planners enhance preparedness for IED scenarios and other threats and hazards. Many of the recommendations within this chapter originated from lessons learned from the DHS Multi-Jurisdiction IED Security Planning (MJIEDSP) Program. Since 2007, the MJIEDSP program assisted nearly 100 communities with C-IED preparedness through scenario-based analysis and planning, to identify and address capability gaps for IED incidents.

Planning Considerations

Three levels of planning occur:

- **Strategic-level** planning sets the context and expectations for operational planning;
- **Operational-level** planning provides the tasks and resources needed to execute the strategy; and
- **Tactical-level** planning shows how to apply resources in order to complete the operational tasks within a given timeframe.

The intent of this chapter is to assist planners in conducting **operational-level** planning. Operational plans provide instruction on roles, responsibilities, and actions for the plan's stakeholders. Typically, this involves coordinating the activities of responders during an IED incident. It is important for communities, organization, businesses, or facility owner/operators to develop operational-level planning based on existing capabilities and to revise those plans and any IED-specific annexes as the strategic-level planning process continues and capabilities change.

Steps in the Planning Process

Figure 19 illustrates the six steps of the planning process, outlined in Comprehensive Preparedness Guide (CPG) 101: Developing and Maintaining Emergency Operations Plans.⁷¹ The steps are flexible and enable planners to adapt the process to their own unique characteristics and situations. This guide has adapted the planning process to incorporate IED-specific actions and planning considerations. Planners may wish to consult CPG 101 for more detailed information on each step of the planning process.

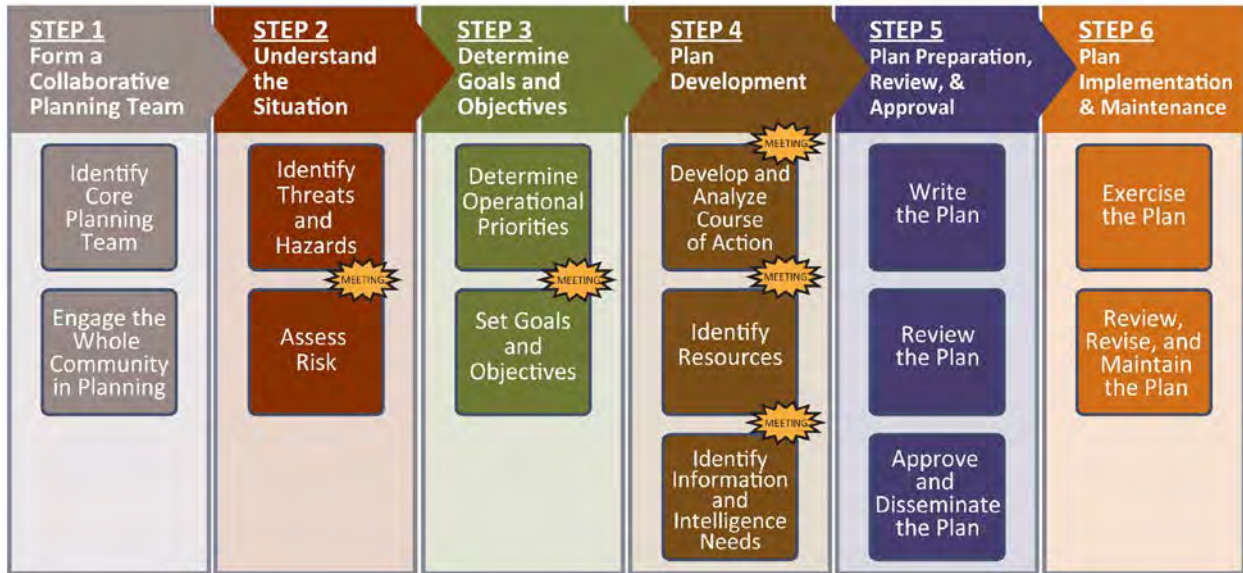


Figure 19: Steps in the Planning Process
Property of DHS

Step 1: Form a Collaborative Planning Team

The best plans take input from a diverse set of stakeholders that includes representatives from all of the organizations that have a role. Forming the planning team is often an iterative process, and planners should consider:

- Adjusting the size, composition, and level of effort of the team, depending on the size of the community or organization that is planning to counter the IED threat.
- Adding appropriate subject matter experts to help identify key operational issues for consideration by the planning team. For an IED threat assessment, this may include local bomb squad personnel, FBI Special Agent Bomb Technicians (SABTs), and state homeland security officials.
- Coordinating with stakeholders that have knowledge of needed issues, in the event that representatives of required disciplines are not available in the community or organization. For example, communities that do not have a standing bomb squad may consider including state police personnel that have knowledge of regional bomb squad activities.
- Including representatives from the planning area as well as community stakeholders, such as first responders, local emergency management staff, and others who have roles and responsibilities before, during, and after an IED incident to the planning team.

The planning team should be small enough to permit close collaboration with first responders and other community stakeholders, yet large enough to be representative of the planning area. It should also be large enough so that it does not place an undue burden on any single person.

Table 9 provides a list of recommended participants that planners may wish to include in a planning team, although teams may vary based on community planning requirements. The planning team is not required to include each of the members listed, or may include additional members not present on this list.

Table 9: List of Recommended Participants
Property of DHS

Local	
<ul style="list-style-type: none"> • Mayor’s office • Homeland Security Director • Police department • Sheriff department • Other law enforcement (e.g., constables) • Police-tactical team leaders (city/county/state) • Fire (city and county) • Office of Emergency Management • Emergency Medical Services (EMS) • Bomb squad commander or representative • SWAT commanders • Dive team commanders • Explosive detection K-9 representative • HAZMAT commanders • Communications center or dispatch center leadership • Fusion Center representative • Forensic laboratories/Crime Scene Unit • Planning and training coordinators/ commanders • Public Affairs/Public Information Officers (PIOs) 	<ul style="list-style-type: none"> • Public works • Local transportation authority • Public transit police department • Local healthcare council/area hospitals • Local power company • Local telephone company • Facility security managers and applicable operators • Geographic Information System (GIS) coordinator • University security • Agricultural and garden supply retailers representative • Hardware retailers • Construction and mining companies • Chemical and cleaning supply retailers • Drug retailers • Beauty supply retailers and providers • Fireworks/pyrotechnics retailers and professionals • Firearms dealers/sporting goods stores • Racing supply retailers • Security official/manager from critical infrastructure, facilities, building, or local business district
State	
<ul style="list-style-type: none"> • State Homeland Security Advisor (HSA) • State police bomb squad commander or Representative 	<ul style="list-style-type: none"> • State Emergency Management Director/public safety • National Guard
Federal	
<ul style="list-style-type: none"> • Protective Security Advisor (PSA) • FBI WMD coordinator • FBI SABT • Federal security director • Transportation Security Specialist Explosives (TSSE) 	<ul style="list-style-type: none"> • United States Coast Guard • ATF • Joint Terrorism Task Force (JTTF) • DOD

Example: Community Planning Team

Based on the experiences of the MJIEDSP program, the planning team for a city or jurisdiction works best if the team contains a minimum of:

- One (1) Federal representative;
- One (1) State or local government representative;
- One (1) representative from each of the following emergency services:
 - Law enforcement
 - Emergency medical service
 - Fire response
- One (1) Emergency management representative; and
- One (1) Emergency planner.

Step 2: Understand the Situation

Once assembled, the planning team begins identifying threats and hazards to the community. Communities that use the THIRA process may use existing THIRA submissions to guide their efforts during this step. For a more detailed discussion of the THIRA process and how jurisdictions can complete their own THIRAs, refer to CPG 201: Threat and Hazard Identification and Risk Assessment Guide, Second Edition.⁷² Identifying IED threats to a community requires, at minimum, an understanding of the history of IED threats that the community has faced and understanding of the perceived potential threat in the future. This may include high-consequence threats that occur infrequently as well as common threats that are low-consequence.

Example: IED Incident History and Current Threat

The city planning team meets to discuss the history of IED incidents. Members of local law enforcement, the bomb squad, and fire department consider all incidents in the community between 1995 and 2015:

- One significant IED incident occurred at a public Christmas tree lighting ceremony in 2002. The incident killed five people, wounded more than 100, and caused \$25 million in damages to local businesses.
- Pipe bombs destroyed three mailboxes in a local neighborhood in 2007.
- The bomb squad responded to more than 150 calls, including 20 hoax devices and the rendering safe of seven viable devices.
- Of the more than 30 bomb threats made against local facilities, none involved actual devices. This included 10 threats in 1998 against several local schools.
- Suspicious bags and packages caused the evacuation of City Hall (2002), a local university building (2006), and several large businesses.

In addition, the planning team learns from the state law enforcement agency and local FBI Field Office that threats have been made to businesses in the region by international terrorist groups. The planning team reviews details on past attacks by the group and similar organizations to identify likely tactics and their consequences should they occur.

The planning team defines IED-based scenarios that will stress community capabilities. If the community is part of a state or jurisdiction that has already performed a THIRA, example scenarios may already exist and should be cross-referenced. Otherwise, subject matter experts, local emergency managers, fusion centers, and Federal stakeholders may be able to assist communities with developing and refining realistic scenarios. Impacts from these scenarios should include the potential for severe injuries and fatalities, facility damage or destruction, and displacement of affected populations or businesses. If a community has not already identified scenarios through a THIRA or other risk assessment process, it can use the scenarios provided in Table 10.

Table 10: IED Scenario Recommendations
Property of DHS



Scenario 1: Large VBIED

Similar to the 1995 bombing in Oklahoma City, planners should consider an incident that:

- Involves a VBIED of between several hundred and several thousand pounds of explosive;
- Kills more than 100 people;
- Injures hundreds more;
- Produces structural damage to one or more critical infrastructure sites; and
- Causes damages in excess of \$1B.



Scenario 2: Coordinated IED Attack

Similar to the 2005 attack against the London transportation system, planners should consider an incident that:

- Involves two or more IED attacks within a region of interest in 4-6 hours;
- Kills more than 10 people;
- Injures hundreds;
- Disrupts or damages critical infrastructure; and
- Causes damages between \$500M and \$5B.

Next, the team develops community-specific IED scenarios that include realistic conditions with the most severe consequences. These scenarios help communities develop realistic capability requirements and prepare for all possibilities, including mass casualties and significant damage to infrastructure. Consider using the following potential targets when developing scenarios:

- Mass gatherings at stadiums, arenas, and outdoor venues;
- Commercial facilities, such as malls, large businesses, and hotels;

- Government sites, such as courthouses, administrative buildings, schools, and military facilities, including recruiting stations; and
- Transportation entities, such as mass transit, rail, ports, and aviation.

Example: IED Scenario

“City Stadium” is one of the largest football venues in the U.S. (capacity greater than 100,000). Any attack on a nationally televised game will produce a media spectacle. A large VBIED (5,000 pounds) detonates on the road, directly adjacent to one of the stadium entrances during the game. The blast kills 200 people and destroys a large section of the stadium. Additional casualties occur in the ensuing rush to exit the stadium, resulting in a total of 700 injured individuals.

Step 3: Determine Goals and Objectives

The planning team develops a list of goals and objectives that address capability gaps related to the scenarios developed in Step 2. Chapter 3 outlined 10 example C-IED Goals, referenced again in Table 11, as a starting point for the planning team.

*Table 11: C-IED Goals
Property of DHS*

#	Goal
1	Use and share risk information to guide IED-related physical security, law enforcement, and emergency response activities.
2	Identify and report IED-related suspicious activity.
3	Prevent the acquisition of explosives and explosive precursor chemicals used in IEDs.
4	Implement site-specific protective measures to prevent and minimize the impact of IED incidents.
5	Utilize IED screening and detection methods in high-risk environments.
6	Take immediate safety precautions for bomb threats, suspicious items, and IEDs.
7	Safely coordinate response activities at IED incident sites.
8	Request Public Safety Bomb Squad assets to diagnose suspicious items and render-safe IEDs.
9	Provide IED-specific emergency medical response.
10	Reduce the psychological and economic impacts of IED incidents.

Next, the planning team identifies existing capabilities that are associated with each Goal. For those communities that follow an all hazards approach to preparedness, it may be useful to identify capabilities that reside within the core capabilities referenced in Table 12. The highlighted core capabilities are most closely associated with the C-IED Goals in Table 11. Jurisdictions that complete the THIRA process have already estimated their capabilities in this way. Planners may draw information from the THIRA to establish a baseline for developing the needed capabilities to fill identified gaps.

Table 12: Primary Core Capabilities for Countering the IED Threat (Highlighted)
Property of DHS

Prevention	Protection	Mitigation	Response	Recovery
Planning				
Public Information and Warning				
Operational Coordination				
Intelligence and Information Sharing		Community Resilience	Infrastructure Systems	
Interdiction and Disruption		Long-term Vulnerability Reduction	Critical Transportation	Economic Recovery
Screening, Search, and Detection		Risk and Disaster Resilience Assessment	Environmental Response/Health and Safety	Health and Social Services
Forensics and Attribution	Access Control and Identity Verification	Threats and Hazards Identification	Fatality Management Services	Housing
	Cybersecurity		Fire Management and Suppression	Natural and Cultural Resources
	Physical Protective Measures		Logistics and Supply Chain Management	
	Risk Management for Protection Programs and Activities		Mass Care Services	
	Supply Chain Integrity and Security		Mass Search and Rescue Operations	
			On-scene Security, Protection, and Law Enforcement	
			Operational Communications	
			Public Health, Healthcare, and Emergency Medical Services	
			Situational Assessment	

Step 4: Plan Development

Based on the information obtained during Step 3, the planning team can begin plan development. Planners should refer to CPG 101 for writing and reviewing checklists, as well as format considerations.⁷³

Operational Plan

Communities develop C-IED operational plans and annexes that rely on existing capabilities. Jurisdictions may develop a C-IED operational plan as an IED annex to an existing EOP. If an IED annex already exists, the planning team should update it to include the information discovered while completing Steps 1–4, and as capability gaps close due to the strategic-level planning process. Those jurisdictions without a C-IED operational plan should include its completion as a corrective action within the strategic plan.

Appendixes D and E contain a checklist that may be useful for planners during the development of operational plans and IED-specific annexes. Planners may wish to consider:

- A concept of operations (CONOPS);
- Assignment of roles and responsibilities; and
- Instruction on command, control, and coordination.

Step 5: Plan Preparation, Review, and Approval

Once plans are developed, planners should present them to their appropriate senior officials for approval, publication, and dissemination. Planners should check the written plans for compliance with applicable laws and for usefulness in practice. Commonly used criteria can help determine the effectiveness and efficiency of the plan. The following measures can help determine if a plan is high quality:

- A plan is **adequate** if the plan identifies and addresses critical courses of action effectively; can accomplish the assigned function; and includes valid and reasonable assumptions.
- A plan is **feasible** if the jurisdiction can accomplish the assigned critical courses of action by using available resources within the time contemplated by the plan.
- A plan is **acceptable** if it meets the requirements driven by a threat or hazard, meets cost and time limitations, and is consistent with the law.
- The plan should **comply with and conform to** applicable statute, law, or ordinance because these provide a baseline that facilitates both planning and execution.

Step 6: Plan Implementation and Maintenance

A jurisdiction should implement the plan so stakeholders throughout the whole community know their roles and responsibilities before, during, and after an IED incident. The more an organization practices its plan and stakeholders train on the plan, the more effective response will be in all stages of an incident, lessening impacts on life and property. Exercises provide opportunities to practice with all of the C-IED stakeholders, as well as to identify gaps and weaknesses in the plan.

Planning is a continuous process that does not stop upon publication of the plan. Planning teams should establish a process for reviewing and revising the plan to include new information, insights, and lessons learned identified through training and exercises, and actual IED-specific incidents. Ultimately, the IED annex should evolve over time to address changing priorities, reflect updated risk assessments, and incorporate other sources of information that improve or enhance the document to ensure the annex remains relevant for first responders and the whole community.

Appendix A: Starting Points for Assistance on Countering IEDs

This appendix contains a summary of key resources that can serve as starting points to identify or request more specific assistance on C-IED planning and capability development. The resource links are valid as of the time of publication, but are subject to change. To ensure access to the most up-to-date resource listing, along with all SRG C-IED content and related information, visit the dedicated SRG C-IED page available at <https://TRIPwire.DHS.gov>.

Resource	Resource description
DHS Office for Bombing Prevention (OBP)	DHS OBP builds capabilities and capacity that enhance communities' abilities to prevent, protect against, respond to, and mitigate the use of explosives. OBP leads DHS's efforts to implement national C-IED policy and maintains programs and resources in the area of capability analysis and planning; information sharing and decision support; training and awareness; and intergovernmental coordination.
FBI Field Offices	There are 56 offices located in major metropolitan areas across the U.S. where the FBI carries out investigations, assesses local and regional crime threats, and works closely with stakeholders on cases and operations. Most Field Offices include an SABT with IED subject matter expertise.
FEMA Regional Offices and Federal Preparedness Coordinators (FPCs)	FEMA's 10 Regional Offices support development of all-hazards operational plans and help States and communities become better prepared to prevent, protect against, and recover from threatened or actual disasters, including IEDs. FPCs are located with Regional Offices and are responsible for strengthening, integrating, and institutionalizing the region's preparedness efforts through planning, assessment, analysis, training, and exercise efforts.
Homeland Security Grant Program (HSGP)	FEMA-administered grant programs to fund a range of preparedness activities, including planning, organization, equipment purchase, training, exercises, and management and administration across all core capabilities and mission areas, including countering IEDs.
DHS MJIEDSP	Technical assistance program fusing C-IED capability analysis, training, and planning to enhance urban area IED prevention, protection, mitigation, and response capabilities. The program assists with collectively identifying roles, responsibilities, capability gaps, and how to optimize limited resources within a multi-jurisdictional planning area.

Resource	Resource description
DHS PSAs	National network of security subject matter experts located across all 50 States and Puerto Rico who engage with SLTT mission stakeholders and members of the private sector to protect the Nation’s critical infrastructure. PSAs are a link to DHS infrastructure protection resources; coordinate vulnerability assessments, training, and other DHS products and services; provide a vital link for information sharing in steady-state and incident response; and assist facility owners and operators with obtaining security clearances.
DHS C-IED Training	OBP maintains a diverse curriculum of training specific to C-IED efforts and applicable to many types of whole community stakeholders. Information, training catalogs, and access details are available via OBP and PSAs.
First Responder Training	The clearinghouse for all training provided by the National Domestic Preparedness Consortium, which includes lists of state officials who can approve training.
FBI SABT Program	Provides additional training and assistance for PSBS and bomb technicians in their region. Contact your local FBI Field Office for more information.

Appendix B: Available Assistance for Countering IEDs, by Goal

This appendix contains a list of Preparedness Resources that can assist in C-IED planning and capability development efforts, organized by relevant C-IED Goal. The focus is on resources available from the Federal Government, many with limited or no cost to users. However, planners should also leverage assets in their community or larger jurisdiction or region, such as an Emergency Management or Homeland Security office, agency, or official with purview over existing preparedness efforts and resources. Fusion Centers are also increasingly involved in terrorism-related preparedness and planning activities.

The resource links are valid as of the time of publication, but are subject to change. To ensure access to the most up-to-date resource listing, along with all SRG C-IED content and related information, visit the dedicated SRG C-IED page available at <https://TRIPwire.DHS.gov>.

Resource	Resource description
Goal 1: Use and share risk information to guide IED-related physical security, law enforcement, and emergency response activities	
National-level coordination channels include:	
FBI JTTFs	Combine local, state, territorial, insular area, tribal nation, and Federal law enforcement and homeland security assets to pursue terrorist activity.
FEMA Regional Offices and FPCs	FEMA's 10 Regional Offices support development of all-hazards operational plans and help States and communities become better prepared to prevent, protect against, and recover from threatened or actual disasters, including IEDs. FPCs are located with Regional Offices and are responsible for strengthening, integrating, and institutionalizing the region's preparedness efforts through planning, assessment, analysis, training, and exercise efforts.
State and Major Urban Area Fusion Centers	Serve as focal points within the state and local environment for the receipt, analysis, gathering, and sharing of threat-related information between the federal government and SLTT and private sector stakeholders.
NSI	The standardized process—including stakeholder outreach, privacy protections, training, and facilitation of technology—for identifying and reporting suspicious activity in jurisdictions across the country and also serves as the unified focal point for sharing SAR information.

Resource	Resource description
FBI InfraGard Initiative	Links businesses, academic institutions, local, state, territorial, insular area, and tribal nation law enforcement agencies, and others to share information and intelligence to prevent hostile acts against the U.S.
DOJ Engaging the Private Sector to Promote Homeland Security	Bureau of Justice Assistance information on establishing law enforcement-private sector relationships.
National-level information sharing platforms on IEDs and IED incidents include:	
DHS TRIPwire website	DHS's 24/7 online, collaborative information-sharing and resource portal that provides a "one stop shop" for C-IED stakeholders. TRIPwire includes news, information, and data on IED incidents and trends, preparedness resources, and security practices applicable across many C-IED planning and operational activities.
ATF Bomb Arson Tracking System (BATS)	A web-based case management system that provides arson and explosives investigators at the local, state, tribal, and territorial levels with up-to-date investigative data from across the nation for free.
FBI Law Enforcement Enterprise Portal (LEEP)	Provides all levels of the law enforcement, criminal justice, and public safety sectors with general operational support, online training, and electronic communication.
Technical Support Working Group (TSWG) IED/HME/Drug Awareness for Law Enforcement	Training on IED components to prepare law enforcement personnel to execute routine and high-risk search and seizure warrants with the goal of preventing a possible IED-related attack.
TSWG IED Trigger Recognition Guide	Information to assist with the field identification of electronic triggers used with IEDs, including details on more than 70 IED triggers found in Afghanistan and Iraq.
TSWG Radiological Dispersal Device (RDD) Recognition Guide	Guidance on recognition, evaluation, and initial operational response for a suspected RDD.
TSWG Radio Controlled Improvised Explosives Card (RC-IED)	A pictorial representation of RC-IED threats and a series of actions to take if encountered.
TSWG Preparation for the Suicide/Homicide Bomber Training Support Package	Information distributed by the Combatting Terrorism Technical Support Office (CTTSO) providing awareness level training, operations level training, and command level training.
Law Enforcement Intelligence: A Guide for State, Local, and Tribal Law Enforcement Agencies	A guide directed primarily toward local, state, and tribal law enforcement agencies of all sizes that need to develop or reinvigorate their intelligence function.

Resource	Resource description
DOJ Guide for Explosion and Bomb Scene Investigation	Best practices for investigating the scenes of IED incidents.
TSWG IED Evidence Collection Card	Summarized instructions for the collection, packaging, and prioritization of forensic evidence.
TSWG IED Evidence Collection Guide	Information on the use of the Improvised Device Defeat Evidence Collection Card in the collection of forensic evidence after an IED is rendered safe.
TEDAC	Works with law enforcement personnel to acquire and analyze forensic evidence.
Goal 2: Identify and report IED-related suspicious activity	
The following resources provide information on the IED threat:	
FBI Field Offices	56 offices located in major metropolitan areas across the U.S. where the FBI carries out investigations, assesses local and regional crime threats, and works closely with stakeholders on cases and operations. Most Field Offices include an SABB with IED subject matter expertise.
USBDC	National repository for information on arson and explosives related incidents throughout the United States, maintained by ATF. Includes incident reports and statistics available to the law enforcement community.
State and Major Urban Area Fusion Centers	Serve as focal points within the state and local environment for the receipt, analysis, gathering, and sharing of threat-related information between the federal government and SLTT and private sector stakeholders.
DHS TRIPwire website	DHS's 24/7 online, collaborative information-sharing and resource portal that provides a "one stop shop" for C-IED stakeholders. TRIPwire includes news, information, and data on IED incidents and trends, preparedness resources, and security practices applicable across many C-IED planning and operational activities.
National Consortium for the Study of Terrorism and Responses to Terrorism (START)	Hosts the Global Terrorism Database, an open-source database including information on terrorist events around the world, including the use of IEDs.
State Department Country Reports on Terrorism	Information on terrorist activity around the world, including the use of IEDs.

Resource	Resource description
Resources on suspicious activity identification and reporting include:	
NSI	Standardized process—including stakeholder outreach, privacy protections, training, and facilitation of technology—for identifying and reporting suspicious activity in jurisdictions across the country and also serves as the unified focal point for sharing SAR information.
DHS “If You See Something, Say Something™” Program	Nationwide public awareness initiative focused on indicators of terrorism and terrorism-related crime, emphasizing the importance of reporting suspicious activity to proper local law enforcement stakeholders.
DHS and DOJ BMAP materials and BMAP Training	Law enforcement entities distribute BMAP materials to local businesses to help employees identify explosive precursors and other IED components and recognize suspicious purchasing behavior that could indicate potential bomb-making activities.
DHS IED Counterterrorism Workshop	Enhances the participant’s understanding of the IED threat, surveillance detection methods, and soft target awareness.
DHS Surveillance Detection Training for Law Enforcement and Security Professionals	Instructs law enforcement personnel and public and private sector security professionals on how to detect hostile surveillance by exploring surveillance techniques, tactics, and procedures from an adversary’s perspective.
U.S. Postal Service (USPS) Suspicious Mail or Packages poster	Visual aid for identifying suspicious mail and packages.
Goal 3: Prevent the acquisition of explosives and explosive precursor chemicals used in IEDs	
The ATF provides many resources to assist explosives permit holders with safety and regulatory compliance activities. This includes:	
ATF Rules and Regulations Library	Library of explosive materials resources.
ATF Federal Law and Regulations for Explosives	2012 guide to ensuring the safe and secure storage of explosive materials.
ATF Compliance Guidelines for Explosives License and Permit Holders	Pamphlet to assist with explosives regulatory compliance.
ATF Secure Storage Techniques	Storage information for Federal explosives license and permit holders.

Resource	Resource description
ATF Guidance on Regulations for Fireworks Retailers	Overview document for fireworks retailers to aid in compliance with regulatory requirements.
ATF Suspicious Explosives Use or Purchase	Information for the general public regarding accidental or intentional harm caused by the improper or illegal use of explosives, to include suspicious activity indicators and reporting tools.
ATF Information on Reporting Theft or Loss of Explosives	Information on how to report the theft or loss of explosives.
Resources with guidance, standards, regulations, or related information on explosive precursor chemicals include:	
DHS and DOJ BMAP materials and BMAP Training	Law enforcement entities distribute BMAP materials to local businesses to help employees identify explosive precursors and other IED components and recognize suspicious purchasing behavior that could indicate potential bomb-making activities.
DHS TRIPwire website	DHS's 24/7 online, collaborative information-sharing and resource portal that provides a "one stop shop" for counter-IED stakeholders. TRIPwire includes news, information, and data on IED incidents and trends, preparedness resources, and security practices applicable across many C-IED planning and operational activities.
CTTSO HMEs Recognition Guide	A 58-page, 4x6-inch, spiral-bound booklet that contains images and text describing the indicators and warnings pertaining to HMEs.
TSWG Indicators and Warnings for HMEs	CTTSO information to allow on-scene personnel to rapidly assess that a situation involves the presence of HMEs.
DHS Ammonium Nitrate Security Statutes and Regulations	Information on the proposed rule for DHS to regulate the sale and transfer of ammonium nitrate.
DHS CFATS	Guidance on the regulatory-based security standards for high-risk chemical facilities, including facilities that are high risk based on their possession of explosives or explosive precursor chemicals.
FBI Weapons of Mass Destruction (WMD) Coordinators	Located in all 56 FBI Field Offices, these experts coordinate operational efforts with local stakeholders and provide training about precursor chemicals used to make IEDs, such as Chemical Industry Outreach Workshops as part of the National Improvised Explosive Familiarization (NIEF) initiative.
ATF Ammonium Nitrate Security Guidance	Guidance on securing ammonium nitrate.

Resource	Resource description
National Academy of Sciences (NAS) Keeping Laboratory Chemicals Safe and Secure and Chemical Laboratory Safety and Security	Guidance for scientific laboratories on chemical management strategies and securing chemicals of concern.
Department of Health and Human Services School Chemistry Laboratory Safety Guide	Guide provided by the National Institute of Occupational Safety and Health (NIOSH) for securing chemicals in school chemistry labs.
Department of Energy Best Practices for Transporting Gas Cylinders	Guidance provided by the U.S. Department of Energy Lawrence Berkeley National Laboratory (LBNL) on transporting and securing gas cylinders.
Resources that help with identifying and reporting suspicious activity related to explosive precursors include:	
DHS and DOJ BMAP materials and BMAP Training	Law enforcement entities distribute BMAP materials to local businesses to help employees identify explosive precursors and other IED components and recognize suspicious purchasing behavior that could indicate potential bomb-making activities.
ATF and The Fertilizer Institute (TFI) Be Aware for America and ATF and TFI Be Secure for America	Information provided by the ATF and TFI on identifying and reporting suspicious activity related to ammonium nitrate.
LAPD Indicators of Suspicious Activity for Bulk Fuel Distributors	Information on identifying suspicious activity related to commerce in bulk fuels.
LAPD Indicators of Suspicious Activity for Farm Supply Stores	Information on identifying suspicious activity related to commerce in fertilizers and other farm supplies.
Additional resources that are relevant to explosives safety and security include:	
DOJ National Explosives Task Force (NETF) Guidance on Reporting Suspicious Fireworks Purchase and Activity	Advisory to assist fireworks retailers to familiarize themselves with possible indicators of suspicious activity.
IME Safety Publications	A library of safety, storage, transportation, and training guides for explosive materials, detonators, and related products.

Resource	Resource description
Goal 4: Implement site-specific protective measures to prevent and minimize the impact of IED incidents	
Resources that provide information on IED blast effects and include instructions on implementing protective measures include:	
DHS FEMA-426: Reference Manual to Mitigate Potential Terrorist Attacks against Buildings , part of the Building and Infrastructure Protection Series Tools	Tools and guidance to reduce physical damage to structural and nonstructural components of buildings and related infrastructure and the resulting casualties caused by conventional bomb attacks.
National Institute of Building Sciences (NIBS) Whole Building Design Guide	Information on a wide range of building-related guidance, criteria, and technology from a “whole buildings” perspective, including guidance on explosive threats.
Interagency Security Committee (ISC)	A list of standards and best practices for physical security related to the protection of buildings and nonmilitary Federal facilities in the U.S.
DoD Protective Design Center Library , including Unified Facilities Criteria (UFC)	A comprehensive list of standards and best practices for physical security related to the protection of military facilities, but also valuable for informing civilian practices. Topics include hardening structures, antiterrorism standards, standoff standards, security engineering/planning, entry control/access control, and resilience.
U.S. General Services Administration (GSA) Site Security Design Guide	Establishes the process that security professionals, designers, and project and facility managers should follow in designing site security at any Federal project.
DHS Soft Target Awareness Training and DHS Sector-Specific Guides	Resources to enhance individual and organizational terrorism awareness and risk management for commercial facilities and facilitate information sharing for commercial infrastructure facility managers, supervisors, operators, and security staff.
DHS Protective Measures Course	Instruction to enhance commercial sector individual and organizational awareness on how to devalue, detect, deter, and defend facilities from terrorism, providing the knowledge and skills necessary to understand common vulnerabilities and employ effective protective measures.
Additional resources on specific protective measures include:	
FBI General Information Bulletins 99-6: Physical Security Guidelines, and 99-4: Protective Measures	Contact your local FBI field office for more information.

Resource	Resource description
NIBS Whole Building Design Guide—Glazing Hazard Mitigation	The fundamentals and basics of glazing hazard mitigation practices for both new and existing buildings.
DHS SAFETY Act Qualified Anti-Terrorism Technologies	Lists technologies approved and designated by DHS to provide liability protections in the event of an act of terrorism.
GSA Window Glazing Analysis Response and Design (WINGARD)	GSA-provided information on window glazing to protect people during IED incidents.
DHS Urban Blast Tool , part of the Building and Infrastructure Protection Series Tools	Assistance in determining site-specific blast effects in urban environments.
Resources that provide information on special events security planning include:	
DHS PSAs	National network of security subject matter experts located across all 50 States and Puerto Rico who engage with SLTT mission stakeholders and members of the private sector to protect the Nation’s critical infrastructure. PSAs are a link to (DHS) infrastructure protection resources; coordinate vulnerability assessments, training, and other DHS products and services; provide a vital link for information sharing in steady-state and incident response; and assist facility owners and operators with obtaining security clearances.
DHS IED Search Procedures Training	Increases preparedness of security personnel and facility managers of sites that are hosting a special security event. Focused training on general safeties used for specialized search and explosives sweeps; tailorable to meet specific participants’ needs.
DOJ Planning and Managing Security for Special Events	Framework to assist local law enforcement in planning and managing security for events that attract large numbers of people, including information on protective measures.
DHS Special Event C-IED Training	Available from DHS for venues and special events, including stadiums and arenas, places of worship, education, malls and shopping centers, large buildings, hotels, and medical facilities.
FBI Crisis Management Unit (CMU)	Support in preparing for and successfully responding to critical incidents and special events.
JHERT	Provides the incident commander an interagency team that can assess the need for further specialized assets at designated special events. Contact your local FBI field office for more information.

Resource	Resource description
Goal 5: Utilize IED screening and detection methods in high-risk environments	
Additional resources for visual and manual screening include:	
DHS and Sports Venue Bag Search Procedures Guide	Guidance and suggestions for developing and implementing bag search procedures at public assembly venues hosting major sporting events.
TSWG Personnel Screening Guide Training Support Package	Training guidance for screening people that may pose a terrorist threat.
FBI General Information Bulletin 99-5: Building Searches (Revised 9/21/05)	Contact your local FBI field office for more information.
FBI Special Technicians Bulletin 2005-1: Search of Motor Vehicle Checklist	Contact your local FBI field office for more information.
DHS VBIED Detection Course	Trains participants to successfully inspect for, detect, identify, and respond to a VBIED.
DHS Vehicle Inspection Guide and DHS Vehicle Inspection Video	Information on inspecting vehicles that may pose a terrorist bomb threat.
TSWG Vehicle Inspection Guide Training Support Package	A 280-page course to train personnel to determine various indicators of suspected hidden IEDs.
TSWG Small Watercraft Inspection Guide (SWIG)	A guide for determining various indicators of suspect IEDs on a range of vessel types, a training section for recognition of explosives and IED types, and information for inspecting small watercraft for contraband.
Several resources may help with the selection of specific explosive and anomaly detection methods and technologies:	
DHS Guide for the Selection of Explosives Detection and Blast Mitigation Equipment for Emergency First Responders	Information for responder groups to aid them in the selection and purchase of explosives detection and blast mitigation equipment.
National Institutes for Justice (NIJ) Guide for the Selection of Commercial Explosives Detection Systems for Law Enforcement Applications	Information for law enforcement agencies to aid them in the selection and utilization of explosives detection equipment.

Resource	Resource description
DHS SAFETY Act Qualified Anti-Terrorism Technologies	Lists technologies approved and designated by DHS to provide liability protections in the event of an act of terrorism.
NAS Transportation Research Board Applicability of Portable Explosive Detection Devices in Transit Environments	Information to assess the usefulness of portable explosive detectors in a transit environment to help transit agencies augment their existing explosive detection activities.
USPS Guide to Mail Center Security	Information on mail theft; letter or package bombs and bomb threats; how to establish a security and bomb-screening plan; chemical, biological, or radiological threats; and other resources.
Government Accountability Office (GAO) Report on Explosives Detection Technologies to Protect Passenger Rail	Reviews the availability of explosives detection technologies and their ability to help secure the passenger rail environment, and key operational and policy factors that impact the role of explosives detection technologies in the passenger rail environment.
TSA Air Cargo Screening Technologies List	A guide for regulated parties to use when procuring screening equipment in accordance with TSA approved security programs.
Goal 6: Take immediate safety precautions for bomb threats, suspicious items, and IEDs	
Resources for developing bomb threat response plans include:	
DHS-DOJ Bomb Threat Response Guide	Provides information on developing bomb threat response plans.
DHS Bomb Threat Checklist	A checklist for recording information when receiving a bomb threat.
FBI General Information Bulletins 2012-1: The Bomb Threat Challenge, and 99-2: Bomb Threats	Contact your local FBI field office for more information.
ATF Bomb Threats and Physical Security Planning	Detailed information on bomb threats and response techniques.
MJIEDSP	Technical assistance program fusing C-IED capability analysis, training, and planning to enhance urban area IED prevention, protection, mitigation, and response capabilities. The program assists with collectively identifying roles, responsibilities, capability gaps, and how to optimize limited resources within a multi-jurisdictional planning area.

Resource	Resource description
DHS Bomb Threat Management Workshop	Improves the ability of critical infrastructure owners, operators, and security personnel to manage IED threats by highlighting specific safety precautions associated with explosive incidents and bomb threats.
DHS IED Search Procedures Workshop	Increases IED awareness on bombing prevention measures and planning protocols to detect IEDs by reviewing specific search techniques.
Additional resources provide information on developing response plans for schools, including:	
Department of Education and DOJ Bomb Threat Response Planning Tool	A free, interactive planning tool for schools that includes staff training presentation and implementation resources.
DOJ Community Oriented Policing Services (COPS) - Bomb Threats in Schools	Planning guide to assist with analysis and response to bomb threats in schools, public or private, kindergarten through 12th grade.
Energetic Materials Research and Testing Center (EMRTC) Understanding and Planning for School Bomb Incidents	Addresses planning by educational stakeholders for bomb-related incidents.
Goal 7 : Safely Coordinate response activities at IED incident sites	
Resources for developing interoperable command capabilities include:	
FEMA ICS Resource Center	Provides information from FEMA on ICS principles, including job aids, position checklists, reference materials, and training.
DHS MJIEDSP	Technical assistance program fusing C-IED capability analysis, training, and planning to enhance urban area IED prevention, protection, mitigation, and response capabilities. The program assists with collectively identifying roles, responsibilities, capability gaps, and how to optimize limited resources within a multi-jurisdictional planning area.
NYPD Active Shooter: Recommendations and Analysis for Risk Mitigation	A list of recommendations for building security personnel to mitigate the risks from active shooter attacks.

Resource	Resource description
Resources that provide information on on-scene safety, secondary devices, and force protection measures include:	
Bomb Threat Standoff Chart	Provides minimum evacuation distances for various IED threats as guidelines for safe perimeters distances.
First Responder Guidance for Improving Survivability in IED and/or Active Shooter Incidents	Guidance from the DHS Office of Health Affairs that translates evidence-based response strategies from the U.S. military’s vast experience in responding to and managing casualties from IED and/or active shooter incidents into the civilian first responder environment. This guidance also incorporates civilian best practices and lessons learned from similar incidents, both in the U.S. and abroad.
Occupational Safety and Health Administration (OSHA) Secondary Explosive Devices Guide	Information from OSHA to help workers understand what a secondary explosive device is and how it may affect their health and safety.
TSWG IED Awareness for First Responders Training Support Package	Training for state and local Law Enforcement and Security Personnel awareness on the subject of IEDs.
Goal 8: Request Public Safety Bomb Squad assets to diagnose suspicious items and render-safe IEDS	
Resources on render-safe capabilities include:	
FBI SABT Program	Provides additional training and assistance for PSBS and bomb technicians in their region. Contact your local FBI Field Office for more information.
FBI Hazardous Devices School	The FBI Hazardous Devices School in Huntsville, Alabama, trains and certifies public safety bomb technicians to national standards that promote interoperability. Planners and bomb technicians interested in developing or enhancing their jurisdiction’s PSBS capabilities should contact your local FBI field office for more information.

Resource	Resource description
DHS NCCAD	Preparedness information about the nation’s bomb squads, EDC teams, public safety dive teams, and SWAT teams; can assist communities with assessing C-IED capabilities. Additional resources specific to bomb squads include:
FBI Special Technicians Bulletin 2010-1: A Model for Bomb Squad SOPs	Recommendations from the National Bomb Squad Commanders Advisory Board and the FBI for developing SOPs to govern the day-to-day operations of the professional bomb squad. Law enforcement and public safety agencies are encouraged to use this resource to establish an SOP or update existing departmental policy and procedures that promote safety during potentially dangerous operations. Contact your local FBI Field Office for more information.
FBI Special Technicians Bulletin 2013-1: A Guide for Selecting Bomb Squad Personnel	Augments the National Guidelines for Bomb Technicians and Model for Bomb Squad SOPs with recommendations applicable to selection of acceptable candidates for bomb technician certification. Topics addressed include suggested candidate selection processes, establishing a selection committee, and drafting a position announcement. Contact your local FBI Field Office for more information.
Goal 9: Provide IED-specific emergency medical response	
Resources that provide information on emergency and mass casualty care include:	
First Responder Guidance for Improving Survivability in IED and/or Active Shooter Incidents	Guidance from the DHS Office of Health Affairs that translates evidence-based response strategies from the U.S. military’s vast experience in responding to and managing casualties from IED and/or active shooter incidents into the civilian first responder environment. This guidance also incorporates civilian best practices and lessons learned from similar incidents, both in the U.S. and abroad.
Centers for Disease Control (CDC) Preparedness, Response to Mass Casualty Event Resulting from Terrorist Use of Explosives	Information and insight to assist public policy and health system leaders in preparing for and responding to a mass casualty event caused by terrorist use of explosives (TUE), including leadership in preparing for and responding to a TUE event, and effective care of patients in the pre-hospital and hospital environments during a TUE event.

Resource	Resource description
CDC in a Moment’s Notice: Surge Capacity for Terrorist Bombings	CDC guidance on developing a rapid medical surge capacity for bombing incidents. Includes surge action templates to help various users address surge capacity issues.
FEMA Fire/Emergency Medical Services Department Operational Considerations and Guide for Active Shooter and Mass Casualty Incidents	Resource provided by the U.S. Fire Administration to support planning and preparation for active shooter and mass casualty incidents.
Resources that contain IED-specific information for medical personnel include:	
Bombings: Injury Patterns and Care	Website developed by the American College of Emergency Physicians and the CDC with comprehensive information, guidance, and training resource specific to blast injuries at all levels of care.
CDC Guidelines for Field Triage of Injured Patients	Information on how to triage patients at the scene of incidents.
Primary Blast Injury: An EMS Guide to Pathophysiology, Assessment, and Management:	Guidance for EMS providers to assess and treat IED blast victims in the U.S.
CDC Blast Injury Mobile App	Supports pre-hospital and hospital healthcare providers and public health professionals in preparing for and responding to terrorist bombings and other mass casualty explosive events.
Additional resources that contain IED-specific medical information include:	
CDC Bombing Injury Patterns	One- and three-hour courses designed to provide the latest clinical information regarding blast-related injuries from terrorism.
CDC Explosions and Blast Injuries: A Primer for Clinicians:	A guide for clinicians on treating IED-related injuries.
Committee for Tactical Emergency Casualty Care (C-TECC)	Guidance on medical management of preventable deaths at or near the point of wounding.

Resource	Resource description
NYC Lessons from the Mumbai Terrorist Attacks: Testimony of New York City Police Commissioner Raymond W. Kelly Before the Senate Committee on Homeland Security and Government Affairs	Lessons learned from NYPD officers who traveled to Mumbai to learn about the tactics used in the Mumbai attack and how their information contributed to NYPD planning exercises and security measures.
FEMA Explosives-Specific Emergency Preparedness Information	Information designed to prepare the general public in case of a bomb threat, suspicious package, or letter.
Red Cross Terrorism Preparedness	Information designed to prepare the general public to prepare for and respond to terror threats and terrorism.
Resources that provide medical response lessons from the conflicts in Iraq and Afghanistan include:	
First to Cut-Trauma Lessons Learned in the Combat Zone	Guidance published by the U.S. Army Institute of Surgical Research which contains information and lessons learned from Iraq and Afghanistan on responding to unique wounding patterns and trauma such as those experienced by individuals injured by IED blasts.
U.S. DOD Traumatic Brain Injury (TBI)	Information focused on the risks of overpressure and shock waves associated with blasts on the human body, and a robust research program focused on occupational exposures to blasts and their effects on the brain.
Resources that provide medical response lessons from the 2013 Boston Marathon bombings include:	
After Action Report for the Response to the 2013 Boston Marathon Bombings	Provides the findings of an after action review of response and recovery activities of public safety, public health, and medical personnel and identifies gaps and best practices.
Resources that provide medical response lessons from the 2005 London bombings include:	
Reduction in Critical Mortality in Urban Mass Casualty Incidents: Analysis of Triage, Surge, and Resource Use after the London Bombings on July 7, 2005	Includes information on triage and in-hospital response to the London bombings and identifies factors.

Resource	Resource description
Resources that provide medical response lessons from the 2004 Madrid bombings include:	
Madrid Explosion Information Bulletin No. 4	An overview of the Spanish Red Cross’s efforts to assist the casualties in the Madrid train bombing.
Injury Patterns from Major Urban Terrorist Bombings in Trains: The Madrid Experience	Contains information to provide civilian care providers with knowledge of the types of blast injuries sustained by victims of mass-casualty incidents by focusing on the injury patterns sustained by casualties of the Madrid, 11 March 2004, train bombings.
Resources that provide medical response lessons from the 1995 Oklahoma City bombing include:	
Lessons Learned from the Bombing of 1995	Includes lessons learned on crisis medicine and counseling.
Oklahoma State Department of Public Health Oklahoma City Bombing Injuries	Summary of causes of injury from the bombing.
Goal 10: Reduce the psychological and economic impacts of IED incidents	
Information on crime victim assistance in the wake of an IED attack includes:	
FBI Victims Assistance Program (VAP)	Multifaceted program that provides assistance and numerous resources to help ensure that victims of crimes investigated by the FBI are afforded the opportunity to receive the services and notification as required by federal law.
Information on how communities responded to mental health issues in the wake of an IED attack includes:	
Coping After Terrorism for Injured Survivors	FBI handbook to help injured survivors understand their physical and emotional reactions to an act of terrorism or mass violence and finding help through the FBI Office of Victims Assistance.
Coping After Terrorism for Survivors	FBI handbook to help survivors understand their physical and emotional reactions to an act of terrorism or mass violence and finding help through the FBI Office of Victims Assistance.

Resource	Resource description
Talking to Children about the Bombings	Guidance developed by the National Child Traumatic Stress Network following the Boston Marathon bombings to assist adults in comforting children and answering their questions.
Parent Guidelines for Helping Youth after the Bombing	Guidance developed by the National Child Traumatic Stress Network following the Boston Marathon bombings to assist adults in comforting children and teens and answering their questions.
Promoting Mental Health Following the London Bombings: A Screen and Treat Approach	Describes a method for screening and treating large numbers of affected individuals following an IED attack. Information on how to recover from the economic and business impacts in the wake of an IED attack includes:
DHS SAFETY Act (part of the Homeland Security Act of 2002)	May limit the legal liability of companies that manufacture or sell technologies and services that have anti-terrorism capabilities, such as blast-mitigation materials and screening services.
U.S. Department of the Treasury Terrorism Risk Insurance Act (TRIA) (signed into law in 2002)	Created a temporary Federal system for shared public and private compensation for certain insured losses resulting from a certified act of terror. Consider TRIA when planning for economic resilience.
Department of the Treasury Federal Share Claim Process	Information on applicability for TRIA from the Treasury Department.
Small Business Administration Disaster Preparedness and Recovery Plan	A guide to assist businesses with planning for disasters.
FEMA Ready.gov Business	Guidance on preparing businesses for all hazards, including developing preparedness plans for IED incidents.
CDC Emergency Preparedness for Business	A collection of resources for businesses.

Appendix C: Example Corrective Actions through C-IED Planning

This appendix includes a list of the most common recommendations provided to communities following MJIEDSP workshops conducted since 2013. This is not an all-inclusive list of potential goals, capability gaps, or corrective actions. Each community or organization engaged in planning will have their own unique requirements. The list only serves as a starting point, intended to help planners compare and develop their own actions to address capability gaps. This appendix, along with all SRG C-IED content and related information, is available at <https://TRIPwire.DHS.gov>.

The MJIEDSP program assists communities with C-IED preparedness by developing and planning for specific scenarios and identifying capability gaps. The program recommends corrective actions to address identified gaps and enhance IED preparedness. For more information on the MJIEDSP program, visit <https://www.dhs.gov/mjiedsp>.

Table 13: Capability Gaps and Corrective Actions
Source: DHS OBP

Goal(s)	Capability Gap	Corrective Action
1, 7, 8, 9, 10	Comprehensive special event operational plan	<p>Develop joint plans.</p> <ul style="list-style-type: none"> Develop joint response plans with all the agencies within the region, with response authorities required during potential high-risk operations involving the criminal/terrorist use of explosives.
1, 7, 8, 9, 10	Policy and procedures for multijurisdictional coordination during IED incident	<p>Develop IED Incident Logic Tree.</p> <ul style="list-style-type: none"> Subject matter experts (i.e., Bomb Squad, SWAT) should develop the logic tree associated with a complex IED, firearms, and/or hostage incidents to clearly outline the thresholds of initiating agency and jurisdictional coordination for resources and additional response assets. <p>Review IS-706 NIMS Intrastate Mutual Aid Course.</p> <ul style="list-style-type: none"> Review the FEMA IS-706 NIMS Intrastate Mutual Aid course (an introductory course offered through the Emergency Management Institute). This course speaks to MAAs and their relationship to NIMS, providing an in-depth understanding of interagency/jurisdictional coordination as well as a framework for instituting such agreements.

Goal(s)	Capability Gap	Corrective Action
		<p>Develop and Evaluate Coordination Policy.</p> <ul style="list-style-type: none"> • Develop a policy based on the understanding of MAAs and each jurisdiction’s approach to coordinated efforts specific to individual requirements. This policy should clearly identify the positions, thresholds, and redundant means of contact for coordination efforts. Ensure each agency evaluates the new policy and can make recommendations for improvement.
1, 2, 3, 4, 5, 6, 7, 8, 9	IED awareness and IED search techniques	<p>Attend Additional Courses.</p> <ul style="list-style-type: none"> • Review course information available at www.firstrespondertraining.gov, the clearing house for training provided by the National Domestic Preparedness Consortium, which includes list of state officials who can approve training. <p>Share IED Information and Intelligence.</p> <ul style="list-style-type: none"> • Coordinate new IED threat and discovery information with intelligence sharing organizations between public safety, public health, and other appropriate agencies. <p>Participate in DHS OBP BMAP.</p> <ul style="list-style-type: none"> • BMAP works to increase public and private sector awareness of how to identify and prevent bomb-making activity: http://www.dhs.gov/bomb-making-materials-awareness-program. <p>Participate in the DHS-OBP IED Search Procedures Workshop.</p> <ul style="list-style-type: none"> • This workshop enhances participants’ knowledge of IED awareness, prevention measures, and planning protocols by outlining specific search techniques that reduce vulnerability and mitigate the risk of terrorist IED attacks. Coordinate training through your local PSA. <p>Become Familiar with Current Terrorist Tactics and Trends.</p> <ul style="list-style-type: none"> • Review FBI-DHS Joint Intelligence Bulletins, local Fusion Center products, and information available through local FBI Field Offices and JTTF. • Analyze TRIPwire information on a recurring basis to provide timely updates on concealment tactics and trends involving terrorist/criminal activity to law enforcement and firefighting personnel. <p>Provide Explosive Awareness and Industry Updates.</p> <ul style="list-style-type: none"> • Provide chemical property awareness and industry application updates from local Bomb Squad and industry representatives on military and commercial explosives to canine detection teams.

Goal(s)	Capability Gap	Corrective Action
		<p>Train in Narcotics Precursor Awareness.</p> <ul style="list-style-type: none"> • First responders should continue training in the recognition of narcotic precursors to aid in the ability to discern the difference between narcotics versus HME labs from a safety standpoint.
1, 3, 4, 5	Risk assessment process for critical infrastructure	<p>Conduct THIRAs.</p> <ul style="list-style-type: none"> • Conduct a THIRA on all identified critical infrastructure. <hr/> <p>Prioritize critical infrastructure.</p> <ul style="list-style-type: none"> • Prioritize the critical infrastructure sites based on the importance from the information gathered during the THIRAs.
1, 2, 4, 6, 7, 9	Secondary device awareness	<p>Conduct Secondary Device Training.</p> <ul style="list-style-type: none"> • Ensure first responders are aware of “secondary device threats” and the information is included in emergency response plans.
8, 9	Awareness of, and access to, specialized resources during IED incidents	<p>Determine Counter-IED Capabilities.</p> <ul style="list-style-type: none"> • Use the FEMA NIMS Typed Resource Guide and NCCAD to identify and achieve critical skills and capabilities. <hr/> <p>Distribute Resource Lists.</p> <ul style="list-style-type: none"> • Provide area resources and capabilities lists to county emergency management agencies and other regional 911 call centers. <hr/> <p>Perform NCCAD Analysis.</p> <ul style="list-style-type: none"> • All bomb squads, SWAT teams, public safety diver teams, and explosive detection canine teams throughout the region should participate in DHS OBP’s NCCAD program. <hr/> <p>Update Plans and Compact Agreements.</p> <ul style="list-style-type: none"> • Incorporate FEMA Typed Resource Definitions and DHS NCCAD into local EOPs and the Emergency Management Assistance Compact.

Appendix D: Sample IED Annex

Step 5 of the planning process in this guide introduced an annex format for planners to follow in developing an EOP's IED Annex. This section provides detail about what each section should include and provides some key considerations for developing the content.

IED Annex

The IED annex augments an EOP with specific information on operations before, during, and after an IED incident. This section addresses overarching activities. The content in this section provides a solid foundation for planners. The information in this section should not duplicate information contained in other sections of the base EOP.

Introductory Material

Introductory material can enhance accountability by the plan's sponsoring authority: the local government, emergency management agency, police department, or the private sector organization, business, or facility conducting the planning. Typical introductory material includes:

- **Cover Page.** The cover page has the title of the annex. It should include a date and identify the government jurisdiction, organization, or facility covered by the annex.
- **Promulgation Document/Signature Page.** This document/page is a signed statement formally recognizing and adopting the annex. It gives both the authority and the responsibility to leadership to perform their tasks before, during, and after an IED incident, and therefore signed by senior leadership.
- **Approval and Implementation Page.** The approval and implementation page introduces the annex, outlines its applicability, and indicates that it supersedes all previous versions of the annex. It should include a delegation of authority for specific modifications to the annex. It should outline any levels of delegation authority. It should also include a date and signed by senior leadership.
- **Record of Changes.** Tracking of each update or change to the annex is crucial for version control. The record of changes, usually in a table format, contains, at a minimum, a change number, the date of the change, the name of the person who made the change, and a summary of the change.
- **Record of Distribution.** The record of distribution, usually in a table format, indicates the title and the name of the person receiving the annex, the organization to which the recipient belongs, the date of delivery, and the number of copies delivered. The record of distribution proves that tasked individuals and organizations have acknowledged their receipt, review, and/or acceptance of the annex.
- **Table of Contents.** The table of contents is a logically ordered and clearly identified layout of the major sections and subsections of the plan that will make finding information within the annex easier.

Purpose, Scope, and Situation Overview

This section includes the following components:

- **Purpose.** The purpose sets the foundation of the rest of the annex. The annex's purpose is a general statement of what the plan should do. A brief synopsis of the annex supports the purpose.
- **Scope.** The scope details the limits of the IED annex. It clarifies what the annex does and does not accomplish.

- **Situation Overview.** The situation overview explains why the IED annex is necessary. The situation overview covers a general discussion of:
 - The threat posed by a IED on the jurisdiction or organization;
 - The capabilities the jurisdiction or organization has to counter or respond to an IED;
 - The legal, political, demographical, and physical conditions of the jurisdiction or organization that affect planning for an IED; and
 - Any planning assumptions the team made to continue the planning process.

Concept of Operations

This section explains in broad terms the decision maker's intent with regard to countering IEDs. This section provides an overall impression of how the jurisdiction or organization will prepare for, prevent, protect against, respond to, and recover from an IED. Describe by phase:

- Identify those with authority to activate the annex;
- Identify other stakeholders' plans that directly support the implementation of the annex (e.g., higher-level organization, facility, or government EOP);
- Describe the command and coordination structures used by phase;
- Describe the methods and techniques of resource employment, (e.g., search teams, screening teams, EDC teams, tactical emergency casualty care, and rescue task force).
- Explain the actions taken before an incident to prevent, protect against, and mitigate the impact on operations, life, and property;
- Explain the actions taken during an incident to respond to the incident and minimize its impact on operations, life, and property; and
- Explain the actions taken after an incident to recover from its impact on life, property, or operations.

Organization and Assignment of Responsibilities

This section provides an overview of the broad roles and responsibilities of jurisdiction or organizational leadership and staff and, as well as an overview of operations during IED incidents. This section should:

- Describe the roles and responsibilities of each individual/organization that apply by operational phase for a IED, including, but not limited to, jurisdictional/organization leadership, staff, community leadership, stakeholders, and local departments and agencies (e.g., fire, law enforcement, EMS, emergency management); and
- Describe informal and formal agreements (e.g., MAAs) in place for a quick activation and sharing of resources during an incident.

Direction, Control, and Coordination

This section describes the outline for all direction, control, and coordination activities. This section uses the structures and concepts outlined in the NIMS:

- Describe the chain of command and delineation of authority used by the jurisdiction or organization;
- Describe the relationship between the jurisdictions' or organizations' plan and the surrounding community's or larger organizations' emergency management system; and

- Describe who has control of equipment, resources, and supplies needed to support the plan.

Information Collection, Analysis, and Dissemination

This section addresses the role of information in the successful implementation of activities that occur before, during, and after an IED incident. The section should:

- Identify critical information requirements by operational phase and what (if any) decision points they are associated;
- Identify the type of information in the successful implementation of the activities that occur during the operational phases; and
- Provide answers to the following questions for each of the identified types of information:
 - What is the source of the information?
 - Who analyzes and uses the information?
 - How is the information collected and shared?
 - What is the format for providing the information to those who will use it?
 - When should the information be collected and shared?

Communications

This section describes the communication and coordination protocols used between organizations. The communication section should:

- Describe the outline for delivering communications support and how the jurisdiction's or organization's communications integrate into larger regional or national emergency operations framework.
- Identify and summarize separate interoperable communications plans.
- Common terms are critical when working with organizations from different entities or from across a region. It is useful to agree upon and document common terms for clarity during planning and future operations
- Public Affairs Guidance should provide significant details on the jurisdiction's or organization's information processes used during an incident. A coordinated joint approach will ensure timely, accurate, accessible, and consistent messaging across multiple stakeholders, jurisdictions, and/or disciplines, and minimizes confusion and dispels rumors quickly. A central clearinghouse will minimize duplication of effort, and will provide one location for public information users to find the best, reliable, and authoritative information regarding the event or incident.

Administration, Finance, and Logistics

This section covers general support requirements and the availability of services, as well as general policies for managing resources. It should identify and reference policies and procedures that exist outside of the plan. This section should:

- Identify administrative controls and requirements that will be used to provide resource and expenditure accountability;
- Briefly describe how the jurisdiction will maintain accurate logs of key activities;
- Briefly describe how vital records will be preserved;
- Identify sources for replacement of assets; and
- Identify general policies for keeping financial records, tracking resource needs, tracking the source and use of resources, acquiring ownership of resources, and other compensation concerns related to the response.

Plan Development and Maintenance

This section discusses the overall approach to planning and the assignment of plan development and maintenance responsibilities. This section describes the critical training and exercise activities the jurisdiction or organization uses to support the plan. This includes the core training objectives and frequency to ensure that stakeholders understand roles, responsibilities, and expectations. This section also establishes the expected frequency of exercises. Higher-level government or private sector organizations' requirements, best practices, and similar requirements at the local level inform plan content. This section should:

- Assign responsibility for the overall planning and coordination to a specific position; and
- Provide for a regular cycle of training, evaluating, reviewing, and updating the plan.

Authorities and References

This section provides the legal basis for emergency operations and includes:

- Lists of laws, statutes, ordinances, executive orders, regulations, formal agreements, or internal policies relevant to IEDs; and
- Provisions for the succession of decision-making authority and operational control to ensure execution of critical emergency functions in the absence of senior leadership.

Appendix E: Counter-IED Planning Checklist

This appendix provides a checklist to determine which plan components are included or may be lacking in current planning efforts. A more detailed description for each question follows the checklist. This appendix, along with all C-IED content and related information, is available via the dedicated website at <https://TRIPwire.DHS.gov>.

Plan Component	Completed
Overarching	
1. Does the annex address all five mission areas?	
2. Does the annex include public information/awareness efforts?	
3. Does the annex include training?	
4. Does the annex include exercises?	
5. Does the annex include appropriate government agencies and/or senior leadership?	
6. Does the annex identify resources?	
Prevention	
1. Does the annex address bomb threat incidents?	
2. Does the annex address securing precursor materials?	
3. Does the annex include law enforcement investigative considerations such as jurisdiction determination and evidence collection?	
Protection	
1. Does the annex identify critical infrastructure?	
2. Does the annex provide for improving physical security?	
Mitigation	
1. Does the annex provide for mitigation efforts?	
Response	

Plan Component		Completed
1.	Does the annex identify the requirements of access and functional needs populations?	
2.	Does the annex include threat-initiated actions?	
3.	Does the annex address pre-determined response policies?	
4.	Does the annex address medical response considerations?	
Recovery		
1.	Does the annex address debris removal?	
2.	Does the annex address long-term assistance?	

Overarching

Question 1: Does the annex address all five mission areas?

Countering IEDs requires actions across all five mission areas, and the annex to the EOP should include considerations for Prevention, Protection, Mitigation, Response, and Recovery.

Question 2: Does the annex include public information/awareness efforts?

Successful countering IED efforts include educational/public awareness programs to inform the public of pre-incident indicators and reporting mechanisms.

Question 3: Does the annex include training?

Once emergency planners and private sector leaders have completed the planning steps, they should review IED training programs and materials to pinpoint any weaknesses or gaps. For example, planners should evaluate whether proper training and resources are available not just for law enforcement, but also for public and private sector employees, hazardous materials (HAZMAT) and search and rescue teams, and medical personnel to deal with unique elements of an IED incident.

Question 4: Does the annex include exercises?

Every emergency plan should undergo validation. Exercising the plan is the best way to evaluate whether or not it will work without actually having to respond to a disaster. An exercise program may include activities such as a seminar, workshop, tabletop exercise, game, drill, functional exercise, or full-scale exercise. Exercises include the development of after action reports to identify gaps and vulnerabilities.

Question 5: Does the annex include appropriate agencies and officials?

Jurisdictions should involve senior officials; offices of emergency management; law enforcement; fire departments; emergency medical services; area bomb squads; SWAT and HAZMAT teams; hospitals and public health departments; designated incident commanders; local FBI field offices; local ATF field offices; local military facilities; the fusion center;

regional planning stakeholders; public works and transportation departments (including public transit and utility companies); private sector representatives from major industries and critical infrastructure facilities; and nongovernmental and volunteer organizations that may be involved in responding to IED events or be the target of IED events.

Question 6: Does the annex identify resources?

Jurisdictions have varying levels of expertise and resources. For instance, the capabilities of a small, rural area without a bomb squad differ greatly from those of a large urban area with access to several bomb squads and other specialized response teams. Bomb squad staffing, support, and resources may also vary greatly even in the Nation's largest cities. Jurisdictions without specialized resources still need to plan for IED events, determining what resources are available to them, identifying any needed MOUs or MAAs, or specifying which resources outside the jurisdiction have agreements in place, and assessing critical infrastructure.

Prevention

Communities should have policies in place detailing the procedures and safety measures for handling each type of situation.

Question 1: Does the annex address precursor materials?

Bomb-makers must acquire explosive materials or materials to make explosives in order to construct devices. The plan should address procedures for identifying precursor materials and reporting of suspicious activities related to said materials.

Protection

Question 1: Does the annex identify critical infrastructure?

IED attacks are most likely to occur in places where they can cause injuries to a large number of people and severe disruption to community functions. Each jurisdiction needs to identify and prioritize those systems and assets within its community, whether physical or virtual, that it deems to be most critical to sustain the community and account for their protection and restoration. Examples of critical infrastructure include schools, government facilities, power plants, shopping centers, and airports and other transportation nodes.

Question 2: Does the annex provide for improving physical security?

Planners and private sector leaders should examine the current physical security of buildings, facilities, and critical assets. Security gaps may identify the need to implement additional physical security measures.

Mitigation

Question 1: Does the annex provide for mitigation efforts?

Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters. Risk analysis provides a foundation for mitigation activities that reduce risk.

Response

Question 1: Does the annex identify the requirements of access and functional needs populations?

Prior to an IED incident, planners should understand how an IED incident may affect a community's access and functional needs, such as a group or individual's need to access homes or work sites in vicinity of the incident. Some jurisdictions may need to consider multiple methods of public messaging to alert citizens and keep them informed. Planners should consider how messaging will reach individuals with special needs or requiring accessible communications and those with limited English proficiency. Additionally, planners need to consider individuals who may not be able to evacuate independently due to age, injury, illness, or disability and may need assistance in moving to an evacuation point.

Question 2: Does the annex include threat-initiated actions?

The annex should take into account threat-initiated actions, including time and resource constraints. Private sector/NGO leaders, emergency managers, and first responders need to implement actions based upon the incident and the standardized IED threat-rating system.

Question 3: Does the annex address pre-determined response policies?

Pre-determined response policies enable responders to work together to decide on initial courses of action and protocols, keeping in mind that response activities will be affected by ongoing law enforcement, EMS, or other emergency response activities (e.g., securing and clearing the area for possible secondary explosive devices, preserving life and evidence).

Question 4: Does the annex address medical response considerations?

Injuries resulting from blast and debris-related injuries may require rapid medical response. Planners should consider the medical aspects of an IED incident, to include the assessment and triage of blast injuries and the distribution of casualties to hospitals to avoid overwhelming a single facility.

Recovery

Question 1: Does the annex address debris removal?

In order for first and emergency responders to work effectively, debris removal operations may need to occur immediately to allow vehicles and equipment access to the affected area. Additionally, debris removal operations may face particular challenges because authorities treat IED incident sites as crime scenes.

Question 2: Does the annex address long-term assistance?

Depending on the severity of the IED incident, recovery may be a long-term activity. Planners should consider potential requirements for long-term assistance.

Endnotes and References

Endnotes

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- ¹⁰ (FBI 100: The Unabomber 2008)
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- ¹² (New York City Police Department 2009)
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- ¹⁴ (Majority Staff of the Committee on Homeland Security 2014)
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- ¹⁶ (Wilson 2006)
- ¹⁷ (U.S. Department of Justice 2010)
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- ¹⁹ FEMA 426 Manual, page 3–8 (2011)
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- ³¹ (Walters 2015)
- ³² (Hartman 2013)
- ³³ (Apuzzo and Goldman 2010)
- ³⁴ (Robbins and Wyattthe 2010)
- ³⁵ (If You See Something, Say Something n.d.)
- ³⁶ (Federal Explosive Laws and Regulations, ATF 2012: ATF Federal Law and Regulations for Explosives 2012)
- ³⁷ (AFT: Thefts of Explosives from State and Local Government Storage Facilities are Few but may be Underreported 2005)
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- ⁴⁰ (ATF Offers \$5,000 Reward in Explosives Theft 2014)
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- ⁴³ West Virginia Code §61-3E-3
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⁶⁷ (Kennedy, The Real Meaning of Community Service: The Economic and Financial Impact of the Oklahoma City Bombing 2012)

⁶⁸ (Pfefferbaum 1996)

⁶⁹ (Bombs will cost UK tourism £300m 2005)

⁷⁰ (Journal of Traumatic Stress 2008); (Brewin, et al. 2010)

⁷¹ (CPG 101, Developing and Maintaining Emergency Operations Plans, Version 2 2010)

⁷² (Comprehensive Preparedness Guide 201: Threat and Hazard Identification and Risk Assessment Guide 2013)

⁷³ (Developing and Maintaining Emergency Operations Plans 2010)

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