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RESOURCE GUIDE

Target Hardening: General Resources

DESCRIPTION

The following links and documents provide general guidelines, tools, and other resources on the subject of target hardening. Target hardening has long been a common strategy for combating criminal activity. Consequently, there is a wealth of information on target hardening measures that can be applied to address the issue of terrorism. In addition, several new guidelines and reports have been issued that examine target hardening measures that are specific to terrorism.

RESOURCES

Fact Sheets and General Hardening Guidelines Federal Government

[Department of Homeland Security \(DHS\)](#)

Potential Indicators of Threats Involving Vehicle Borne Improvised Explosive Devices (VBIEDs): DHS provides this guidance on detection and prevention of potential terrorist attacks from VBIEDs (e.g. truck bombs). The suggested protective measures stem from the experience gained and lessons learned from the May 2003 truck bombings of a residential compound in Riyadh, Saudi Arabia.
([LLIS.gov ID# 7559](#))

Associations

[American Public Transportation Association](#):

Suggested Anti-Terrorism Security Measures: This is a collection of basic recommendations to minimize the risk and impact of terrorist attacks on public transportation.
<http://www.apta.com/services/safety/suggested.cfm>

[Northeastern Regional Association of State Agricultural Experiment Station Directors](#):

Site Security and Bioterrorism: The Northeastern Regional Association of State Agricultural Experiment Station Directors published this guide offering simple steps that facilities which house bio-hazardous materials can take to safeguard against terrorism and protect those materials from theft or sabotage.
([LLIS.gov ID# 12761](#))

Guides and Reports

Federal Government

[Department of Defense \(DOD\):](#)

[Defense Department Minimum Anti-Terrorism Standards for Buildings:](#) This guide spells out the DOD's own hardening standards for its facilities. It includes detailed measures regarding standoff distance, building design strategies, and explosion safety.
([LLIS.gov ID# 12765](#))

[Department of Health and Human Services:](#)

[Centers for Disease Control and Prevention \(CDC\):](#)

[National Institute for Occupational Health and Safety \(NIOSH\):](#)

[Guidance for Protecting Building Environments from Airborne, Chemical, Biological, or Radiological Attacks:](#)

CDC-NIOSH published this extensive outline of protective measures for buildings. The guide focuses on ways to regulate airflow and improve air filtration when looking to bolster building security against terrorism.
([LLIS.gov ID# 747](#))

[Department of Homeland Security \(DHS\):](#)

[Federal Emergency Management Agency \(FEMA\):](#)

[Developing a Mitigation Plan:](#) FEMA has produced guidelines for developing a hazard mitigation plan. The guidelines include both the planning and implementation of suggested mitigation measures.
http://www.fema.gov/fima/planning_howto3.shtm

[Reference Manual to Mitigate Terrorist Attacks Against Buildings:](#)

FEMA has published a comprehensive guide offering general target hardening measures for buildings. The manual is designed to reduce both the physical damage and the number of casualties resulting from terrorism against private sector facilities including industrial, commercial, healthcare, or educational buildings.
([LLIS.gov ID# 12766](#))

[Department of Labor:](#)

[Occupational Health and Safety Administration \(OSHA\):](#)

[Fire and Explosion Planning Matrix:](#) This link leads to a fire and explosion prevention and mitigation planning tool produced by OSHA. The site contains a host of resources and tools for risk assessment and target hardening measures.
<http://www.osha.gov/dep/fire-expmatrix/index.html>

[The White House:](#)

[Office of Homeland Security:](#)

[National Policy on Critical Infrastructure Protection:](#) Published in July 2002, this document serves as the Bush Administration's overall vision and strategy for national critical infrastructure protection. In addition to spelling out the President's general strategy,

the report also assigns different federal agencies their particular responsibilities within homeland security.
([LLIS.gov ID# 12767](#))

Associations

[American Association of State Highway and Transportation Officials \(AASHTO\):](#)

[Recommendations for Bridge and Tunnel Security:](#) Published by AASHTO and the Federal Highway Administration (FHWA), this report includes extensive analysis and recommendations for hardening these particular components of the transportation sector.
([LLIS.gov ID# 12798](#))

Universities and Think Tanks

[Brookings Institution:](#)

[Protecting Targets Within the United States:](#) This is part of a Brookings Institution report that offers recommendations for increased security of critical infrastructure and other potential terrorist targets. The study also estimates the costs of implementing various mitigation and hardening measures.
([LLIS.gov ID# 12799](#))

[Princeton University:](#)

[Woodrow Wilson School of Public and International Affairs:](#)

[Technologies to Protect Harbors, Ports, and Vessels:](#) This Woodrow Wilson School study discusses measures for protection of these elements of transportation and commerce. The report examines measures and innovations to strengthen maritime security as well as the potential costs associated with implementing these prevention and mitigation measures.
([LLIS.gov ID# 12837](#))

[RAND:](#)

[Security and Safety in Los Angeles High-Rise Buildings After 9/11:](#) This RAND study of Los Angeles facility preparedness serves as a guide for risk assessment in other jurisdictions. While focusing on Los Angeles, the document also examines the security measures taken by other major jurisdictions such as Washington, DC and Chicago in the wake of the September 11 attacks.
([LLIS.gov ID# 772](#))

Private Sector

[SCIENTECH, Inc.:](#)

[Design Techniques to Strengthen "Soft Buildings" Against Acts of Terror and Car Bombs:](#) Drawing on his experience with terrorist bombings in Israel, the author, Amit Reizes, focuses on steps that can be taken to harden building walls and windows. His report discusses the retrofitting of existing structures as well as the addition of blast walls and other hardening measures.
([LLIS.gov ID# 12838](#))

Articles

Associations

[The Protective Glazing Council:](#)

Joseph L. Smith, "[Anti-Terrorism: Criteria, Tools, and Technology](#)", 19 February 2003.

This article contains a detailed overview of risk assessments and the target hardening measures that follow from them.

([LLIS.gov ID# 12839](#))

Presentations

Federal Government

[Department of Homeland Security \(DHS\):](#)

[Federal Emergency Management Agency \(FEMA\):](#)

["Critical Infrastructure Protection Process"](#): This general presentation from FEMA outlines resources for protecting the critical infrastructure of fire and emergency medical services. The presentation includes a 5-step critical infrastructure protection process that emergency responders can follow.

<http://www.usfa.fema.gov/subjects/emr-isac/>

[The Smithsonian:](#)

["Freedom Without Fortresses"](#): This November 2001 presentation hosted by the Smithsonian's National Building Museum discusses the changes and challenges for building designers as they seek to create more secure work environments.

([LLIS.gov ID# 12840](#))

Private Sector

[Aurora Safety:](#)

["Improving Facility Security in the Age of Terrorism"](#): This presentation offers basic recommendations to bolster the security of office buildings against the threat of terrorism.

([LLIS.gov ID# 12841](#))

Related Links

Federal Government

[Department of Defense \(DOD\):](#)

[Naval Facilities Engineering Service Center \(NFESC\):](#)

[Anti-Terrorism and Force Protection Glossary of Terms](#): This link is to an extensive glossary covering terms related to counterterrorism and target hardening that is produced by the Navy's Anti-Terrorism and Force Protection Team.

http://atfp.nfesc.navy.mil/atfp_glossary.html

[Department of Homeland Security \(DHS\):](#)

[Federal Emergency Management Agency \(FEMA\):](#)

Risk Management Series Publications: This website provides FEMA's latest risk management publications. Most of these documents can be downloaded in PDF format directly from the website.
<http://www.fema.gov/fima/rmsp.shtm>

General Services Administration (GSA):

Office of the Chief Architect: Access to this extensive site is password protected, but registration is free. It contains a host of software tools related to building design and site security.
<http://www.oca.gsa.gov/>

Associations

International Association for Counterterrorism and Security Professionals (IACSP):

Closed Circuit Television Links: This is a page of links to sites regarding closed circuit television (CCTV) systems and related surveillance equipment.
<http://www.antiterrorism.org/cctv.html>

Universities and Think Tanks

University of Southern California (USC):

Homeland Security Center for Risk and Economic Analysis of Terrorism Events: The homepage of this center, hosted by USC, seeks to apply economic and risk analysis in an effort to improve critical infrastructure protection. The faculty of this center comes from universities across the country and represents a wide range of academic disciplines and areas of expertise including emergency response, economics, engineering, weapons of mass destruction, and cybersecurity.
<http://www.usc.edu/dept/ise/hsc/>

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