



Agencies planning and developing transportation infrastructure have a responsibility to protect that investment. Starting with two key considerations at the outset of any project will provide planning agencies the opportunity to do just that. The first consideration is to expand the planning advisory team to include non-traditional members such as law enforcement, fire, emergency medical services, and emergency management agency representatives. The second is to involve these agencies from the beginning and keep them involved throughout. These agencies provide the background for protection and security measures that should be included in planning and final design.

The chart on the next two pages reinforces those two considerations. It links certain steps for security planning with the project planning process and provides planning techniques and tips.

On page 4 of this brochure are links to publications and other resources that can be used by the planning team to help inform discussions about protection and security. These resources can also be used to form a common level of understanding among planning team members.

Questions or comments about the contents of this chart can be addressed to fhwa.planning@dot.gov.

Integrating Security into the Project Planning and Development Process:

To fully understand how to integrate Security Considerations into the Transportation Planning Process, the following chart tracks a potential project from project conception through construction and operation. The Security Steps column (Boxes A through H) provides a set of steps and measures that should be utilized to help integrate security planning and considerations into the planning process. The Transportation Planning Steps column (Boxes 1 through 10) describes the traditional steps in planning and developing a project. Each planning steps box contains a list of those security steps that should be considered during that phase. The third column provides a set of planning techniques and tips to consider throughout the process. The two stars in the Transportation Planning Steps highlight the Preliminary Design and Final Design steps that should serve as major review points for ensuring the incorporation of security reviews and evaluations into the planning process.

Security Steps

- A. Security Advisory Team:** Have the team do a review at key steps in the planning process.
- B. Threat Assessment and Hazard Analysis**
- C. Threat and Hazard Mitigation Strategies**
- D. Incorporate Security Requirements**
- E. Develop Contract Language with Security in Mind**
- F. Conduct Security Reviews**
- G. Develop Scope of Work**
- H. Conduct Planning and Rehearsals**

Transportation Planning Steps

- 1. SYSTEM LEVEL ANALYSIS**
The local, state, and/or regional governing body determines the need for a new project in the area through a visioning exercise or needs assessment. Security Steps: **A**
- 2. PROJECT IDENTIFICATION**
More specific concepts like location, purpose, need, access, and funding sources are discussed. Security Steps: **B, C, D, F**
- 3. PROJECT PLANNING**
The regional planning process allows for a study of the proposed project area. The proposed project is reviewed and approved by the MPO for possible study in the **Unified Planning Work Program (UPWP)** and inclusion in the **Long Range Transportation Plan (LRTP)**. Security Steps: **C, F, G**
- 4. PROJECT PROGRAMMING**
The project enters into the funding stage. The MPO will include the project in their **Transportation Improvement Program (TIP)**. The state then adds the project to the **Statewide Transportation Improvement Program (STIP)** to ensure that transportation infrastructure funding is available for the project. Security Steps: **C, F**
- 5. PRELIMINARY DESIGN** ★
The project enters the preliminary design phase. The initial risk assessment and mitigation strategies are revisited to ensure security measures are incorporated into the design. Security Steps: **D, E, F, G, H**
- 6. ENVIRONMENTAL REVIEW**
The project now enters the project conformity and **National Environmental Policy Act (NEPA)** process to determine, minimize and if appropriate mitigate the project's environmental impact. Security Steps: **D, F**
- 7. FINAL DESIGN** ★
The project design is approved with security considerations and environmental mitigation included. Final review of the risk assessment and mitigation strategies. Security Steps: **D, F, G**
- 8. ACQUISITION AND CONTRACTING**
 - Right of Way (ROW) acquisition
 - Acquisition of construction firm
 - Plan, Specification, and Estimate (PS&E) Agreement
 - Utilities
 Security Steps: **F**
- 9. PROJECT CONSTRUCTION**
The project is constructed based on agreements and specifications from above steps. Security Steps: **A**
- 10. PROJECT ACCEPTANCE**
The Operator of the project will follow **Standard Operating Procedures (SOP)** to ensure safe and secure operation. Security Steps: **F, H**

Planning Techniques & Tips

Broaden the Planning Team: Incorporate non-traditional security partners early and often into the planning process to ensure quality input.

Risk Management Program and Assessment: Develop a Risk Management program and use it to evaluate the program and specific critical projects.

Key Questions to Ask Early:

1. Is the infrastructure critical?
2. What are the threats against the infrastructure?
3. How can design mitigate the threats?

Conduct a Component Level Workshop: Use this to establish the security requirements before the project moves to preliminary design.

★ **Critical Check Point:** These are the steps where security measures are incorporated into the project design. After this it becomes more expensive to add security elements.

Standard Operating Procedures: SOPs should be developed for both the construction and operations phases. Use the Security Advisory Team to ensure proper security considerations are incorporated.

Environmental Review & Security Review Can Take Place Concurrently: There may be inter-relationships between how the design incorporates both security and environmental elements.

Resources:

[Considering Security and Emergency Management in the Planning of Transportation Projects](http://planning.dot.gov/documents/ConsideringSecurityAndEM.pdf): This document was developed to increase the awareness of the transportation infrastructure project community, especially those individuals working for a State Department of Transportation (DOT) or Metropolitan Planning Organization (MPO), about security and emergency management. The intended primary audience is those individuals – planners of new projects – responsible for developing new highway-related infrastructure projects.

<http://planning.dot.gov/documents/ConsideringSecurityAndEM.pdf>

[Costing Asset Protection: An All-Hazard Guide for Transportation \(CAPTA\)](http://www.trb.org/Main/Blurbs/160337.aspx)—The CAPTA methodology is an approach that agencies can use to analyze threats and hazards relevant to critical multimodal transportation infrastructure assets. <http://www.trb.org/Main/Blurbs/160337.aspx>

[CAPTool User Guide: Using CAPTool to Implement the “Costing Asset Protection: An All-Hazards Guide for Transportation \(CAPTA\)” Methodology](http://www.fhwa.dot.gov/security/emergencymgmt/profcapacitybldg/captool_users_guide.pdf)—The Costing Asset Protection Tool (CAPTool) is a macro-enabled Microsoft® Excel spreadsheet that is used to implement the CAPTA methodology. CAPTool is implemented in Microsoft® Excel and requires no special hardware or software. CAPTool can be downloaded here: <http://www.trb.org/Main/Blurbs/160337.aspx>. The User Guide is located here: http://www.fhwa.dot.gov/security/emergencymgmt/profcapacitybldg/captool_users_guide.pdf

[Disruption Impact Estimating Tool- Transportation \(DIETT\): A Tool for Prioritizing High Value Transportation Choke Points](http://www.trb.org/Main/Public/Blurbs/157351.aspx)—This Transportation Research Board National Cooperative Highway Research Program (NCHRP) report and spreadsheet tool can assist transportation planners as they identify and prioritize high-value transportation choke points. DIETT can be downloaded here: <http://www.trb.org/Main/Public/Blurbs/157351.aspx>

[Recommendations for Bridge and Tunnel Security](https://www.fhwa.dot.gov/bridge/security/brp.pdf)—A FHWA and AASHTO document that provides information on how to improve the security of bridges and tunnels. <https://www.fhwa.dot.gov/bridge/security/brp.pdf>

[Security 101: A Physical Security Primer for Transportation Agencies](http://www.trb.org/main/blurbs/162394.aspx)— This Transportation Research Board National Cooperative Highway Research Program (NCHRP) report is designed to provide transportation managers and employees with an introductory-level reference document to enhance their working knowledge of security concepts, guidelines, definitions, and standards. <http://www.trb.org/main/blurbs/162394.aspx>

[Risk Management for Terrorist Threats to Bridges and Tunnels](http://www.fhwa.dot.gov/security/emergencymgmt/profcapacitybldg/training.cfm)—This is an FHWA developed and presented course. It is available on request at the requestor’s site. More information and point of contact can be found by clicking the title in the list of courses at the link below.

<http://www.fhwa.dot.gov/security/emergencymgmt/profcapacitybldg/training.cfm>

[National Infrastructure Protection Plan \(NIPP\) 2013](http://www.dhs.gov/sites/default/files/publications/NIPP%202013_Partnering%20for%20Critical%20Infrastructure%20Security%20and%20Resilience_508_0.pdf)—This document, produced by the Department of Homeland Security, establishes a vision, mission, and goals that are supported by a set of core tenets focused on risk management and partnership to influence future critical infrastructure security and resilience planning at the international, national, regional, SLTT, and owner and operator levels.

http://www.dhs.gov/sites/default/files/publications/NIPP%202013_Partnering%20for%20Critical%20Infrastructure%20Security%20and%20Resilience_508_0.pdf