Consideration of Security in the 2007 Update of *Destination 2030*

Discussion Paper

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Puget Sound Regional Council

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Purpose of this Paper

The Safe, Accountable, Flexible, Efficient Transportation Act: a Legacy for Users (SAFETEA-LU), which was passed by Congress and signed by the President in August of 2005, established new requirements for the preparation of Metropolitan Transportation Plans (MTPs). One of these new requirements is that the Puget Sound Regional Council (PSRC), as the Metropolitan Planning Organization for the Puget Sound region, explicitly address security in updating it's Metropolitan Transportation Plan, *Destination 2030* (which was adopted as the Metropolitan Transportation Plan for the Puget Sound Region on May 24, 2001, and reviewed and updated in 2004).

> Transportation security has also become a major issue being discussed by policy makers and in the ongoing work activities of some MPOs. The November 2001 issue of PSRC's newsletter highlights the conclusions of the Northwest Freight Conference held October 7-9, 2001 at SeaTac airport. It was noted that in the wake of September 11th, it is essential that security be improved at border crossings and throughout the transportation system. Washington Governor Gary Locke urged, "A complete rethinking of how we approach transportation security, with freight security as an equal component".[1]

The purpose of this paper is to describe the new requirements for addressing security in *Destination 2030* and define what is meant by transportation security; describe how security is currently being addressed within the region by WSDOT (both roads and Washington State Ferries), marine ports, airports, transit agencies, local agencies and PSRC. The paper also identifies the key issues surrounding security within the region and proposes how *Destination 2030* should address security, and what, if any, role PSRC should play in the region's transportation security approach.

What SAFETEA-LU Requires

Since 1991 with the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) Congress explicitly included safety and security as factors to address, as appropriate, in Metropolitan Transportation Plans. In the 1998 Transportation Equity Act for the 21st Century (TEA-21), Congress streamlined the planning factors into seven areas to be considered in the transportation planning process (Public Law 105-178). One of these seven was to "increase the safety and security of the transportation system for motorized and non-motorized users". Throughout this time, emphasis was placed on safety, with security receiving little guidance or attention other than federal transit programs emphasis on transit security, which focused on the personal security of individuals in using transit services. SAFETEA-LU requires that security now be addressed as a stand-alone factor.

In the wake of the events of September 11, 2001, the security requirements took on a whole new meaning and emphasis. Federal and state agencies have been created to assess the vulnerability of infrastructure systems and support security strategies and measures. These agencies include the

[1] "Regional Views Newsletter", Puget Sound Regional Council, Seattle, WA, November 2001

President's Commission on Critical Infrastructure Protection (PCCIP), the Office for Domestic Preparedness (ODP) and the Department of Homeland Security (including the Transportation Security Administration and a refocused Coast Guard), among others. In 2005 with the passage of SAFETEA-LU, Congress added security as a new stand-alone planning factor to be considered in metropolitan plans. In addition, the Federal Highway Administration and the Federal Transit Administration have issued draft guidance, which states that this new requirement must be in place prior to MPO and State adoption/approval of transportation plans addressing SAFETEA-LU provisions.

The draft metropolitan transportation planning regulations proposed for implementing SAFETEA-LU include the following requirements related to security:

23CFR450.306 Scope of the metropolitan transportation planning process

> "(a) The metropolitan transportation planning process shall …provide for consideration and implementation of projects, strategies, and services that will address the following factors:
>
> (2) Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users;
>
> (b) Consideration of the planning factors should be reflected, as appropriate, in all aspects of the metropolitan planning process, including activities such as the formulation of goals, objectives, performance measures, and evaluation criteria for use in developing the metropolitan transportation plan; identification of prioritization criteria for projects and strategies reflected in the TIP; and development of short range planning studies, strategic planning and/or policy studies, or transportation needs studies.
>
> (h) The metropolitan transportation planning process should be consistent with … the Regional Transit Security Strategy, as required by the Department of Homeland Security.

23CFR450.322 Development and content of the metropolitan transportation plan

> h) The metropolitan transportation plan should include … (as appropriate) emergency relief and disaster preparedness plans and strategies and policies that support homeland security and safeguard the personal security of all motorized and non-motorized users.

Both the federal law and the draft guidance provide little direction on the appropriate scope of security to be covered in a metropolitan transportation plan or the specific role of a Metropolitan Planning Organization such as PSRC. Across the country, regional agencies are defining their roles as best meets the needs of their local jurisdictions and their own capabilities and policy directions.

What is Transportation Security

What Does Security Need to Address?

The Transportation Research Board (TRB) sponsored a study on Incorporating Security into the Transportation Planning Process[2]. The purpose of the study was to determine the extent to which transportation planning processes at the state and local levels incorporate security issues and strategies for securing the nation's transportation infrastructure. For the purposes of this study, security was defined as:

> *"Protection from terrorist threats or actions due to acts of extreme violence resulting in significant loss of life, injury, and/or damage or destruction of facilities and infrastructure, whether or not these acts are intended to further political or social objectives."*

In the Puget Sound Region, however, the King County Office of Emergency Management has advocated an "all hazards" approach to security. Guidance provided by FTA[3] encourages an all hazards approach by stating,

> *"In particular, areas that are vulnerable to disasters of either man-made or natural origin are encouraged to consider including disaster planning work activities in their SP&Rs and UPWPs."*

Careful consideration regarding the definitive intent of security for planning purposes in the region is encouraged. The planning process should consider the definition of security and whether man-made and natural security issues can be conjointly considered.

> **Terrorism -** Terrorism is defined in the Code of Federal Regulations as "the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives."[4] Terrorism is often categorized as "domestic" or "international." This distinction refers not to where the terrorist act takes place but rather to the origin of the individuals or groups responsible for it. For example, the 1995 bombing of the Murrah Federal Building in Oklahoma City was an act of domestic terrorism, but the attack on the World Trade Center on September 2001 was international in nature.
>
> Although any population or facility could become a target of terrorism, facilities that have the capacity to hold large numbers of people with little or no security, may be more vulnerable to attack. However, potential higher risk targets have been identified as symbolic targets like government buildings, corporate headquarters, events that draw large crowds, and other identifiable structures like bridges and other transportation facilities where large numbers of people are concentrated. A contributing factor to the risk of such facilities is the increasingly difficult task of protecting potential targets despite more effective physical security and technological countermeasures. For instance, even if the range of the weapons is relatively short, it will be a considerable challenge to expand an anti-terrorist security zone beyond the immediate periphery of a potential target.

[2] NCHRP Report 525, Volume 3
[3] Federal Register November 30, 2005, page 71971 to 71974
[4] 28 C.F.R. Section 0.85, Judicial Administration

Transportation facilities are particularly important for security because they provide the key links for response and support as well as their day-to-day function. Maintaining these facilities is vital to an area's commerce because disruptions to major facilities like interstates can have negative impacts on an area's economy. There is also the potential for increased risk at the point of an event on the transportation systems (highway, streets, transit systems, airports or seaports) because they are assembly places for large groups of people.

Terrorism attacks can include the following;

Physical;
- car bomb at bridge approach, in highway tunnel,
- airplanes diverted into buildings or large gatherings
- bombs at pipeline compressor stations or segments, storage facilities, pavilions or other large gathering locations,
- container vessel fire at marine terminal, ramming of bridge by maritime vessel,
- shooting at a terminal or transit station
- bombs or fires on buses, trains, ferries or airplanes, or at stations
- vandalism of structures, signal systems, railroad tracks

Biological;
- release in multiple subway stations or transit terminals,
- anthrax release from freight ship, on passenger train,

Chemical;
- sarin release in multiple transit stations,
- physical attack on railcar carrying toxics,

Cyber attacks.
- cyber attack on control stations for highway traffic, pipelines, train,
- attack on port or transit power/telecommunications,
- sabotage of train control systems, general traffic control signals.

Natural Disasters - Natural hazards are capable of producing widespread impacts to a region's property and residents. In order for PSRC to identify and prioritize appropriate mitigation actions, specific information about each hazard needs to be addressed regarding vulnerable populations and infrastructure, the impact that such an event has and could have, as well as expected impacts.

Natural disasters could include the following (for the Puget Sound region);

- earthquakes
- high winds
- severe thunderstorms (lightning and hail)
- severe winter storms
- flood
- urban and wildfires
- hazardous material transport spills or explosions
- drought

- landslides
- volcanic events
- pandemics (bird flu)
- dam and levee failures

Crime - A crime in a broad sense is an act that violates a political or moral law. In the narrow sense, a crime is a violation of the criminal law. For example, most traffic violations are not crimes in a legal sense. For transportation, elements of crime could be related to terrorist activities in regards to destruction of transportation infrastructure elements but are distinct in that they do not appear to have an intent that is defined by terrorism. That is, the act of driving around railroad gates and causing an accident is not like the act of deliberately parking a vehicle in the tracks with the intent of causing an accident.

Other incidents that do not target transportation facilities specifically but can have major impacts to traffic operations and the ability to provide emergency services are also of concern, such as major demonstrations/gatherings. This can include planned events that draw large crowds, such as street festivals and holiday celebrations like 4th of July fireworks, but can include demonstrations and rallies. These types of 'special events' create conditions of heavier than normal use on the transportation system and call for additional consideration. A security concern with major demonstrations is the chance that these events could evolve into less than peaceful conditions, such as riots.

This was true with the World Trade Organization (WTO) riots that occurred in downtown Seattle in 1999. Protestors obstructed roadways, making it nearly impossible for anyone, especially emergency vehicles, to access the area. With police officers vastly outnumbered, the city was rendered helpless as thousands looted and destroyed shops, restaurants and the like. Planning for these events can be quite different than other 'special events'. The number of participants is difficult to determine and where the event or path of the event will occur as well. Also, emergency response can be difficult to provide to areas where such gatherings are happening and rerouting may be necessary.

Crime can also be cyber in nature. Transportation agencies have a need to increase their development of tools, concepts and protocols to stop penetration of systems and to ensure that these tools are useful and relevant to their operating environment.

What are the Potential Elements of Security

This section discusses potential elements and stages of security. Definitions were developed from national sources and do not necessarily reflect the stages or actions that will be developed or undertaken as part of the PSRC planning process. However, the planning process will be used to distinguish between the region's plan and a PSRC role for defining the roles and types of actions that the MPO could take in each phase of security-related planning, disaster incident, or other effort. This is seen as a key initial step in defining the elements of security to be included in the PSRC's transportation plan.

The following stages of security discussed are listed from proactive to reactive and include; prevention, protection, redundancy, response, recovery, and monitoring. Each stage is distinct in its objectives for responding to security issues and often involves different departments or areas of

responsibilities within same and cross organizations. Also, the types of actions that state or regional agencies could assume in each phase (stage) are quite different and should regard the availability of technical staff.

Particularly important to all elements is coordination and sharing information between organizations and entities with overlapping or shared responsibilities in the area. Understanding the role that each entity takes for each stage is also important particularly for the reactionary stages of Response and Recovery. Such roles are often carefully detailed within Emergency Management Plans.

Prevention - Prevention has several components, ranging from the actual stopping of an attack before it occurs, to providing improved facility designs that prevent large scale destruction. Surveillance, monitoring, and sensing technologies will likely play an important role in the prevention phase of an incident[5]. Prevention could also include funding new strategies, technologies or projects that can help prevent events. Another important step is in conducting vulnerability analyses on regional transportation facilities and services coupled with the secure management of such data. Additionally, prevention measures include efforts to limit access to assets that may be compromised such as access control systems, closed circuit television systems, and intrusion detection systems. These measures can also include less technologically advanced solution such as doors, fences, locks, and architectural barriers, and a system to encourage the public to report suspicious activities they observe in or near transportation facilities.

Protection and Mitigation - If prevention measures alone are not sufficient to protect an asset and it is of high enough priority, target hardening approaches may be taken. These vary by type of asset. Blast resilience may include architectural features that allow for 'venting' energy from an explosive device, for example. Retrofitting measures can be included in existing designs, and new design standards may be developed (as with seismic design standards) to ensure high vulnerability targets, such as bridges, tunnels, and intermodal facilities, are appropriately safeguarded. Mitigation is defined as reducing the harmful impact of an attack as it occurs and in the immediate aftermath. Important steps could include providing a forum for discussions on coordinating emergency response, funding communication systems, and disseminating best practices in incident-specific engineering design and emergency response to agencies.

Redundancy - The redundancy of major components of the transportation system is a major component of the transportation system. Man-made and natural events that close or restrict use of several major components of the transportation or a couple of key components, underscore the need for increased attention to and investment in system redundancy and the related area of improved emergency response planning.

Response - Response can be defined as reducing the harmful impact of an attack as it occurs and in the immediate aftermath. This entails identifying the most effective routing for emergency vehicles and the evacuation of large numbers of people, as well as providing

[5] Meyer, Michael. The Role of Metropolitan Planning Organizations in Preparing for Security Incidents and Transportation Response, Georgia Institute of Technology, Atlanta, GA, 2002..

effective communication systems among emergency response teams and for general public information.[6]

Recovery and Monitoring - Recovery efforts include both short-term (response) activities such as emergency notification and first response as well as longer-term activities such as restoring business continuity by providing traveler information, temporary and permanent re-routing of service, and reconstruction. Recovery also includes facilitating rapid reconstruction and resumption of services after an attack. Potential roles for Puget Sound agencies could include conducting transportation network analyses to determine the most effective recovery investment strategies, acting as a forum for developing appropriate recovery strategies, and funding recovery strategies. Monitoring includes recognizing that an incident is underway, characterizing it, and monitoring developments. Clearly, surveillance, monitoring, and sensing technologies would be critical to this phase of incident response, as would public information. Potential roles for Puget Sound agencies could include proposing protocols for non-security/ safety agency response (e.g., local governments) and coordinating public information dissemination strategies.

Critical Infrastructure

Critical infrastructure can be defined as systems and resources, whether physical or virtual, so vital to the United States that their incapacity or destruction of such systems and resources would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters. Planning for transportation security in a metropolitan area must include the identification of the critical infrastructure and ways to protect it.

Security Data Needs

Terrorist acts, hazard events, and in some instances criminal activities, are occasional, statically random events by intent, and not amenable to the same types of database-orientated analyses as are other events such as traffic crashes. Other more commonly occurring criminal acts are often not recorded by law enforcement agencies as having occurred at transportation facilities. A recent response to this lack of data occurred in 2001, when the National Transit Database (NTD) was expanded by the FTA to collect data on acts of terrorism and extreme violence (e.g., bombings), as well as indicators of such threats (e.g., bomb threats). This data collection system may serve as a model for other surface transportation modes.

Data to determine security concerns for transportation projects is more difficult to quantify and define in terms of scores when it comes to programming and addressing these issues. Although it can be argued that security concerns are operational considerations for non-highway projects and may be addressed by actions such as dispatching additional police (response), the full integration of security concerns in the planning process requires that elements of high, medium, and low impact security impacts be considered in each project being advanced for funding[7].

Privacy and Other Legal Issues of Surveillance

A 1928 court case interpreted the United States constitution regarding privacy as "the right to be let alone… the most comprehensive of rights and the right most valued by civilized man."[8] Similarly,

[6] Meyer 2002.
[7] Wegmann and Everett. The Role of Security in the Surface Transportation Programming Process. University of Tennessee.
[8] Olmstead v. U.S., 277 U.S. 438 (1928)

State constitutions have defined privacy as "the right to live one's life in seclusion, without being subjected to unwarranted and undesired publicity."[9] Thus, entities must balance the right and duty to investigate or survey against the right to privacy. Failure to do so can lead to claims that invasion of privacy amounts to a failure to act fairly. Courts have been found to permit "reasonable" investigations, including reasonable surveillance operations because of public interest.

Surveillance is the act of monitoring the activity of something. In terms of civil society there are two main types of surveillance: passive surveillance is the indirect monitoring of a person or organization and direct or intrusive surveillance is the direct intervention in the work of a person or organization using technical means, such as bugs, or human operatives such as infiltrators. State surveillance exists to counter a variety of perceived threats, from subversion by other states to external or internal terrorism and the activities of organized crime. Much of this surveillance has, historically, been carried out by human operatives, and hence was limited in its scope. But surveillance today is increasingly automated.

Ensuring that security against terrorist or similar threats is maintained depends on the control of sensitive information within a small group of persons on a need-to-know basis. The release of information (e.g., vulnerability assessments) into the planning process, and, thus, the public domain, could be detrimental to the process and may undermine the security of the assets being considered as key elements. Therefore, the decision to include the security element in the planning process as an open discussion item becomes a delicate topic regarding the potential of releasing sensitive information as the process would not be a truly open public involvement process.

Factors Potentially Limiting Security Effectiveness

Some key factors to be considered when seeking to incorporate security into the transportation planning process include the following:

- Uncertainty regarding what is security and how it might affect the local region,
- Higher perceived relevance and visibility of safety,
- Unavailability of security data,
- Open accessibility of transportation systems,
- Multitude of metropolitan/local area stakeholders,
- Lack of security performance measures, and
- Need to safeguard sensitive information.

This last point runs contrary to the openness of the transportation planning processes in this country. It will be a major challenge for transportation planning agencies to retain a collaborative and transparent planning process while protecting security-sensitive information and selected products of the planning process.

[9] Hamilton v. Lumbermans Mutual, La.App., 82 So.2d 261

Transportation Security Activities in Washington State and the Puget Sound Region

There have been actions to improve transportation security in Washington State and the Puget Sound region at all levels: statewide, regionally, at the county level and at a local level. Some of the most noteworthy efforts are described below.

Washington Statewide Homeland Security Program

Overall statewide leadership in security planning in Washington is provided by the Emergency Management Division of the Washington Military Department. The Emergency Management Division administers grants from the federal Homeland Security Department and assists the governor in coordinating homeland security activities in the state. Two main advisory groups provide policy direction to the EMD and to the governor: the Emergency Management Council and the Domestic Security Executive Group.

The Emergency Management Council includes representative from the following:

- State Patrol
- Association of Sheriffs and Police Chiefs
- Department of Ecology
- Building Officials
- Military Department
- Search and Rescue
- City Officials
- Local Emergency Management Directors
- Local Fire Chiefs
- Fire Protection Bureau
- State Emergency Management Directors
- Department of Health
- County Sheriffs
- Department of Natural Resources
- Private Industry
- Association of County Officials
- Member-at-large

The EMC receives support on security issues from a statewide Committee on Homeland Security. One of the actions of the EMD and the Committee on Homeland Security has been the development of the Washington Statewide Homeland Security Plan. The strategic objectives of the plan are to:

- Reduce Washington State's vulnerability to acts of terrorism, and natural or technological hazards.
- Prevent, deter, defend against, and dissuade terrorist attacks from occurring within Washington State.
- Prepare citizens, government, tribal nations, and businesses at all levels to effectively respond in the event of any emergency including a terrorist attack.

- Minimize the damage and effectively respond to and recover from attacks and natural or technological emergencies that do occur.

The plan includes goals specifically oriented to transportation security:

> *Goal 3.6 (prevention), To support our economy and communities by keeping people, businesses and government moving and operating with safe and secure transportation systems.*
>
> *Goal 7.2.1.4 (resources), In support of the National Incident Management System (NIMS) implementation develop a resource plan for managing and employing resources in advance of an incident*

The second major group advising the EMD and the governor is the Domestic Security Executive Group which consists of the following members:

- TAG/Director, Military Department (Chair)
- Director, Emergency Management Division
- Chief, Washington State Patrol
- Secretary of Health
- Secretary of Transportation,
- Director of the Department of Agriculture
- Director, Department of Ecology
- Director Department of Information Services
- Director Office of Financial Management
- Governor's Senior Staff

In addition to the two main groups advising the EMD, an E-911 Advisory Committee has been formed and reports to the EMD on issues related to the Emergency 911 system in the state. This committee allocates funds generated from a cell phone tax to regions for the development of E-911 centers.

One of the primary roles of the EMD is to distribute Department of Homeland Security funds within the state. Some homeland security funds are distributed as grants to specific implementing agencies by the U.S. Department of Homeland Security, but those that are not are distributed by EMD. The state is divided into nine regions. Funds are allocated to each of these regions based on the overall need as determined by the EMD. Each of the four counties in the Puget Sound region is in a different EMD region. King County and Pierce County are each their own region but Snohomish and Kitsap Counties are each grouped with two other counties.

EMD also distributes other funds within the state. The funds from the U.S. Department of Homeland Security are to be used only for homeland security. Funds for other hazards or emergencies are also available through Emergency Management Program Grants and these are also administered by EMD.

Each of the EMD regions is lead by a Regional Coordinator and there is generally a Homeland Security Council/Emergency Management Advisory Committee organized for each region. The implementation of homeland security and most other security activities is the responsibility of

county-based emergency management departments or individual entities such as the airports, seaports, Washington State Ferries, the transit agencies, or cities. Other federal departments besides Homeland Security also provide grants for security and these are generally provided as grants directly to implementing agencies based on grant application.

Security as a Component of the Washington Transportation Plan Update (WSDOT)

Washington's Transportation Plan directly addresses security as a priority in its statement of goals and objectives:

> *Goal 8: Increased Security – customers are safe and secure while using the transportation system*
>
> *Objectives:*
> *1.) Improve emergency response systems*
> *2.) Increase the security of the transportation system*

An update of the plan is currently underway and additional definition support to the objectives will be provided.

Marine

Marine security is in the Puget Sound has been largely shaped by the National Maritime Transportation Safety Act (NMTSA) of 2002 which implemented extensive regulations to improve security for passenger, freight and employees. NMTSA set up a robust regulatory framework and advisory framework that is headed by the U.S. Coast Guard. The Coast Guard works with Area Maritime Security Committees to develop a security plan for each area that is consistent with a National Maritime Security Plan. The South Committee includes the Seattle, Tacoma, Everett and Olympics ports, the North Committee includes Anacortes, Friday Harbor, and Bellingham ports, and the Olympic Committee includes Port Angeles, the Port Townsend, and Neah Bay ports. Among port authorities and port tenants, the committees involve carriers, shippers, passengers, vessel servicing organizations, federal, state and local law enforcement to accomplish the goals within their respective areas. In building awareness and communication throughout the ports, the committees hope to improve security procedures and decrease port vulnerabilities.[10]

Unlike the rest of the transportation sector that falls under the Homeland Security threat levels, maritime operations fall under the Maritime Security (MARSEC) levels. The three MARSEC levels are closely related to the five homeland security levels but are not exactly aligned.

In 2003, the Port of Seattle helped Tacoma and Everett secure federal grants for security projects and began participating in Operation Safe Commerce with the Port of Tacoma.[11] Under Operation Safe Commerce, ports have explored and continue to explore new methods for improving the

[10] http://www.pugetsoundpsc.org/index.html
Puget Sound Port Security Committees, Port of Seattle

[11] http://www.portsealttle.org/news/press/2003/06_13_2003_87.shtml
Port of Seattle. "Operation Safe Commerce and TSA Port Security Grants: Pacific Northwest Ports Receive Port Security Funding." June 13, 2003.

security of containers arriving and departing from the port. This federally funded program aims to coordinate various groups (shippers, carriers, etc.), improve port conditions by studying and evaluating the current system, and integrate technology and policies to increase security measures taken during container movement.

Currently, cargo leaving foreign ports for the United States is searched before departure, and a list of the cargo is mandatory. Before arrival in Seattle, the Coast Guards will refer to the list when performing another search of the vessel's cargo. Vessels bound for the United States are now required to submit a formal security plan in advance, detailing how they intend to secure engine rooms and other restricted areas, and spelling out plans for terrorism-related evacuations. Trucks traveling in and out of the port must pass through a Vehicle and Cargo Inspection System that uses gamma rays to scan the contents of containers, which is then matched against manifests.[12] The Port of Seattle has also employed canine detection teams, radiation detection devices, X-ray machines, and physical inspections to monitor cargo and screen for drugs, explosive devices, chemical weapons, etc. Marine Safety and Security Teams often patrol critical areas in fast-response boats, escorting ferries, and cargo vessels when appropriate.

The Washington State Ferry's (WSF) is part of the Washington State Department of Transportation and is considered part of the state highway system. As such, it is policed by the Washington State Patrol. Under the WSF security measures, all vehicles are subject to screening while waiting in holding lanes for the next ferry to arrive. Bomb sniffing dogs have also been used for screening of vehicles and passengers waiting to board the ferries. WSF has prohibited and restricted many potentially dangerous items from its ferries (including guns, explosives, propane tanks and hazardous materials). Once they have boarded, passengers are required to remain on the vessel unless permitted by the Captain to leave. WSF also urges passenger to be alert to suspicious behavior and comply with security measures and procedures.

Air

Since September 11, 2001 the Port of Seattle has supported federal efforts and guidance in securing the transportation system. At SeaTac International Airport, security is planned by a Security Department of the airport to meet the requirements of the Department of Homeland Security and the Transportation Security Administration (TSA). Security activities at the airport cover commercial passenger, air cargo, general aviation and air space security. The TSA, FAA, WSDOT, and airport operators are working to improve safety and security at general aviation airports while retaining the commercial aviation industry's ability to meet the needs of the flying public.

> **Commercial Passenger Security -** The Transportation Security Administration, Federal Aviation Administration, Port of Seattle, and airlines have undertaken a broad range of efforts aimed at protecting aircraft in flight and airport passenger terminals from terrorist acts. Numerous enhanced security measures have been implemented at Sea-Tac Airport. These include increased presence of law enforcement personnel throughout the airport, enhanced screening equipment and procedures (every bag is now checked for explosives using the latest technology screening machines), all screening is now performed by Transportation Security Administration (TSA) personnel, canine explosive teams with bomb sniffing dogs have been expanded, restrictions have been placed on parking in front of the

[12] http://seattlepi.nwsource.com/local/260569_seattleport23.html
Seattle Post Intelligencer. "More Port Security Measures in Place Here." February 23, 2006.

passenger terminal, only ticketed passengers are allowed beyond the airport security screening stations, the airport and airlines have implemented enhanced TSA restrictions on what can be brought on board planes, airfield access restrictions have been significantly enhanced, and the airport is implementing a new badge program using biometric access code technology (finger printing) for all employees who have access to restricted areas of the airport.

Air Cargo Security - On November 17, 2003 the TSA published an Air Cargo Strategic Plan, focused on security. The plan's four objectives are to: (1) enhance shipper and supply chain security; (2) identify elevated risk cargo through prescreening; (3) identify technology for performing targeted air cargo inspections; and (4) secure all-cargo aircraft through appropriate facility security measures. Since its creation after September 11, 2001, TSA has moved steadily to strengthen air cargo security. The Strategic Plan represents a major new commitment by TSA to build aggressively on that foundation and substantially improve the security environment for the nation's aviation system. TSA, FAA, regional airport operators, and air cargo carriers are working together to begin implementing these air cargo security objectives.

General Aviation Security - The U.S. Department of Transportation and Transportation Security Administration (TSA) have also established improved security measures for general aviation airports. At the national level, methods used to increase general aviation security have, to date, mostly fallen into four areas: (1) airspace and operational restrictions; (2) intercept operations - the Department of Defense has increased airborne flight monitoring assets and combat air patrols on an ongoing and random basis; (3) scrutiny of pilots, crews, passengers and aircraft on the ground; and (4) communication and education. At the airport level, the following security measures have been recommended by the National Association of State Aviation Officials (NASAO) to enhance security at all public use general aviation airports: (1) secure unattended aircraft, (2) report unusual and suspicious activity, (3) develop airport security plans, (4) increase public awareness and education, (5) monitor airport property and users, (6) control movement in the aircraft operating area (AOA), (7) prevent unauthorized AOA access, and (8) develop standards for new pilot ID Smart Cards and identification verification systems.

Additional Regional, County and Local Activities

Public transportation systems have been the target of a significant number of terrorist attacks throughout the world in the past five years. The transit authorities in the Puget Sound have responded by initiating security activities to protect passengers and employees. These have included expanded electronic surveillance, police patrols and use of bomb detecting canine patrols particularly in areas of high vulnerability such as the Seattle transit tunnel. Emergency procedures are also practiced in drills conducted by the transit authorities. The Washington State Transit Association has formed a Transit Security Council to discussion security issues statewide.

Much of the emergency response in the Puget Sound is planned for and initiated at the county level in the Puget Sound region. Each of the four counties in the Puget Sound region has initiated homeland security planning and preparations in addition to the ongoing emergency management preparations that have gone on. The counties each have Emergency Management Departments that have prepared a variety of security plans. The elements in these plans are as follows:

King County (Region 6)
- Critical Infrastructure Plan
- County Emergency Plan
- Hazard Identification Vulnerability Plan
- Regional Hazard Mitigation Plan
- Regional Disaster Response Plan

Kitsap County (Region 2)
- Kitsap County Hazard Identification and Vulnerability Analysis (Sept 2004)
- Kitsap County Multi-Hazard Identification Plan (Aug 1999)
- Comprehensive Disaster Recovery Plan (Dec 2003)
- Comprehensive Emergency Management Plan (Dec 2003)

Pierce County (Region 5)
- Comprehensive Emergency Management Plan (June 1998 / Revised and Updated 2003)
- Natural Hazards Mitigation Plan
- Hazard Identification and Vulnerability Assessment
- Mt. Rainier Volcanic Hazards Plan

Snohomish County (Region 1)
- Snohomish County Comprehensive Emergency Management Plan
- Snohomish County Natural Hazards Mitigation Plan
- Hazard Identification and Vulnerability Assessment (2004)

How are the SAFETEA-LU Requiremets Being Met in Other Regions of the Country

Across multiple levels of government and jurisdiction in the United States over the past years, there has been increased discussion and emphasis given to planning and developing strategies to reduce areas of vulnerability to security threats. NCHRP Report 525 reviewed the most recent Transportation Improvement Programs (TIPs) for ten major MPOs across the country and developed detailed case studies of four (4) metropolitan areas selected for their unique features. The study showed that overall, there is widespread confusion over what specifically security refers to, which level of government is responsible for addressing national security issues, where funding for these initiatives will come from and how federal legislation can be interpreted regarding the need to specially address security as a core element of the required transportation planning process. These areas of confusion have impeded efforts to consider security earlier in the project development process. In the absence of local interest and commitment and federal funding support, security is addressed on a sporadic basis, at best. To develop security as a reasonable element in the inclusion of a regional transportation plan; the needs, requirements, roles and responsibilities, and an understanding of how security will be defined and acted upon are critical to successfully defining a framework for the role of the region.

Most efforts to address security at the metropolitan planning level appear limited to the operational aspects of the asset, with little or no consideration of security in the development of Regional or

Statewide Transportation Improvement Programs. While safety has emerged as a major factor in the transportation planning process, security as a distinct issue area is either not addressed or subsumed under the safety element. Security issues are considered to a greater extent where the local community has already been sensitized to the threats posed by terrorist attacks, such as New York City, Oklahoma City, or Washington, DC. In contrast, other metropolitan areas such as San Francisco or Portland (Oregon) have focused on more imminent natural disasters or local security threats, such as earthquakes and vandalism, respectively, where the linkage between security and emergency preparedness is more pronounced.

A general perception persists that security planning and protection remains the purview of a specialized group of agencies (particularly federal agencies) and firms (particularly defense-related firms) dealing with national security, environmental terrorism, organized crime, and/or hazardous materials.[13] Effective planning and deployment of a program for transportation security in a major metropolitan area will require substantial inter-agency coordination. The coordination will be required across federal, state, regional and local agencies and involve transportation, law enforcement and emergency service agencies. Because the coordination may require a decision-making process for organizations not accustomed to working together, new institutional structures may be required to facilitate the coordination.

The NCHRP Report 525 identified numerous areas in which there were noteworthy national examples of practice. Some of the examples that are most relevant for the current discussion are summarized below.

Policy Development

Policy development is a critical step towards defining how security will be addressed in the region. One example of security-focused policy comes from the Southeast Michigan Council of Governments (SEMCOG), the MPO for the Detroit metropolitan area. SEMCOG has included in its MTP the goal "Promote a safe and secure transportation system." This goal is supported by four policies. The four policy statements promote improved security through infrastructure investment, new technologies, and interagency coordination. The policies also specifically identify security for transit passengers and employees and international border crossings as areas of particular focus.

Planning and Coordination

Largely in response to the Oakland Hills fire in 1991, the California Office of Emergency Services formulated the Standardized Emergency Management System (SEMS) which provides a framework for multi-agency coordination, incident command, mutual aid, and area-wide operations. Use of the SEMS is mandated in all metropolitan areas of the state. In the San Francisco Bay Area, the Metropolitan Transportation Commission (the region's MPO) worked with Caltrans (the state DOT) and the Bay Area transit operators to develop the Trans Response Plan (TRP) following the guidelines of the SEMS. The TRP defines multi-modal response functions, responsibilities and procedures in the event of a disaster.

Communications

The agencies involved in emergency response for the Austin metropolitan area in Texas have joined together to develop the Combined Transportation, Emergency and Communications Center

[13] NCHRP Report 525, Volume 3.

(CTECC).[14] The purpose of the center is increase the coordination between traffic operations, emergency services and police departments.

Programming and Prioritization of Security Projects

The Baltimore Metropolitan Council TIP has linked some ITS programs and projects to security issues. They note that emergency management services save lives and improve security through immediate notification of the precise locations of crashes, breakdowns, and other incidents.

The Metropolitan Planning Organization for the Miami Urbanized Area's TIP for 2001-2002 to 2005-2006 includes a section on Seaport Security. The following is an excerpt from that section:

> *"In compliance with the state-mandated security requirements, Port security enhancements are budgeted in Fiscal Year 2002 and 2003. These enhancements include: port-wide closed-circuit television, alarm systems, cargo area fencing, and access control systems. Furthermore, construction of additional INS and Customs office space in cruise terminals, a federal agency requirement, is included in the Security Enhancements."*[15]

Addressing the SAFETEA-LU Requirements for Security in the Puget Sound Region

What is in *Destination 2030* Now

Destination 2030 acknowledges the need to optimize, manage and preserve the use of transportation facilities and services and states that a high level of maintenance and preservation of transportation infrastructure and services ensures that current assets continue to function properly and safeguard regional mobility into the future. Other policies reflect the need to focus on transportation to support the region's growth and economic vision and expand transportation capacity offering greater mobility options. However, the word security does not appear within the current plan. Although some of the policies contained within do somewhat forward security related policies, inclusion of language directed towards policy that would improve security would be warranted.

Potential Areas for Future Activities and Enhancements

Critical Transportation Infrastructure Plan for the Region - One area of focus in a more comprehensive security plan for the region will be the development of a critical transportation infrastructure plans by all counties and a coordinated plan for the region. Some of this work has been done at a county level, but a fully integrated regional plan has not been developed. The plan should identify the parts of the transportation systems that are critical to successful evacuation of the region in the event of an emergency and to providing emergency services.

Funding for Security Projects -When there does not appear to be enough funds to address existing and predicted future congestion in a region, finding funds to address security is

[14] Federal Highway Administration, *Getting More by Working Together: Opportunities for Linking Planning and Operations*, Washington, D.C. November 2004, page 2-50.

[15] "Dade County Transportation Improvement Program Fiscal Years 2001-2002 to 2005-2006." Miami Urbanized Area Metropolitan Planning Organization, Miami, FL, 2001.

often difficult. Many of the events of the past five years, including 9-11 and Hurricane Katrina, have demonstrated the importance of funding security and the cost of not doing so. Where security considerations have been included in metropolitan/local transportation planning, the cost of the planning process has increased as a result of the increase in technical considerations and number of stakeholders that must be involved in the process.[16] Making changes to the local transportation planning processes can be trying since metropolitan/local and state transportation agencies worry about diverting available funds from projects already judged as high priority using establish criteria. PSRC will have an important role in the region leading the discussion of how to fund transportation security. It will be important for the Puget Sound region to consider the importance of security funding as it deliberates the need for critical infrastructure and programs to address all of the elements of security.

Project Prioritization - Many MPOs and DOTs have fairly advanced methodologies for selecting projects to be included in the Transportation Improvement Program (TIP) or Statewide Transportation Improvement Program (STIP). Scoring techniques are frequently used by MPOs in prioritizing projects for inclusion in TIP. From a sample of thirteen MPOs, it was not uncommon for safety concerns to represent ten to twenty percent of the point allocation for highway projects, but little recognition was given to security issues[17]. Also, it was found that safety and security were frequently ignored in the prioritization of transit, intermodal, or enhancement projects. Those agencies that select all projects from one funding pot and do not stratify their programming evaluation into predefined modal or funding categories were more likely to explicitly include safety or security considerations when selecting non-roadway projects. Security is not currently a factor in selecting projects with PSRC regional funding.

Coordination and Interoperability -The regional transportation plan does not currently address coordination between agencies or interoperability in providing for security-related programs. Interoperability requires simultaneously investing in technology, training and communication to ensure that during a disaster, all of the elements of the security system can work together and be properly coordinated and managed.

Modeling - Planning for security requires a certain amount of modeling to determine appropriate evacuation routes and to evaluate the adequacy of these routes to carry the necessary amount of traffic in the event of an emergency. The modeling for security planning is likely to rely most heavily on a model system such as the PSRC regional model because it has a network that covers the entire region and because it has a reasonable representation of the population and employment by zone that can be used to generate trip patterns for different hours of the day. Some modifications of the regional model would be necessary, however, to make it most suitable for security planning. Additional algorithms would be necessary to develop trip tables that represent evacuations under different emergency situations rather than average weekday travel patterns. The regional model may also need to be supplemented with operational simulation modeling to allow for assessment of how different parts of the transportation system would operate under different loadings and when various parts of the system may not be in operation. Although this modeling

[16] NCHRP Report 525, Volume 3.
[17] Wegmann and Everett. The Role of Security in the Surface Transportation Programming Process. University of Tennessee

function will almost certainly need to be a coordinated activity of the many agencies that are involved in transportation security planning for the region, PSRC might be a logical lead because of its role in maintaining the regional planning model system.

What Should be Considered for the Update

It is clear that transportation security is an important topic in the Puget Sound region, and the region's airports, seaports, transit agencies, WSDOT, the Washington State Ferries, and federal security agencies are expending significant resources on transportation security. To help scope what could be a useful security element for the Metropolitan Transportation Plan and role for PSRC in ongoing security activities, PSRC organized and sponsored a Security Planning Workshop that was held on July 19, 2006. This workshop brought together a broad range of professionals involved in transportation security. Participants in the workshop included representatives from the U.S. Department of Transportation, the state and regional homeland security agencies; state, regional and local transportation agencies; and first-responder organizations. The dialogue in the workshop demonstrated the extensive activities already underway to address security in the transportation system in the region.

To meet the metropolitan transportation planning requirements of SAFETEA-LU as they relate to security, PSRC will have to demonstrate that it has given appropriate consideration to security in the development of its Metropolitan Transportation Plan. By sponsoring the recent Security Planning Workshop, PSRC has taken an important step forward toward addressing the SAFETEA-LU requirements for consideration of security. A discussion paper that provided background on the issues involved with security planning and examples of what is being done in the Puget Sound region and other parts of the country has also helped PSRC with meeting the SAFETEA-LU requirements. In the months ahead, PSRC plans to use the information gathered in the workshop and to determine what additional actions might be appropriate within the context of the current amendment to *Destination 2030* and which might be appropriate to plan for in the next major MTP update.

Policy Recommendations -The Working Group of the Transportation Policy Board of PSRC has been formulating recommendations for an overhaul of the *Destination 2030* Regional Transportation policies. One policy is being given consideration for addition by the group:

> *MPP-T-8 Protect the transportation system against disaster by identifying vulnerable assets and prevention strategies, and by planning for an appropriate and coordinated response.*

The *Destination 2030* Amendment now being developed can build on this concept by defining a process for carrying out the spirit of the policy.

Coordination - It is difficult to imagine where the role of coordinator or convener would be more important than in security. The review of key issues and national practice have demonstrated the critical need for coordination of activities not only across transportation agencies but also across law enforcement, emergency response and local government

agencies as well. PSRC can play an important role in security in the region by being the organization that convenes the discussions that begin the process and by coordinating the actions of the many agencies involved. The process of security planning will then define the roles and responsibilities of the other agencies in the region.

Project Prioritization - Security is not currently a factor in selecting projects with PSRC regional funding, and there is no comprehensive accounting of other funding being spent on security, or of the overall needs related to security. Prioritization can ensure that critical security projects receive necessary funding by including security as a consideration n the project prioritization scoring system.

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