# Metropolitan Transportation Commission
## Regional Transportation Emergency and Security Planning Report

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1.0 Protecting the Bay Area Transportation System

The San Francisco Bay Area has an extraordinary topography that includes eight toll bridges, three major commercial airports, several marine ports and a robust regional public transportation network. As such, the Bay Area is highly vulnerable to both natural hazards and man-made disasters. A major Bay Area earthquake or terrorist event would have a rippling effect throughout the state of California as well as the nation. Given these risks, the Metropolitan Transportation Commission (MTC), in coordination with state, regional and local agencies, has made significant investments in implementing a multifaceted approach toward emergency preparedness and security planning. MTC’s regional emergency and security planning efforts have focused on ensuring emergency response readiness and securing critical transportation infrastructure.

This emergency and security planning report has been prepared pursuant to the 2005 Federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA) that required security be considered in the transportation planning process of metropolitan areas. This report provides a summary of MTC’s comprehensive emergency planning activities, which incorporates both emergency preparedness and security planning into an integrated regional transportation emergency planning approach.

1.1 MTC’s Emergency Preparedness and Security Planning Goals

MTC’s role in emergency preparedness was initiated following the 1989 Loma Prieta Earthquake. After 9/11, that role quickly evolved to include security planning. MTC’s efforts in emergency and security planning go beyond identification of priorities and goals used to guide safety and security investments contained in the region’s long-range transportation plan. Rather, MTC has served as a leader in emergency preparedness in response to a natural disaster or man-made terrorist event by assuming an active role in disaster preparedness and response and recovery efforts. These leadership efforts include the development of regional emergency response plans; serving as a regional clearinghouse during the immediate response and recovery phase of an emergency; advocacy and lobbying for emergency legislation; and coordination of annual emergency preparedness exercises.

MTC has established a regional transportation emergency preparedness goal to coordinate response and recovery efforts resulting from man-made and natural events in order to minimize the threat and impact to lives, property and the regional economy. Through collaborative planning processes, MTC has consistently fostered the involvement of many key stakeholders at all levels of government. Over the past decade, MTC has been a pioneer metropolitan planning organization when it comes to regional emergency transportation and security planning and has adopted the following regional emergency preparedness objectives:

- work with state, regional and local agencies to ensure timely and coordinated response to any regional emergency, through advanced planning and preparation such as the development of regional emergency response coordination plans, the
facilitation of regional transportation emergency preparedness exercises and coordination of security training for transportation agency personnel
• support federal legislation to promote adequate security funding for airports, seaports and other transportation operations
• support federal legislation to ensure timely reimbursement of emergency funding used to repair damaged transportation infrastructure.

1.2 Overview of Existing Transportation System

The San Francisco Bay Area brings together a population of over 7.1 million people, and an employment market that provides more than 3.6 million jobs, making it the fourth largest employment region in the country. The Bay Area setting is nestled in Northern California where the nine counties that touch the San Francisco Bay are geographically segmented into over 100 cities. These counties share over 7,179 square miles of land mass that is connected by eight toll bridges that crisscross the Bay waters. On land, the cities and counties are connected through a network made up of 340 miles of carpool lanes, 19,400 miles of local streets and roads, 9,000 miles of bus routes, 470 miles of rail, 5 public ports, 3 major commercial airports, 750 miles of bikeways in the regional bicycle system and over 26 multimodal transit operators.

The mass transit system alone carries over 1 million riders each weekday, which make up 9.4 percent of all commute trips. A major disaster or terrorist event could paralyze regional mobility and the Bay Area economy. Thus, MTC and its transportation partners are actively engaged in ongoing transportation emergency and security planning.

1.3 Threats and Hazards to Transportation

The Bay Area transportation network is comprised of multi-modal structures and facilities and, thus, is susceptible to natural and man-made threats that have the potential to significantly disrupt the region. Coordinated emergency preparedness and security planning enhances the transportation system’s ability to protect critical assets by reducing the risks of a terrorist event or mitigating damage from natural a disaster.
The Federal Bureau of Investigation (FBI) has consistently placed bridges, ports and public transportation as a high priority for the nation’s critical infrastructure protection agenda. This vulnerability increases exponentially when one considers both direct and indirect hazards (e.g. earthquake damage to transportation facilities followed by associated fires; terrorist explosions followed by extensive debris on surrounding roadways; hazardous materials release followed by explosions, etc.)\(^1\). Sources of disruption, whether direct or indirect, cause service failures of streets, freeway structures and rail lines. Whether earthquakes, floods or other natural disasters, the resulting damage to the transportation network demonstrates the complexity of returning those systems to service after a cataclysmic incident. Table 1 below illustrates the likelihood of damage to critical Bay Area facilities caused by severe shaking.

### Table 1. Damage to Critical Structures

<table>
<thead>
<tr>
<th>Types of facilities</th>
<th>Number (or extent) of Bay Area facilities with a high likelihood of experiencing damaging shaking in the next 30 years</th>
<th>Percentage of total number of facilities in the nine-county Bay Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>76</td>
<td>![Percentage Bar Graph]</td>
</tr>
<tr>
<td>Fire, Police, and Local Government</td>
<td>2,970</td>
<td>![Percentage Bar Graph]</td>
</tr>
<tr>
<td>Elementary Schools</td>
<td>987</td>
<td>![Percentage Bar Graph]</td>
</tr>
<tr>
<td>Intermediate or Middle Schools</td>
<td>164</td>
<td>![Percentage Bar Graph]</td>
</tr>
<tr>
<td>High Schools</td>
<td>233</td>
<td>![Percentage Bar Graph]</td>
</tr>
<tr>
<td>Colleges or Universities</td>
<td>62</td>
<td>![Percentage Bar Graph]</td>
</tr>
<tr>
<td>Bridges and Interchanges</td>
<td>2,721</td>
<td>![Percentage Bar Graph]</td>
</tr>
<tr>
<td>Bay Area Rapid Transit (BART) tracks</td>
<td>95 miles (150 km)</td>
<td>![Percentage Bar Graph]</td>
</tr>
<tr>
<td>Roads</td>
<td>18,963 miles (30,350 km)</td>
<td>![Percentage Bar Graph]</td>
</tr>
</tbody>
</table>

Source: Putting Down Roots in Earthquake Country, USGS, 2005

1.3.1 Earthquakes

The Bay Area is exposed to seismic hazards from numerous known faults and potentially several unknown faults. In fact, thousands of earthquakes occur every year around the Bay Area. While most of these go unnoticed, over the next twenty years there are at least eight likely future earthquakes that will probably have more of an impact on the Bay Area’s transportation system than either the 1989 Loma Prieta or 1994 Northridge earthquakes. As illustrated in Figure 1, The U.S. Geological Survey (USGS) estimates that there is a 62 percent chance that a magnitude 6.7 or larger earthquake will occur in the region before 2032.

The last major regional disaster was the Loma Prieta earthquake (1989), which saw significant damage to the transportation network. Lasting only 10 to 15 seconds, this earthquake resulted in 62 deaths and 400 severe injuries. In addition, over 12,000 homes and 2,600 businesses were damaged or destroyed. Major transportation facilities,

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including the eastern span of the Bay Bridge, the Cypress Freeway in Oakland, and the Embarcadero Freeway in San Francisco were severely damaged.
MTC, acting as the Bay Area Toll Authority, in partnership with Caltrans, has made great strides to strengthen the region’s highways and bridge infrastructure through bridge and highway seismic retrofit projects. To date, five of the seven state-owned bridges have been retrofitted.

MTC has developed detailed damage data projections for the San Andreas and the Hayward earthquake faults that identify likely damage to the transportation network that might result from intense shaking and/or liquefaction on either earthquake faultline. Such pre-disaster vulnerability data provides the region’s transportation agencies guidance to develop mitigation plans and response strategies in advance of a major earthquake.

### 1.3.2 Terrorism

While the region’s transportation network has managed to overcome damages resulting from several natural disasters, the events of 9/11 refocused attention to strengthening the security of the transportation infrastructure and operating systems. Transportation systems, and in particular public transit systems around the world, have for decades served as a principal target for terrorist acts. Since 1993, mass transit systems in the United States have figured prominently in acts of terrorism and extreme violence such as the: 1993 Long Island Railroad shooting; 1995 sabotage induced derailment of Amtrak’s Sunset Limited in Arizona; and the 1997 Fulton Street New York City subway station fire bombing.

Over the past 15 years, acts of terrorism in the United States have resulted in over 10 fatalities and more than 1,000 injuries to transit passengers. While the Bay Area has not experienced any direct acts of terrorism, based on lessons learned from around the nation, the region has taken measures to secure the region’s critical transportation infrastructure and minimize the region’s vulnerability to terrorism. Transit facilities have added increased camera surveillance equipment to enhance detection capabilities and deter terrorist activity.

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2.0 Federal Transit Administration Characterization of MPO roles in Systems Operations and Security Disaster Planning

The Federal Transit Administration (FTA) has identified five classifications that define the roles of Metropolitan Planning Organization (MPOs) in security and disaster planning. Table 2, provides a summary of the classifications of emergency roles and functions that can be undertaken by an MPO: Traditional; Convener; Champion; Developer; and Operator. According to the FTA’s “Characterization of MPO Roles in Systems Operations and Security Disaster Planning” white paper, MTC’s role in emergency and security planning is defined as a “Developer”, but also shares some of the characteristics defined by the “Convener” and “Champion” MPO roles. As a “Developer” MPO, MTC coordinates monthly emergency and security planning forums to facilitate information sharing and a collaborative process for the development of coordinated regional emergency management plans and agreements.

Table 2. MPO Roles in Systems Operations and Security Disaster Planning

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>The MPO incorporates system management and operations in its ongoing transportation planning activities. The focus would be on specific management and operations projects that arise as part of the transportation planning process; but the primary responsibility for operations-type projects would rest elsewhere, most likely with the region’s operations agencies.</td>
</tr>
<tr>
<td>Convener</td>
<td>The MPO acts as a forum where operations plans could be discussed and coordinated with other plans in the region. Regular meetings on operations issues would be held, but the MPO would still not be responsible for developing a regional operations plan.</td>
</tr>
<tr>
<td>Champion</td>
<td>The MPO works aggressively to develop a regional consensus on operations planning. MPO planners work with operating agencies to create programs and projects that improve system performance. The MPO takes the lead in developing regional agreements on coordinated operations.</td>
</tr>
<tr>
<td>Developer</td>
<td>The MPO develops regional operations plans in addition to incorporating operations strategies into the transportation plan. System-oriented performance measures would be used to identify strategic operations gaps in the transportation system.</td>
</tr>
<tr>
<td>Operator</td>
<td>The MPO is responsible for implementing operations strategies that were developed as part of the MPO-led planning process.</td>
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</tbody>
</table>

Additionally, FTA’s Office of Planning and Environment conducted interviews with ten MPOs throughout the nation that identified common characteristics among MPOs. Table 3, “Summary of MPO Roles in Security Planning,” reveals that the Bay Area’s MPO, which is MTC, demonstrates progressive leadership in the area of regional emergency and security planning. In addition to establishing an emergency preparedness and security goal, MTC staffs emergency planning committees and collaborates with federal, state and local partners for the development of regional emergency operations plans and conducts region-wide training and exercises.

Table 3. FTA Summary of MPO Roles in Security Planning

<table>
<thead>
<tr>
<th>MPO City, State</th>
<th>Security in Goal Statement</th>
<th>Staffing Committees</th>
<th>Acting As an Information Clearinghouse</th>
<th>Collaboration with Federal, State or Local Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta, GA</td>
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<tr>
<td>Boston, MA</td>
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<tr>
<td>Chicago, IL</td>
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<tr>
<td>Houston, TX</td>
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<tr>
<td>Kansas City, KS/MO</td>
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<tr>
<td>Los Angeles, CA</td>
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<tr>
<td>New York, NY</td>
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<tr>
<td>Philadelphia, PA</td>
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<td></td>
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<tr>
<td>San Francisco, CA</td>
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</tr>
<tr>
<td>Washington, DC</td>
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</tbody>
</table>


3.0 Regional Emergency Partners and Committees

The cascading effects of a disaster can be taxing on every part of a community including those networks that deal with communications; fire and rescue; hazardous materials; law enforcement; coroner, medical and health needs; care and shelter; and transportation. Whether for the transport of first responders, medical supplies and equipment; or for the evacuation of victims, “transportation systems” are the common thread that connects all disciplines together.

3.1 Partners

By working with several local, regional and state agencies, MTC serves as the primary coordinating body to address emergency transportation and security planning for the nine-county region. Disaster response and recovery is extremely complex and as such requires the collaboration of many state, regional and local governments and jurisdictions. Table 4 identifies some of the major state, regional and local players and their responsibilities in emergency planning.
### Table 4. San Francisco Bay Area Regional Emergency Coordination Partners

| **Coastal Region Office of Emergency Services (OES)** | OES is the designated state agency charged with coordinating state resources to respond to a declared disaster. The State is divided into three OES Administrative Regions (Coastal, Inland & Southern). The Coastal Region covers 16 counties along the Northern California coastline including the nine Bay Area counties. The Coastal Region coordinates local and regional agencies and, in the event of an emergency, would activate the Regional Emergency Operations Center (REOC) to manage resources among the 16 County Operational Areas in northern California during all phases of emergency management. |
| **California Department of Transportation, District 4 (Caltrans)** | Caltrans is the owner and operator of the state highway system. Caltrans operates the regional Traffic Management Center that provides real-time management of the Bay Area’s highway system. In the event the Traffic Management Center resources are overwhelmed, Caltrans would activate its emergency operations center to better manage their agency’s response to the emergency situation. |
| **California Highway Patrol, Golden Gate Division (CHP-GGDiv)** | The Golden Gate Division of the CHP has law enforcement jurisdiction over state routes, U.S. Highways, Interstate highways and public roads in unincorporated parts of the nine-county Bay Area. CHP works closely with OES and Caltrans to manage the immediate response to an emergency. |
| **Regional Transit Operators** | Ten major transit operators participate in the Trans Response Plan Steering Committee and the Regional Transit Security Working Group that serve as regional transportation emergency preparedness and security planning forums. Following an emergency, each transit operator has the capability to activate its emergency operations center to facilitate management of their agency’s response. |
| **Airports and Seaports** | Three international airports located in Oakland, San Francisco and San Jose, and two seaports located in Oakland and San Francisco, play a vital role in enabling access and delivery of emergency equipment and disaster service workers. |
| **San Francisco Bay Area Water Emergency** | WETA was established by the state Legislature and replaces the WTA (Water Transit Authority). The mission of WETA |
The Transportation Authority (WETA) is to improve the ability of ferries to respond in an emergency. Immediately after a disaster strikes, ferries will be critical to helping the Bay Area get back on its feet and keep the economy moving.

3.2 Emergency and Security Planning Committees

The Bay Area’s regional emergency preparedness and security planning is accomplished through several emergency management and coordination committees. Below is a summary of the various regional emergency preparedness and security planning forums in which MTC serves as either a participant or facilitator.

**Trans Response Plan (TRP) Steering Committee**

Established by MTC, Caltrans, State OES and the Bay Area’s major transit operators to develop, maintain and test the Trans Response Plan (defined in Section 4.1). Chaired by MTC, the TRP Steering Committee meets on a monthly basis.

**Regional Transit Security Working Group (RTSWG)**

Created in partnership with the Office of Homeland Security, the RTSWG is comprised of multi-modal regional transit operators to develop and implement a Regional Transit Security Strategy (RTSS) to reduce vulnerability and minimize risks from acts of terrorism.

**Mutual Aid Regional Advisory Committee (MARAC)**

MARAC was established by the Coastal Region OES to coordinate and advise 16 counties along the state’s northern coastal region on mutual aid resource coordination issues. MTC actively participates in this forum to share information regarding regional transportation coordination during a major disaster.

**Bay Area Urbanized Area Security Initiative (BAUASI)**

Comprised of ten Bay Area counties (including Santa Cruz) and the three largest Bay Area cities (Oakland, San Francisco and San Jose), Bay Area UASI (formerly known as SUASI) includes several working groups that perform security planning, preparedness and mitigation activities funded with BAUASI funds. Some of these activities include California’s annual Golden Guardian functional exercise and a regional communication interoperability project.

4.0 Regional Plans and Mutual Aid Agreement

As with the various forums described above, MTC has coordinated the development of several emergency preparedness and security plans that establishes a framework for a
coordinated regional response to a disaster. The emergency coordination plans and agreements described in this section are annually tested through regional preparedness exercises.

4.1 Trans Response Plan (TRP)

Following the 1989 Loma Prieta earthquake, the region’s transportation agencies developed a set of interagency agreements and procedures to respond to future disasters. This effort resulted in the Trans Response Plan (TRP), which was adopted by the Bay Area Partnership Board in 1997. The TRP defines the functions, responsibilities and procedures for developing a coordinated multimodal response to an emergency. Recently, MTC has worked with the TRP Steering Committee, State OES and the California Highway Patrol to strengthen inter-agency communications by procuring satellite phone equipment for the transportation partners and the County Operational Areas within the Bay Area.

4.2 San Francisco Bay Area Regional Emergency Coordination Plan (RECP)

The San Francisco Bay Area Regional Emergency Coordination Plan (RECP) was developed by the State OES and its local government partners to provide a framework for collaboration during regional disasters when such events will likely exceed the capabilities of individual jurisdictions. The multi-jurisdictional response plan includes the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma. The plan builds upon California’s existing Standardized Emergency Management System (SEMS) and clearly defines the regional components of that system, such as coordination across disciplines and levels of government, resource sharing, and regional decision-making. The RECP includes nine subsidiary plans, one of which is focused on Transportation.

4.3 San Francisco Bay Area Regional Transportation Emergency Management Plan (RTEMP)

The RTEMP is a counterpart of the State’s RECP Transportation Subsidiary Plan, which addresses emergency functions such as transportation of first responders and other disaster service workers; delivery of emergency equipment and supplies; and evacuation. Whereas the focus of the RECP’s Transportation Subsidiary Plan is on coordination of transportation assets to enable emergency response, the RTEMP focuses on restoration of basic transportation services to the general public.

The San Francisco Bay Area Regional Transportation Emergency Management Plan (RTEMP) provides guidance for the coordination of emergency response capabilities of transportation agencies throughout the nine-county San Francisco Bay Area. The purpose of the RTEMP is to enhance the ability of Bay Area public transportation agencies to recover operations and deliver basic transportation services after a significant regional disaster. The RTEMP builds upon the framework of the Trans Response Plan and provides detailed definitions of the roles, responsibilities, and interagency coordination and
decision-making mechanisms between state and regional emergency management agencies and multi-jurisdictional transportation agencies. It also provides reference materials applicable to specific emergency scenarios, such as earthquakes on the San Andreas and Hayward faults and acts of terrorism.

### 4.4 Regional Transit Security Strategy (RTSS)

The Regional Transit Security Strategy (RTSS) was jointly developed by the major transit operators in the Bay Area to increase the safety and security of transit riders as well as the infrastructure of the Bay Area’s transportation network. Regional security strategies have been identified to reduce vulnerability and minimize risks of terrorist threats that are most relevant to the region, including Improvised Explosive Devices (IEDs) or chemical, biological, radioactive, nuclear explosive (CBRNE) incidents. The Bay Area’s regional transportation security objectives include prevention and detection, security training, hardened security of critical mass transit infrastructure, and development of a comprehensive information-sharing program, such as a regional public security awareness campaign.

### 4.5 Local Hazard Mitigation Plan (LHMP)

In 2005, the Association of Bay Area Government (ABAG) developed a multi-jurisdictional local government hazard mitigation plan (MJ-LHMP) for disaster recovery of the Bay Area. The MJ-LHMP was a joint effort by the cities, counties and special districts in the Bay Area to build a more disaster-resistant region recognizing that disasters do not respect the boundaries between individual jurisdictions. The goal of the MJ-LHMP is to ensure a resilient region by minimizing risks resulting from natural disasters identified in eight regionally defined “commitment areas” (Infrastructure, Health, Housing, Economy, Government Services, Education, Environment and Land Use Systems).

The “Infrastructure” commitment category identifies natural and man-made disaster mitigation measures to reduce and/or minimize damage to Bay Area transportation facilities and public utilities that provide critical lifelines during and following a catastrophic event. With millions of dollars already invested to retrofit bridges, strengthen elevated tracks, BART’s Transbay Tube and several train stations, MTC is currently working with ABAG and the transportation agencies to develop a “transportation chapter” to the MJ-LHMP. Core mitigation strategies will be identified and prioritized in order to accelerate post-disaster recovery of the region’s transportation

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system. The identified mitigation strategies will be included in the Transportation Annex of the 2009 update to the MJ-LHMP.

4.6 San Francisco Bay Area Transit Operators Mutual Aid Agreement

Following the 1989 Loma Prieta earthquake, MTC facilitated the development of a Master Mutual Aid Agreement among nine major transit operators serving the Bay Area. This agreement establishes an organized framework for voluntary mutual assistance among transit operators in the event of an emergency. It is annually reviewed and updated by the signatory agencies; the 2008 review resulted in expanding the agreement to include three additional operators.

5.0 Regional Emergency Preparedness Exercises and Training

Over the past decade, MTC has coordinated region-wide annual transportation exercises and workshops that coordinated the transportation community with the network of emergency responders at the local and regional levels. These emergency preparedness exercises are conducted to test the RTEMP/TRP and agency-specific emergency operation plans that provide guidance for a coordinated regional response. Exercise scenarios have focused on natural disasters. The most recent exercise scenario was a terrorist attack on the transportation system. MTC also has sponsored training to ensure transportation agency staff are compliant with the Incident Command System, the State Emergency Management System and the National Incident Management System, which collectively lays the foundation for responding to disasters and the aftermath of security attacks.

6.0 Transportation System Surveillance and Infrastructure Hardening

MTC, in partnership with Caltrans and the CHP, administers programs and funding that play a critical role in the surveillance of the region’s highways and bridges.

6.1 Bay Area Video Upgrade (BAVU)

The Bay Area’s freeway system extends approximately 620 miles throughout the region and accounts for about 60 percent of all miles driven by trucks and passenger vehicles. The Bay Area highway system is equipped with a network of over 300 closed circuit televisions that are linked to and monitored by the Caltrans District 4, Regional Transportation Management Center (TMC). MTC, in partnership with Caltrans, has initiated the Bay Area Video Upgrade (BAVU) project to enhance and/or replace antiquated field equipment and upgrade the video surveillance system for the freeway surveillance cameras from the TMC. Completion of this project will enhance the region’s ability to monitor and quickly detect any security threats to the region’s highway system.
6.2 Bay Area Freeway Service Patrol (FSP)

The Bay Area Freeway Service Patrol (FSP) is a fleet of white tow trucks that patrol the region’s most congested freeways during the busiest times of the day, quickly clearing accidents and other incidents — the cause of more than 50 percent of traffic congestion. This congestion management program provides roadside assistance to motorists in trouble, removes dangerous road debris, and otherwise helps to make the region’s freeways safer and less congested. Trained by the CHP to detect and report anything suspicious identified along the freeways and near bridges, the FSP program provides another form of real-time surveillance of our Bay Area highways to protect the region against potential acts of terrorism.

6.3 Regional Transit Security Enhancements

In partnership with the Regional Transit Security Working Group, MTC coordinates with the regional transit operators to ensure programming of federal funds awarded to the region through the Department of Homeland Security Transit Security Grant Program (TSGP). While TSGP funds have focused on the region’s capital investments, resources have also been used to develop a regional public education campaign to promote security awareness.

7.0 Dissemination of Information and Interoperable Communication

Dissemination of information to the region and the ability to communicate following a disaster are paramount to the facilitation of coordinated emergency response. Following a disaster, MTC is responsible for carrying out three primary roles, one of which is the dissemination of regional information on the status of the transportation system.

7.1 511 Advanced Traveler Information System (ATIS)

511 is a free phone and web service that provides information on the Bay Area transportation system. MTC manages the 511 program in partnership with Caltrans and the CHP. Information about traffic, transit, ridesharing or bicycling can be obtained by dialing 511 or visiting the 511.org web site. By phone, 511 provides transportation information via a state-of-the-art speech recognition system that allows the caller to receive information without pressing a button. On the web, 511.org provides even more interactive services to help the traveler plan his/her trip by clicking on one of the four major areas – Traffic, Transit, Rideshare, or Bicycling.
511 has been a successful traveler information system in the Bay Area since the telephone number was adopted and launched in 2002. Over the years, 511 has placed more emphasis on emergency planning and response as the public’s reliance on the system has resulted in usage spikes following emergencies. Recently, MTC implemented several improvements and enhancements to make 511 more resilient and robust in times of need.

**7.2 Emergency Satellite Communication System**

To ensure the region’s transportation agencies’ ability to communicate and coordinate following a major disaster that impacts traditional forms of communication, MTC provided the Costal Region OES, the 16 County Operational Areas, Caltrans, CHP and the region’s largest transportation agencies with stationary satellite phones. More recently, MTC provided the chief executives of Caltrans, CHP and the largest transportation agencies with mobile satellite units. Lessons learned from previous emergencies have proven that the ability to communicate without dependence on the terrestrial network enables a more timely and effective response. MTC coordinates regional communication checks several times throughout the year, for both the stationary and mobile equipment, to ensure user proficiency and confirm the equipment is functioning properly.

**8.0 Looking Ahead**

While MTC can pride itself on the many activities undertaken to mitigate vulnerabilities and to protect the Bay Area’s delicate transportation system, the changing nature of disasters and terrorism presents new challenges for transportation planning agencies. There are several areas that require attention in order to assure that planning efforts can continue.

- **Unfunded mandate** – MPOs are required to conduct security planning, but there are no dedicated funds to carry out the many activities that constitute this effort. Regional and state governments should be provided stable funding for these responsibilities or local governments should be given authorization to impose fees to support emergency preparedness and security planning efforts.
- **Flexible Federal Reimbursement** – The Robert T. Stafford *Disaster Relief and Emergency Assistance Act* (the Stafford Act), Public Law 93-288, as amended, and the Federal Highway Administration Emergency Relief Program were established to provide disaster relief and federal assistance to supplement state and local efforts in response to a catastrophe. While these federal programs enable critical disaster aid, modifications to provisions in both are necessary to loosen restrictive regulations and allow more timely recovery and increased flexibility in the types of costs eligible for reimbursement by state, regional and local transportation agencies.
- **Short and Long Term Recovery Leadership** – Efforts have been initiated at the regional level to explore short- and long-term recovery issues; however, this is a task that calls for clearly defined leadership at each level of government to
provide the necessary guidance to ensure economic stability and resilience of the region.

- Planning for Special Needs Populations – Transportation agencies play an essential role in planning for emergency transport of special needs populations. Emergency transportation planning for special needs populations should be proactive. Funding must be made available to engage community service agencies to work collaboratively with transit and paratransit operators to develop procedures that address the needs of the disabled, transit-dependent and non-English speaking individuals.