



*Santa Clara Valley Transportation Authority*

Annex to 2010 Association of Bay  
Area Governments  
Local Hazard Mitigation Plan  
*Taming Natural Disasters*

Santa Clara Valley Transportation  
Authority (VTA)

# VTA – Santa Clara Valley Transportation Authority

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## Introduction

On June 6, 1972, residents of Santa Clara County approved the creation of the Santa Clara County Transit District by a more than two-thirds vote. Four months later, the first transit plan for the County was adopted and VTA, known at that time as “County Transit” was born. Arrangements were made for the County Transit to buy out the three financially strapped local bus lines and on January 1, 1973, Santa Clara County residents boarded their first publicly operated bus service.

Governed by the Santa Clara County Board of Supervisors, VTA was supported by a 29 member advisory commission and management services were provided by the County of Santa Clara. The transit district function was incorporated into the county government structure, which at that time encompassed planning and development, aviation, and road operations divisions.

On January 1, 1995, County Transit was legally separated from the County of Santa Clara and merged with the Santa Clara County Congestion Management Agency to form a new agency, the Santa Clara Valley Transportation Authority, which served both roles. With VTA now the designated CMA, the VTA Board became responsible for multi-modal, countywide transportation planning and the integration of transportation and land use planning as well as for transit operations. For the first time, this gave a single policy board the unique opportunity to make and implement transportation policy in Santa Clara County. With representatives of 15 cities and the county, the new Board has adopted a regional approach to transit and land use planning issues, addressing congestion and air quality.

Working under the direction of a 12-member Board of Directors, VTA has an approximately \$350 million annual operating budget, and serves a 326 square mile urbanized area with four light rail lines, over 20 fixed route bus and express bus lines, and ADA paratransit service. In terms of average daily ridership, VTA is the 4th largest transit agency in the Bay Area, and the 6<sup>th</sup> largest in the State of California.

## The Regional Planning Process

VTA participated in the regional process led by ABAG workshops, conferences, and meetings in conjunction with the monthly meetings of the Metropolitan Transportation Commission. As part of this lengthy and comprehensive process, VTA participated in

- Two Transportation Response Plan (TRP) Steering Committee meetings held to solicit input from transit operators and other interested agencies, and
- The Transit Workshop on February 12, 2009 review draft mitigation strategies and reach consensus on priorities for mitigation.

For more information on these meetings and for rosters of attendees, please see Appendix A and H in the ABAG Multi-Jurisdictional Local Hazard Mitigation Plan 2010 (MJ-LHMP). In addition, VTA has provided oral comments on the multi-jurisdictional plan and provided information on facilities that are defined as “critical” to ABAG.

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## The Local Planning Process

Representatives from several VTA departments identified and prioritized appropriate mitigation strategies. The personnel involved included Senior, Management and Executive Management staff from the Operations, Administration, Construction, External Affairs and Congestion Management Agency divisions, representing transit operations, facilities, emergency services, capital program planning, and grants management. In addition, the final draft mitigation strategies were forwarded for comment to other departments whose responsibility it is to implement them.

Senior, Management, and Executive Management staff from Operations, Administration and the Congestion Management Agency Divisions met on December 2, 2010 to review the draft strategies. Prior to the discussion, general priorities and appropriate departments were identified. The meeting discussed the mitigation strategies, prioritized said strategies, and reviewed preliminary budgets and potential funding sources for strategies designated as “High” priority for VTA-owned-and-operated facilities. Each person was responsible for communicating existing efforts and thoughts on appropriate future action in their area of expertise. Finally, the draft priorities listing was provided to the program team so that they could review the strategy priorities with the specific members of their department responsible for implementing them, as well as to review preliminary budgets and potential funding sources for strategies designated as “High” priority. The Programming and Grants Manager, for example, discussed the strategies with risk management staff and the Chief of Operations.

### *Review and Incorporation of Existing Information*

This process involved consideration of both the hazard and risk information developed by ABAG and discussed in the overall multi-jurisdictional Local Hazard Mitigation Plan, as well as the assessments of the age and construction type of structures owned by VTA and described on page 6. These meetings also discussed the Short Range Transportation Plan (SRTP) and Capital Improvement Program (CIP) already in place at VTA, as well how these plans could be best integrated with this Local Hazard Mitigation Plan Annex.

### *Process for Updating Plan Sections*

VTA did not participate in the 2005 multi-jurisdictional Local Hazard Mitigation Plan. Thus, none of the sections in this Annex are updates of a prior Annex.

### *Public Meetings*

The public had two opportunities to comment on the draft Annex.

- (1) An opportunity for public comments on the DRAFT mitigation strategies was provided at a public meeting on September 22, 2009 at a publicly noticed workshop jointly held by

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MTC, ABAG, and several transit districts and advertised on the websites of ABAG and MTC, and several transit districts. No public comments were received from either the meeting or the internet posting.

- (2) The Draft Annex Strategies have been posted on the ABAG website for several months. No comments have been received.

The VTA Board will adopt the plan in a public meeting via an official Resolution upon pre-approval by FEMA. The mitigation strategies will be integrated into VTA's Capital Improvement Program (CIP).

VTA is committed to improving public participation when this plan is updated in five years. To improve this process, VTA will consider writing letters to the editor of local newspapers in its service area to promote wider public knowledge of the process.

## Hazard and Risk Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which this is an Annex, lists nine hazards that impact the Bay Area, five related to earthquakes (faulting, shaking, earthquake-induced landslides, liquefaction, and tsunamis) and four related to weather (flooding, landslides, wildfires, and drought). All of these impacts VTA's planning region. However, in VTA's role as a transit agency, drought has no impact on the provision of transportation services. All relevant reports developed by VTA have been incorporated into this plan. No additional reports describe the hazard or risk to the VTA service area.

VTA operates a headquarters facility (River Oaks) in San Jose, three bus facilities (Cerone and Chaboya, both in San Jose and North Yard in Mt. View), and a light rail facility (Guadalupe) in San Jose, together with 79.6 track miles with 84 stations.

Hazards at these facilities are:

**Earthquake:** None of these facilities are in an Alquist-Priolo Fault Rupture Study Zone. In addition, while they are all in a moderately high area of earthquake shaking potential, the hazard is not as high as in some other portions of the Bay Area. While all of the VTA facilities are in a liquefaction study zone as defined by the California Geological Survey, the Guadalupe rail facility and the Chaboya bus yard in San Jose on South 7<sup>th</sup> St. are the most exposed to this hazard. None are in areas of expected earthquake-induced landslides.

**Tsunamis:** The December 2009 version of the CalEMA tsunami evacuation planning maps indicated that these facilities are not in the tsunami evacuation planning area.

**Flooding:** Both the Cerone bus facility on Zanker Rd. and the River Oaks Headquarters facility on North First St. in San Jose are in the 100-year flood plain.

**Landsliding:** None of these facilities are in an area of existing landslides.

**Wildfire:** None of these facilities are in an area subject to higher than average wildfire threat. However, the Chaboya (South 7<sup>th</sup> St.) and North Yard (Mt. View) bus facilities are in a wildland-urban interface (WUI) fire threat area.

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**Dam-Failure Inundation:** The River Oaks headquarters facility is subject to inundation from one dam, the Cerone bus facility from two dams, and the Guadalupe light rail facility from three dams.

**Delta Levee Failures:** The VTA facilities are not in an area protected by a levee in the Delta.

**Drought:** The operations of VTA are not significantly impacted by drought conditions.

**Hazards Conclusion:** The most significant hazards to all of these facilities are earthquake shaking, liquefaction, flooding, and wildfire. This conclusion was based on the hazard exposure information for VTA's facilities, as well as past occurrences of disasters impacting the VTA service area described in the following section.

**Risk Assessment:** The River Oaks headquarters facility is a complex of three buildings constructed in the early 1980s and purchased by VTA in 1991. They have not undergone a recent earthquake evaluation, in part because of VTA's plan to eventually move from the facilities. However, the buildings were originally constructed to be and actually used as a laser manufacturing facility, and were therefore designed for exceptional stability. North Yard was partially re-built in 2003 – but both Cerone and Chaboya were built in 1979 and 1980 with a mixture of light steel frame and concrete tilt-up construction. These facilities also have not had a recent structural evaluation. The various fuel and pipeline facilities have not been recently evaluated to determine if liquefaction damage is an issue.

While the two bus facilities in the WUI fire threat area have, in general, fire resistant construction, a recent evaluation to see if more mitigation might be cost-effective has not been undertaken.

## *Repetitive Loss Properties*

The VTA buildings are not repetitive loss properties for flooding.

## **Past Occurrences of Disasters (natural and human-induced)**

The Loma Prieta Earthquake of 1989 is an example of the kind of large-scale disaster which can strike the Bay Area. It killed 63 persons, injured 3,757, and displaced over 12,000 persons. With over 20,000 homes and businesses damaged and over 1,100 destroyed, this quake caused approximately \$6 Billion of damage. Reconstruction continues some two decades later as the replacement for Oakland-Bay Bridge is still several years from completion.

More information on State and Federally declared disasters in Santa Clara County and the VTA service area can be found at <http://quake.abag.ca.gov/mitigation/ThePlan-D-Version-August10.pdf>

The VTA service area has experienced a number of different disasters over the last 50 years, including numerous earthquakes, floods, droughts, wildfires, energy shortages, landslides, and severe storms. The most significant disaster impacting the district was the Loma Prieta earthquake and flooding incidents.

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The VTA EOC was placed in a state of partial activation on several occasions when mutual aid requests were expected. During the 9/11 event VTA buses assisted in evacuating local college campuses; during the wildland fires in Chico VTA assisted in transporting local firefighters to and from the affected area.

In addition the EOC has been activated for both internal and regional exercise scenarios, such as earthquakes, threat of terrorist attacks on trains and a bio-terrorism attack at a large San Jose event venue.

## National Flood Insurance Program

VTA carries National Flood Insurance for 2 locations: River Oaks Headquarters and the Cerone Division buildings.

## Mitigation Goals and Objectives

The goal of the ABAG MJ-LHMP is to maintain and enhance a disaster-resistant region by reducing the potential for loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters. This goal is unchanged from the 2005 plan and continues to be the local goal of VTA in designing its mitigation program.

The specific goals of the mitigation program of VTA are consistent with this goal. They are to:

- Ensure the safety and security of VTA employees and passengers
- Minimize disruption of service to VTA passengers
- Minimize damage and loss to VTA equipment and buildings
- Speed recovery from any disruption to provide service to of VTA passengers as quickly as possible

## Mitigation Activities and Priorities

### *Existing Mitigation Activities*

VTA was not a participant in the 2005 ABAG-led Local Hazard Mitigation Plan. However, VTA has been committed to hazard mitigation for many years.

In particular, VTA has utilized, and will continue to utilize, the latest code standards during the design and construction of any future buildings or facilities in particular related to fire and earthquake mitigation.

- The new light rail elevated structure was constructed using the latest code standards.

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- While the headquarters facility has suffered from intermittent flooding in the past, the SCVWD has installed a new storm drainage project in the area which has mitigated the issues at the site.

VTA also has a policy to encourage public transit and to develop green alternatives to people commuting in cars, thus promoting policies that will reduce greenhouse gas emissions.

## *Future Mitigation Actions and Priorities*

As a participant in the 2010 ABAG multi-jurisdictional planning process, the staff of VTA helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan.

However, the decision on specific priorities for VTA was made the team identified in the section on the Planning Process, and reviewed by VTA's General Manager. The decision on the priority was made based the hazards and risks present in the VTA service area, as well as the hazards and risks specific to VTA facilities, and past occurrences of natural disasters. The decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not harmful to the environment or our heritage. The decision was also made to best leverage the implementation mechanisms available to VTA, including the biennial Capital budget process and the Emergency Operations Plan.

Representatives from multiple departments reviewed progress on the mitigation, identified and prioritized additional mitigation strategies to be a specific focus for the 2010-2015 period.

The draft priorities will be provided to the VTA Board for adoption pending pre-approval of this LHMP by FEMA.

The VTA LHMP planning group staff also prioritized specific mitigation tasks for the next 5 years. This list includes implementation process, funding strategy, and responsible agency. The full list is included as an attachment to this Annex. In particular, VTA plans to focus on obtaining funding to ensure that:

- VTA has utilized, and will continue to utilize, the latest code standards during the design and construction of any future buildings or facilities. (INFR b-8) The lead on this strategy is Construction for it is part of the permit and design approval process.
- VTA's operating facilities are relatively new and constructed to current code. VTA has worked with the City of San Jose and the Santa Clara Valley Water District to implement extensive (and expensive) flood control measures adjacent to its' administrative offices. However, when funds become available, VTA would ultimately like to relocate its administrative facility to a new facility in an area outside of the flood zone and that will be constructed using modern earthquake-resistant design. (GOVT a-2) The lead on the strategy is Operations/Construction Management Program.

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- Shelving, file cabinets, computer systems, and other nonstructural components of the VTA's critical facilities will be evaluated and anchored to meet the performance needs of the agency following an earthquake when funds become available. (GOVT a-4) The lead on the strategy is Operations/Construction Management Program.
- VTA is concerned about emergency power and is investigating possible funding sources. (INFR a-8) The lead on this strategy is Transit Operations.

The timetable for these strategies is 5-10 years, depending on the economic recovery of the Bay Area.

The specific strategy priorities of VTA are included in the VTA spreadsheet attached to this LHMP.

### Incorporation into Existing Planning Mechanisms

VTA has, and will continue to use, a variety of project-specific mechanisms to ensure that the projects and mitigation strategies identified as existing or having relatively high priorities in this LHMP Annex are implemented. VTA will incorporate the goals, objectives and strategies identified in this annex in the annual Capital Improvement Program, as well as into the Emergency Operations Plan.

The goals, objectives, and strategies identified in this Annex will be incorporated into VTA's 10-year Capital Improvement Program and biennial capital and operating budgets through VTA's ongoing CIP and budget development process. Other on-going existing programs are part of VTA's Administrative Code, Congestion Management Agency mandates, Risk Management strategies, Operations and Security strategies, Sustainability Program, and permit and design and approval process.

There are no other planning mechanisms available to VTA that are appropriate to incorporate this plan.

(FEMA wants examples – and I picked this paragraph and the next one to show a couple. I just pulled the info from the Excel spread sheet. Hopefully, they make sense.) Thus, for example, the most expensive issue is related to retrofitting or replacing VTA facilities. VTA's operating facilities are relatively new and constructed to current code. VTA has worked with the City of San Jose and the Santa Clara Valley Water District to implement extensive (and expensive) flood control measures adjacent to its' administrative offices. However, VTA would ultimately like to relocate its' administrative offices.

VTA is also looking for funding from the grants process to deal with the issue of emergency power generation capability. While the specific costs of such equipment and capability is unknown, VTA has identified TSA/FEMA and Cal EMA are potential funding agencies.

The final strategies and Annex will be adopted in the same resolution adopting the overall LHMP following Approval Pending Adoption by FEMA by the VTA Board.

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Ongoing integration of the policies and programs identified in this Local Hazard Mitigation Plan will occur at VTA within the Risk Management Department.

VTA will continue to work with MTC and the transit districts in the Bay Area to encourage them to adopt the Local Hazard Mitigation Plan and to ensure that these mitigation plans are incorporated into an overall regional planning process.

## Plan Update Process

As required Disaster Mitigation Act of 2000, VTA will update this plan annex at least once every five years, by participating in a multi-agency effort with ABAG and other agencies to develop a multi-jurisdictional plan.

The Risk Management Department will ensure that monitoring of this Annex will occur. The plan will be monitored on an on-going basis. However, the major disasters affecting our service area, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used. For example, if a structural engineer determines that a major risk exists at more or more buildings or tanks at the VTA facilities, the priority associated with upgrading those facilities will be re-evaluated. Finally, the Annex will be a discussion item on the agenda of the meeting of department heads at least once a year in April. At that meeting, the department heads will focus on evaluating the Annex in light of technological and political changes during the past year or other significant events. The department heads will be responsible for determining if the plan should be updated.

VTA is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The Risk Management Department will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the agency again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including the County's Office of Emergency Services. Counties and agencies should then work together to identify another regional forum for developing a multi-jurisdictional plan.

VTA is committed to public participation. All VTA Board meetings are open to the public and the public is invited to comment on items on the Board Agenda. The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, VTA will provide the opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment period and meeting logistics. VTA is committed to improving public participation in the update process over the next five years. To improve this process, VTA will consider writing letters to the editor of local newspapers in its service area to promote wider public knowledge of the issues related to disaster mitigation and the planning process.

## Mitigation Plan Point of Contact

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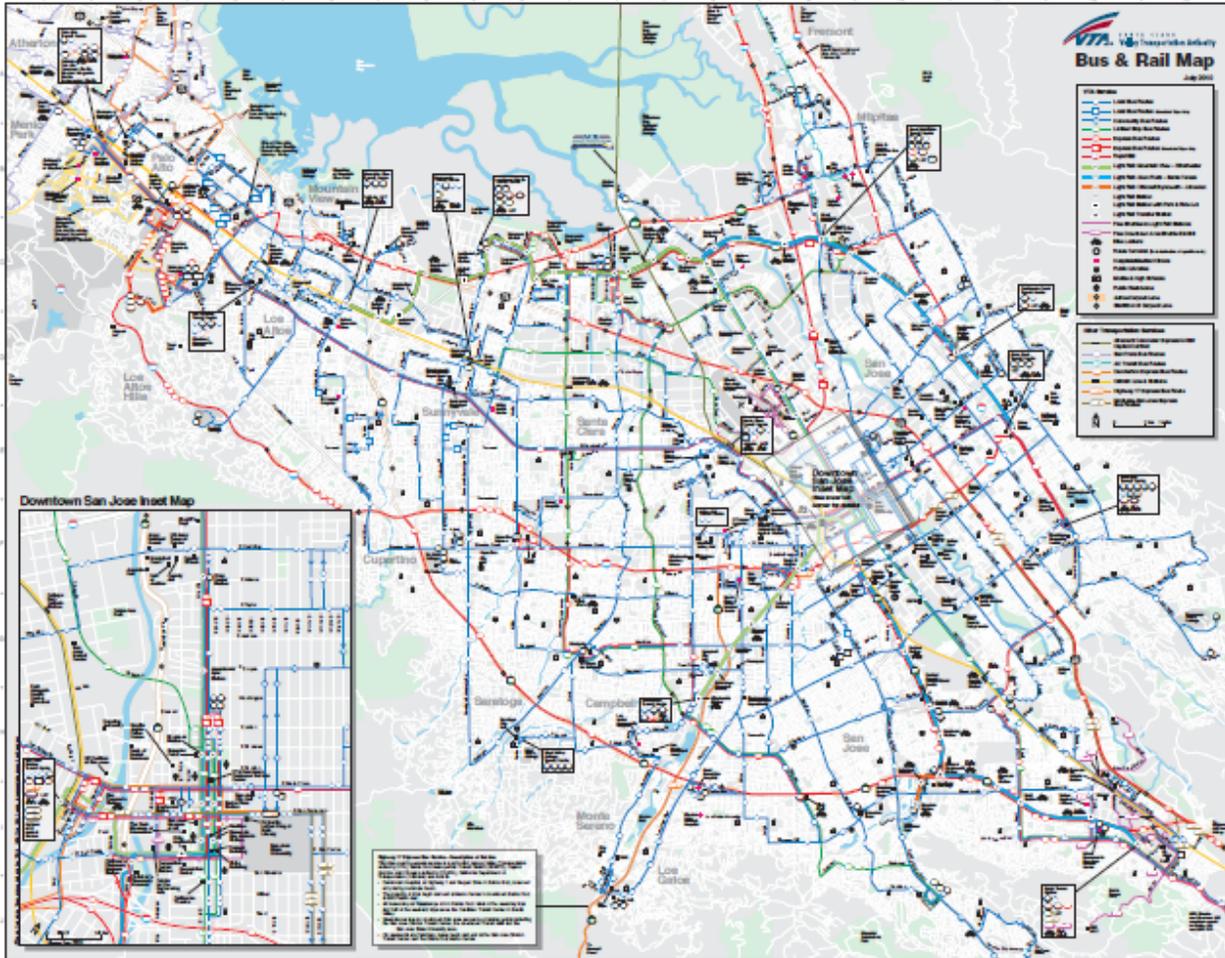
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## Exhibit A - General VTA System Map

The following map was obtained from [http://www.vta.org/schedules/pdf/system\\_map.pdf](http://www.vta.org/schedules/pdf/system_map.pdf). Additional maps are available from [http://www.vta.org/schedules/schedules\\_bymap.html](http://www.vta.org/schedules/schedules_bymap.html).



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## Exhibit B - VTA 2010 Mitigation Strategy Spreadsheet

[Available online at <http://www.abag.ca.gov/bayarea/eqmaps/mitigation/strategy.html>]