

MEMO   **To:**           **Board of Directors, Santa Cruz METRO**

**Date:**       **March 30, 2010**

**From:**     **Marlene Connor, Project Manager, Wilbur Smith Associates**

**Subject:**  **Monterey Bay Bus Rapid Transit Study**

### **Background**

Wilbur Smith Associates was selected to complete a Monterey Bay Bus Rapid Transit Study. The study initially consisted of three parts, a Regional BRT Overview, and work scopes individually negotiated with Monterey Salinas Transit (MST) and Santa Cruz METRO.

### **Projects**

MST, which had discussed the potential for BRT implementation for a number of months, was focused on the development of a specific project formatted to comply with the guidelines for funding as an FTA Very Small Starts application. This focus was reinforced and assisted by additional resources provided by the Air District Board for development of a specific corridor MST project. The selected corridor, on Lighthouse and Fremont, was successfully presented to FTA for funding and has moved forward into project development

A Regional Plan which conceptually identified regional connections and projects was also completed.

### **Santa Cruz METRO**

The Santa Cruz METRO Board acted to consider the BRT conceptually for the long distance corridor between Watsonville and Santa Cruz. Based on conversations with METRO staff, the thought of more frequent service in the Watsonville to Santa Cruz corridor was considered logical because of its status as one of METRO's highest ridership corridors. The development of initial BRT planning concepts was incorporated into the operations planning components within the Short Range Transit Plan which was then underway.

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# **BRT and Regional Transit Coordination in Monterey Bay**



July 2009

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## Introduction

The goal of this part of the project is to consider the role of a Conceptual Regional BRT Plan that can incorporate both the broader perspectives of the affected regional agencies with the more specific input from the operating agencies. The contents include an overview of those various agency modal perspectives and a conceptualization how a longer term BRT network might evolve to be integrated into the public transportation vision for the region.

As indicated in Exhibit 1 on the following page, the base map for the Monterey Bay area, which for the purposes of this study encompasses the operating areas of Santa Cruz METRO to the north and Monterey-Salinas Transit to the south. The study area is affected by a hillside and mountain topography that limits connections to other activity centers in the broader urban area to the north including San Jose, the east bay and Oakland and the San Francisco Peninsula.

Major highway corridors include:

- State Route 1 that links Monterey with Santa Cruz and continues north and south of those cities along the coast;
- US 101 which is an inland route extending from north of San Francisco through San Jose and Salinas and moving inland to the south;
- State Route 68 connecting Monterey with Salinas and US 101;
- State Route 156 linking SR 1 with US 101 north of Salinas; and
- SR 17 that connects Santa Cruz and San Jose.

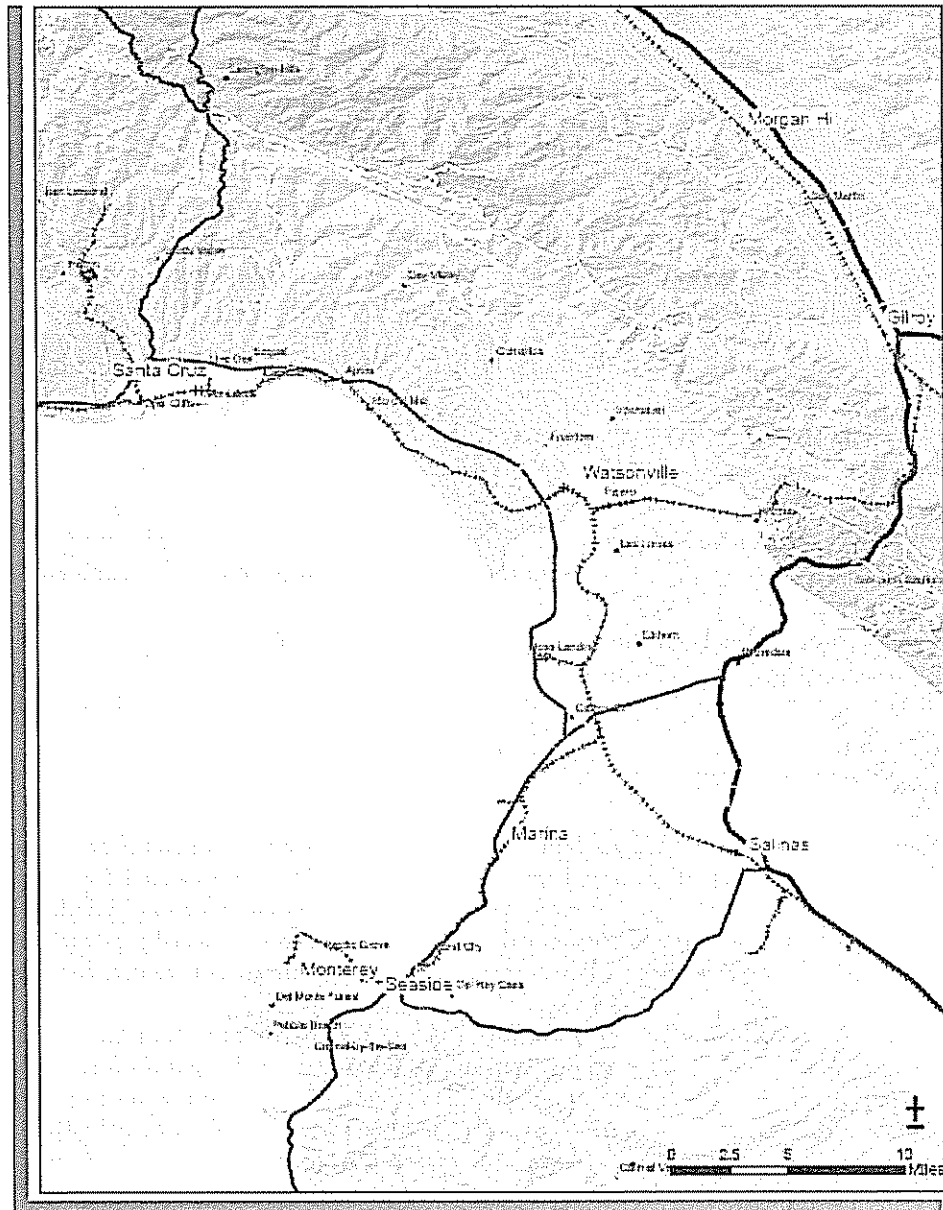
In addition to these main highway corridors, there are several rail corridors that have service connections and/or service potential. The existing operations are:

- Caltrain service that operates to Gilroy and accesses the San Francisco Peninsula, and
- Amtrak Coast Starlight that stops in Salinas before heading north to San Jose and the East Bay.

Also, there has been discussion regarding Caltrain service extension to Salinas including stops at Pajaro, near Watsonville and Castroville. In addition, TAMC has been conducting an analysis of transit potential in the rail corridor north of Monterey and SCCRTC has acquired the rail right of way in the Santa Cruz area.

As indicated above, most inter-regional travel connects with the urban areas north of the Monterey Bay, which are closer than the southern connections to San Luis Obispo and Santa Barbara.

Exhibit 1: Monterey Bay Study Area



## Bus Rapid Transit

BRT has evolved the past decade to become an integral component of the multi-modal public transit options available throughout the country, paralleling the success BRT has had in South America, Europe, and throughout the world. However, although there are numerous services operating as BRT, their applications continue to be diverse based on the operating environment and local policy priorities. These applications are often referred to either as BRT Light, which denotes a service that is distinguishable from regular bus service, but often operates in mixed flow traffic with few other attributes. On the other hand, some jurisdictions operate BRT in exclusive rights of way and have substantial stations and, thus give the appearance of more a rail than bus operation. The type of service that can be a candidate for BRT operation also varies from a main corridor application with stops at half-mile or mile spacing to more of a commuter express application with a few stops in the peripheral areas focusing on accessing an urban destination.

Therefore, BRT has a number of different applications, but all are linked by a common set of elements or attributes which include:

- Running way – either mixed flow or exclusive
- Stations – design and system development
- Vehicles – size and propulsion systems
- Fare collection – on or off-board payment
- Intelligent Transportation Systems – traffic signal preference or priority and customer information and communication
- Service and operating plans – station spacing and route layout simplicity
- Branding – marketing and communications

## BRT in the Monterey Bay

As the study evolved, it became apparent that there were different perspectives regarding BRT from the two operating agencies, Monterey-Salinas Transit and Santa Cruz METRO. MST approached the study from the view of developing a specific project for submittal to the FTA for funding, whereas METRO was more interested in better understanding some of the elements of the programs and especially balancing the ability to link communities with improved service without any potential adverse impacts on vehicle and bicycle flow.

MST staff completed a significant amount of pre-research and had worked with the National Transit Institute to present a two-day workshop in May 2006 on BRT attributes and projects with a panel of experts discussing policies, planning and projects from national and international views. Also as a follow up to that workshop, staff from Lane Transit in Eugene, Oregon, which had been involved in the initial set of FTA BRT candidate cities, provided additional guidance and insight to MST regarding the Lane Transit process and issues for MST to consider as this planning study moved forward.

Lane Transit embarked on a thorough commitment to BRT, working extensively with the community to select an initial starter project, which they determined required a designated right of way and exclusive guideway. In addition, while developing the initial route, Lane Transit had already begun working on both a potential second project and an overall planning process that would rank the potential for additional BRT lines to be developed in the future. As part of that process, key corridors were identified for interim improvements in service including the use of some BRT elements or attributes (e.g. queue jumpers).

This phased development of a broader BRT system plan was embraced by MST staff as a method to similarly evolve a system of BRT services for MST. General discussions began regarding potential attractors and corridors including downtown Salinas, the evolving campus and associated activities for CSUMB, and access to Monterey and the Cannery Row destinations that attracted large volumes of tourists annually.

The initial scoping process for potential BRT lines was guided to some degree by the pragmatics of the FTA Very Small Starts process, which included the following thresholds in order to qualify for FTA funding:

- Existing corridor ridership exceeding 3,000/day
- Frequent service - 10 min. peak/15 min. off-peak
- Span of service – 14 hrs./day
- Signal priority or pre-emption
- Low floor/level boarding
- Special branding
- Total cost less than \$50 million
- Cost per mile less than \$3 million (excluding vehicles)

These thresholds were considered from a system and project view before moving ahead with the development of the Fremont/Lighthouse Corridor project.

In Santa Cruz, the METRO Board extensively discussed whether to view this study as a corridor specific project or a broader concept for additional study and refinement. Ultimately the Board adopted the latter position and asked for additional input on how BRT could improve access between Watsonville and Santa Cruz, one of the key corridors in their system. As indicated previously, several members had expressed concern regarding preference or priority treatments within the roadways south of Santa Cruz and also questioned the viability of service enhancements during an era of constrained resources.

As the study progressed, there was an additional request from the University of California at Santa Cruz to enhance the project with supplemental resources to consider the potential for Very Small Starts funding for a project to connect the UCSC campus with Metro Center in downtown Santa Cruz. This concept had evolved from prior studies by UCSC regarding options and alternatives to increase mode share by transit for students and employees, based to some degree on anticipated increases in students and staff.

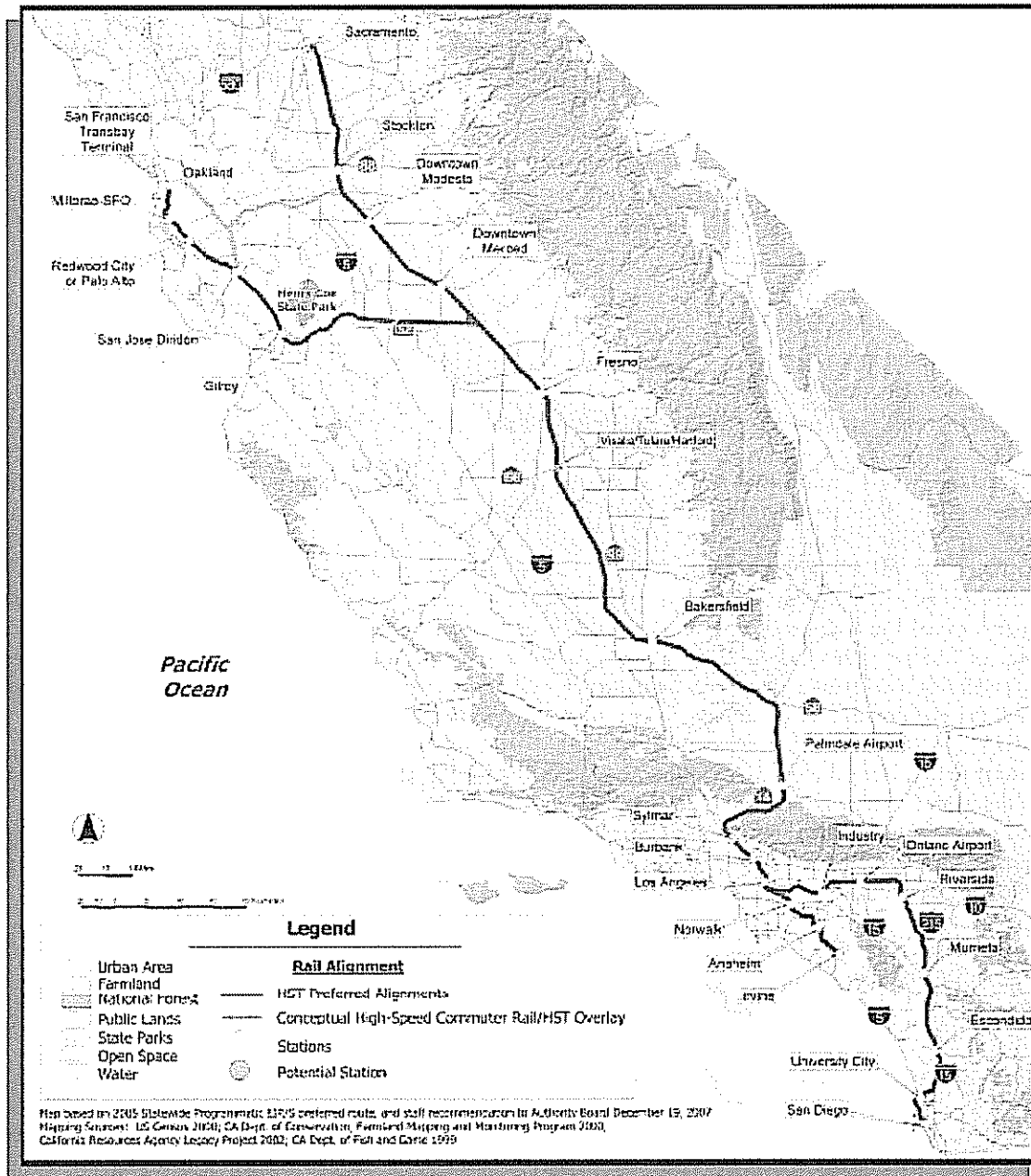
✓ As a result, preliminary BRT analyses were conducted on both the Fremont/Lighthouse and the UCSC – Metro Center Bay/Mission/Laurel corridors.

## California High-Speed Rail and Other Rail Connections

In November 2008, California voters approved Proposition 1A, Safe, Reliable, High-Speed Passenger Train Bond Act, which established the framework for the development of a high-speed rail (HSR) system for the state, as indicated on the following page in Exhibit 2, the statewide map.

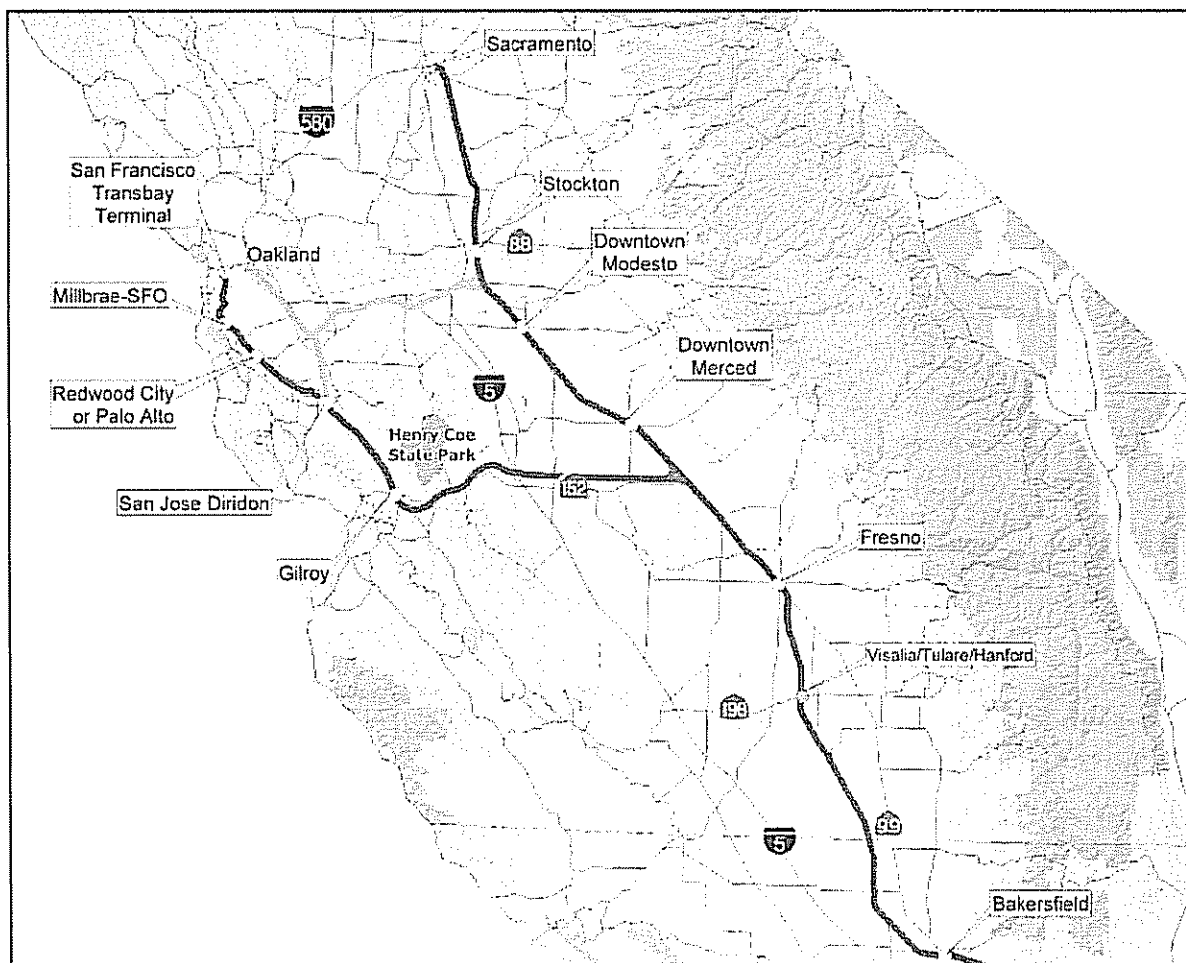


Exhibit 2: Proposed High-Speed Rail System



With regard to the Monterey Bay area, station stops are planned for both San Jose and Gilroy as shown in Exhibit 3, on the following page. The routing is further defined in the subsequent information, which indicates that the preferred station location for Gilroy would be the existing Caltrain Station.

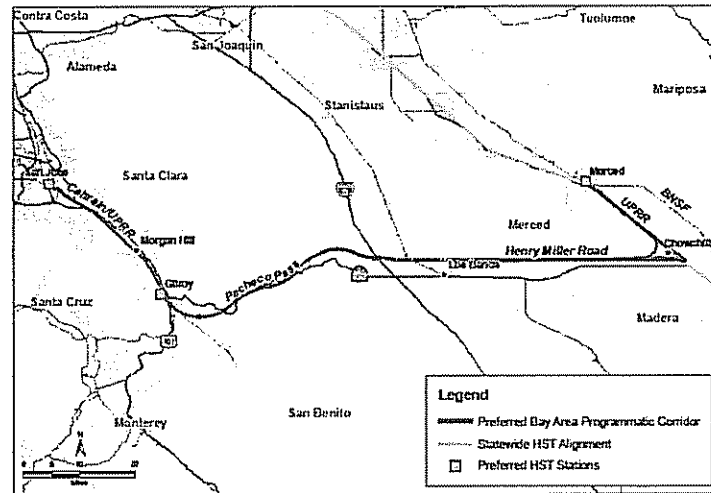
Exhibit 3: Northern California Proposed HSR Station Stops



From a national perspective, interest in high speed rail increased dramatically when President Obama added \$8 billion dollars of funding into the American Recovery and Reinvestment Act and a commitment for an additional \$1 billion per year through the budget process. Potential corridors and projects throughout the nation eagerly awaited additional information from the Administration regarding plans and processes. Some initial concepts were received as part of the High-Speed Rail Strategic Plan released in April 2009 which identified ten corridors plus the Northeast Corridor as potential candidates for funding (including the California Project). Exhibit 4 on the following page presents the initial San Jose to Merced Alignment from the California High-Speed Rail Strategic Plan. In addition more detailed application guidance was presented on June 17, 2009. Thus, the HSR system development continues via input from the FRA and the Obama administration.

Exhibit 4: Initial San Jose to Merced Alignment from the California High-Speed Rail Strategic Plan

The selected alignment for the San Jose to Merced section generally follows the Caltrain/Union Pacific Railroad corridor from San Jose to Gilroy, passing through urban and suburban areas. From Gilroy, the corridor extends east through the mountainous Pacheco Pass, generally following State Route 152, and then along Henry Miller Road to Chowchilla to connect with the Bakersfield to Merced section of the HST system. Stations are proposed in San Jose (Diridon Station), Gilroy and downtown Merced. The preferred station location in the city of Gilroy is the current Caltrain Station. The Project EIR/EIS will examine site-specific impacts of the preferred alignment, station locations, and HST operations between San Jose and Merced, and will identify specific mitigation measures as necessary. This public scoping effort is intended to collect information on potential impacts, mitigation measures, and project alternatives to help define the scope of evaluation of the project. Comments will be accepted through close of business on Friday, April 10, 2009 at [comments@hst.ca.gov](mailto:comments@hst.ca.gov).



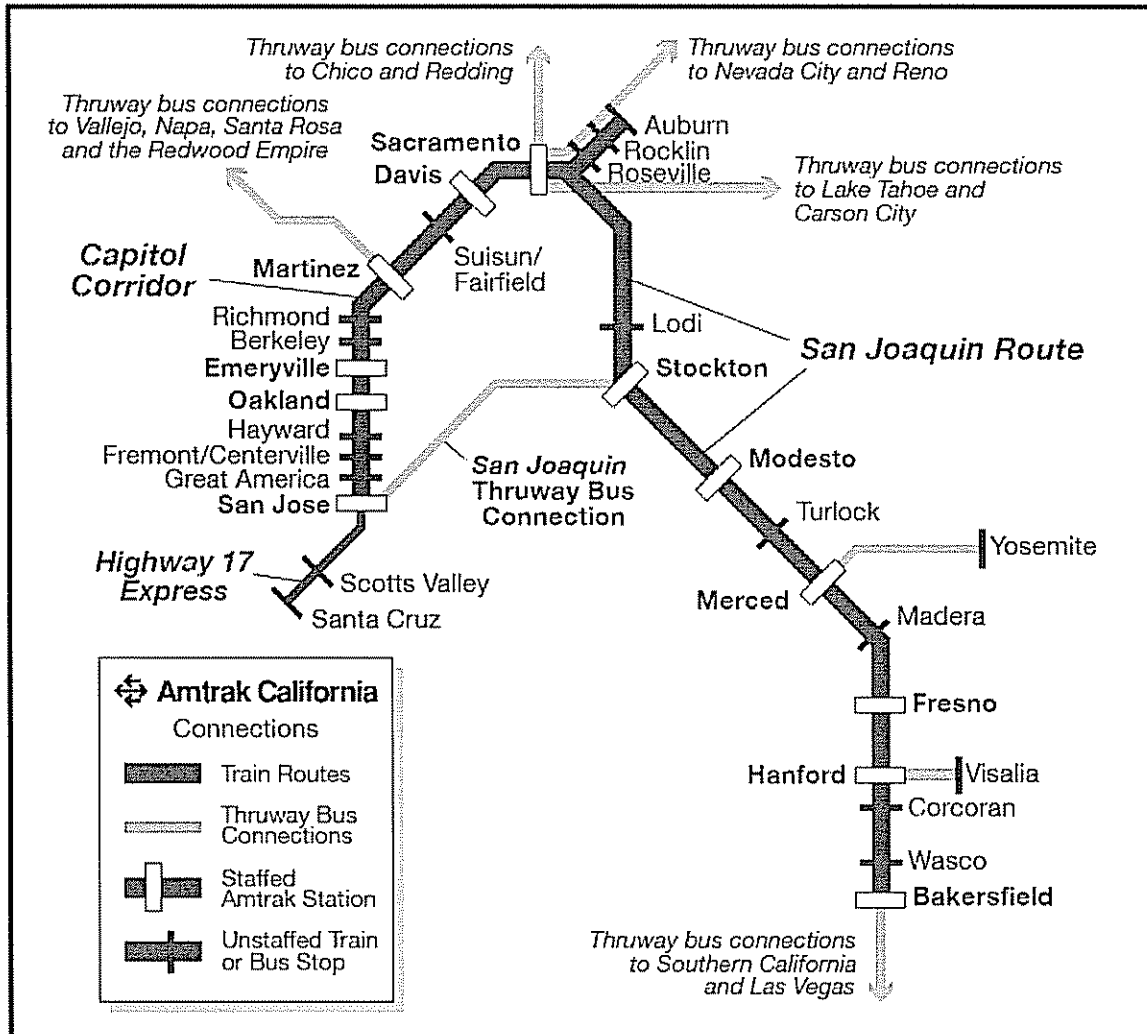
Existing rail service is available via Caltrain at the Gilroy Station and via Amtrak at the Salinas Station. The former provides three northbound and two southbound trips per weekday, and the latter includes a daily stop by the Coast Starlight Express, plus connecting bus service to Monterey and Carmel.

Bus connections are also an important part of the access alternatives offered at Gilroy with services operated by VTA, MST, San Benito and Greyhound. Regarding Greyhound, although the service network has been reduced in comparison with prior levels, there are Greyhound alternatives within the Monterey Bay area connecting north to Watsonville, Santa Cruz and San Jose as well as south through Salinas, King City and ultimately San Luis Obispo and Los Angeles.

## Regional Transit Planning

Similar to the multi-provider rail connection theme above, Santa Cruz METRO has partnered with VTA, Caltrans, and Amtrak to be a part of the Amtrak Thruway program. Exhibit 5 on the following page provides more detail of the program.

Exhibit 5: Amtrak Thruway Program



The two interesting facets of the Highway 17 Express program, as shown above, are the emphasis on providing that regional connection, which then offers more regional mobility options, and the funding partnerships which offer benefits to customers of multiple connecting services.

Key components of an expanded Monterey Bay regional BRT or transit program should also include the ability to maximize connections and develop partnerships with other agencies.

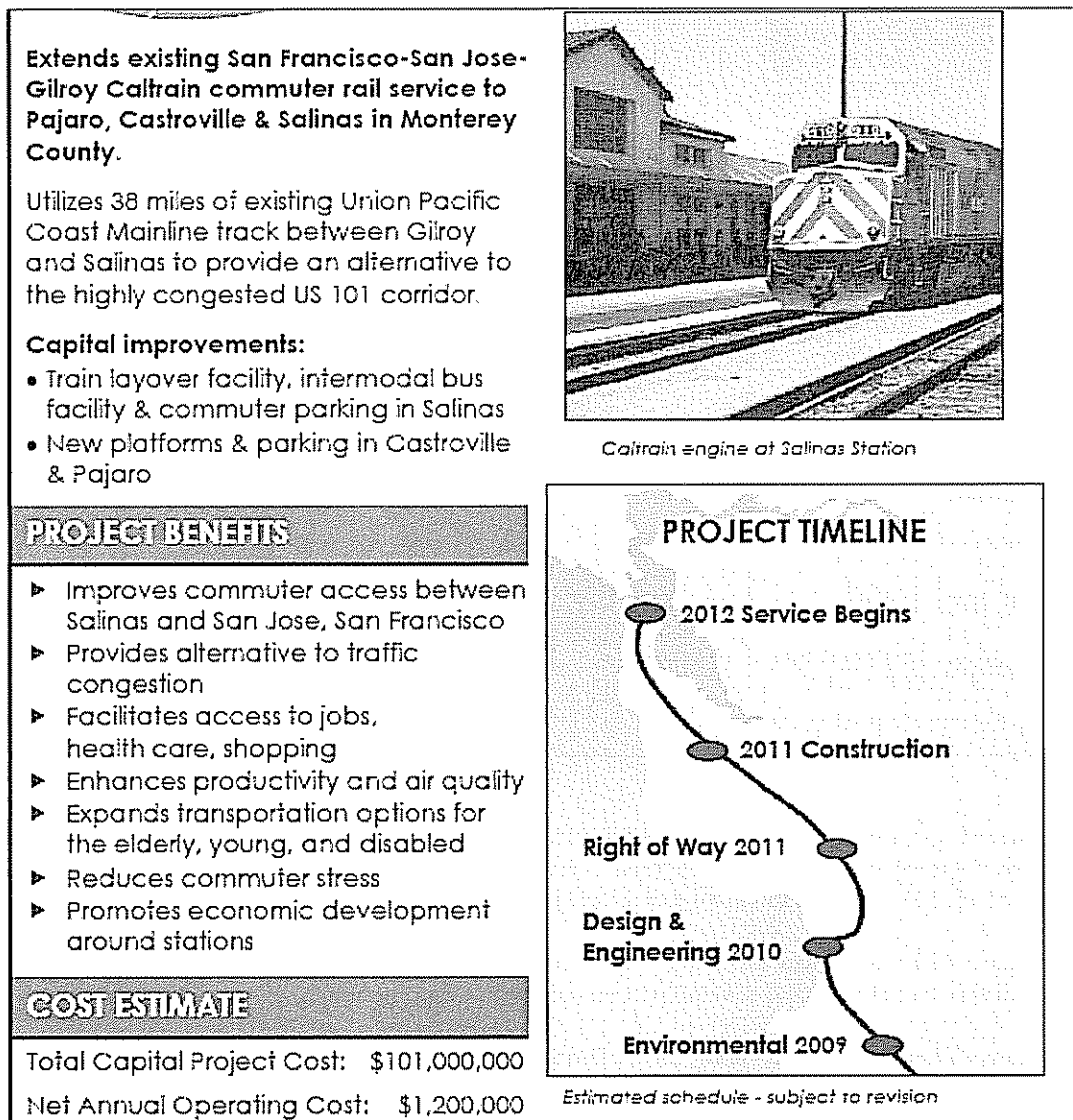
Monterey Salinas Transit is also providing several current regional connections as the Amtrak Thruway bus, including express service to San Jose via Route 55, which also serves Gilroy and Morgan Hill. In addition, MST operates three routes to Watsonville, two primarily along the Coastal Corridor from Marina and Salinas.

and another along Highway 101 from Salinas. These services recognize the increasing demand for mobility within the area.

## TAMC Projects and Planning

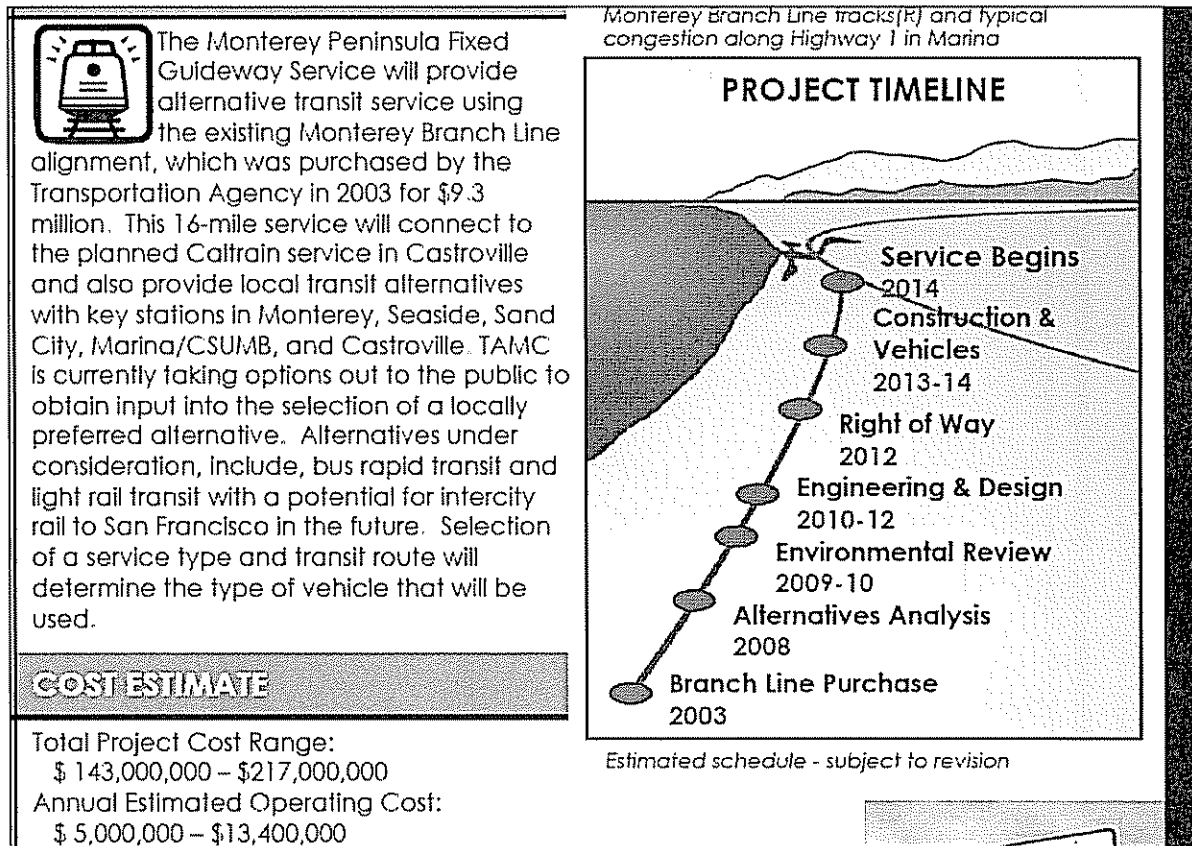
The Transportation Agency for Monterey County (TAMC) has also been developing regional transit connections. One project includes extending the Caltrain service to the south as described below in Exhibit 6.

Exhibit 6: TAMC Regional Transit Connection Project



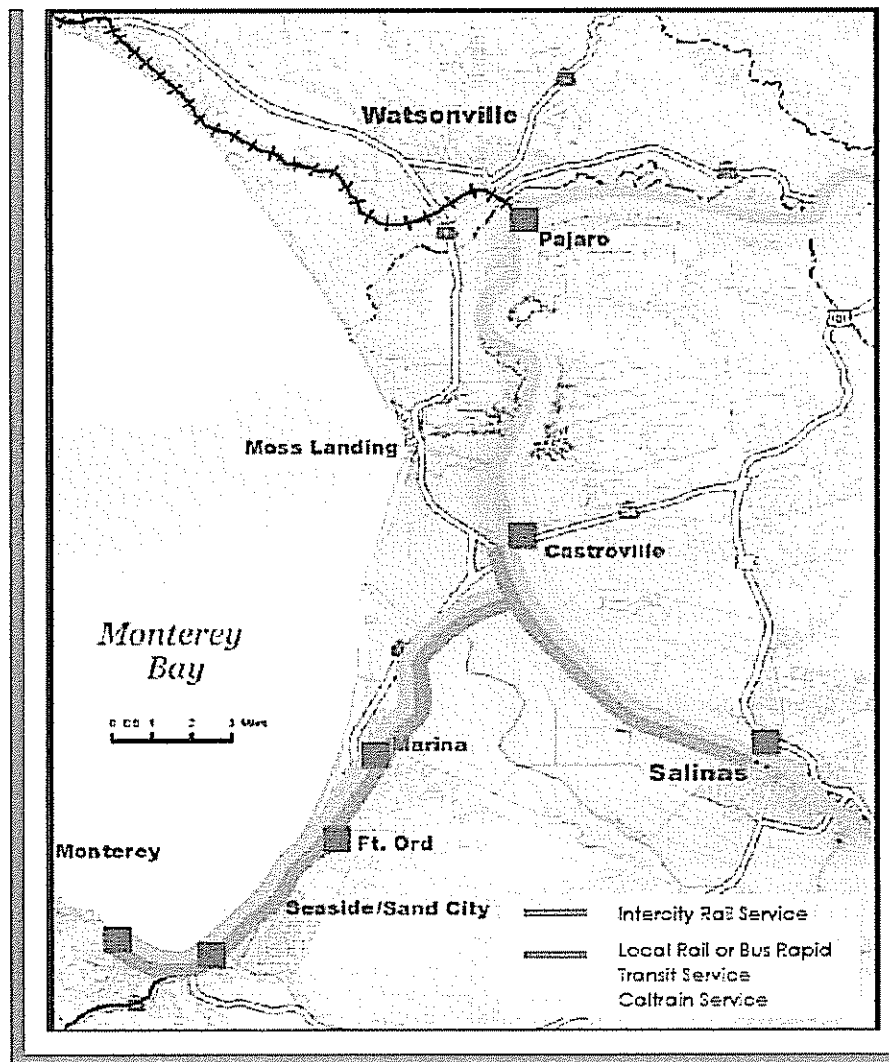
In addition, TAMC has acquired the right of way for the Monterey Peninsula Fixed Guideway Service, as described below in Exhibit 7.

Exhibit 7: TAMC Fixed Guideway Service Project



Collectively, the TAMC projects could result in a system approach for the area, as depicted in Exhibit 8 on the following page, a recent brochure. However, as noted by TAMC, there are a number of alternatives to be considered based upon potential funding opportunities, policy and public support and ability to meld the multiple agencies and operators into a seamless public transportation system that can be used with ease and understanding by a variety of customers.

Exhibit 8: TAMC Proposed System Approach



## **Santa Cruz County Regional Transportation Commission**

The SCCRTC goals are:

### **Purpose of the SCCRTC:**

1. Set priorities for major capital improvements to our transportation infrastructure, including highways, major roads, rail, and alternative transportation facilities.
2. Pursue and allocate funding for all elements of our transportation system.
3. Adopt policies to improve mobility, access and air quality.
4. Plan for future projects and programs to improve the regional transportation system while improving the region's quality of life.
5. Inform businesses and the public about alternatives to driving alone and the need to better manage our existing transportation system.
6. Conduct programs to encourage the use of alternative transportation modes.

During the recent past there have been significant planning discussions through the Transportation Funding Task Force, which was established to consider potential funding priorities for the County, many of which focus on future options for the Highway 1 corridor. In addition, the SCCRTC has reached an agreement in principle with Union Pacific to acquire the Santa Cruz Branch Rail Line.

## **AMBAG (The Association of Monterey Bay Area Governments)**

AMBAG is the designated Metropolitan Planning Organization for Monterey, Santa Cruz and San Benito counties. MPOs are typically charged with the responsibility of ensuring a continuing, comprehensive and cooperative planning process is utilized in building the affected communities in the region. AMBAG is responsible for transportation and mobile air source planning for the three-county region and coordinates the programming and planning of projects and facilities that also consider the air quality impacts of these transportation projects.



The Monterey region is the only area of the state where the responsibility for transportation planning is shared by the following: a Council of Governments (AMBAG), Regional Transportation Planning agencies that operate at the County level, the local transit operators and the State Department of Transportation (Caltrans). AMBAG also works closely with the region's air quality planning and monitoring agency, the Monterey Bay Unified Air Pollution Control District (MBUAPCD) and the local jurisdictions in the area.

From a programmatic perspective, the three main planning processes that AMBAG coordinates and approves are the annual Overall Work Program, which describes activities and budgets for a given year, the Metropolitan Transportation Improvement Program, which is a three-year roll up of funded projects and activities, and the longer term Metropolitan Transportation Plan, which provides a 20+ year framework for the region.

The most recent update of the MTP was completed in 2005. It would appear that the next update of that plan would have the best potential to add in a thorough discussion of the various transportation options and alternatives contained in this overview and both frame out the priorities of the region and indicate a phased implementation plan to meet those priorities, based on available and potential resources.

## Monterey Bay Unified Air Pollution Control District (MBUAPCD)

The Monterey agency was created in 1965; three years later Santa Cruz joined to form a two-county agency, and subsequently San Benito County was also added to form the current agency. The MBUAPCD is responsible for overall air quality planning and monitoring from a number of different programs and perspectives, including an Air Quality Management Plan. The AQMP also includes a number of Transportation Control Measures which provide policy direction to achieve air quality goals, such as Improved Public Transit Service to attract new ridership, as shown below in Exhibit 9.

Exhibit 9: MBUAPCD Transportation Control Measure

**TABLE 7.2-1 IMPROVED PUBLIC SERVICE TRANSIT PROJECTS IN FY  
2006/07 to FY 2009/10 MTIP**

No.	Lead Agency	Description	FFY 2006-2010 Project Cost
<b>MTIP FY06/07-FY09/10</b>			
1	TAMC	Caltrain Extension to Monterey County	\$26,168,000
2	TAMC	Caltrain Extension: Gilroy to Salinas	\$500,000
3	TAMC	Coast Daylight/Caltrain Extension Track Improvement	\$500,000
4	SBCOG	Transit Operations	\$7,665,000
5	MST	Monterey Transit Station	\$300,000
6	MST	Bus Operations	\$66,706,000
7	MST	Rides Operations	\$6,062,000
8	MST	Bus Replacement	\$9,368,000
9	MST	Salinas-King City Transit Service Line 23	\$329,000
10	City of Salinas	Intermodal Transportation Center	\$1,454,000
11	City of Salinas	Salinas Central City Transit Shuttle Service	\$426,000
12	King City	King City Transit Capital and Operations	\$236,000
13	City of Greenfield	Greenfield Autolift Capital & Operations	\$214,000
<b>13 Total MTIP Projects</b>			<b>\$119,928,000</b>

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## Creating the Monterey Bay Public Transportation Vision

As indicated in the information contained above, there are a number of agencies that have varying perspectives that can influence the planning and implementation of public transportation in the Monterey Bay. In addition, there are a number of potential modal alternatives that have been identified that offer pieces of connection opportunities to the region (e.g. Caltrain extension). However, at the moment there does not appear to be an overall planning concept to connect all the local jurisdictions in the region to the various modal opportunities. An enhanced, coordinated bus system, anchored by Bus Rapid Transit services within key corridors would have the potential to achieve that planning goal.

As indicated above, BRT is comprised of a series of attributes or elements that can be enhanced to meet additional demands for service. It also has the flexibility to extend to new areas of development or to modify routing to serve other modal services that might develop over time, such as High-Speed Rail. In addition, it has the potential to provide high levels of service to accommodate large numbers of passengers to facilities such as the Monterey Bay Aquarium or to serve Transit Oriented Developments or other densified land use.

BRT also can incorporate a number of Intelligent Transportation System components, such as real time arrival information, off board payment alternatives, such as a smart card, plus other enhanced customer information opportunities. All of these can be addressed in a consistent manner that would serve to facilitate travel in a seamless system within the region. Arguably, the ability to use one fare card for all services or call one phone number for information on all services would expand mobility options for many potential riders within Monterey Bay.

From an implementation standpoint, the current MST Bay Rapid Transit project has demonstrated that once the corridor had been identified, moving forward to complete the Federal Transit Administration Very Small Starts can be accomplished within a year. Furthermore, once a project has been submitted, funding approval can be secured for the following federal fiscal year.

Another approach to creating the public transportation vision would be through adopting a mobility management process for the region. The following excerpt from the SamTrans Strategic Plan provides a good overview of the concept:

Although the most recent discussions about Mobility Management have developed from the human service transportation coordination process, the concept has the potential for a much broader application. Many jurisdictions have created Mobility Manager positions to recognize that ongoing coordination is a process that requires dedicated staff time in order to achieve results. These positions have typically been funded by FTA sources which can provide 80 percent of the cost. Mobility Management is also an eligible activity for ARRA funding.

Mobility leaders are guided by the principles of mobility management. Mobility management is a comprehensive and innovative approach for managing and delivering coordinated transportation services to customers on an individual basis through a wide range of transportation options and service providers. It focuses on providing a range of transportation options that match the needs of the customer, linking land use and transportation investments, educating and marketing to the customers to influence travel

behavior, and solidifying partnerships to maximize transportation investments and efficiencies.

Mobility management is about getting people where they need to go. Just as importantly, it also is a transportation strategy for working towards a sustainable future. Making transportation investments and providing services that maximize travel options will enable people to make sustainable choices about how they move. Influencing individual behavior, which on a collective scale can minimize fuel and energy consumption and pollution, is an essential role that the District must embrace for the future.

### **Key Principles of District Mobility Management**

- Meet the demand for mobility of specific target groups and influence pre-trip mode choice.
- Provide information on a variety of modes of transportation to the user and maximize awareness of transportation options.
- Meet mobility needs via an efficient and integrated use of transportation and land use infrastructure.
- Create alliances with different partners, a vital factor for improving transit access and creating a sustainable transit environment.
- Address people's attitudes to influence travel choices.
- Anticipate, monitor and take action to mitigate and/or take advantage of external factors, such as demographic trends and economic forecasts.
- Achieve long-term financial stability to provide the levels of investment that meet the growing demand for transportation services.

Source: Federal Transit Administration's United We Ride Program

Thus, it would appear that bringing together the affected parties and partners to think through the potential for a regional approach to enhanced bus connections, led by a series of BRT corridor projects, embracing the concepts of Mobility Management would have significant potential to move forward with the public transportation vision for the Monterey Bay.

## Moving Forward

In order to reach the desired goal of a regional BRT network in the Monterey Bay, which would provide enhanced mobility options, consistent with national goals of managing energy consumption, and improving air quality and congestion, there are a number of recommendations for moving the process forward

The existing public transportation network in the Monterey Bay provides good and varied transit services by a number of agencies whose programs have been described in this report. The development of a regional approach to the development of a BRT network which would be a foundation from which greater connectivity regionally could be accomplished would mean viewing the various components as part of "one system", with connectivity and consistency. This would require the development of regional goals and priorities to guide the overall network development. The regional system then, could serve more people, more effectively and offer the potential for what will be a growing number of future users.

### 1. Establish a Regional Connectivity Council.

The transportation agencies in the Monterey Bay, including MST, Santa Cruz METRO, Air District Board, TAMC, SCCRTD and AMBAG should formally develop a Regional Connectivity Council. This Council will be the working group consisting of Monterey Peninsula key stakeholders. Many of the people and agencies involved in this study will make up that group. Individuals on the Regional Connectivity Council will represent transportation providers, elected officials, Caltrans representatives, and any other relevant agency involved with transportation on the Peninsula. The primary tasks of the Regional Connectivity Council are to develop strategies, goals, and objectives for developing and promoting the regional BRT network, assist fellow agencies with implementation barriers, and make project priority recommendations for the region that benefit all residents. Priorities could include, but not be limited to: funding for operations and capital improvements, key nodes, including destinations and attractions connectivity, target corridors for congestion mitigation, etc. Of course, priorities need to be assigned collectively for a regional approach.

### 2. Secure funding for a Mobility Manager to staff regional connectivity processes.

This position is eligible for eighty percent federal funding with a local match. Additionally, ARRA monies could also be used to fund this position.

### 3. Lead agency to hire a Mobility Manager.

The Mobility Manager is an important component which would ensure that the process of developing the regional connectivity foundation piece to continued consistent BRT development.

The Mobility Manager's primary responsibilities are to provide support and guidance for all elements of developing a coordinated regional BRT network. The position would report directly to the designated lead agency.

### 4. Develop Memorandum of Understanding (MOU).

The MOU will be between the various partnering agencies to reinforce participation and development goals.

### 5. Conduct a public relations event to announce the vision for a regional BRT network.

The public relations event could provide the foundation for regional movement enhancement throughout the service areas and make it publicly official as part of the event. Each individual participant should be recognized, along with supporting agencies and officials. The celebration could be at an upcoming event or a stand alone event.

6. Develop strategies, priorities, and principles to meet the development goals.  
The Regional Connectivity Council and Mobility Management staff should develop strategies, priorities, and principles to meet the development goals.

7. Identify and establish processes to share information between participating organizations.