ALAMEDA COUNTYWIDE TRANSPORTATION PLAN

Administrative Draft

September 1, 2011

Submitted by the Nelson\Nygaard Team

ALAMEDA
County Transportation Commission

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Cover images from the Alameda CTC

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1. INTRODUCTION

What is the Countywide Transportation Plan?

This Alameda Countywide Transportation Plan (CWTP) is a long range policy document that guides future transportation investments, programs, policies and advocacy for all of Alameda County through 2040. It addresses all parts of our complex transportation system, including capital, operating and maintenance of freeways, buses, rail, ferries, and other modes. It also addresses transportation programs that serve varying needs throughout the county, such as paratransit services for seniors and people with disabilities and safe access to schools. This document establishes a vision for Alameda County's transportation system, inventories needs and available funding, and identifies gaps where funding and needs don't match.

The CWTP allocates all the money available for transportation investments in Alameda County. The projects (specific capital improvements, such as extending a rail line) and programs (recurring funding distributed by grants or by formula, such as road maintenance funds) in this Countywide Plan will be included in the Regional Transportation Plan, which assigns money for state and federal funding. In order for a transportation project or program in Alameda County to receive funding, it must be in this document.

Acknowledging that the future is unknown, and that changing conditions in the county will place new demands on the transportation system over time, this plan is updated every four years. The CWTP was last updated in 2008/09.

There are a number of factors that make this update of the CWTP unique from past plans, including a new sponsoring agency – the Alameda CTC, the simultaneous development of a new transportation sales tax expenditure plan (TEP), and the concurrent development of a new Regional Transportation Plan by the Metropolitan Transportation Commission (MTC) and a Sustainable Communities Strategy (SCS) by the Association of Bay Area Governments (ABAG). The county is also facing growing needs and new unfunded policy mandates designed to promote sustainability and reduce carbon emissions in an era of increasingly limited resources. Perhaps most important, the priorities identified in this plan were determined through a performance based analysis, with input from the public, city and county staff, and elected officials, to ensure that our investments are consistent with the goals of a sustainable Alameda County.

> **The 2012 Countywide Transportation Plan is being developed at a time of substantial change in transportation policy at the federal, state and regional levels, as well as a time of great economic uncertainty.**

A New Agency: The Alameda County Transportation Commission

In the past, the CWTP was prepared by the Alameda County Congestion Management Agency (ACCMA). This CWTP is under the guidance of a new agency – the Alameda County Transportation Commission (Alameda CTC). The Alameda CTC is a countywide transportation agency, resulting from a merger of the ACCMA and the Alameda County Transportation Improvement Authority (ACTIA). ACCMA previously managed the planning and funding and project delivery of transportation projects in Alameda County. ACTIA previously managed the transportation sales tax revenues and expenditures. This merger eliminates redundancies; creates efficiencies in planning, programs and project delivery; and streamlines legislative, policy and funding efforts.

The mission of the Alameda CTC is to plan, fund and deliver a broad spectrum of transportation projects and programs to enhance mobility throughout Alameda County.

The Alameda CTC is also developing an expenditure plan for augmenting and extending the existing half-cent sales tax for transportation, known as Measure B. The merger of the two agencies ensures that county transportation priorities can be funded efficiently and that priorities can be implemented as quickly as possible.

> **The mission of the Alameda CTC is to plan, fund and deliver a broad spectrum of transportation projects and programs to enhance mobility throughout Alameda County.**

New Context, New Challenges, New Approach

Historically, the need for transportation improvements across the county has far outstripped the amount of funding available to pay for improvements. Updating the CWTP is always an exercise in balance between different transportation modes, between maintenance of the current system and expansion, and between meeting current needs and preparing for future needs.

Beyond making difficult choices between competing needs in an environment of limited resources, this CWTP update is taking place in a transformed economic, regulatory, and social environment. The concept of creating a more sustainable way of living through transportation and land use investments has become a legislative mandate. These factors create a climate that is both challenging and opportune for crafting mobility solutions for the coming decades.

Current trends considered in this plan include:

- Demographic changes such as the aging of the population
- The need for affordable housing in close proximity to jobs
- Availability of housing choices for an increasingly socially and economically diverse population
- Increasing urban development patterns that support and benefit from non-automobile modes of travel
- Evolving consumer and lifestyle preferences that seek to capitalize on the benefits of living closer to job centers, transit services, and daily needs

Each of these trends influences how we use our transportation system and the demands placed on our transportation infrastructure. All this is occurring in the face of stark fiscal realities brought about by a recession that has had significant impacts on local, state and federal budgets.

> **It is clear that Alameda County is in the midst of a lasting and profound period of change and that continuing investments on a "straight line" into the future is neither viable nor sustainable.**

New Policy Environment

In California, three key legislative and regulatory changes have led to a new focus on linking transportation planning and investment decisions with existing and future land use patterns. They are:

- Assembly Bill 32-the California Global Warming Solutions Act, 2006[1]
- California Senate Bill 375-Redesigning Communities to Reduce Greenhouse Gas, 2008[2]
- MTC's Resolution 3434—Transit-Oriented Development (TOD) Policy for Regional Transit Expansion Projects, 2005[3]

AB 32 and SB 375's goals are to reduce greenhouse gas emissions through a set of regulatory and policy directives, while the MTC Resolution 3434 links the expenditure of regional capital funding for transit expansion to the density of households allowed around future mass transit systems in the Bay Area.

As a result, this CWTP has taken a much closer look at coordinating transportation investments with the land use patterns of the county. Specifically, the relationship between job and housing locations and transportation investments and the effects of the many diverse, underlying land use policies established by different communities is being dealt with in a more direct way than ever before. This is described fully in Chapter 4.

This CWTP has taken a much closer look at coordinating transportation investments with the land use patterns of the county.

Linkages to Regional Planning Activities

This update is taking place concurrently with an update of the Regional Transportation Plan (RTP) that is also responding to SB 375, building on years of work at the regional level to better coordinate land use and transportation planning and decision making to yield more sustainable outcomes.

Due to this legislation, the Regional Transportation Plan is required to include a "Sustainable Communities Strategy" (SCS) —a regional land use plan that must be incorporated into the transportation plan. ABAG is the regional agency responsible for developing the SCS, and MTC has developed new performance measures to reflect this new planning paradigm. MTC's new goals and performance measures are included as Appendix E. These regional goals were also considered in developing the CWTP, and all Alameda County projects selected through this planning process are expected to perform well against these new measures.

The preparation of the CWTP and TEP has been closely coordinated with the preparation of the Regional Transportation Plan and the Sustainable Communities Strategy by MTC and the Association of Bay Area Governments (ABAG), a regional agency composed of nine counties and 101 cities in the Bay Area whose planning efforts address regional economic, social, and environmental challenges. This process is further described in Chapter 4.

New Fiscal Realities

Funding is one of the greatest challenges in this Countywide Transportation Plan. For years, highly volatile revenue sources and significant limitations to how each funding source can be spent have created a constrained financial environment. Increasingly, structural imbalances between state revenues and expenditures have led to significant cuts in transportation funding, and the future continues to be uncertain as major policy changes are underway at the federal and state levels. Finally, the county faces the fallout from a recession that is projected by many to have had the worst economic impact on the country since the Great Depression.

The effect of the recession on transportation has been significant in a number of ways. A few examples:

- MTC estimates that Alameda County will face a multi-billion dollar shortfall in streets and roads maintenance revenue.
- Local transit service has undergone cutbacks due to revenue shortfalls at all levels. In response to the recession, cutbacks and the need to increase fares to help offset revenue shortfalls, transit service suffered ridership losses, and thus fare revenue losses, creating a spiraling problem.
- Demand and costs for transportation programs and transit services continue to increase at a rate greater than revenue growth.

[1] AB 32 website: http://www.arb.ca.gov/cc/ab32/ab32.htm
[2] SB 375 website: http://www.arb.ca.gov/cc/sb375/sb375.htm
[3] Resolution 3434 website: http://www.mtc.ca.gov/planning/rtep/

In order to align needs with decreasing budgets, this CWTP has required hard choices; stakeholders have had to think very carefully about use of resources, focusing more on cost effectiveness, leverage and investments that generate revenue or improve productivity. It is also clear that Alameda County will have to rely even more on local resources to meet our needs in the future. The recently passed Vehicle Registration Fee and potential augmentation of the local transportation sales tax are examples of Alameda County voters supporting local transportation priorities.

Responding to Funding Shortfalls: A New Sales Tax Expenditure Plan

Currently, Alameda County has a half-cent sales tax dedicated to transportation, known as "Measure B." Measure B was originally approved by voters in 1986 and reauthorized in November 2000; the sales tax expires in 2022. The funding plan for sales tax revenue, called the Transportation Expenditure Plan (TEP), lists the specific projects and programs that are to be funded by sales tax revenue. These TEP projects and programs are drawn from projects and programs in the CWTP. The expenditure plan for the existing Measure B sales tax dedicates approximately 40% of the revenue to capital projects and 60% to ongoing programs including streets and roads maintenance, transit operations, specialized services for seniors and persons with disabilities, bicycle and pedestrian travel, and transit oriented development funds.

The current sales tax has been a critical funding source for transportation projects in Alameda County. In fact, these types of local sources have come to represent the bulk of money available for transportation in the entire region. State and federal sources have diminished over time, and currently account for less than 40% of projected annual transportation revenue in the region.

Although the current expenditure plan for Measure B goes to 2022, a new TEP is being considered for a number of reasons. Most notably:

- Sales tax revenue has fallen short of original projections due to the economic recession; the county has received hundreds of millions of dollars less than planned for. This gap will continue to grow in coming years if nothing is done.
- The decline in revenues has had a particularly significant impact on services that county residents depend on for their daily mobility, such as bus service and transportation programs for seniors and people with disabilities; these programs depend on annual funding distributions for their ongoing operations.
- Capital projects have not been hit as hard because they have been able to identify replacement funding through federal stimulus and benefit from lower costs due to the recession. As a result, projects have been largely completed. So, without a new plan, the county would not be able to program local funds for new projects until 2022.

For all of these reasons, crafting of the CWTP update is concurrent with a new sales tax measure slated to go on the ballot in November 2012.

Plan Development Process

Key milestones in the development of this CWTP were:

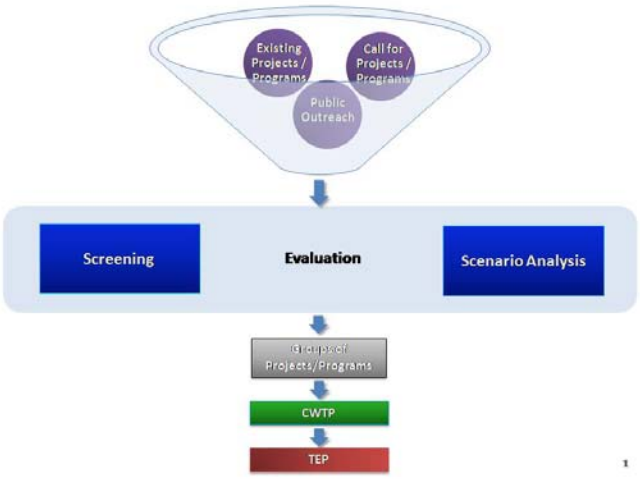
- **Vision and Goals, January 2011**: Adoption of a vision statement and nine goals by the Alameda CTC CWTP-TEP Steering Committee in January 2011 after input from the Community and Technical Advisory Working Groups (CAWG and TAWG).
- **Public Outreach, January-March 2011:** The first major phase of public outreach activities was undertaken in early 2011 to educate and solicit input related to transportation needs and priorities from communities throughout the county (described more fully in the section on public engagement below).
- **Performance Measures, March 2011**: Based on the nine adopted goals, performance measures were developed and adopted by the Steering Committee in March 2011, with input from CAWG and TAWG.
- **Call for Projects and Programs, March-April 2011**: The Alameda CTC solicited project applications from all jurisdictions and transportation operators to assess the full range of funding need in the county. The CTC simultaneously assessed

programmatic needs in the county based on public and stakeholder input.

- **Project/Program Evaluation, June-July 2011**: A multipart evaluation was conducted to generate three groups of projects and programs that have similar performance and, in the case of projects, estimated costs. The three groups served as a tool to assist decision-makers in selecting transportation investments for Alameda County's future transportation system. Other factors were used in selecting transportation investments incorporated in the CWTP. The groups of projects are presented and the evaluation process discussed more fully in Chapter 6.

An illustration of this process is shown below in Figure 1-1.

Figure 1-1 Project and Program Evaluation Process



Key documents that have been developed to inform this process are:

- **Vision, Goals, and Performance Measures:** A consensus approach to the vision and goals for our transportation system and definition of the measures used to describe performance. These are summarized in Chapter 2 of this report.
- **The "Briefing Book," March 2011**: A comprehensive existing and future conditions report, summarized in Chapter 3 and included as Appendix B.
- **Issue Papers, April 2011**: A more detailed analysis of key transportation issues, including relevant case studies and research. Topics include:
  - Transportation funding
  - Goods movement
  - Coordination with land use
  - Sustainability
  - Transit sustainability and integration
  - Parking management and Transportation Demand Management (TDM)

  The issue papers are summarized in Chapter 3 and included in full as Appendix C.
- **Scenario Evaluation, June 2011**: Outlining a comprehensive technical methodology for the performance based analysis of projects and programs submitted for consideration by project sponsors. Summarized in Chapter 6 and included as Appendix D.

Engagement of Public and Stakeholders

Public engagement and transparency are foundations of the development of this CWTP. Alameda County is tremendously diverse and there is no single mode or infrastructure investment category that would meet all the needs in the county. Crafting a plan to meet the broad range of needs is a challenging undertaking. Therefore, significant efforts have been made throughout the process to ensure that this broad range of needs is integrated into the CWTP, that all voices are represented, and that all decision making processes are clear and comprehensible. Particular emphasis has been placed on ensuring input from those communities historically disconnected from such decision-making processes and communities that face particular transportation challenges, either because of affordability, disability, or age-related mobility limitations.

Many activities have taken place throughout this process to involve the community in the update of the Alameda CWTP and development of a new TEP. These include general public outreach activities, a website where all project information can be accessed and comments can be submitted, and two standing advisory committees that represent diverse constituencies. These public involvement activities are described in more detail below. In addition, more

detailed information is included in Appendix F, the Outreach Report.

Public Participation Activities

The first major phase of public outreach activities was undertaken in early 2011 to educate and solicit input related to transportation needs and priorities from communities throughout the county. More than 1,600 Alameda County participants provided input to the Alameda CTC during the spring of 2011. This input painted a broad picture of the county's transportation needs. Community input was used to develop a list of potential projects and programs for inclusion in the draft CWTP/TEP. Input was solicited through a variety of methods, including:

- Five public workshops in spring 2011.
- A poll of registered Alameda County voters.
- An online questionnaire.
- In-person small group dialogues using an "outreach toolkit" with the same questionnaire as the online version. Dissemination of the toolkit expanded the reach of activities beyond those who could attend evening workshops.
- Community and technical advisory working group meetings.

A second major phase of public outreach will take place in fall of 2011 to review the first draft of the CWTP and gain additional information about projects and programs to be included in the TEP.

Anyone interested in the process can also access all project materials on the project website (www.AlamedaCTC.org), submit comments through the website or to project staff, and make public comments at any of the standing committee meetings, described below.

Plan Development Standing Committees

Two advisory working groups and a Steering Committee have been formed to guide the development of these plans. All meetings are open to the public, all background documents and presentations are available on the CWTP-TEP website, and copies are made available at the committee meetings.

Community and Technical Advisory Working Groups (CAWG and TAWG)

The Community Advisory Working Group was formed to assure that the CWTP and TEP are designed to meet the diverse needs of communities and businesses throughout Alameda County. CAWG has 27 members representing a broad array of perspectives and stakeholders throughout the county, including business, civil rights, education, environment, faith-based advocacy, health, public transit, social justice, seniors and people with disabilities.

The Technical Advisory Working Group provides technical input into CWTP development; members review and provide input on issues such as cost-estimating and evaluation of project and program performance, as well as review polls and reports. TAWG is comprised of 35 members, primarily staff members from cities across the county as well as staff from Alameda County, park districts and transit agencies.

These two groups serve an advisory role to the Steering Committee. CAWG and TAWG also share information with each other and assist with disseminating information to their respective constituencies and publicizing opportunities for general public input.

Steering Committee

In May 2010, the Alameda CTC created a Steering Committee, comprised of a subset of the Commission members, to lead the development of the CWTP and TEP and to make recommendations to the full Commission. Whereas the other two committees, CAWG and TAWG, are advisory in nature, the Steering Committee makes final decisions and recommendations to the Commission to adopt official plan documents and approve key milestones in the Plan's development. The 13-member committee represents all areas of the county; the members are elected officials from cities across the county and the boards of BART and AC Transit.

Full committee membership rosters are available in Appendix G.

Structure of this Report

This CWTP report is structured as follows:

Chapter 2 sets the vision for this update of the CWTP, establishing the foundation upon which all other work was conducted in the development of the CWTP. It also provides more information on the context for CWTP development and the many factors that have made this CWTP distinct from past updates. Finally, it presents the performance measures that the Alameda CTC will use to monitor and evaluate the results of this CWTP.

Chapter 3 provides a summary of the Briefing Book's key findings regarding existing and future conditions, as well as the most salient issues and challenges associated with Alameda County's future transportation system, focusing on each mode.

Chapter 4 elaborates on the integration of transportation and land use planning, which is covered briefly in Chapter 2. Coordination with land use planning is playing a far more central role in this CWTP than it has in the past due to the new policy environment; a range of land use scenarios were developed in parallel with the transportation project and program evaluation process.

Chapter 5 provides an overview of the revenues and funding sources available to finance transportation improvements in Alameda County through 2040. This is a draft projection, and thus subject to change as the policy and funding environment changes over time with the concurrent development of the Regional Transportation Plan.

Chapter 6 presents the transportation investment program, which describes the series of capital projects and programs that will receive funding. This reflects the technical evaluation process and strategic investment choices made by the Alameda CTC to best maintain and enhance the county's transportation system.

Chapter 7 outlines an implementation work plan including short-term, long-term and ongoing actions that need to be taken to enable implementation of the plan. These could include legislative actions or other actions by the Alameda CTC.

More detailed information on many of the topics in this CWTP can be found in the appendices.

2. A VISION OF THE FUTURE

A New Vision & Goals

To implement the requirements of state legislation and the new emphasis on sustainability at the regional level, the development of this Countywide Transportation Plan update began with establishing a new vision and goals. By emphasizing sustainability and equity, the new vision and integrated transportation and land use goals diverge from prior plans that focused primarily on congestion relief. This reflects Alameda County's desire to reduce the number of miles driven in private automobiles, improve multimodal connectivity and travel choices, and change land use patterns to make the use of non-auto modes more viable. The vision and goals, shown on page 2-2, were adopted by the Steering Committee in January 2011. They form the foundation of all the work that was done to create this Countywide Transportation Plan.

Performance Measures

Based on Alameda County's adopted goals, specific performance measures were developed to provide an objective, technical means to measure how well the various projects and programs met those goals. These performance measures were developed over several months with input from the Community and Technical Advisory Working Groups. They were designed to utilize available data and technical tools that represent the current state of the practice in California and the Bay Area, such as the Alameda County travel model and other analysis tools such as such as the Alameda County travel model. Other analysis tools included geographic information systems (GIS), MTC's pavement condition index (PCI), and MTC's regional transportation model. The evaluation also used custom spreadsheets created to analyze data from each of these tools, generate data used in those tools, and, where necessary, combine results with off-model data to create the required performance measures. Further detail on the analysis tools and associated data is included with the presentation of performance measure results, located in Appendix E.

The performance measures, shown on page 2-3, were adopted by the Steering Committee in March 2011. The project and program evaluation process, including a description of how these measures were applied to each project and program, is described in Chapter 6.

Performance-Based Planning

Performance-based planning is a way for competing transportation investments to be compared to each other objectively. It allows policies and goals to be expressed in quantifiable terms and creates an analytical framework to determine the degree to which different investments meet the policies and goals. The performance evaluation process is designed to be objective, yielding the same results regardless of the analyst who does the evaluation.

This approach leads to a more systematic and analytical selection process for investment priorities. It

also allows for ongoing monitoring of the performance of investments to inform future decision-making and to enable adjustments to be made as necessary. The region has been increasingly moving towards a performance-based approach for the past decade. Performance monitoring is discussed further in Chapter 6.

ALAMEDA CWTP VISION AND GOALS

Alameda County will be served by a premier transportation system that supports a vibrant and livable Alameda County through a connected and integrated multimodal transportation system promoting sustainability, access, transit operations, public health and economic opportunities.

Our vision recognizes the need to maintain and operate our existing transportation infrastructure and services while developing new investments that are targeted, effective, financially sound and supported by appropriate land uses. Mobility in Alameda County will be guided by transparent decision making and measureable performance indicators and will be supported by these goals:

Our transportation system will be:

- **Multimodal**
- **Accessible, Affordable and Equitable** for people of all ages, incomes, abilities and geographies
- **Integrated** with land use patterns and local decision-making
- **Connected** across the county, within and across the network of streets, highways, transit, bicycle and pedestrian routes
- **Reliable and Efficient**
- **Cost Effective**
- **Well Maintained**
- **Safe**
- **Supportive of a Healthy and Clean Environment**

Each of these goals was attributed to a specific set of performance measures to evaluate individual projects and programs in a "first level" of technical analysis. Performance measures were also used in a second evaluation, which analyzed how groups of projects and programs performed together in meeting the adopted goals for the CWTP. Figure 2-1 outlines the performance measures for both levels of technical analysis.

Figure 2-1 Alameda County CWTP Project Performance Measures

Goal	Screening Measure	Scenario Measure
1. Multimodal	• Number of passenger and freight modes directly improved or affected by the investment	• Percent of all trips made by alternative modes (bicycling, walking, or transit)
2. Accessible, Affordable & Equitable	• Number of activity centers & transit hubs within ½ mile of the investment • Number of traffic analysis zones (TAZs) with above-average proportion of low-income households that are intersected by an investment	• Share of households, by income group, within a given travel time to activity centers • Share of households, by income group, geographically close to frequent transit service
3. Integrated w/ Land Use Patterns & Local Decision-Making	• Number of PDAs intersected by an investment	• Share of households, by income group, geographically close to frequent transit service • Transit ridership per revenue hour
4. Connected	• Ability to complete or improve a link in the regional transportation system	• Average travel time (auto, carpool, truck, transit) • Ratio of peak to off-peak travel time
5. Reliable & Efficient	• Located on an identified Congestion Management Plan route • Located on a route with above-average heavy trucks	• Average travel time (auto, carpool, truck, transit) • Ratio of peak to off-peak travel time
6. Cost Effective	• Reflected in grouping process, which groups investments based on performance measure evaluation and cost	• Reflected in grouping process, which groups investments based on performance measure evaluation and cost

Goal	Screening Measure	Scenario Measure
7. Well Maintained	• This measure was only used for evaluation of programs	• Percent of roads, by facility type, in excellent, good, low or failing condition • Estimating the remaining service life for all transit assets
8. Safe	• Number of freeways and arterial roadways with fatal crash rates above the statewide average ("safety areas") that the investment overlaps	• Collision-related injuries and fatalities for all modes
9. Clean & Healthy Environment	• This measure was only used for evaluation of programs	• Average daily travel time for bicycle and pedestrian trips • Per-capita CO_2 emissions from cars and light-duty trucks • Per-capita fine particle emissions from cars and light-duty trucks

3. EXISTING AND FUTURE CONDITIONS

Introduction

This chapter provides an overview of both existing and future conditions for Alameda County's transportation network. It provides a basic summary of conditions by travel mode and highlights key findings related to each. Finally, this chapter provides a summary of the most salient issues and challenges associated with Alameda County's future transportation system.

The primary source for this chapter is the Alameda CTC *Countywide Transportation Plan (CWTP) and Transportation Expenditure Plan (TEP) Briefing Book*, which was finalized in March 2011. The Briefing Book examined current demographic, employment, and travel conditions within Alameda County and identified projected trends for the future. In addition, the Briefing Book highlighted each mode's basic infrastructure, travel trends, and associated issues and challenges. For more detailed information or in-depth analysis, it is recommended that readers review the complete Briefing Book and related Issue Papers, included as Appendix B and C of this document.

It is also important to note that future trends discussed in this chapter are based on population and employment projections prepared by the Association of Bay Area Governments (ABAG) and adjusted for Alameda County as part of the CWTP effort to create a "Sustainable Communities Strategy Alternative Future" land use scenario. This scenario assumes local governments in Alameda County will implement land use policies that seek to concentrate growth in higher-density areas of the county. These adjustments were informed by input from regional and local planning agencies as well as the region's ongoing SCS planning process, discussed in detail in Chapter 5.

> **This chapter of the CWTP also provides a summary of the most salient issues and challenges associated with Alameda County's future transportation system.**

To generate estimates of future travel demand, population and employment data from the SCS Alternative Future land use scenario was fed into Alameda County's travel demand modeling software along with information about committed transportation improvements. The travel demand model then produced estimates of transportation system performance in the future year (2035). This forecasted future transportation data was then compared to the model base year. In this analysis, 2005 was chosen as the base year. The demographic, socioeconomic and transportation network data in the base year reflected conditions in 2005 based on estimates from ABAG, the U.S. Census Bureau, and other local sources. This document uses the travel model 2005 base year when more recent data is not available. This includes transportation indicators such as travel volumes, congestion and travel delay.

Comparing future forecasted results to a base year allowed for the identification of major trends affecting the transportation system. All future conditions data in this chapter are derived from the county model analysis unless otherwise noted.

Demographics and Travel Patterns

Overview

Alameda County extends from the Bay Area's urban core to its rural periphery. It includes 14 cities and several unincorporated communities. The county has a residential population of approximately 1.6 million and is home to an estimated three-quarters of a million jobs. The cities in Alameda County range in population from Emeryville, with 10,000 residents, to Oakland, with over 400,000 residents. Oakland and Fremont are the most populous cities in Alameda County, while Emeryville and Albany have the smallest populations.

Historically, Alameda County's planning efforts have been organized into four planning areas, each with distinct development patterns and travel characteristics (Figure 3-1):

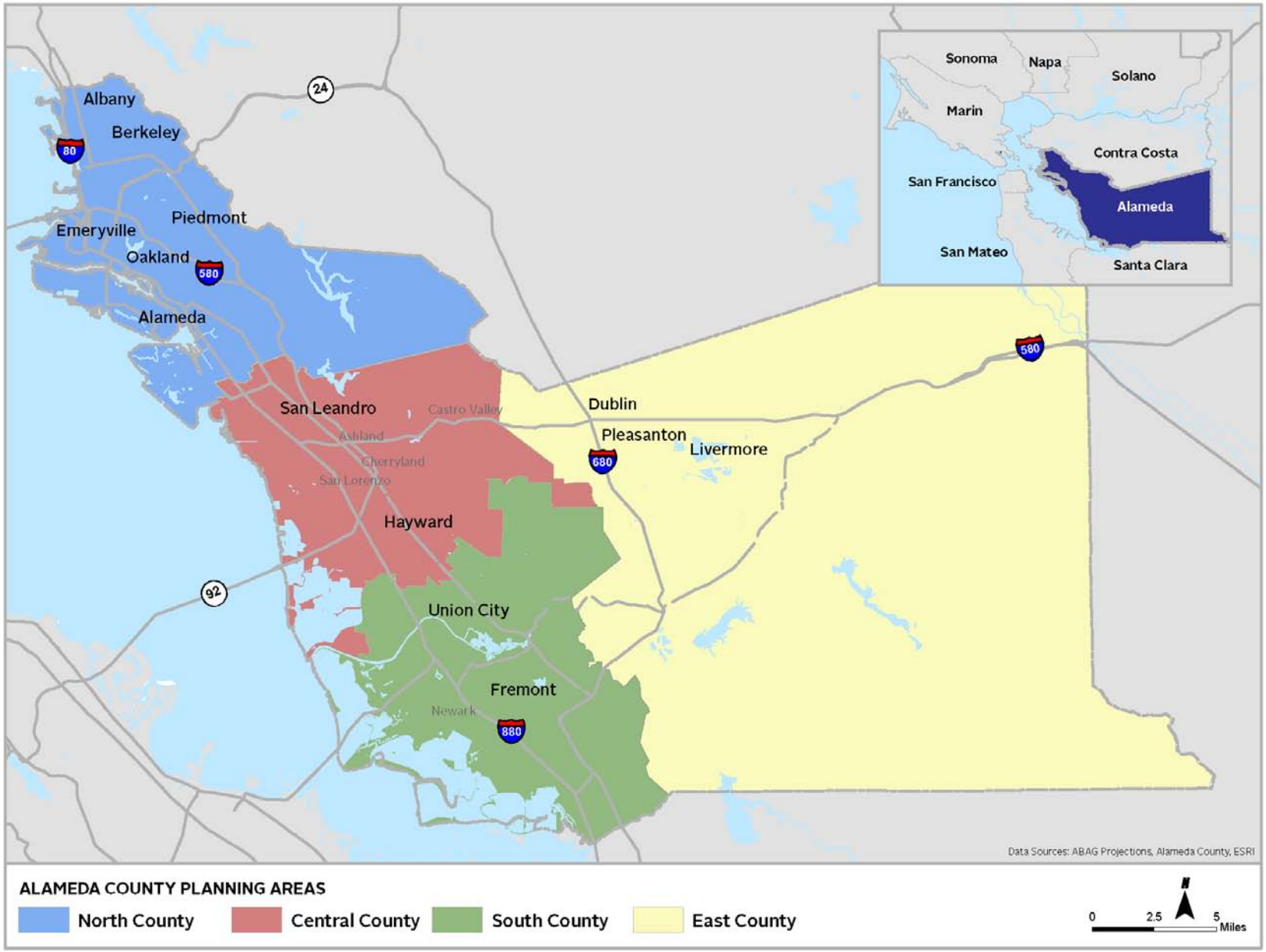
- **North County** encompassing Alameda, Albany, Berkeley, Emeryville, Oakland, and Piedmont
- **Central County** encompassing the cities of Hayward and San Leandro and the unincorporated communities of Ashland, Castro Valley, Cherryland, Eden, Fairview, and San Lorenzo
- **South County** encompassing the cities of Fremont, Newark, and Union City
- **East County** beyond the East Bay hills, including the cities of Dublin, Livermore, Pleasanton, and the unincorporated communities of Sunol and other smaller communities in the East Bay hills

Population density varies substantially throughout the county, with the urban North County being most dense, Central County encompassing a range of densities, and the more suburban South County and East County being the least dense. There are also large swathes of undeveloped land, representing the East Bay Regional Parks, regional wilderness areas (such as the Ohlone and Sunol Regional Wilderness Area), and state recreation areas.

Most importantly, however, is the diversity of Alameda County. From density, land use, and employment opportunities to race, income, and age, Alameda County is fundamentally defined by its diversity, requiring multiple transportation systems to address the multitude of needs. Residents, visitors, employees, and businesses in Alameda County all drive, carpool, take transit, bike, and walk in great numbers. Moving forward, Alameda County will need to plan for all of these modes and ensure that they continue to efficiently serve all of the region's stakeholders.

> **Alameda County is fundamentally defined by its diversity, requiring multiple transportation systems to address the multitude of needs.**

Figure 3-1 Alameda County and Its Planning Areas

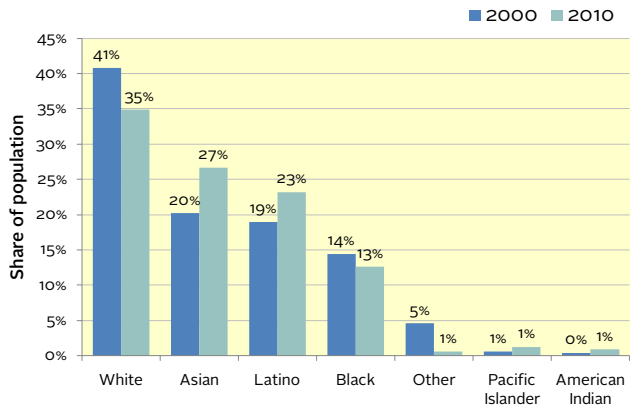


Existing Conditions

Race

Alameda County is racially diverse and has become even more so in recent years. In fact, no single ethnic or racial group makes up more than half of the population. In 2000, Caucasians were the biggest racial group at 41% of the population, but as of 2010, the proportion of white residents of Alameda County had decreased to represent roughly 35% of the population, while the share of Latinos and Asians had increased. (Figure 3-2)

Figure 3-2 Increasing Racial Diversity Over Time (2000 and 2010)



Source: U.S. Census 2000 and 2010

Age

As of 2005, approximately 10% of the population of Alameda County was above 65 years of age. The largest share of the existing population (40%) is the 20-44 age cohort.

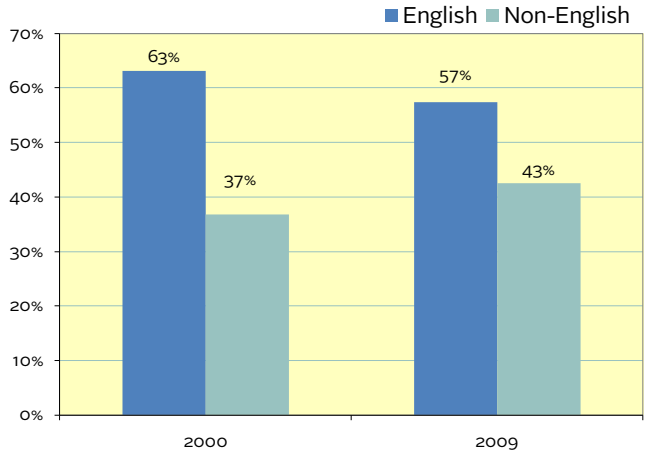
Income

Alameda County also has a diversity of income levels, with household income distributed relatively evenly across all income levels: almost one-third of households earn less than $35,000 per year, another 22% earn more than $100,000 per year, and the remainder earn between $35,000 and $100,000. Median household income has fallen slightly (about 3%) over the past decade. The highest concentrations of low-income residents in the county are in the western portions of the county, concentrated in Oakland and Berkeley.

Language

The diversity of Alameda County is also reflected by the fact that a large, and growing, portion of households in Alameda County do not speak English as their primary language at home. In 2009, English was the primary language spoken at home for 57% of households, down from 63% in 2000, as shown in Figure 3-3. Non-English speakers are concentrated in parts of Union City, Fremont, Hayward, and Oakland.

Figure 3-3 English vs. Non-English Speaking Households (2000 and 2009)



Source: U.S. Census 2000, American Community Survey, 2009

Employment

The number of jobs and employment opportunities vary throughout Alameda County. According to ABAG estimates, employment is most heavily concentrated in Oakland (26% of all jobs), Fremont (13%), Berkeley (11%), and Hayward (10%). Together, these four cities accounted for 60% of jobs in Alameda County as of 2010.

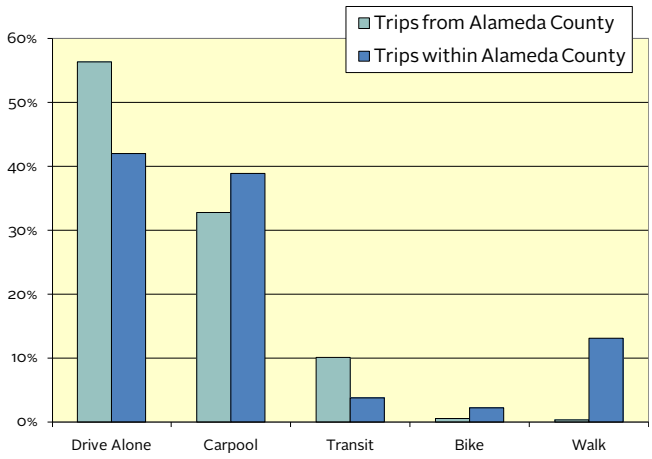
Vehicle Ownership

According to ABAG estimates, most households in the county own at least one vehicle, while a substantial share (approximately 14%) owns no vehicle. This represents the second-largest share of zero-vehicle households in the Bay Area counties after San Francisco. The largest shares of zero-vehicle households in the county are located in the downtown areas of Berkeley and Oakland.

Travel Mode

Alameda County residents and workers have a variety of modes of travel available to them. According to ABAG estimates, most (83%) of all trips to, from, or within the county are made by automobile, but almost half of all daily driving trips are made in carpools. Another 17% are made by transit, bicycling, or walking. These percentages are similar to Bay Area regional averages. Trips made just within Alameda County, however, are more likely to have a higher transit, walking, or bicycling mode share than trips traveling beyond the county's borders, as shown in Figure 3-4.

Figure 3-4 Share of Current Daily Trips by Mode of Travel (2005)



Source: Alameda County travel demand model output representing 2005 conditions.

Future Trends, Issues and Challenges

Population and employment growth

In 2035, Alameda County will be home to about 1.9 million people and 1.2 million jobs, representing an increase of 24% and 14% respectively from 2005 (Figure 3-5). These growth projections take into account the impacts of the current economic recession, and have been revised downward significantly from earlier projections that predicted a nearly 50% increase in jobs by 2035.[1] Nevertheless, accommodating close to a million additional residents and employees combined will require significant new investments in the transportation system.

Figure 3-5 Growth in Population and Employment

	2005	2035	Percent Change
Population	1.15 million	1.87 million	24%
Employment	730,000	830,000	14%

Source: Alameda County travel model. Numbers are rounded. See Chapter 4 for additional detail regarding land use scenarios.

Suburban job growth projected

The SCS Alternative Future land use scenario redistributes some growth to higher-density locations within the county. Even with this emphasis on higher densities, suburban job centers are expected to experience the highest rates of job growth relative to the older urban core cities. For example, the largest projected increase will be in Dublin, which is expected to experience a 65% increase in employment. By contrast, Oakland and Berkeley, where the majority of the county's current transit infrastructure exists, are projected to experience job growth of 15% and 1%, respectively (Figure 3-6).

Figure 3-6 Projected Change in Employment by City, 2005-2035[2]

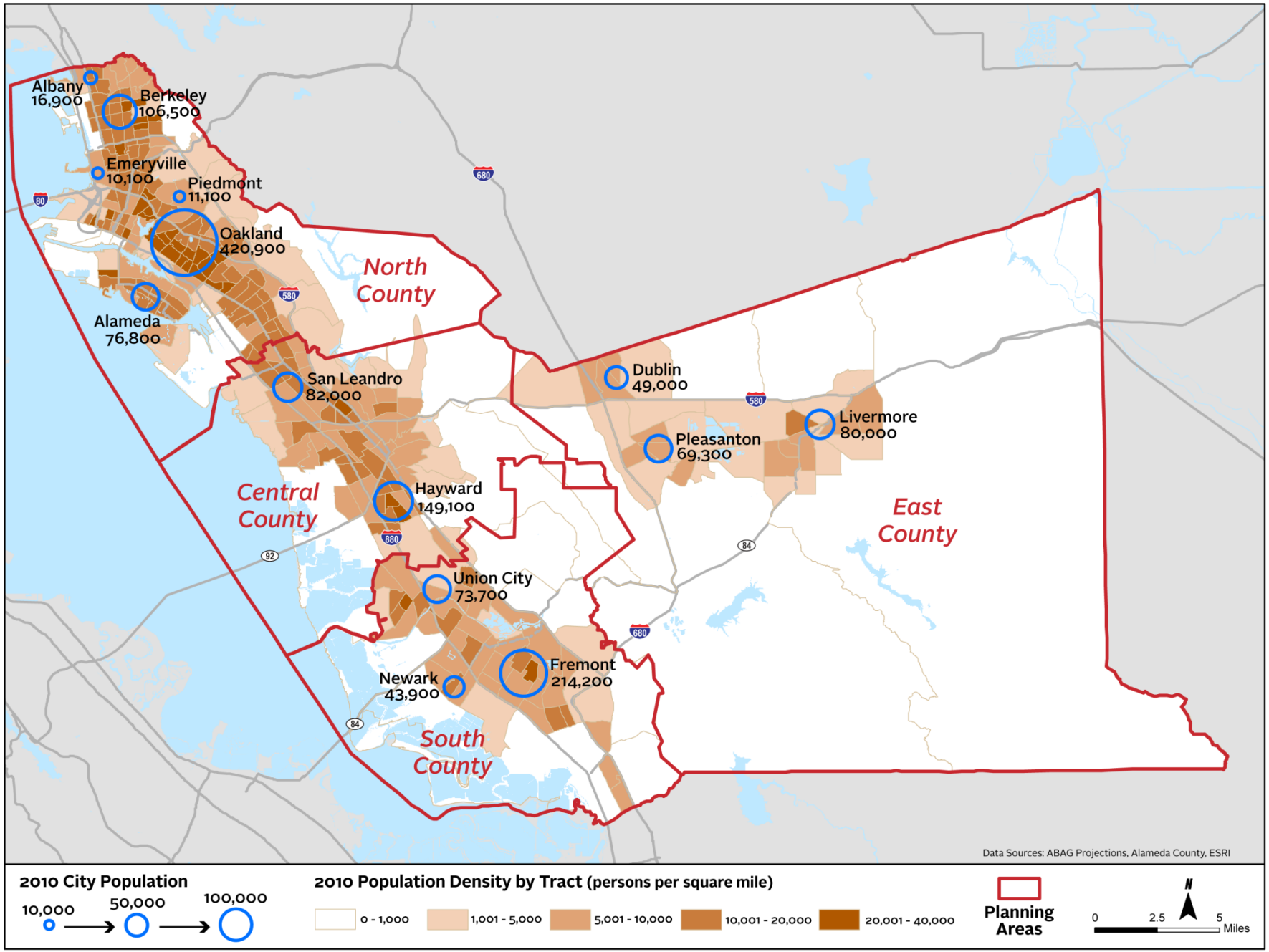
Cities	2005	2035	Change
Dublin	18,227	30,054	65%
Union City	19,720	26,839	36%
Livermore	23,421	31,862	36%
Alameda	27,401	33,096	21%
Emeryville	19,670	23,005	17%
Oakland	203,304	234,801	15%
San Leandro	41,637	46,372	11%
Fremont	100,287	111,579	11%
Newark	19,562	21,579	10%
Castro Valley	13,196	14,468	10%
Hayward	75,171	81,624	9%
Pleasanton	58,317	60,786	4%
Berkeley	75,456	76,466	1%

Source: Alameda County travel model

[1] Source: ABAG 2007, as cited in the *Alameda CTC CWTP and TEP Briefing Book*.

[2] *It should be noted that these job growth figures by city may be different in the final SCS land use strategy currently being finalized by MTC and ABAG. Their process is discussed in more detail in Chapter 4.*

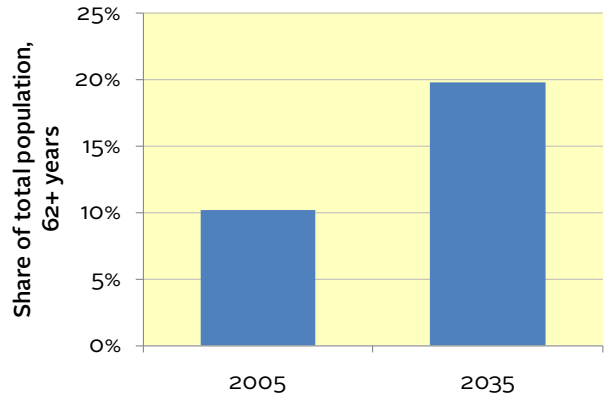
Figure 3-7 Alameda County Population and Density



Growing senior population

Seniors are a sector of the population that has unique mobility needs requiring specially designed transportation services. In addition, the share of Alameda County's population made up by seniors is growing. According to the Alameda County travel model, in 2005 the share of the population aged 62 and older was just above 10%; by 2035 it will have reached nearly 20% (Figure 3-8). Between 2005 and 2035, about 150,000 additional residents in this age category will be living in Alameda County. As this demographic shift occurs, the needs of this sector of the population and the services and infrastructure to meet those needs will become an increasingly prevalent part of our transportation planning.

Figure 3-8 Seniors as Share of Total Population



Source: Alameda County Travel Model

Growing share of zero-vehicle households

The Alameda County travel model projects that the number of households in the county that do not own a vehicle will increase from approximately 14% in 2005 to 18% in 2035. The absolute number of households with zero vehicles will increase by about 50,000 over the same period. Households without cars include many that cannot afford a car, as well as a growing number of households that are car-free by choice. Alameda County will continue to have the second-largest share of zero-vehicle households in the Bay Area after San Francisco. This trend will likely translate into increased demand for mass transit services and bicycling and walking infrastructure.

Highways and Roadways

Overview

Alameda County's roadways are the backbone of its transportation system, facilitating regional travel and connecting the county with major Bay Area destinations. For example, interstates 80, 580, and 680 link Alameda County to San Francisco in the west, and Solano, Contra Costa, and San Joaquin counties to the north and east. I-880 connects Alameda County with San Mateo and Santa Clara counties to the west and south, home to many key employment destinations in Silicon Valley. Alameda County roadway facilities also connect to three Bay Area bridges that link the East Bay to San Francisco and destinations on the southern Peninsula. Finally, an integrated network of freeways internal to Alameda County (I-980, SR-24, I-238, Route 84) and a comprehensive system of arterial roadways and local streets facilitate trips within the county.

It is important to remember that although our roadways are most often associated with auto trips, they are also essential for carrying all modes of travel including freight, auto, transit, bike and pedestrian trips. Ensuring their proper design, operation, and maintenance, therefore, will benefit multiple modes of travel.

> **Though most often associated with auto trips, roads are also essential for carrying all modes of travel including freight, auto, transit, bike and pedestrian trips.**

Existing Conditions

Congestion

Alameda County is home to some of the most heavily traveled freeways and arterials in the San Francisco Bay Area. Five of the top ten most congested Bay Area freeway corridors are located within the county. For example, the I-80 westbound corridor (since the 1990s) and the I-580 eastbound and westbound corridors (since 2005) have been ranked as the top three most congested locations in the Bay Area. See Figure 3-9 for the top ten congested corridors in Alameda County.

Vehicle Hours of Delay

Vehicle hours of delay (VHD) is a measure of the level and duration of congestion on a particular roadway. According to the Caltrans District 4 Highway Congestion Monitoring Data, the highest levels of delay occurred around 2001 and have fallen since then, likely due to the economic recession.

Average Travel Speeds

From 2006 to the present, overall average speeds have been improving for both freeways and arterials, particularly during the PM peak period. Overall average travel speeds on the freeway system during the PM peak period increased by about four miles per hour between 2006 and 2010. On county arterials, speeds increased 3.5 miles per hour between 2006 and 2010.[3]

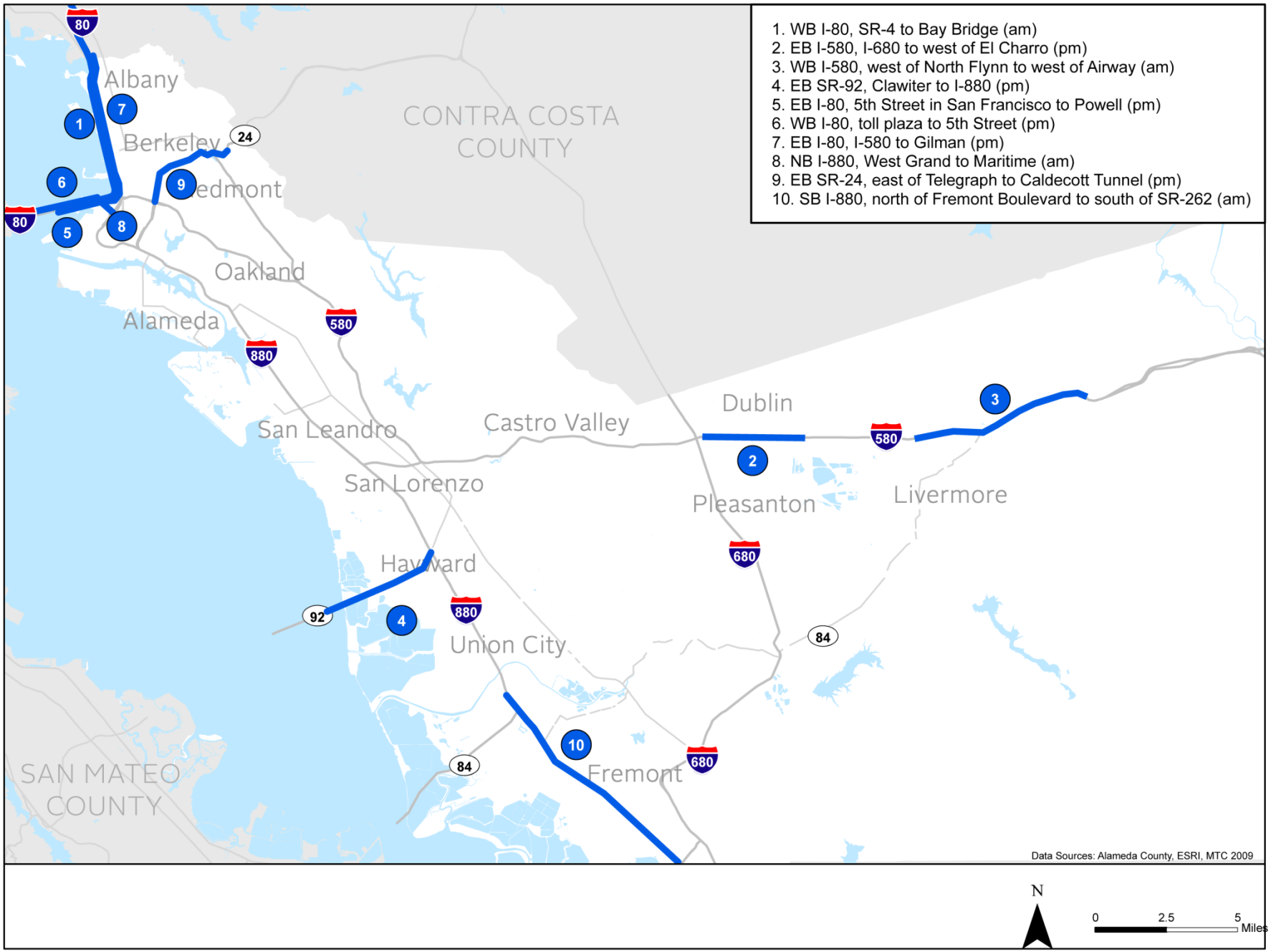
Maintenance

The pavement condition index (PCI) is a measurement of pavement quality and conditions. The PCI ranges from zero, which represents the worst conditions, to 100, which represents a newly paved road. According to an MTC summary of PCI reports by jurisdiction from 2006-2010, Alameda County has a mixed record for pavement quality. In 2010, Alameda County itself had a PCI of "Good" (PCI between 70-79), reflecting a general upward trend in pavement quality. However, PCIs by jurisdiction were very inconsistent. On one hand, the City of Dublin had PCIs of 80+ ("Very Good"), while the cities of Livermore, Union City, Pleasanton, and Emeryville all had PCIs of "Good." By contrast, the City of Alameda and the City of Oakland were classified in the "At-Risk" category – PCI less than 60. These cities also appear to be on a consistent downward trend in PCI.[4]

[3] Source: Alameda County LOS Monitoring Reports

[4] MTC, *The Pothole Report: Can the Bay Area Have Better Roads?* June 2011. http://www.mtc.ca.gov/library/pothole_report/Pothole_Report_2011.pdf

Figure 3-9 Top 10 Congested Freeway Corridors in Alameda County 2009



Safety

The number of freeway collisions peaked in 2000, according to the Caltrans and Alameda CTC Annual Performance Report, but has been decreasing significantly since then as shown in Figure 3-10. In 2008, the number of freeway collision occurrences was at its lowest since 1995. This is consistent with national trends indicating steep declines in the number of collisions and collision rates since the start of the economic recession.

Figure 3-10 Collisions on Alameda County Freeways

Source: Caltrans, District 4 and Alameda CTC Annual Performance Report 2008-2009

System Management

A number of innovative strategies are currently being used to manage congestion, including Transportation Systems Management (TSM) programs. Major TSM programs in Alameda County include ramp metering on several segments of the freeway system and several signal coordination and phasing/timing optimization projects, including the East Bay Smart Corridors Program. The county also benefits from the 511®/Advanced Traveler Information System (ATIS) service available throughout the Bay Area.

Future Trends, Issues and Challenges

Increasing roadway usage

More people and more jobs in the Bay Area will mean more demand on Alameda County streets and regional highways. While Alameda County and the region are focused on mitigating the impact of auto travel by reducing vehicle miles traveled (VMT), the Alameda County travel model forecasts that without significant changes in land use patterns and transportation investment policies, VMT in the county will continue to increase. Based on the future year model results, VMT is expected to increase in Alameda County by approximately 40% by 2035 (Figure 3-11). Demand is likely to be heaviest on expressways where traffic is already high, with a more than 100% projected increase on arterial roadways alone. Regional trends are similar, as the model shows VMT increases of at least 20% in all counties in the region, with up to 50% increases in miles traveled.

Figure 3-11 Change in Alameda County vehicle miles traveled by facility type, 2005-2035

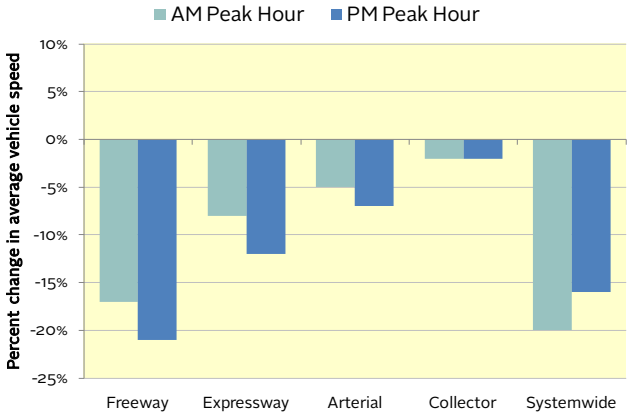
Facility Type	Percent change in average daily VMT
Freeway	32%
Expressway	106%
Arterial	54%
Collector	49%
Systemwide	**40%**

Source: Alameda County travel model

Declining travel speeds

Average travel speeds on Alameda County freeways and arterials are also forecasted to decrease by about 10% during peak periods by 2035. According to the Alameda County travel model, for example, freeway speeds would drop from an average of approximately 45 miles per hour to less than 40 miles per hour in 2035. The evening period should expect the greatest congestion and decrease in travel speeds, as trips for work and evening recreation overlap on the county network. As another example, average travel time from the southern to northern areas of the county (including Oakland) is projected to increase by over 50% during the AM peak hour and by over 15% in the PM peak hour.

Figure 3-12 Percent change in vehicle speed by facility type in Alameda County, 2005-2035



Source: Alameda County travel model

Increased congestion

Additional VMT and increased travel times are signs that many of the county's top congested corridors will be operating over capacity, even more than is already the case. Congestion levels are strongly influenced by a number of factors, including economic conditions, but the Alameda County travel model projects that congestion on some corridors in the county could increase up to 40% in the peak travel periods.[5] Similarly, travel times could increase in many areas of the county, adding up to 10 minutes of delay, on average, during peak periods in some corridors.

Some of the most congested corridors today (Figure 3-9) will remain very congested in the future, including the Bay Bridge Toll Plaza and adjoining freeways , I-80 and I-580 through Berkeley and El Cerrito, the Caldecott Tunnel area, and sections of I-580 around Dublin and Livermore. This congestion will occur even with committed roadway improvements in place (see Chapter 6).

Poor pavement conditions

Increased automobile and freight travel will likely result in declining pavement conditions. This need will be especially pronounced in older jurisdictions where infrastructure is more likely to be at the end of its life cycle. In addition, jurisdictions are faced with increasingly tight road maintenance budgets. Unless additional funding is identified, cities will likely have an even harder time keeping up with their road maintenance needs.

[5] Congestion is measured here as the volume-to-capacity ratio.

Increased number of collisions

The Alameda County travel model forecast, combined with MTC crash rate estimates, showed increased automobile travel that resulted in an increased number of roadway collisions in 2035, including collisions involving pedestrians and bicyclists. As noted above, VMT is expected to increase approximately 40% by 2035, resulting in an increase in total annual traffic incidents of approximately 50%.

Transit

Overview

Transit service in Alameda County includes multiple modes (rail, bus, ferry and shuttle) and is provided by a number of public and private operators. The two major operators in the county are BART and AC Transit, which account for the vast majority (close to 95%) of transit usage, as shown in Figure 3-13. Shuttles also play a significant role in the county's transit network, as they often bridge gaps between employment centers, medical or educational institutions, shopping centers, and BART.

> **Short of dramatic changes in the funding outlook, transit operators will continue to have to rely on service reductions, fare increases, and staff reductions to balance their budgets.**

Existing Conditions

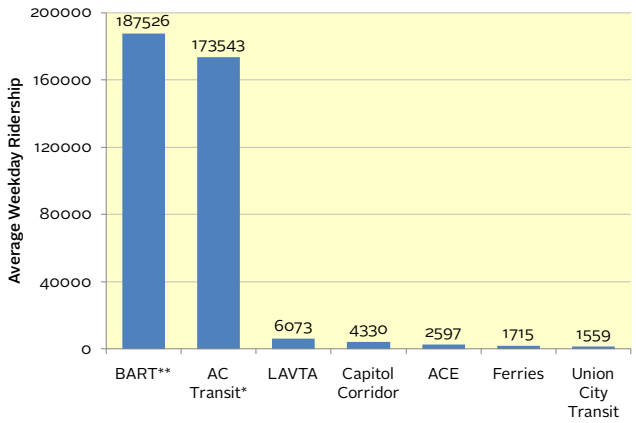
Diversity of service

There is a huge range of transit service within Alameda County. Listed below are the various transit systems that serve the county. Ridership for the major operators is provided in Figure 3-13, while a map is provided in Figure 3-14.

- AC Transit
- BART (Bay Area Rapid Transit)
- Livermore Amador Valley Transit Authority/Wheels (LAVTA)
- Amtrak Capitol Corridor
- Altamont Commuter Express (ACE)
- Union City Transit (UCT)

- Alameda/Oakland Ferry Service (AOFS)
- Alameda Harbor Bay Ferry (AHBF)
- Shuttles:
  - Emery Go-Round
  - "B" Line
  - AirBART
  - San Leandro LINKS
  - West Berkeley Shuttle
  - UC Berkeley Bear Transit
  - Lawrence Berkeley National Laboratory shuttle
  - Estuary Crossing Shuttle
  - Other institutional shuttles
  - Senior/disabled shuttles

Figure 3-13 Average Weekday Ridership, by Alameda County Operator



** Estimated FY 2009-10 daily boardings in Alameda County, based on calculation using service hours and population from ACCMA 2006-07 Performance Report*
***January 2010 trips with one or both exists in Alameda County*

Sources:

Metropolitan Transportation Commission (MTC): Statistical Summary of Bay Area Transit Operators, June 2011
Capitol Corridor Joint Powers Authority: Capitol Corridor Business Plan Update – FY2011-12 – FY 2012-13, March 2011
BART: Monthly Ridership Report, January 2010
All data is FY 2009-10 except: BART Ridership (January 2010)

Important role for paratransit

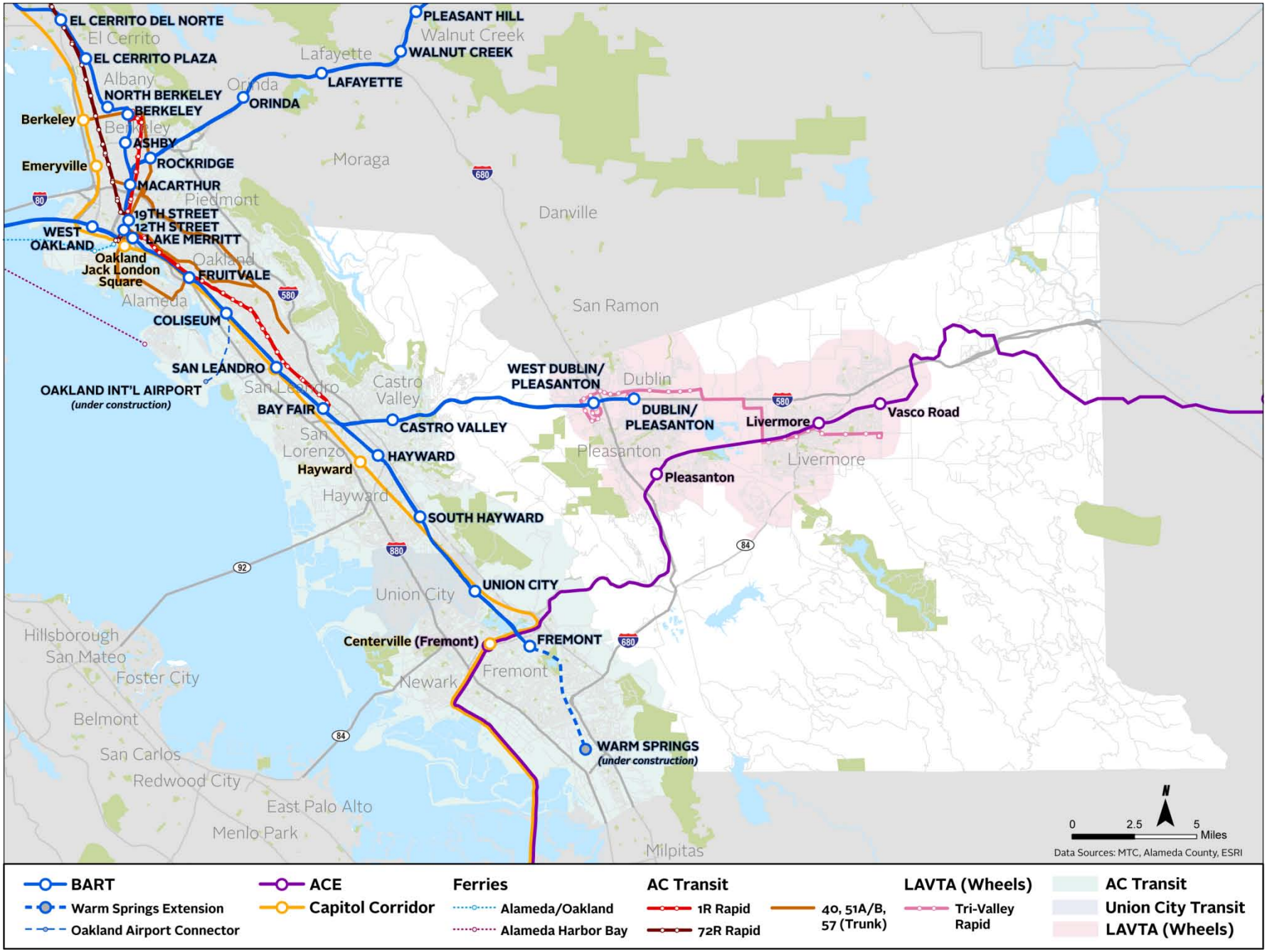
Under the Americans with Disabilities Act (ADA), transit providers are required to provide demand-responsive, origin-to-destination service within three-quarters of a mile of their routes for people with disabilities who are unable to ride standard buses or trains. All public transit operators in Alameda County provide these services. East Bay Paratransit (the paratransit provider for AC Transit and BART) provides close to 700,000 annual trips for ADA paratransit registrants. Approximately 66,000 annual paratransit trips are also provided on LAVTA's Wheels service, and another 18,000 on Union City Transit's paratransit service.

In addition, there are a number of transportation services for seniors and people with disabilities, such as city-based shuttles and taxi subsidy programs, provided throughout the county and funded by the county sales tax, Measure B, and city funds.

Emerging new technologies

In order to overcome existing barriers related to coordination between transit systems, as well as the challenges that passengers can experience managing fares and transferring from one transit system to another, many of the major transit agencies in the Bay Area (BART, AC Transit, Caltrain, Golden Gate Transit & Ferry, and Muni) are transferring to Clipper "smart cards." The use of real-time arrival, departure, and travel time information through Google Transit, NextBus, and 511 has also emerged as a common tool for transit agencies to improve customer experience.

Figure 3-14 Alameda County Major Transit (Existing and Under Construction)



Future Trends, Issues and Challenges

Though many differences exist among the transit operators in Alameda County, they are united by a number of common themes and challenges. These include:

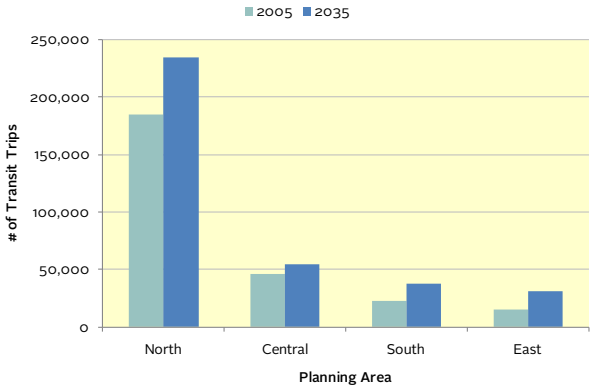
Increasing transit demand

Public transportation currently accounts for approximately 6% of total trips made in, to or from Alameda County, according to the Alameda County travel model. Without significant new investment in transit infrastructure, the transit mode share is expected to remain approximately the same in the future. However, even with a constant transit mode share, the absolute number of public transit riders will increase due to population growth. Daily transit travel is expected to increase by about 33%, or nearly 90,000 new daily trips.

As shown in Figure 3-15, the greatest increase in ridership is expected in the North County planning area where the greatest population and employment densities are located. North County also has key transit connections to San Francisco and other key regional destinations. The forecasted data reinforces the importance of key bus and rail hubs in Alameda County.

This means more riders on the busiest routes, increased need for new service in growing areas of the county, and strain on Alameda County's diverse transportation agencies to maintain their existing levels of service. The increasing demand for transit services comes at a time when transit systems across the county are facing significant funding challenges, resulting in both reductions in service and increases in fares.

Figure 3-15 Alameda County Daily Transit Trips, 2005-2035



Source: Alameda County travel model

Lack of financial sustainability

All major transit operators in Alameda County (BART, AC Transit, LAVTA and Union City Transit) are facing severe financial shortfalls, and this trend may continue in the future. These operators have all been forced to cut service, raise fares, and/or reduce staff in recent years to balance budgets. Furthermore, all operators are facing significant challenges in identifying and securing funding for future capital expenditures and maintenance needs. Meanwhile, traditional funding sources, such as operating dollars from the state, are declining. Short of dramatic changes in the funding outlook, transit operators will continue to have to rely on service reductions, fare increases, and staff reductions to balance their budgets.

Balancing expansion with service enhancements

These financial challenges have arisen in part from a longer-term structural problem of reductions in state and federal funding, coupled with increasing wage and benefit costs (and to a lesser extent, fuel costs), which have resulted in declining cost-effectiveness. This indicates a need to increase ridership (which aligns with other goals of decreasing roadway congestion and auto mode share). However, this need is often met through service expansion, which must be balanced against sustaining and enhancing current service for existing riders who depend on it.

Need for improved connectivity

Many transit riders in Alameda County must use more than one transit system to meet their daily travel needs and are acutely aware of the fragmented nature of the regional system. Also, transit systems in Alameda

County are often faced with the problem of "last mile" connections, which generally refers to the last mile gap between a transit station and a user's origin/destination. Improving connectivity and coordination is a key element of transit system effectiveness.

Need for cost-effective solutions

Several high-profile transit capital investments have already been planned for the future, including the BART extension to Warm Springs and the Oakland Airport Connector, and several others are already "on the books." These types of rail investments have proved popular, yet ultimately there are limitations to the amount of expensive rail infrastructure that can be built, particularly in an environment of drastically reduced transit funding. Quality bus service, including Bus Rapid Transit, and enhanced transit priority treatments to improve the speed and reliability of bus travel are important parts of a transit strategy for the county and can also serve to complement and supplement regional rail service. In short, a balanced approach to new transit investments that maximizes cost-effectiveness is needed as Alameda County plans for the future.

Bicycling

Overview

Bicycling is a vital part of Alameda County's transportation system. It provides a healthy way to explore many of the county's unique recreational opportunities and also serves as a crucial commute and travel mode for many during their daily activities. The importance of bicycling will only continue to grow as people seek out healthy, cost-effective, and non-polluting ways of getting around in the coming decades. The county has made significant strides in developing appropriate and safe infrastructure for bicyclists, but additional investment is needed to meet both current and future demand.

It is beyond the scope of this document to describe in detail the local and regional bicycle network in Alameda County. For more information on the existing and proposed bicycle network please refer to the Alameda CTC Briefing Book, the Alameda Countywide Bicycle Plan, and each jurisdiction's bicycle master plan.

> **The U.S. Census indicates that commuting by bicycle has increased by approximately 20% since 2000 in Alameda County.**

Existing Conditions

Bicycle ridership

In 2000, MTC estimated that approximately 593,000 bicycle trips were made every week in Alameda County, or almost 85,000 trips daily. These figures do not include trips to transit, which comprise more than 77,000 weekday trips to various transit systems throughout the county. The U.S. Census[6] indicates that commuting by bicycle has increased by approximately 18% since 2000 in Alameda County.

In addition, the bicycle commute share in Alameda County increased from 1.2% to 1.5% between 2000 and 2006-2008. Although this is still a small share of overall commuters, it represents a 21% increase in less than a decade, reflecting the growing popularity of bicycle transportation.

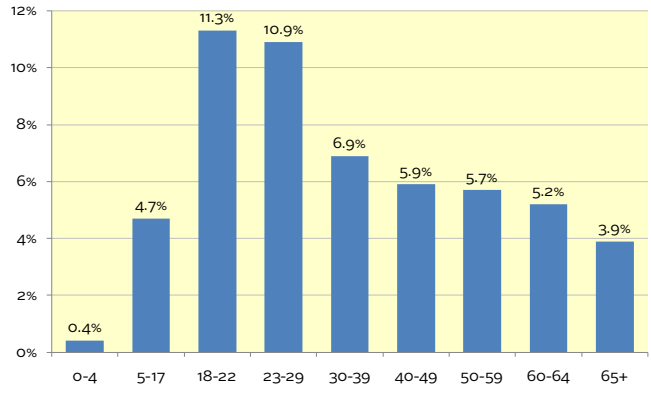
Bicyclist demographics

In Alameda County, as in the U.S. as a whole, far fewer women bicycle than men. Women make only one-third of all bicycling trips, or just under half as many as men. The highest bicycle mode share in Alameda County is for the 18-22 age cohort at 11.3%. Not surprisingly, as people get older they typically use bicycles less often as a means of transportation, as evidenced by the fact that less than 4% of people over 65 years of age travel by bicycle. Finally, bicycle ridership also varies by income level. In Alameda County, the highest mode shares for bicycle travel are in the "low" (less than $30,000) and the "high-medium" ($60,000-$100,000) income groups.[7]

[6] 2000 U.S. Census and 2005-09 American Community Survey

[7] Bay Area Travel Survey (BATS) 2000. The most recent household, BATS 2000, travel survey was done by MTC in 2000. No additional MTC regional travel surveys have been performed since.

Figure 3-16 Bike Mode Share by Age Group in Alameda County

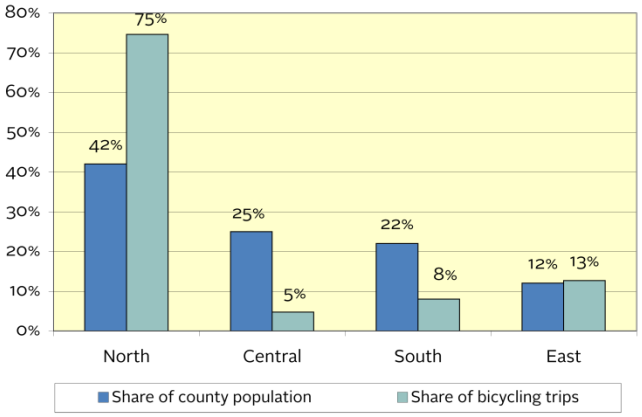


Source: BATS 2000

Bicycle trip distribution

Approximately 75% of all bicycle trips in the county are in North County, far over its population share of 42%. Fewer Central and South County residents are bicycling. These two areas account for almost 50% of the population but only 13% of the county's bike trips. In East County, the share of bicycle travel and share of population are relatively balanced (13% and 12%), as shown in Figure 3-17.

Figure 3-17 Share of Bicycle Travel in Alameda County Compared with Share of Population by Planning Area



Sources; BATS 2000, 2006-2008 ACS

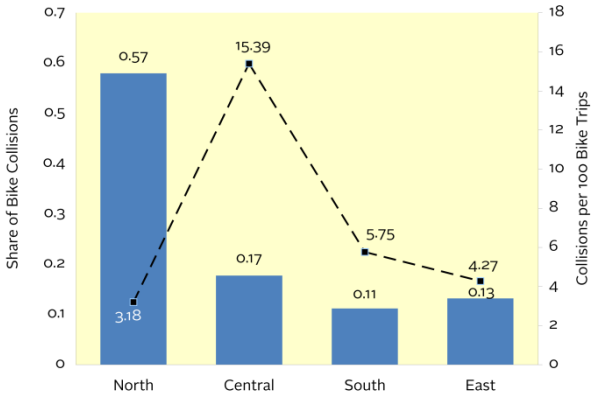
Bicycle collisions

The number of bicycle collisions has been relatively stable since 2001. Over the past eight years, there was an average of 581 bicycle collisions in Alameda County, with just under three fatalities per year. The number of annual bicycle collisions remained relatively stable between 2001 and 2007, fluctuating within a narrow range between 500 and 600. In 2008, there was a spike in collisions to 737.[8]

Bicycle collision rate

North County has the lowest bicycle collision rate. While having the highest number of bicycle collisions, North County has the fewest collisions per 100 bike trips, at three. Although it has a small overall share of the county's collisions, Central County has the most collisions per 100 bike commuters at 15, a rate five times that of North County (Figure 3-18).

Figure 3-18 Share of Bicycle Collisions and Collisions per 100 Bike Trips



Sources; SWITRS, 2000 Census, 2006-2008 ACS

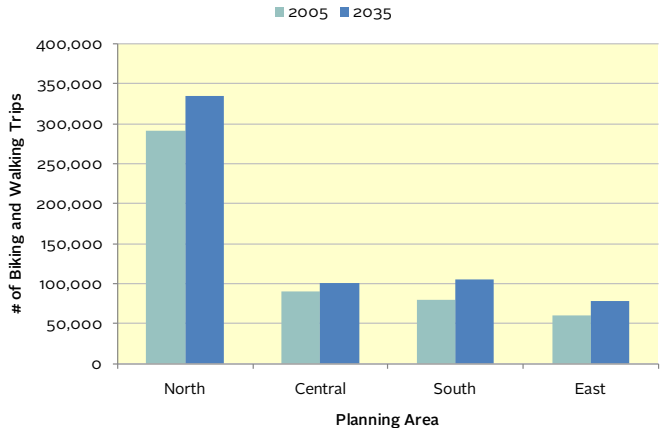
Future trends, issues and challenges

Increased demand for bicycling

Although the share of trips made by bicycling (2%) is projected to stay constant, population and employment growth will lead to increased demand for bicycling and walking, which will require additional infrastructure investment. As seen in Figure 3-19, the number of bicycling trips is expected to increase in all planning areas, with the greatest increases in the North County and South County, likely due to the greater employment and residential densities in these areas.

[8] California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS)

Figure 3-19 Growth of Walking and Bicycling Trips, 2005 & 2035



Source: Alameda County travel model

Network gaps and barriers

Many of the most common reasons people cite for not biking—lack of safe facilities, concerns about traffic safety and long distances—are at least partly related to physical barriers or connectivity gaps in the bicycle network and, for longer trips, to transit hubs. Automobile and rail infrastructure, highways, railroads, and interchanges create a majority of the physical barriers in the existing network throughout Alameda County. Key gaps include missing segments of off-street, often multi-jurisdictional, pathways; lack of on-street bike lanes; and intersections that are inhospitable to bicycle traffic.

Insufficient funding to meet demand for facilities

Almost every local jurisdiction cites lack of funding as a major barrier to making bicycle improvements. A 2010 online survey of all 15 Alameda County jurisdictions identified an initial estimate of the level of funding required to meet bicycle infrastructure and maintenance needs. For example, the City of Oakland identified over $35 million for bicycle projects, while the City of Pleasanton identified close to $30 million in bicycle funding needed.

Walking

Overview

Nearly every trip by any travel mode begins and ends as a walking trip. In fact, more Alameda County trips are made on foot than by any other non-auto mode. As such, the ability of pedestrians to travel with comfort, ease, and safety is vital to ensuring that Alameda County has an efficient and multimodal transportation network.

The importance of safe and accessible pedestrian facilities will only continue to increase in Alameda County in the future. Projected demographic trends and policy mandates indicate an increase in the amount of urban development conducive to short walking trips. Such trends will make addressing these needs more and more important. Furthermore, the growing need to address rising energy costs and climate change will only continue to shift demand to travel modes that are sustainable and cost-effective.

It is beyond the scope of this document to describe in detail all of the pedestrian facilities and infrastructure for each Alameda County jurisdiction. For more information on the existing and proposed pedestrian network please refer to the Alameda CTC Briefing Book, the Alameda Countywide Strategic Pedestrian Plan, and each jurisdiction's pedestrian master plan.

> **Nearly every trip by any travel mode begins and ends as a walking trip.**

Existing Conditions

Walking mode share

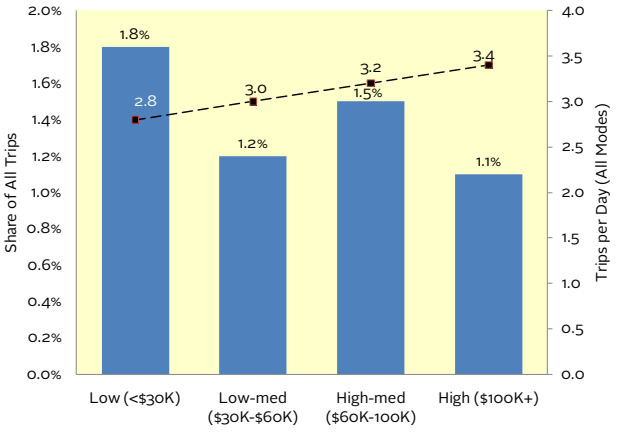
In 2000, MTC estimated that approximately 3.3 million trips were made primarily on foot every week in Alameda County. This translates to more than 470,000 daily walking trips. If walking trips to or from transit are also included, the weekday number of walking trips in Alameda County nearly doubles, including approximately 360,000 trips to AC Transit bus stops, almost 53,000 to BART stations, plus additional trips to the county's other transit agencies.

According to the 2006-08 ACS, approximately 3.6% of work commuters in Alameda County walked to work, an increase from 3.2% in 2000. This represents a significant 14% growth in the number of daily pedestrian commuters, from 21,900 to 25,000.

Walking rates

Walking rates in Alameda County vary across age groups, with people under 39 and over 65 walking more than those in middle age (ages 40-64). Children between the ages of 5 and 17 make up 28% of all walking trips in the county, consistent with schools being the county's most popular walk destination.[9]

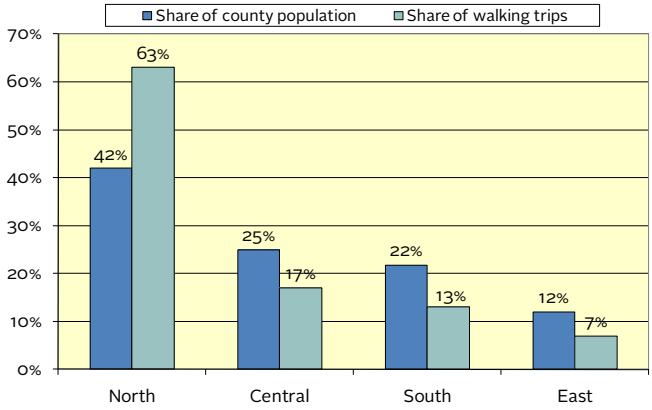
Figure 3-20 Percentage of Total Walk Trips in Alameda County by Age Group



Source: BATS 2000

Households in the lowest income group (under $30,000) make a far higher portion of their trips on foot than the highest income group (17.3% versus 7.4%). However, because people tend to make more total trips per day by all modes as their income rises, the highest income group makes more walking trips per day than the lowest income group (3.4 versus 2.8).[10]

Figure 3-21 Walk Mode Share by Household Income Level in Alameda County



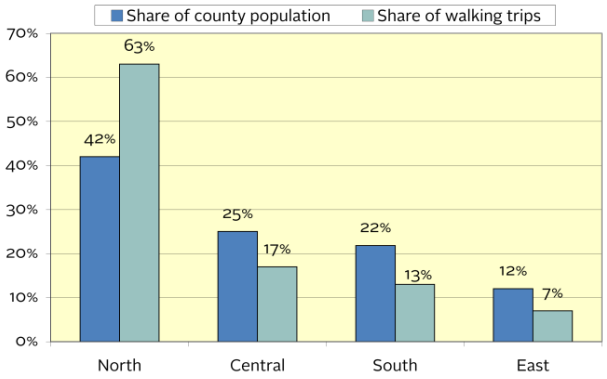
[9] Source: BATS 2000
[10] Ibid

Source: BATS 2000

Pedestrian trip distribution

More than half of all walking trips in the county take place in North County (63%), far above its population share (42%). Central, South, and East County all have lower shares of the county's walking trips than of the county's population, as shown in Figure 3-22. North County residents also walk more often, taking 16% of their trips on foot, almost three times higher than East County residents, who take 6% of trips by foot.

Figure 3-22 Share of County Population and Walking Trips by Planning Area

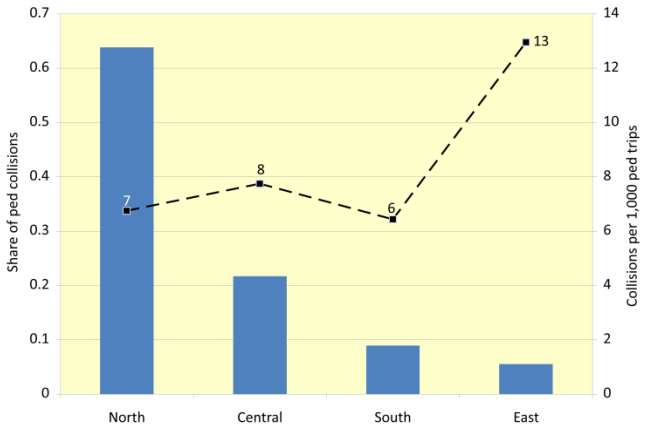


Source: BATS 2000, U.S. Census 2000

Pedestrian collision rate

East County has the highest pedestrian collision rate with 13 collisions per 1,000 pedestrian trips. North County, by contrast, while having the highest number of pedestrian collisions, has among the lowest collision rates, at 7 per 1,000 pedestrian trips, as shown in Figure 3-23.

Figure 3-23 Share of Pedestrian Collisions and Collisions per 1,000 Pedestrian Commuters



Sources: SWITRS, 2000 Census, 2006-2008 ACS

Future, Trends, Issues and Challenges

Increased demand for walking

As shown in Figure 3-19, the number of walking trips is expected to increase in all planning areas, with the greatest increases in the North County and South County, likely due to the greater employment and residential densities in these areas.

Network gaps and barriers

Many of the same physical barriers and connectivity gaps that prevent Alameda County residents from bicycling also deter them from walking. Auto and rail infrastructure such as wide, high-speed arterials, highways, interchanges and railroad tracks create significant barriers throughout the county. Key gaps include roadways without sidewalks, lack of frequent crosswalks, non-pedestrian-actuated traffic signals, and gaps in the countywide multi-use trail system.

Insufficient funding to meet demand for facilities

Almost every local jurisdiction cites lack of funding as a major barrier to making pedestrian improvements. Demand for local streets and roads funding, which would cover sidewalk maintenance, is far above available funding. A 2010 online survey of all 15 Alameda County jurisdictions identified an initial estimate of the level of funding required to meet pedestrian facility needs. For example, the City of Livermore identified $7.4 million annually for 10 years to clear the backlog of sidewalk projects, and $2.7 million annually each year after.

Goods Movement

Overview

Efficient goods movement enhances the region's competitiveness and reduces the costs of goods and services in Alameda County and the Bay Area. It facilitates both domestic and international trade by providing access to markets for local manufacturing, and providing connections to major consumer goods suppliers. International trade is the fastest growing component of local and regional goods movement, with major gateways such as the Port of Oakland and Oakland International Airport located in Alameda County.

Trucking serves most freight demand, moving a wide range of commodities and serving all freight markets. Rail provides transportation for long-haul bulk movements and supplies important transportation links to the Port of Oakland, which is serviced by both of the Class I railroads that operate in the region. With the region's largest port, a major airport, and numerous rail and trucking resources, Alameda County is a critical hub for goods movement nationwide.

With the region's largest port, a major airport, and numerous rail and trucking resources, Alameda County is a critical hub for goods movement nationwide.

Existing Conditions

Truck

Trucks move about 80% of the freight tonnage in the Bay Area, with the I-880/I-80 corridor carrying the highest volumes of truck traffic in the region and among the highest volumes of any highway in the state. Increasingly, regional distribution centers have located in the San Joaquin Valley, and trucks use the I-580 corridor to access them. The largest truck trip generators in the county are the Port of Oakland and the Oakland International Airport. (Source: MTC 2004 Bay Area Regional Goods Movement Study Report)

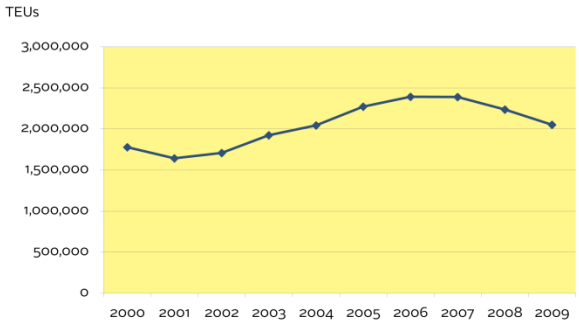
Rail

Rail carries 6% of the freight tonnage in the Bay Area, with Oakland as the center of Alameda County's rail network. Two Class I railroads operate in the county, Burlington Northern Santa Fe Railway (BNSF) and Union Pacific Railroad (UP). Rail provides transportation for long-haul bulk movements, and provides important transportation links to the Port of Oakland. (Source: MTC 2004 Bay Area Regional Goods Movement Study Report)

Waterbourne

Alameda County's waterborne freight includes containerized cargo at the Port of Oakland. Over two million 20-foot equivalent units (TEUs) are handled annually by the port, of which about 58% are exports and 42% imports. In 2008, $33 billion worth of goods passed over the port's wharves. Although port container volumes have decreased in the last three years (by 7% annually), overall the port has exhibited a positive trend in the last decade with a 15% increase from 2000 to 2009, as shown in Figure 3-24.

Figure 3-24 Port of Oakland Container Volume



Source: American Association of Port Authorities (AAPA)

Air

Oakland International Airport (OAK) is one of the three major airports in the San Francisco Bay Area, with 197 daily departures, of which 57 are all-cargo flights. In 2007 about 14.6 million passengers got on or off a plane at Oakland International Airport; the airport has experienced a 72% increase in passenger volumes over the last two decades. However, in recent years there has been a drop in passenger volume (35% decrease from 2007 to 2009), mainly attributed to a shift of domestic traffic from Oakland International Airport to San Francisco International Airport.

Air freight in the Bay Area is mostly handled by Oakland International Airport. In 2007 the airport handled about 661,000 tons of air cargo. Although this fell to 483,000 tons in 2009, in that same year, Oakland was ranked number 12 out of the North American cargo airports for handling freight volume. (Source: Oakland International Airport website)

Future Trends, Issues and Challenges

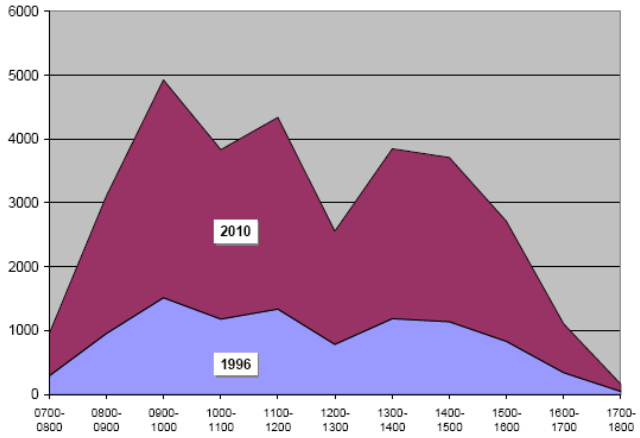
Increased demand, yet fewer supportive land uses

Recent studies have found that development trends and regional growth forecasts indicate increased demand for goods movement services, coupled with a reduction in the availability of affordable, close-in sites for land uses related to goods movement. More specifically, a large share of the central Bay Area industrial land supply may transition to higher-value new uses (office, residential, commercial). These trends could lead to relocation of goods movement related land uses to areas outside of central corridors, potentially leading to increases in land use conflicts, more truck miles and emissions, and higher costs of goods distribution.

Increased congestion for trucks

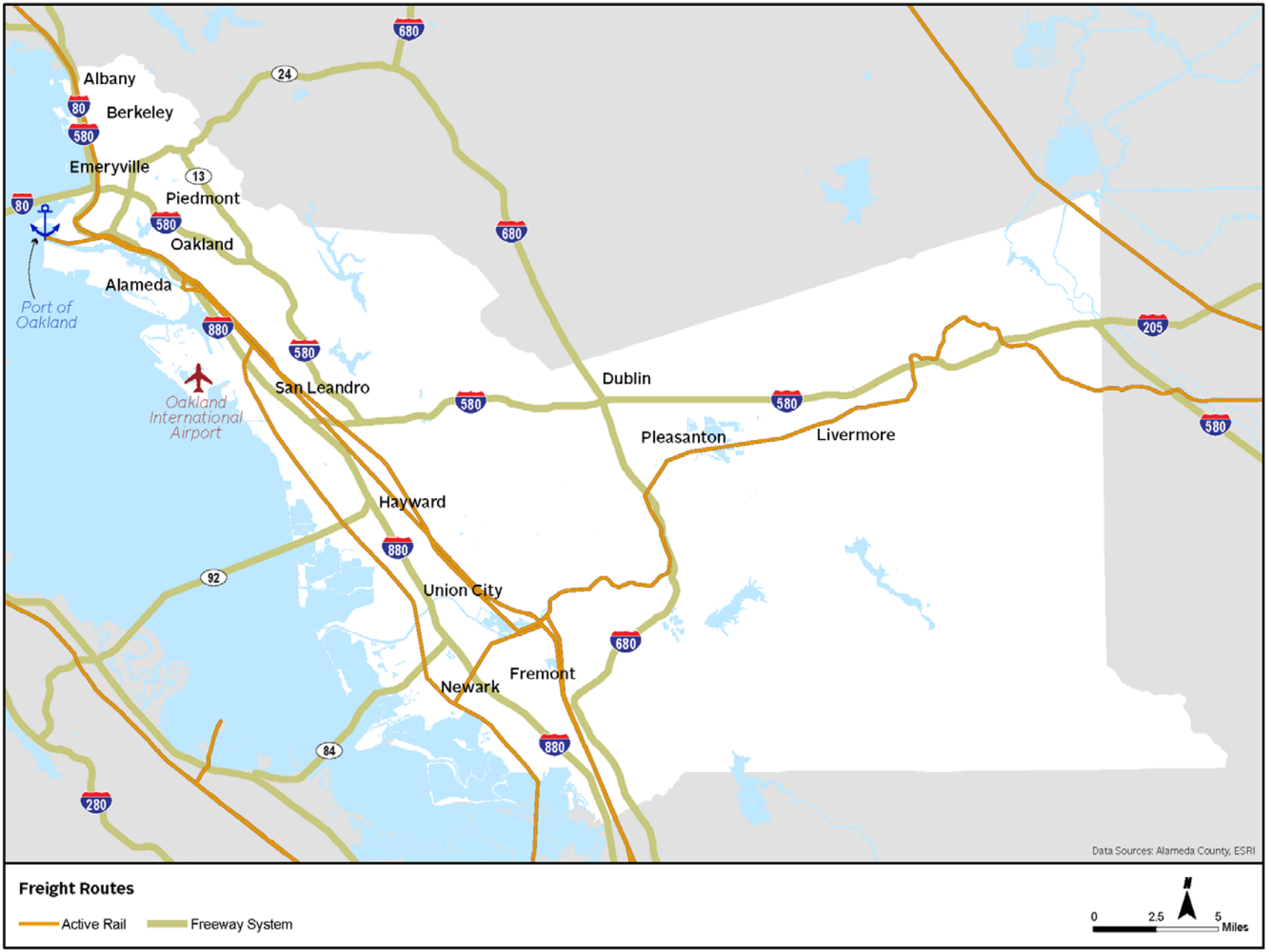
All the major truck corridors identified in Alameda County expect growing levels of recurrent congestion that will affect the cost of goods movement. Trucks are projected to find it more difficult to avoid peak period congestion in the future, since congestion is expected to spread into traditionally off-peak hours (Figure 3-25).

Figure 3-25 Weekly Port Truck Flow and Peaking (1996 and 2010)



Source: Final PID to Support the Central Alameda County LATIP, 2009

Figure 3-26 Major Freeways and Rail Lines



Competition for rail infrastructure

Freight rail traffic demand is expected to increase greatly over the next 50 years. At the same time, there is growing competition between freight rail needs and passenger needs, especially in the Capitol Corridor and Altamont Pass.

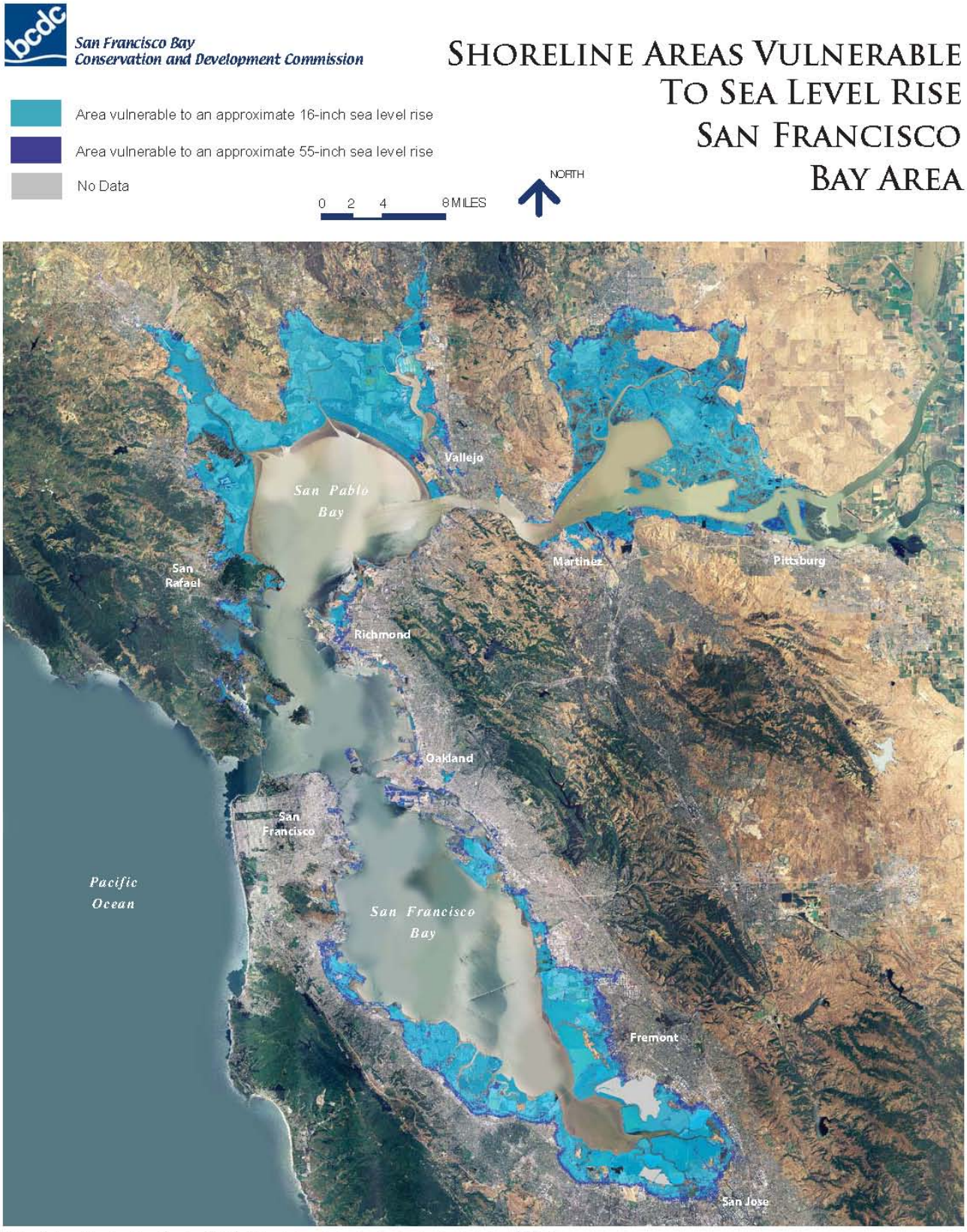
Climate change and sea level rise

The impact of sea level rise may prove a significant consideration not just for the Oakland Airport but for all low-lying infrastructure in the Bay Area. The 2009 *Caltrans Vulnerability of Transportation Systems to Sea Level Rise Preliminary Assessment* explains that impacts may include flooding of tunnels and airport runways, washouts of coastal highways and rail tracks, submersion of dock and port facilities, and a potential shift of demand in transportation. Critical facilities at the Oakland and San Francisco International Airports would be highly vulnerable with just inches of additional sea level rise, as shown in Figure 3-27.

Limited funding for capacity enhancements

The Port of Oakland has a number of major projects planned or underway to accommodate expected growth in container traffic. These projects include major redevelopments of the marine terminals and a new rail terminal. However, these projects face significant funding gaps.

Figure 3-27 Shoreline Areas Vulnerable to Sea Level Rise: 2040-2060



SOURCE: Inundation data from Knowles, 2008. Additional salt pond elevation data by Siegel and Bachand, 2002. Aerial imagery is NAIP 2005 data.

DISCLAIMER: Inundation data does not account for existing shoreline protection or wave activity. These maps are for informational purposes only. Users, by their use, agree to hold harmless and blameless the State of California and its representatives and its agents for any liability associated with its use in any form. The maps and data shall not be used to assess actual coastal hazards, insurance requirements, or property values or be used in lieu of Flood Insurance Rate Maps issued by the Federal Emergency Management Agency (FEMA).

Image source: San Francisco Bay Conservation and Development Commission

Parking and Transportation Demand Management (TDM)

Overview

Traditionally, communities have tried to meet increasing demand for roadway or parking capacity by adding more supply—either through building lanes or adding parking structures. However, that approach has become increasingly unsustainable as there is less room available to add lanes in built up areas, and as cities have discovered the negative impacts that an ever-increasing supply of roadways and parking lots has on the urban fabric.

In addition, ample free parking and roadway capacity expansions have both been shown to induce more driving over time. It has become clear that the capacity expansion approach, originally intended to reduce congestion, may be worsening it, and may have a host of other unintended negative impacts as well.

The primary alternative to increasing supply is managing demand; changing how people travel has proven to be a quite effective way to manage congestion. Managing travel demand through TDM and/or parking management techniques offers cost effective and proven approaches to reducing VMT, by leveraging existing investments and complementing investments in transit systems and other alternatives to driving. TDM and parking management strategies represent an increasingly prevalent and important approach to transportation planning in Alameda County.

> **TDM and parking management strategies represent an increasingly prevalent and important approach to transportation planning in Alameda County.**

Existing Conditions

Role of parking management and TDM strategies

Demand management strategies, in particular parking management, are already an indispensible part of Alameda County's transportation system. A number of cities in Alameda County have already begun to implement parking policy innovations and more robust TDM programs. For example, the City of Berkeley is using novel technologies to collect robust data to enable dynamic pricing. The goal of dynamic pricing in Berkeley is to respond to demand and decrease congestion while improving the economic vitality of the city's downtown. Older suburban communities in Central and South County, such as Hayward and Union City, are also implementing a new parking paradigm as they encourage TOD at their BART stations and in their urbanizing downtowns. Finally, the Alameda CTC itself also plays a key role, funding crucial TDM programs, such as the Guaranteed-Ride-Home (GRH) program.

Local control over parking and TDM strategies

TDM and parking management usually take place at the local level, with local jurisdictions approving TDM ordinances, establishing transportation conditions of approval, and setting parking policies. Similarly, execution of TDM strategies also typically happens at the local and project level, as municipalities, employers, developers, and public or private institutions assume responsibility for ensuring that TDM programs and parking management efforts are implemented.

Varied levels of parking management

Because parking is a local issue, the degree to which parking is managed differs by planning area and land use context. Cities in North County have initiated several efforts to more effectively manage their parking supply, while fewer policies are in place in the South and East Counties. As growth occurs and continues to be focused in key areas, especially around transit stations, comprehensive parking management plans for all County jurisdictions will likely need to be developed.

Future Trends, Issues and Challenges

Parking reform efforts are resource-intensive

Parking management depends on a process that is well designed, highly transparent, supported by robust data, and responsive to public input. However, many cities have not comprehensively reviewed their parking codes in years or decades, while even fewer have conducted a recent inventory of their existing parking supply or gathered data on parking demand. Consequently, even cities that have clear policy direction and political will to address parking challenges lack the required data to make informed and transparent decisions.

Limited local resources

Because local governments are increasingly constrained by a limited budget, many cities simply do not have the capital or staffing resources to expand their TDM efforts or engage in comprehensive parking reform. As a result, there is often limited funding available to initiate the parking studies that help to inform local policy decisions.

Uncertain County role

Currently, the Alameda County Transportation Commission plays a direct, but limited, role in these areas. For example, the Alameda CTC currently administers the county's GRH program. However, parking management is typically under the control of local jurisdictions, while many TDM programs are implemented at the project level. Moving forward, it is crucial that the Alameda CTC find the appropriate balance between regional involvement and local implementation.

Communities of Concern

Overview

"Communities of Concern" is a term adopted by MTC to refer to communities in the Bay Area that face particular transportation challenges, either because of affordability, disability, or age-related mobility limitations. To begin to address the needs of these communities, MTC created the Lifeline Transportation Program, as well as a number of other transportation programs that have been implemented in Alameda County to address the specific needs of low-income residents, people with disabilities, older adults, and youth.

> **Many communities in the Bay Area face particular transportation challenges, either because of affordability, disability, or age-related mobility limitations.**

Existing Conditions

Low-income populations

Roughly 13% of households in Alameda County do not own cars, which is the second highest rate in the Bay Area. Overall, 11% of county residents take public transit to work, but the proportion among low-income residents is much higher. AC Transit ridership surveys indicate that 72% of bus riders are low-income. In addition to the challenges associated with auto ownership, various planning processes have ranked the following as the greatest concerns for low-income residents of the county:

- The high cost of using AC Transit and BART
- Safety from crime while waiting for or riding the bus
- Poor walking conditions, in particular with regard to lighting and sidewalk conditions
- Lack of transit service in the evenings and on weekends

Alameda County youth

Approximately 23% of Alameda County's population is under 18 years old, while a higher proportion of youth fall below the poverty line than in the overall population (14% versus 11%). Currently, AC Transit, LAVTA, and Union City Transit all provide a considerable amount of student-oriented service. For example, 60,000 daily trips on AC Transit are taken by school-age children, with dozens of routes specifically designed to meet the needs of students. In addition, LAVTA provides 15 school tripper routes, while approximately 21% of Union City Transit's riders are youth.

These agencies are currently facing financial challenges and cutbacks that disproportionately impact youth with limited alternatives available to affordable fixed-route transit. Youth whose families do not have access to a car and are dependent upon public transit are particularly sensitive to fare increases and service cutbacks.

People with disabilities and older adults

In many parts of the U.S., the passage of the Americans with Disabilities Act (ADA) in 1990 resulted in a dramatic expansion of transportation options for people with disabilities, but also a steady scaling back of options for those who may have disabilities that do not meet the strict paratransit eligibility requirements of the ADA. As a result, in many parts of the United States, while the ADA has improved mobility for some, many frail seniors who relied on social service transportation are less mobile than before passage of the ADA. Alameda County has made additional investments in specialized accessible transportation services, funded through Alameda County's sales tax, Measure B.

Since 2002, over $60 million of Measure B funding has been invested in transportation programs that serve the needs of people with disabilities and seniors in Alameda County. The allocation of 10.45% of sales tax revenue to accessible transportation programs, the largest share of any of the county transportation sales tax measures in the Bay Area, reflects the value placed on meeting the mobility needs of some of the most vulnerable populations by the voters of Alameda County.

Paratransit trips are provided by East Bay Paratransit (the ADA mandated service), which provides the greatest number of trips, and city-based programs. It is also important to note that a significant number of people with disabilities rely on standard fixed-route transit rather than paratransit services.

Future Trends, Issues and Challenges

Need for continued emphasis on fixed-route transit service

Since fixed-route service remains a significant mode of transport for those who are unable to drive or do not have access to a car, enhanced transit services will continue to be an important means of providing access to jobs, social services, education, and medical services, as well as maintaining social connections for those who are isolated. The need for continued improvements to fixed-route service pertains to all population groups in communities of concern. The primary improvements that will be needed are:

- Transit service that is affordable, more frequent, and available over a longer span of daily service hours
- Improvements to transit shelters and stops to make them more accessible and safer
- More speedy bus service for those who are able to walk longer distances to get to their stops (such as BRT), and localized service for those who may be disadvantaged by the increased distance between BRT stops
- Improved connectivity at BART stations and the ability to transfer between BART and local bus services

Enhanced paratransit services is needed

Paratransit will continue to be an important safety net for people with disabilities who are unable to ride fixed-route services. Some improvements to paratransit service that have been identified by users are: more affordable fares, more on-demand service, better on-time performance, access to more locations, and better services for medical trips.

Improvements to pedestrian environment are essential

Safety of the pedestrian environment is very important for all communities of concern. Improvements include:

- Completion and improvement of sidewalk network, installation of curb cuts for wheelchair access, better lighting, and enhanced crosswalks
- Improvements to bicycle amenities, including bike lanes, improved pavement conditions, enforcement of traffic speeds, lighting, and ability to transfer to other modes

Improved information and assistance

Information about transit service routes and schedules is critical to the expansion of fixed-route usage. However, given the disproportionate number of non-English speakers in this population, and the limitations faced by those with visual and cognitive disabilities, there will always be room for improvement. Information needs can be summarized as follows:

- Better access to information through increased customer service staff, more translated materials, or user-friendly publications that can simplify the task of understanding trip-planning options
- While the publication of "Access Alameda" in a number of languages has proven to be an important community resource for senior and disabled transportation serivces, there remains a need to increase dissemination of this information more widely throughout the county

4. COORDINATION WITH LAND USE

Note on final CWTP content related to land use:

For the purposes of this initial draft of the CWTP, discussion of regional efforts around developing a Sustainable Communities Strategy (SCS), including the Plan Bay Area *Initial Vision Scenario*, as well as Alameda County's development of a Locally Preferred SCS, is limited. Both of those planning processes are currently underway. Pending their final results and outcomes, a full discussion of how these planning processes have influenced the development of the CWTP will be included in this chapter.

Overview

This update of the Alameda Countywide Transportation Plan places an increased level of emphasis on explicitly recognizing the connection between land use planning, transportation and sustainability. This focus on land use connections to transportation investments is consistent with regional policy and is mandated by Assembly Bill 32 and Senate Bill 375 which are designed to reduce greenhouse gas emissions and vehicle miles traveled through strengthening linkages between transportation investment decisions and land use patterns.

To further efforts to focus on the connection between land use and transportation at the local and regional level, the Metropolitan Transportation Commission (MTC), the Association of Bay Area Governments (ABAG), and the Alameda CTC, in collaboration with city planning managers throughout the county, have been examining the relationships between job and housing locations and the diverse land use policies established by different communities to develop a more sustainable scenario for future growth. These efforts are resulting in a more direct role in the transportation investment evaluation process than ever before.

The timing of this update of the Countywide Plan, concurrent with the development of the Regional Transportation Plan update, is fortuitous; it has provided Alameda County communities the opportunity to take a leadership role in the implementation of this new planning paradigm and to coordinate with broader regional efforts.

This chapter describes the legislative mandates that have led to this new policy environment, the land use planning process and products that have been a part of this CWTP update, and how they have influenced transportation investment priorities. The strengthened focus on coordination between land use and transportation planning is also described in detail in Chapter 3 of the Briefing Book, included as

Appendix B, and in the "Integration of Land Use and Transportation" issue paper included in Appendix C of this document[1] (Alameda CTC, 2011).

New Policy Environment

Assembly Bill 32 (AB 32): The California Global Warming Solutions Act

AB 32, the California Global Warming Solutions Act, passed in 2006, mandates a reduction of greenhouse gases to 1990 levels by the year 2020 through a series of emissions reduction measures. It outlines the key sectors responsible for greenhouse gas (GHG) emissions and establishes targets for each to attain. Of these, land use has been identified as one of the sectors that must develop strategies to reduce vehicle miles traveled (VMT) and thereby reduce GHG emissions from passenger vehicles. The Bay Area's target for this sector is a 7% GHG reduction by 2020, and a 15% GHG reduction by 2035.

Senate Bill 375 (SB 375): Redesigning Communities to Reduce Greenhouse Gases

Senate Bill 375, Redesigning Communities to Reduce Greenhouse Gases, was passed in the fall of 2008 to define more concrete implementation requirements for the emissions reductions expected from the land use sector in AB 32. SB 375 aims to reduce greenhouse gas emissions from passenger vehicles through better coordination between transportation and land use decisions. Research shows that increasing a community's density and its accessibility to job centers are the two most significant factors for reducing vehicle miles traveled (VMT).[2] Significant efforts are necessary to reverse California's current trend of a 2% annual growth rate in vehicle miles traveled and instead begin to reduce VMT to meet the state's emission reduction goals.

The ultimate authority to establish land use policy and approve development projects lies with local jurisdictions. However, regional agencies do play a major role in land use planning. They set the policy framework for a coordinated planning environment which allows the region to meet multiple transportation and sustainability goals. SB 375 seeks to leverage the relationship between local and regional agencies through the California Environmental Quality Act, housing elements and regional transportation plans. The fundamental goal is to encourage local governments, who have to coordinate with regional transportation agencies, to make land use and transportation planning choices that reduce VMT and GHG emissions.

The most immediate effect of SB 375 in the Bay Area is its mandate that the Regional Transportation Plan (RTP) must include a "Sustainable Communities Strategy" (SCS). The SCS is a regional land use strategy that houses all projected population within the region across all income levels and assumes that people can afford to live and work in the Bay Area thus reducing commutes. This framework is in contrast to previous countywide plans, which implicitly assumed that people would be "priced out" of the Bay Area housing market and would need to commute long distances.

The development of the Bay Area's first SCS is underway and will be incorporated into the Regional Transportation Plan that is currently in development and slated to be completed in April 2013. Once the SCS is in place, SB 375 will allow for land use changes such as streamlining CEQA requirements for certain projects that implement the region's Sustainable Communities Strategy.

The emphasis of these new legislative mandates on VMT reduction and leveraging land use changes with transportation investments is a distinct change of direction from the past when congestion relief was the key driver of the transportation planning environment and many transportation investment decisions. These new bills have had a substantive impact on transportation funding criteria at the regional and county level and in this plan have to be taken into consideration along with existing legislative mandates.

[1] All documents related to the development of the CWTP can be found on the Alameda CTC website at http://www.alamedactc.org/app_pages/view/3070

[2] "California Energy Commission & Land-Use Planning." California Energy Commission Home Page. Web. 29 Nov. 2010. http://www.energy.ca.gov/landuse/index.html

Regional Policies and Planning Precedents

The Bay Area did not have to start from scratch with plans to reduce greenhouse gases through land use planning when SB 375 was passed, as there were efforts already underway to plan for a more sustainable region. As stated on the One Bay Area website, "For decades, the Bay Area has been encouraging more focused and compact growth to help revitalize older communities, develop complete communities, reduce travel time and expense, make better use of the existing transportation system, control the costs of providing new infrastructure, protect resource land and environmental assets, promote affordability, and generally improve the quality of life for all Bay Area residents."[3]

Therefore, in addition to the new statewide policies, some key regional policies and planning processes have influenced the development of this CWTP, described below.

FOCUS Program

The most recent iteration of planning for sustainability in the Bay Area is the FOCUS program, started in the mid-2000s. This is a voluntary, incentive-based program led by ABAG that allows local governments to identify infill sites (where greater density could be accommodated) near transit as Priority Development Areas (PDAs). PDAs have been defined as "…urban neighborhoods or centers that can accommodate future housing close to transit."[4] In short, these PDA sites are the primary future urban infill residential areas in Bay Area communities. It is estimated that PDAs could accommodate up to nearly half of the projected growth by 2035 on only three percent of the region's land area.[5] PDAs have been identified and designated as such by local jurisdictions, with final adoption by ABAG.

Local agencies have also identified Priority Conservation Areas (PCA) to maintain regionally significant open spaces and land conservation priorities. PCAs seek to establish a framework for the protection of natural lands through coordinated planning, purchase of land, or conservation easements.

Through FOCUS, MTC will provide financial incentives to communities to encourage them to focus development near transit nodes. Incentives will include funding for capital infrastructure, as well as planning and technical assistance that support advancement of PDAs. FOCUS funds also help local communities encourage compact infill development with a range of transportation options, while addressing the demands of such development on non-transportation infrastructure, such as water systems and agricultural lands. In short, FOCUS seeks to be resource-efficient by optimizing the use of existing infrastructure and maximizing the value of any investments in new facilities.

The FOCUS effort has resulted in the identification of 120 PDAs throughout the Bay Area. In Alameda County, local communities have identified 34 PDAs as infill opportunities, shown in Figure 4-1; many of them already have appropriate planning policies in place. The PDAs are transit-oriented development opportunities and are either served by major transit facilities or will be in the future by planned transit investments. These PDAs have played a key role in the land use planning efforts that have accompanied development of the CWTP.

MTC Resolution 3434

MTC Resolution 3434, *the Transit-Oriented Development Policy for Regional Transit Extension Projects*, establishes transit corridor-level minimum thresholds for the number of housing units that must exist or be planned within one-half mile around transit stations in the corridor before the transit project can receive any regional discretionary funding. If a project does not meet the thresholds, a working group of agencies and stakeholders is established and local station area plans developed to determine if higher densities are possible. If so, implementation steps are developed to increase density along the corridor. These density thresholds only apply to the specific set of transit extension projects identified in Resolution 3434 when it was adopted in 2005; including the Dumbarton Rail and AC Transit Oakland/San Leandro Bus Rapid

[3] One Bay Area website, FAQs, referenced August 2011. http://onebayarea.org/plan_bay_area/faq.htm#2

[4] ABAG and MTC's *Plan Bay Area Initial Vision Scenario for Public Discussion*, p. 11. March 11, 2011. http://www.onebayarea.org/pdf/Initial_Vision_Scenario_Report.pdf

[5] One Bay Area website, referenced August 2011. http://onebayarea.org/plan_bay_area/faq.htm#15

Transit, and other proposed projects in Alameda County.

Linking transportation investments with land use was a key regulatory change that resulted from regional efforts at planning for sustainability. The policy is designed to assure that our transportation investment decisions are supported by land use patterns that support transit use.

All of these state and regional changes have created a new environment for development of this CWTP that has required a much more active stance towards land use planning than in prior plans.

The Role of Land Use in the CWTP

Assumptions of where future population and employment will be located are a key component of updates to the CWTP. These assumptions are input into the travel demand model as demographic and socioeconomic data. Traditionally, the model has relied on the most recent regional population forecasts from the Association of Bay Area Governments (ABAG). For this plan update, however, the Alameda CTC engaged local planning officials in developing land use information to both inform the modeling of Countywide Plan alternative land use scenarios and to provide input into the SCS being developed by ABAG for the Bay Area. This CWTP update has also occurred in parallel with the Alameda CTC preparing a Locally Preferred SCS Concept for Alameda County.

ABAG is responsible for making long-term forecasts of population, housing, and employment and where it will be distributed across the nine-county Bay Area. ABAG produces updated forecasts every two years, published as "Projections." ABAG Projections are relied heavily upon by local governments for their planning efforts. The Projections, however, are developed with input from local planning agencies through a review of general plans and other local plans, by local government staff, and taking into account local market factors.

ABAG's approach to projecting future population growth has evolved over time. Historically they developed "trend-based" projections, placing anticipated growth where growth had occurred in the past. For example, a portion of the people working in Alameda County was assumed to live outside the region following the recent trend of people being priced out of the Bay Area housing market. It is important to emphasize that these projections were focused more on trends than on specific city and regional land use plans or policies, although the FOCUS program has resulted in more close collaboration and more consistent feedback loops.

In recent years, ABAG has moved from trend-based projections towards conducting more "policy-based" projections. This approach bases the location of future population not just on historical trends, but also takes into account where the region would *like* growth to occur based on local and regional land use plans and growth policies, which have largely been informed by the FOCUS program, its goals, and the creation of PDAs. As described on the ABAG website: "In recent updates, the Projections forecasts have presented a realistic assessment of growth in the region, while recognizing trends in markets and demographics, while also recognizing local policies that promote more compact infill- and transit-oriented development."[6]

Most recently, and as required by SB 375, MTC and ABAG have worked together to develop a visionary projection of land uses throughout the Bay Area to determine what types of changes would be necessary to meet our greenhouse gas emission reduction targets and other policy goals related to sustainability, health, affordable housing and equity. This visionary plan is known as the Sustainable Communities Strategy.

In concert with these regional efforts, the CWTP has taken a much more active role in providing input into regional population and employment forecasts than ever before.

[6] ABAG website, referenced August 2011. http://www.abag.ca.gov/planning/currentfcst/

PDAs, PCAs, and GOAs

In March of 2011 ABAG and MTC released their *Initial Vision Scenario (IVS)*, the first step in developing a Sustainable Communities Strategy, as required by SB 375. The *Initial Vision Scenario* offers a discussion of future growth in the region, identifies an initial land use pattern for the Bay Area, and proposes the key priorities and strategies that will enable the Bay Area to accommodate grow in a sustainable manner. Since March, MTC and ABAG have been actively involved in conducting outreach throughout the region to get feedback on the IVS, refine the evaluation criteria that will be used to lead to a final Plan and begin preparation of additional refined land use scenarios.

The *Initial Vision Scenario* builds primarily off of the work of local communities as part of the FOCUS planning effort, utilizing the previously identified PDAs and PCAs to establish a framework as to how growth will occur and be concentrated around key transit nodes. Once again, PDAs are locally-designated urban centers that are well-served by transit and can accommodate future housing needs. PCAs, as defined by ABAG, are "…areas of regional significance that have broad community support and an urgent need for protection. These areas provide important agricultural, natural resource, historical, scenic, cultural, recreational, and/or ecological values and ecosystem functions."[7]

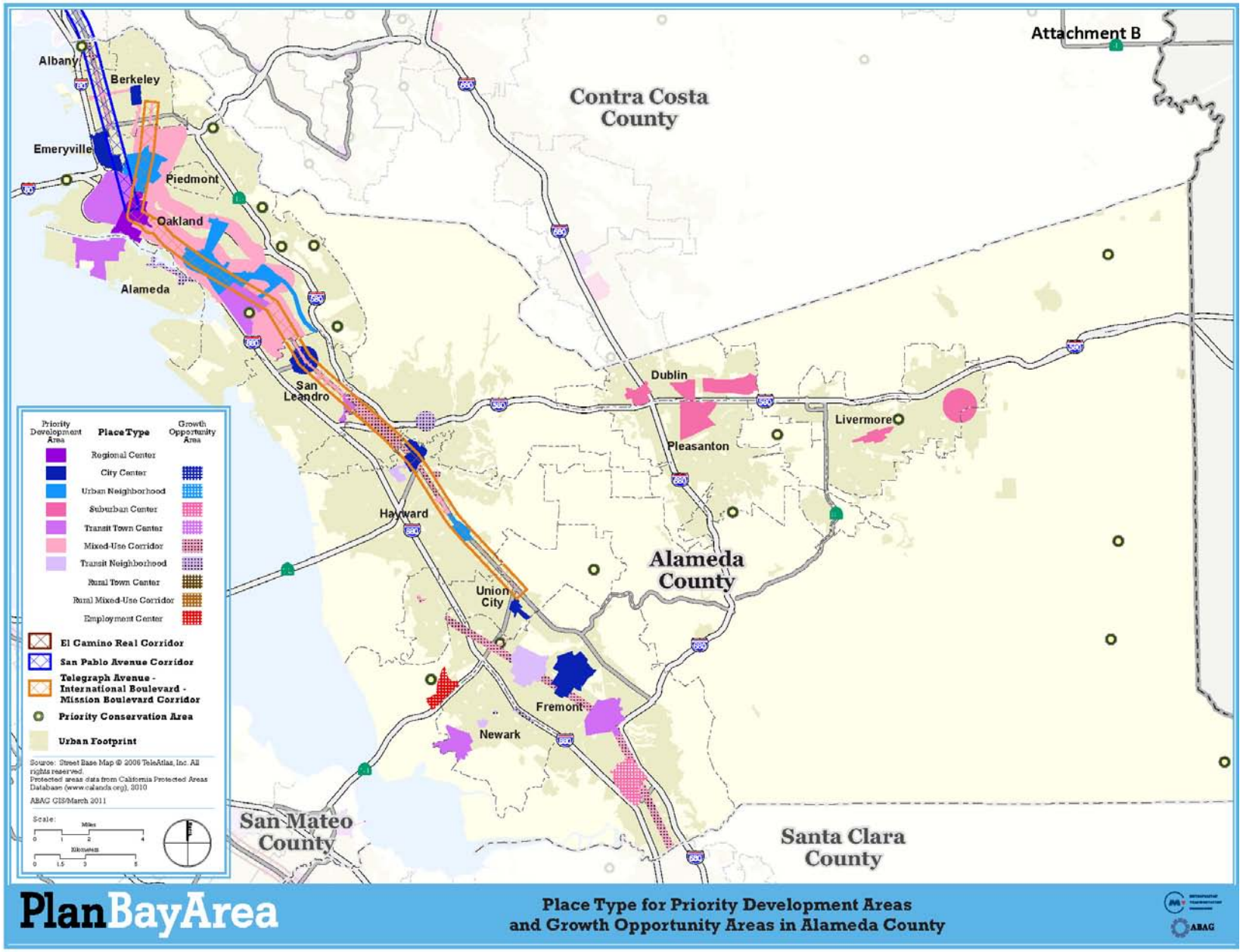
Acknowledging that PDAs can only accommodate about half of the region's projected growth, ABAG also worked with local jurisdictions to identify a series of Growth Opportunity Areas (GOAs), as part of the *Initial Vision Scenario*. GOAs are locations in the region with potential capacity for growth that are either in the process of becoming PDAs or are otherwise pursuing sustainability focused on employment or rural character.[8] As with the PDAs, the Alameda CTC worked with city planning staff to adjust these GOAs to best reflect local conditions.

Figures 4-1, 4-2, and 4-3 provide more detailed information on the 47 PDAs and GOAs in Alameda County, as well as the 17 PCAs in the county.

[7] FOCUS website, referenced August 2011. http://www.bayareavision.org/initiatives/index.html

[8] ABAG and MTC's *Plan Bay Area Initial Vision Scenario for Public Discussion*, p. 89. March 11, 2011.

Figure 4-1 Alameda County Priority Development Areas and Growth Opportunity Areas



Source: ABAG and MTC, Plan Bay Area

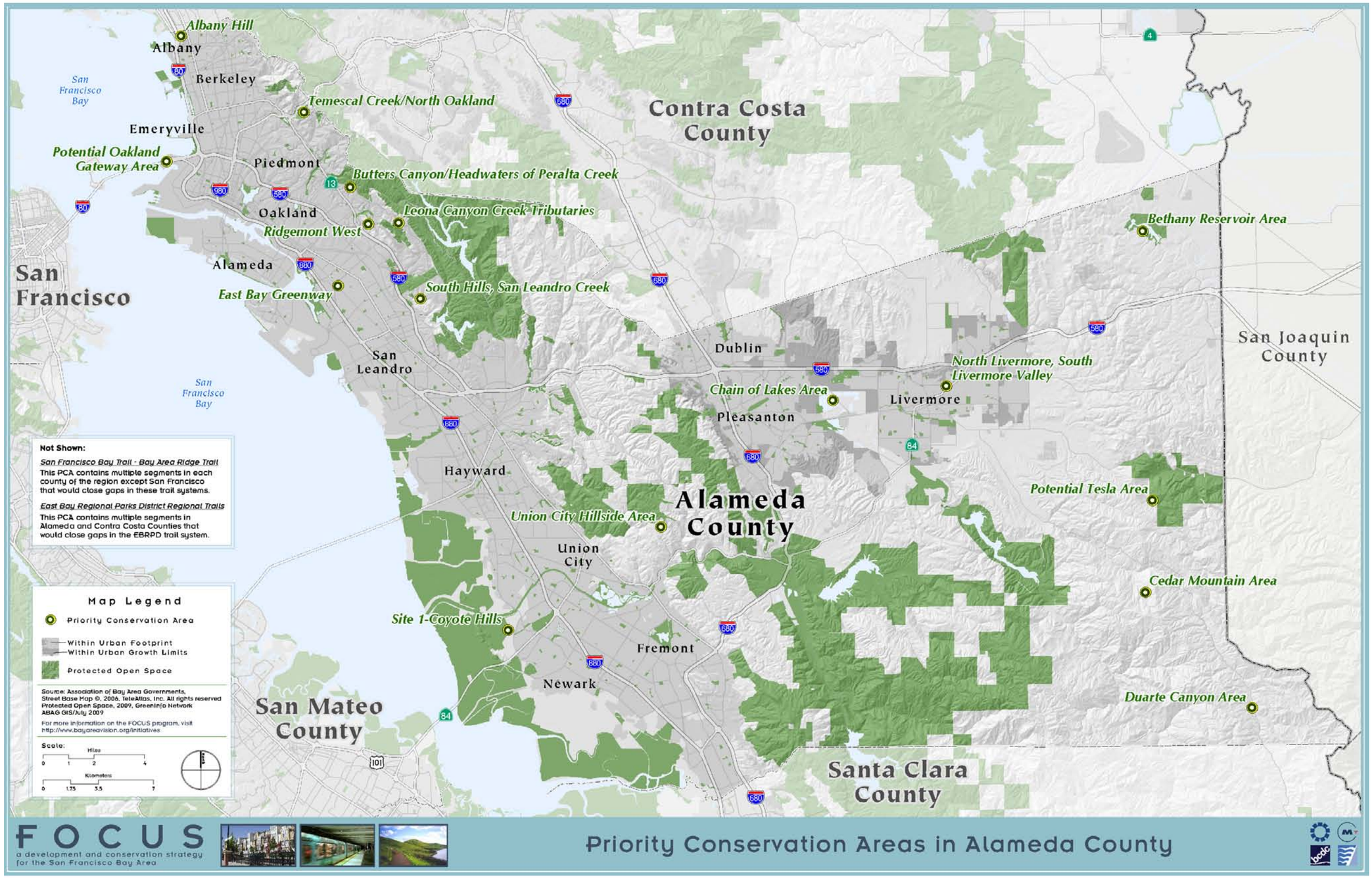
Figure 4-2 List of PDAs and GOAs in Alameda County

Jurisdiction or Area Name	PDA Status
Alameda	
Naval Air Station	Planned/Potential
Northern Waterfront	Growth Opportunity Area
Albany	
San Pablo Avenue & Solano Avenue	Growth Opportunity Area
Berkeley	
Adeline Street	Potential
Downtown	Planned
San Pablo Avenue	Planned
South Shattuck	Planned
Telegraph Avenue	Potential
University Avenue	Planned
Dublin	
Downtown Specific Plan Area	Planned
Town Center	Planned
Transit Center	Planned
Emeryville	
Mixed-Use Core	Planned
Fremont	
Centerville	Planned
City Center	Planned
Irvington District	Planned
Ardenwood Business Park	Growth Opportunity Area
Fremont Boulevard & Warm Springs Boulevard Corridor	Growth Opportunity Area
Fremont Boulevard Decoto Road Crossing	Growth Opportunity Area
South Fremont/Warm Springs	Growth Opportunity Area
Hayward	
Downtown	Planned
South Hayward BART	Planned
South Hayward BART	Planned
The Cannery	Planned
Carlos Bee Quarry	Growth Opportunity Area
Mission Corridor	Growth Opportunity Area
Livermore	
Downtown	Planned
Vasco Road TOD	Potential
Newark	
Dumbarton Transit Oriented Development	Potential
Old Town Mixed Use Area	Potential
Cedar Boulevard Transit	Growth Opportunity Area
Civic Center Re-Use Transit	Growth Opportunity Area

Jurisdiction or Area Name	PDA Status
Oakland	
Coliseum BART Station Area	Planned
Downtown & Jack London Square	Planned
Eastmont Town Center	Planned
Fruitvale & Dimond Areas	Planned
MacArthur Transit Village	Planned
Transit Oriented Development Corridors	Potential
West Oakland	Planned
Pleasanton	
Hacienda	Potential
San Leandro	
Bay Fair BART Transit Village	Potential
Downtown Transit Oriented Development	Planned
East 14th Street	Planned
Union City	
Intermodal Station District	Planned
Mission Boulevard	Growth Opportunity Area
Old Alvarado	Growth Opportunity Area
Alameda County Unincorporated	
Castro Valley BART	Growth Opportunity Area
East 14th Street and Mission Boulevard Mixed Use Corridor	Growth Opportunity Area

Source: Alameda CTC Memorandum, "Discussion of MTC Potential Block Grant Policies and Implications for Alameda CTC." July 21, 2011

Figure 4-3 Alameda County Priority Conservation Areas



Source: ABAG and MTC

Integrated Land Use & Transportation Planning in Alameda County

There are two primary ways that this CWTP addresses land use:

- The goals and performance measures explicitly address land use.
- The Alameda CTC has developed its own demographic and socioeconomic forecasts for use in this first draft of the CWTP evaluation rather than simply using ABAG's forecasts as in the past. The Alameda County forecasts, based on ABAG's work on the SCS to date, will help inform the SCS process and the final ABAG adopted land use assumptions that will be used in the final evaluation for the Countywide Plan and regional planning efforts.

For the purposes of this initial draft of the CWTP, discussion of regional efforts around developing a Sustainable Communities Strategy (SCS), including the Plan Bay Area *Initial Vision Scenario,* as well as Alameda County's development of a Locally Preferred SCS, is limited. Both of those planning processes are currently underway. Pending their final results and outcomes, a full discussion of how these planning processes have influenced the development of the CWTP will be included in this chapter.

5. FUNDING AND FINANCE

Introduction

The Countywide Transportation Plan offers a long-term vision for the future of Alameda County's transportation system. It identifies transportation needs in the county as well as projects and programs to be implemented and developed in order to meet those needs. The harsh reality, however, is that there is simply not enough money available to fund all of the projects and programs outlined in this Countywide Transportation Plan. Unless there is an unanticipated and dramatic shift in how transportation is financed, Alameda County will simply not be able to implement its full transportation vision.

Moving forward, funding is undoubtedly the great unknown as Alameda County plans its transportation network through 2040. This chapter establishes the framework for a larger discussion about the tough funding decisions that Alameda County will have to make in the future.

> **Funding is undoubtedly the great unknown as Alameda County plans its transportation network through 2040.**

Overview of Transportation Funding

The financing of Alameda County's transportation system is as complex and multi-layered as the county's transportation needs. In Alameda County, money is needed to maintain the existing system, actively manage and operate the network, and develop and operate new transportation facilities. All of these projects or programs require numerous planning processes, studies, and, ultimately, a wide variety of funding sources to ensure their successful implementation. This section of the CWTP offers an overview of the basic funding framework for transportation, beginning at the federal level.

Our Funding Framework

In short, transportation dollars come from federal, state, regional, and local sources. Almost every transportation project or program, from a highway interchange to a bicycle lane, requires multiple sources for planning, design, construction, operation, and management.

Federal

For the better part of the 20th century, the federal government played the dominant role in financing the transportation system through a combination of user taxes and fees. The passage of the Highway Revenue Act of 1956 linked the gas tax directly to the creation of the national interstate system by creating a dedicated

transportation account, the Highway Trust Fund. In the 1980s, the gas tax began to also fund transit projects and programs with the creation of the Mass Transit Account within the Highway Trust Fund. In order to fund growing demand for transportation infrastructure, the gas tax was raised numerous times; however, it has not been increased since 1993.

Today, federal transportation policy and spending priorities are set by the federal surface transportation act, a multi-year authorization program that includes highway, safety, transit, rail, and non-motorized transportation programs. The latest iteration of the act, the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), was passed in 2005. SAFETEA-LU expired in 2009, but has had numerous short-term extensions as Congress debates the next federal bill.

State

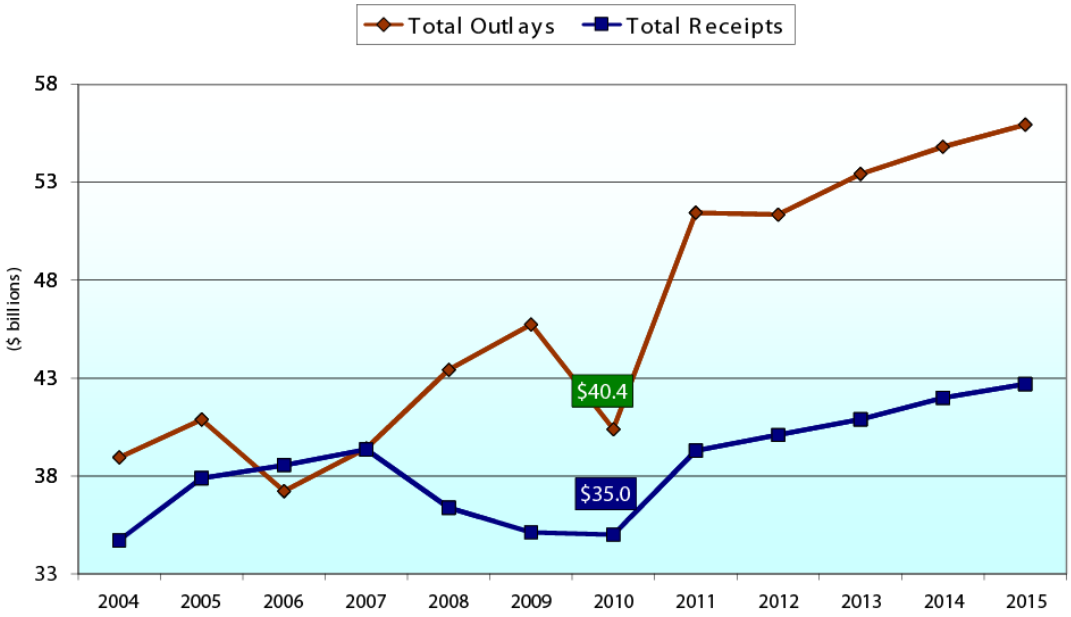
Much like federal funding, the majority of California's state transportation dollars come from taxes and fees. Traditionally, these included a sales tax on gasoline and diesel fuels, an excise tax on gasoline and diesel fuels, and truck weight fees. In March of 2010, Governor Schwarzenegger signed AB 6 and AB 9, better known as the "gas tax swap," which changed these funding mechanisms in California. It had four primary effects. First, it eliminated the statewide sales tax on gasoline. Second, to offset the elimination of the statewide sales tax on gasoline, it raised the excise tax on gasoline. Third, it retained the existing sales tax on diesel fuel and raised it by 1.75%, revenue which is allocated to public transit. Finally, it offset the increase in the diesel sales tax rate by lowering the diesel excise tax.

The state has also invested in transportation finance through the passage of statewide bonds, most recently with 2006's Proposition 1B ($19.925 billion for a variety of transportation programs and projects) and 2008's Proposition 1A ($9.95 billion for high speed rail).

Regional and Local

Within the Bay Area, the region itself and many counties and cities have made significant investments in transportation funding. Regional and local dollars now comprise a substantial portion of the region's financial resources. These regional and local sources include a variety of fees, taxes, and tolls, as well as fares collected by local transit agencies. For example, the region's voters have passed several bridge tolls in recent years to fund not only seismic upgrades to these structures, but also road and congestion projects. In addition, Alameda County recently passed Measure F, which increased annual vehicle registration fees by $10 to fund road, transit, non-

Figure 5-1 Highway Trust Fund Outlays and Receipts Discrepancy



Note: Excludes $8.017 billion transfer from General Fund to Highway Account of HTF in September 2008; $7 billion transfer from General Fund to Highway Account of HTF in August 2009; $19.5 billion transfer from General Fund to Highway and Mass Transit Accounts of HTF in March 2010.

Source: AASHTO, The Forum on Funding and Financing Solutions for Surface Transportation in the Coming Decade. January 2011

motorized, and transportation technology projects and programs.

Finally, Alameda County voters have passed two local transportation sales tax measures that have increasingly served as a major funding element, as further described below.

A Fundamental Shift to Regional and Local Funding

Traditionally, transportation projects have been predominantly funded by federal and state revenue sources. In recent years, however, there has been a dramatic shift towards a funding system that is much more reliant on sources of local funding. This shift is primarily the result of declining investment from the federal and state levels. For example, the federal gas tax has lost much of its purchasing power and has failed to keep pace with spending authorizations. The Highway Trust Fund is nearly "broke" because the gas tax has not been increased since 1993, while individuals are buying more fuel-efficient vehicles and driving less (see Figure 5-1).

In California, the state legislature, in an effort to balance its budget, eliminated certain sources of operations funding for transit agencies, thereby placing an enormous additional burden on local jurisdictions to continue to fund their existing service levels. Not surprising then, that most transit agencies in the state, including AC Transit, have seen service reductions and fare increases at a time when the recession has stretched individual budgets to the maximum.

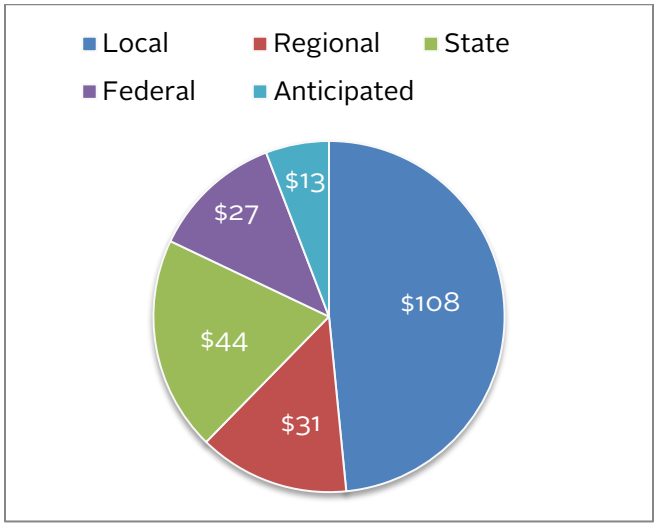
> **There has been a dramatic shift away from federal and state support for transportation operations and infrastructure and towards increased reliance on local funding.**

One of the most crucial local funding sources is the local option transportation sales tax. These tax mechanisms have been around for decades, but their importance has been magnified in recent years. In short, these funding mechanisms allow counties to raise their sales tax and dedicate the additional revenue specifically to transportation purposes. In Alameda County, Measure B was first approved by voters in 1986 and then reauthorized in 2002 for another 20 years. The current Measure B has programmed billions of dollars to a variety of projects (highway and transit expansion) and programs (transit operations, local streets and roads, paratransit, and bicycle/pedestrian). Because these mechanisms are taxes, such local measures require the development of a detailed expenditure plan and two-thirds voter approval threshold. An augmentation and extension of the current Measure B is a vital strategy in implementing the transportation vision laid out in this plan.

> **Moving forward, Alameda County will have to continue to rely on local and regional funding mechanisms as a means to finance its current and future transportation system.**

At this point, outside sources account for less than 40% of the Bay Area's regional transportation revenues. As shown in Figure 5-2, close to $140 billion of revenues over the next 25 years will come from local and regional sources, as opposed to approximately $27 billion from the federal pipeline.

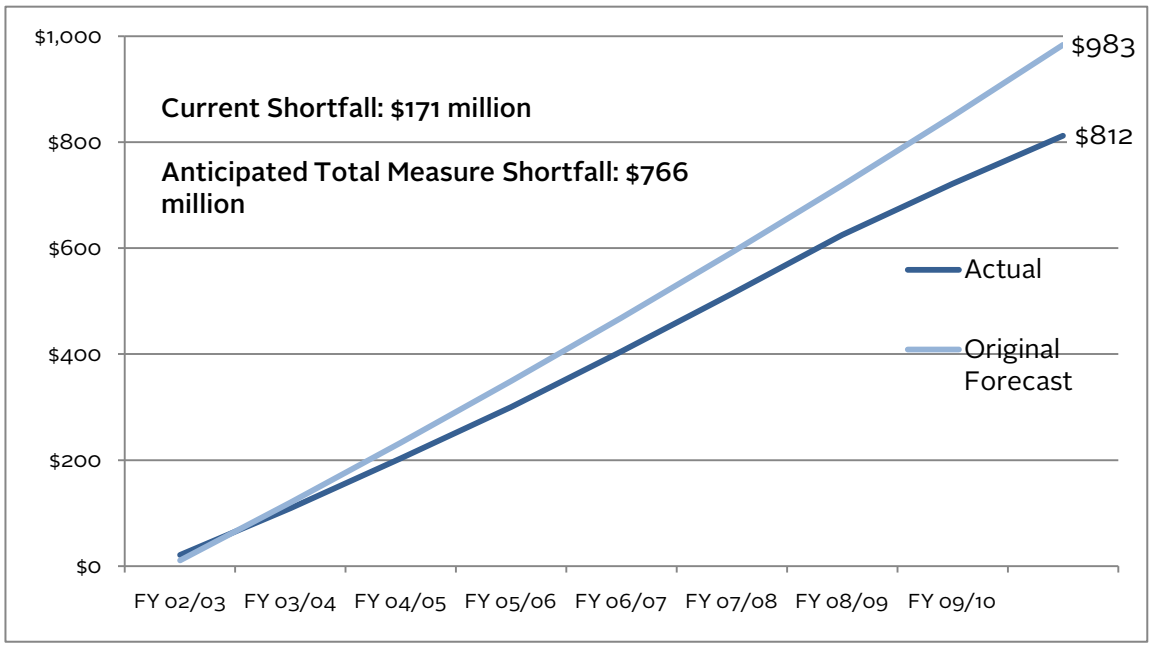
Figure 5-2 Projected 25-Year Regional Revenues (Billions of dollars)



Source: MTC, Transportation 2035 Plan

It appears that the shift to local and regional funding is a permanent one. The systemic budget challenges at the state level and the ongoing federal debate over spending and revenue will likely not be resolved any

Figure 5-3 Current Measure B Funding Shortfall



time soon. Moving forward, Alameda County will have to continue to rely on local and regional funding mechanisms as a means to finance its current and future transportation system.

Funding Issues and Challenges

The funding framework for transportation faces substantial issues and challenges in both the near- and long-term. In future years, competition for increasingly scarce revenue will only become more intense. By identifying the following challenges, Alameda County can position itself to be more strategic in its efforts to secure transportation dollars.

Revenue is declining, while costs and demand only increase

In addition to a fundamental shift to local support for transportation projects and programs, current economic conditions have had a catastrophic impact on the purchasing power of the most common local funding sources, which generally depend on sales taxes for transportation funding. Sales tax receipts in Alameda County have declined during the recession, with the greatest impact being felt by programs that depend on sales tax revenue for operations, particularly streets and roads maintenance and transit operations.

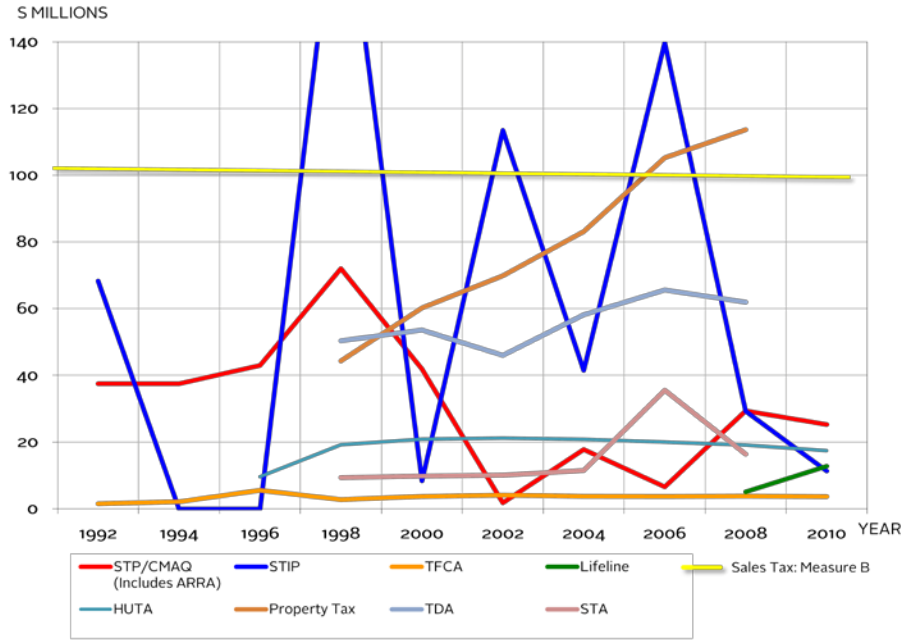
Local transit service has undergone cutbacks due to revenue shortfalls at all levels. In response to the recession and the cutbacks, transit service has lost riders and fare revenue, resulting in even more service cuts and fare increases. Costs for transportation programs and transit services continue to increase at a rate greater than revenue growth. Demands for all forms of transit service are also rising, creating an ever-increasing gap in the demand and cost for service.

> **Demands for all forms of transit service are also rising, creating an ever-increasing gap in the demand and cost for service.**

Core funding programs are not reliable or sustainable

Many sources of funding that were regularly renewed can no longer necessarily be counted upon, for reasons of politics, the economy, or both. The recent and ongoing debate in the U.S. Congress over reauthorization of the SAFETEA-LU funding act has provided a vivid illustration of such threats to available funding. In addition, traditional funding sources for transit operations, namely State Transit Assistance (STA) funding, has fluctuated dramatically

Figure 5-4 Alameda County Funding Volatility



over the past decade as legislators have repeatedly diverted STA funds to backfill the general fund.[1]

In response, there has been a heavy reliance on one-time infusions of transportation revenue in recent years. Over the past decade, programs including California's 2000 Traffic Congestion Relief Program, the Corridor Mobility Improvement Account created as a result of 2006's statewide Proposition 1B, and more recent federal American Recovery and Reinvestment Act (ARRA) stimulus funds have been used to supplement existing sources of funding. However, such temporary sources are by their nature not sustainable.

In addition, many funding mechanisms are highly volatile, which impacts project and program delivery. Revenues from Measure B, a sales tax, are dependent on strong consumer spending and fluctuate along with economic cycles. Thus, ongoing economic challenges have severely impacted Measure B. From 2002 to 2022, this sales tax was expected to bring in approximately $2.9 billion to serve major regional transportation needs and address congestion throughout the county. As shown in Figure 5-3, there is a current revenue shortfall of $171 million and an anticipated measure shortfall of $766 million. These shortfalls disproportionately impact programs, since additional funding sources such as the economic stimulus funds were able to backfill capital projects.

Revenues from Measure B, a sales tax, are dependent on strong consumer spending and fluctuate along with economic cycles. Thus, ongoing economic challenges have severely impacted Measure B.

Similarly, property taxes, which some Bay Area transit agencies rely on to fund their systems, are tied to assessed home values (under California's Property 13, property assessments cannot be increased to reflect rising home values). Not surprisingly, the housing crisis and decline in property values has significantly reduced the revenue available to transit agencies.

Finally, it is important to note that many local and regional funding sources require two-thirds voter approval. While Bay Area voters have historically been willing to support such measures (sales taxes, bridge tolls, and vehicle fees), there is no guarantee that future ballot measures will be approved. Measure B, for example, is set to expire in 2022, but it is likely that a new measure will be placed on the ballot in the coming years. The outcome of this vote will have significant impacts on the county's ability to fund its transportation system.

[1] It appears that the 2010 "gas tax swap" may have improved stability in STA funding levels. At the same time, the STA will no longer benefit from potentially high funding levels due to the elimination of "spillover" dollars from the sales tax on gasoline.

Many primary sources of funding are not flexible

Unfortunately, developing a transportation plan requires more than identifying the most important or most popular projects to fund. There are significant limitations in the way each funding source can be spent. Funding agencies, including the Alameda CTC, generally have limited discretion to allocate transportation funds according to need. Many major funding sources carry strict restrictions on use; for example, federal transit funding is generally available only for capital expansions, not operations, while state funding is generally limited to capital needs including maintenance. Relatively few sources of funding are available for transit operations; as a result, transit agencies tend to rely heavily on local sales and property taxes to fund operations.

This is an important issue since one of the county's main goals is to maintain and operate the existing transportation system. However, MTC estimates that there is a $49.4 billion shortfall for maintaining the region's transportation system over the next 25 years.

> **MTC estimates that there is a $49.4 billion shortfall for maintaining the region's transportation system over the next 25 years.**

Funding sources are generally not linked to use

There are three major forms of transportation user fee in Alameda County: gas taxes, tolls for roads and bridges, and fares for transit users. However, these account for a relatively modest share of all funding: the average farebox recovery ratio (or share of transit operating costs covered by fares) at Alameda County's seven largest transit operators is less than 40%; the federal gas tax has not been increased since 1993; California's recent gas tax swap is overall revenue neutral, but public transit loses about $1 billion in annual revenue with the elimination of the sales tax on gasoline[2]; and only $1 of each $4 to $6 toll collected on state-owned bridges is available to transportation projects through Regional Measure 2.

[2] http://www.mtc.ca.gov/legislation/state_budget_3-10.htm

There have been some moves recently toward a more direct transportation funding model, as exemplified by the new High Occupancy Toll (HOT) lane on Interstate 680 within Alameda County, the first among several such lanes planned by Alameda CTC and MTC. However, taxes and tolls, while clearly more equitable than fees levied on non-users, remain highly controversial among the general public and elected officials.

Funding sources are not always aligned with policy goals

User fees can be an attractive source of transportation funding partly for reasons of equity, and partly because revenue generation can in some cases be linked directly to policy goals. However, in the current system, even where user fees exist they are sometimes not well aligned with such goals. Transit fares, while a major source of funding for operations, actually run counter to goals of reduced vehicle miles traveled (VMT) and carbon emissions by depressing transit usage. Gas taxes, as discussed previously, are subject to diminishing returns as fuel efficiency is improved, and tolls that are "flat," rather than demand-based, cannot be used to manage congestion. Finally, fees are not always equitable, with low-income residents spending disproportionately higher shares of their incomes on transportation.

> **Uncertainty and volatility at the federal and state levels will continue to shift the financing focus to local sources of revenue, such as additional sales tax measures, vehicle registration fees, regional gas taxes, and various forms of congestion pricing.**

Alameda County Funding Sources and Revenue

This section provides a summary of Alameda County's anticipated revenue for the term of this Countywide Transportation Plan. Included below is a brief summary of the key funding mechanisms at each level of government and a detailed revenue projection by source.

Overview of Major Funding Sources

It is beyond the scope of this document to describe in detail the funding provisions and requirements for all of the myriad of federal, state, and regional/local sources. However, a list of the most common mechanisms has been included below.

Federal

- SAFETEA-LU, which funds over 100 programs, such as the Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement Program (CMAQ), the New Starts/Small Starts program, and the Transportation Enhancements (TE) program
- Grant programs, such as Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program and Urban Partnership Program

State

- State Highway Account (SHA)
- State Transit Assistance (STA)
- State Transportation Improvement Program (STIP)/Regional Transportation Improvement Program (RTIP)
- State Transportation Development Act (TDA)
- TDA, Article 3 (Bike/Pedestrian projects)
- State Proposition 1B
- Caltrans Local Assistance Programs, including Safe Routes to School (SR2S), the Bicycle Transportation Account (BTA), and Environmental Enhancement and Mitigation Program (EEM).
- Caltrans Planning Grants Program
- Highway Users Tax Account (HUTA) (gas tax subvention)

Regional and Local

- Gas tax subventions
- Seismic bridge tolls
- Regional Measure 2 bridge tolls
- Measure B local sales tax measure
- Transportation Fund for Clean Air (TFCA) – vehicle registration fees
- Measure F Vehicle Registration Fee
- AB 1107 half-cent sales tax for transit (BART and AC Transit)
- Bicycle Facility Program (BFP), funded through TCFA monies
- Regional Bicycle and Pedestrian Program (RBPP)
- HOT lanes
- Property taxes
- Various impact and development fees

Funding Projections

Note: This section is to be finalized based on additional input from MTC.

Alameda County Draft Discretionary Budget

Figure 5-5 below shows the draft discretionary budget for Alameda County over the next 28 years. It includes estimates for the major state and federal funding sources as well as estimates for Measure B. The estimates for Measure B assume that a new measure will be passed, but at the existing half-cent level. In total, it is estimated that Alameda County will have approximately $6.87 billion in discretionary funds.

Figure 5-5 Draft Discretionary Budget

Source		Amount
Federal		
	STP / CMAQ	$594,284,000
State		
	Regional Improvement Program (including RTIP/STIP/TE)	$1,533,576,000
Local		
	Measure B	$4,365,252,000
	Vehicle Registration Fee	$380,391,000
TOTAL		$6,873,503,000

It is important to note that although the discretionary budget assumes that Measure B will be extended at the current half-cent level, the exact form of any new sales tax measure has yet to be decided. There are three potential options currently being evaluated for a new measure. These include:

- "Low" Revenue Option: Extension of existing half-cent sales tax only
- "Medium" Revenue Option: One-quarter cent augmentation for a total of a three-quarters cent sales tax
- "High" Revenue Option: Half-cent augmentation for a total of a one cent sales tax

Figure 5-6 and 5-7 highlight the differences in the projected funding levels for each of these three options. Moving forward, Alameda County will have to weigh these three options and their respective revenue levels against their ability to secure voter approval.

Figure 5-6 Measure B Net Revenue 01/02 – 21/22 (In $ millions)

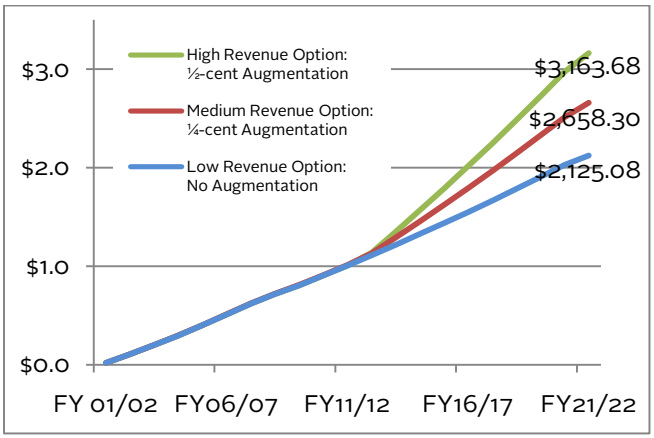
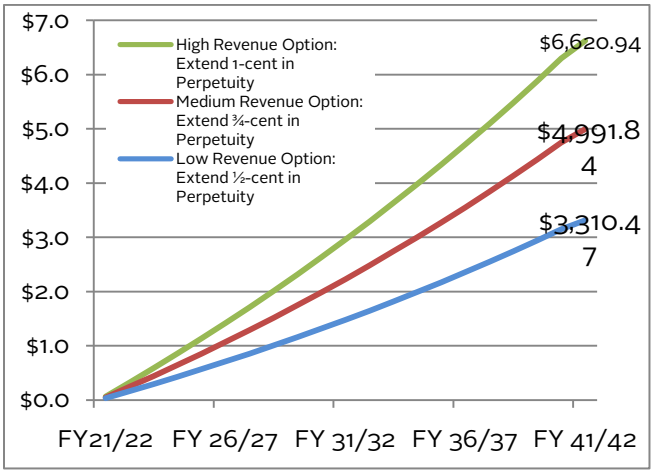


Figure 5-7 Measure B Net Revenue 21/22 – 41/42 (In $ millions)



New and Innovative Funding Opportunities

As the country, the Bay Area, and Alameda County all struggle to do more with less, there is a growing push to identify and secure new sources of transportation funding. This section offers a summary of new and innovative revenue sources that could potentially be used to augment the county's transportation budget. To be clear, however, none of these funding sources is a "magic bullet." All of these mechanisms present their own challenges and no single source will likely be able to fill in the current and future funding gap in Alameda County.

Establish policies and priorities to guide funding choices

Before potential new sources of revenue are identified and secured, Alameda County should proactively establish principles and priorities for the selection of any revenue source. Selecting potential new sources of revenue to pursue should not be a simple matter of figuring out how much funding might be available and how difficult it might be to procure it. Rather, a strategy for new funding should reflect consensus values.

Following is a list of possible priorities or principles to use in determining which, if any, revenue sources should be pursued. In some cases, potential new sources of revenue might reflect some, but not all priorities. However, sources to be pursued should

strive to reflect most of the values shared by stakeholders.

Sources should be equitable

Sources should be equitable in two ways. First, they should not disproportionately impact low-income groups. Second, funding sources should be equitable in terms of directly linking the revenue stream to the mitigation of specific impacts (i.e. congestion) or the provision of specific benefits (i.e. provision of new transit service).

Sources should be linked to regional and county policy goals

Ideally, any new revenue source would also serve to further goals such as Vehicle Miles Traveled (VMT) and emissions reduction, congestion relief, system maintenance, sustainable development, cost-effectiveness, multimodality, enhanced connectivity and integration, and social justice for disadvantaged communities.

Sources should be sustainable

Sources should be permanent, reliable, and stable. Sources that fluctuate from year-to-year can make long-term planning difficult and can add to costs if projects must be delayed.

Sources should address those areas with the most serious needs

Ideally, any new source of funding would be fully flexible in its application, able to be used for any purpose Alameda County sees fit. However, if sources are to be linked to specific categories of spending, then those areas with the greatest need should be prioritized.

Sources should be able to win broad support from stakeholders and partners

Finally, only those sources that seem likely to be able to achieve "buy-in" and support from those affected and/or potential allies should be pursued. This will be particularly important if the county decides to pursue new sources that would have to be implemented regionally or by the state.

Once these priorities and principles have been clarified, Alameda County can develop a strategy for pursuing new sources, including a strategy for collaboration with partner agencies such as MTC.

Potential new and innovative sources

Outlined below is a list of potential new and innovative revenue sources for consideration by Alameda County. A brief description is provided, as well as some of the key issues associated with each mechanism.

Increased taxes and tolls

Regional and/or Countywide Gas Tax

One option is to augment gas tax revenues through the introduction of an additional regional and/or countywide excise tax on gasoline. Per 1997 state legislation[3] MTC has the authority to impose a tax of up to 10 cents per gallon on gasoline sold in the Bay Area. The legislation requires that 95% of revenue must be "returned to source," meaning that Alameda County will receive a significant portion of the money generated due to its population. Individual counties may also impose a gas tax, in one-cent-per-gallon increments, in perpetuity.

Key issues include:

- Political viability is highly uncertain
- High level of cooperation required between local, regional, and state government
- Voter approval required (two-thirds threshold)
- Detailed expenditure plan required
- Revenue tied to purchase of fuel, which will likely decline with increases in fuel-efficiency and alternative fuel vehicles

Additional Surcharge on Bridge Tolls

Tolls on Bay Area bridges could be increased to provide additional funding. In recent years, voters have approved Regional Measures 1 and 2 to fund various projects and programs. Tolls were also recently raised on the Bay Bridge as a means to address peak congestion.

[3] AB 595 (Brown)

Key issues include:

- Legislative and/or voter approval required
- Political viability of additional bridge tolls is uncertain
- Revenue is potentially volatile depending on bridge traffic
- Amount of revenue to specific projects and programs in Alameda County is uncertain

User Fees

Vehicle Miles Traveled (VMT) Fee

Replacement of gas taxes with a Vehicle Miles Traveled, or VMT, fee is an idea that has been long discussed in transportation circles in California. VMT fees are also more directly correlated to the actual impact a driver has on the transportation network. VMT fees are attractive because they offer potential for a more long-term and stable source of revenue. Finally, VMT fees offer the potential to impact travel behavior and achieve larger regional goals through pricing.

Key issues include:

- Would require enabling legislation and take strong leadership from local, regional, and state officials to overcome likely political opposition and resistance to change
- Start-up technology costs, especially those related to collection of the fee
- Would need to overcome perceived and real concerns about privacy
- Would likely require a "phase in" of new GPS technology, and would not be a "quick" solution to the region's funding challenges
- Would require new system for collection of VMT fees

High Occupancy Toll (HOT) Lanes

HOT lanes are essentially carpool lanes that allow non-carpool vehicles to pay to drive in the lane when there is available capacity. The cost of entering the HOT lane varies according to demand – known as dynamic pricing. MTC's long-range transportation plan calls for the development of an 800-mile HOT lane network throughout the Bay Area, including portions of freeways throughout Alameda County. The first HOT lanes in the Bay Area were opened in the fall of 2010 on I-680 South over the Sunol Grade. One of the next segments will be on eastbound I-580 from Pleasanton to Livermore.

HOT lanes are being explored for extensive use because they not only offer a new revenue source, but also enable the pricing of travel behavior to achieve reduced congestion and fund various other transportation improvements.

Key issues include:

- Overcoming public resistance to additional fees
- Concerns related to equity and impacts on certain populations
- Revenue is potentially volatile depending on levels of traffic

Congestion Pricing

Congestion pricing is a funding mechanism that seeks to manage demand on roadways, improve congestion, and support other travel modes through pricing and user fees. In short, congestion pricing involves charging a motorist a fee to drive in congested areas or corridors. Revenues are typically used to fund transportation improvements, especially those that improve public transit and non-motorized travel.

Congestion pricing has been successfully implemented in many European cities and is being explored in San Francisco. Congestion pricing is a strong candidate for a new funding mechanism because it is directly linked to travel behavior and can be used to support larger goals around mobility, accessibility, and sustainability.

Key issues include:

- Political viability is highly uncertain
- Likely public resistance to a new user fee and unfamiliarity with such fees would need to be overcome
- Congestion pricing works best in dense, urban areas with a strong base of public transit and other travel options. Consequently, it may not be appropriate for many areas of Alameda County
- Would require substantial study and planning, and start-up costs are potentially high

Strategic Parking Management

Numerous jurisdictions have used parking management as a means to make it easier to find parking and avoid tickets, in part by increasing availability of legal spaces, but also by providing real-time information on availability, relaxing time limits, and providing more payment options, including credit and debit cards as well as prepaid parking cards. This is expected to reduce revenues from meter, loading zone, double-parking and other violations.

For this reason, market-based pricing of parking may not necessarily result in additional revenues. However, market-based pricing programs in other cities, such as Pasadena, have been used to generate additional revenues, which were then reinvested in the surrounding area. Such a "parking benefit district," or PBD, is typically used to fund streetscape and transportation improvements that would otherwise not be made. Market-based parking pricing programs also provide an excellent example of a revenue source that is both equitable and aligned with policy goals.

Key issues include:

- Overcoming public resistance to changes to "traditional" parking management strategies
- Parking policy is usually an issue of local control; achieving any form of regional consensus will likely be difficult
- Costs associated with parking studies and management implementation/operation

Public/Private Partnerships

Public/private partnerships have become more common in recent years, partly out of necessity, but also as a means of building support for investments by engaging stakeholders in a collaborative process. Public/private partnerships usually consist of direct funding contributions to capital and operating expenses, or they may be sponsorships. Due to the benefits that transportation investments can deliver, "win-win" scenarios often exist where both the public good and private interests can be served simultaneously. The operation of toll roads is one of the most common examples of public/private partnerships, in which the private sector builds the road and operates it with revenues received from the tolls.

Key issues include:

- Parties may be reluctant to enter into such arrangements
- Some members of the public may be opposed to any mechanism whereby private profits are generated using public funds, even if a clear public benefit is involved
- Long-term viability of private entities can be uncertain

Impact Fees

Another mechanism for ensuring that private parties who benefit from public investments in transportation infrastructure contribute to those investments is developer impact fees. So-called "nexus" fees linked to demands placed upon transportation systems by development have become relatively common in California, and there are existing fee programs in Alameda County, including the Alameda County Cumulative Traffic Impact Mitigation Fee[4] and Tri-Valley Transportation Development Fee. The former is a fee on new development used to mitigate traffic impacts and fund the design and construction of roadway and intersection improvements. The latter applies to all new development in the "sub-region," which includes five cities and unincorporated parts of both Alameda and Contra Costa Counties, and currently ranges as high as $2,170 for a single family home and $3.89 per square foot for office space. Enacted in 1998, it is dedicated to road projects.

Various forms of other impact fees are being implemented throughout the Bay Area. For example, San Francisco has utilized a Transportation Impact Development Fee (TIDF), a per square foot fee on development, since 1981 to fund additional transit service. The TIDF has generated more that $120 million in revenue since its inception. Other fees being explored include a vehicle mitigation impact fee, a transportation utility fee on individual households, and parcel taxes dedicated to transit purposes.

Key issues include:

- Overcoming public resistance to new fees

[4] See Chapter 15.44 of the Alameda County General Ordinance Code for more information. http://search.municode.com/html/16425/level2/TIT15BUCO_CH15.44CUTRIMMIFE.html

- Passage of Proposition 26 in 2010, which requires a two-thirds voter threshold on all fees, makes it more difficult to pass such measures
- Nexus between fee and projects must be established
- Fees often apply only to new development, thereby potentially limiting revenue in more "built out" jurisdictions
- Revenue can be volatile depending on economic health of the development market
- Fees are usually intended for capital projects, and application to operating expenditures is limited
- Fees established by local jurisdictions; regional consensus will be hard to achieve.

Summary of New Funding Opportunities

While a number of possible new revenue sources are available for further evaluation, it is clear that there are several common barriers to their implementation that also exist and must be overcome.

Action would be required at the local, district, regional, state, or federal level.

Alameda County itself would be unable to implement many new funding measures on its own. Some, such as market-based pricing of parking, might have to be implemented at the local level, and some, such as sponsorships for transit infrastructure or services, might have to be implemented at the district level. Measures such as a mileage fee would require legislation at the state level and would likely have to be implemented statewide (although under current law, the region may implement its own gas tax).

However, the transportation funding challenges faced by Alameda County are not unique; other large counties in California face similar issues, and might act as partners in a coordinated effort to develop new funding sources statewide. The Alameda CTC could similarly work with and through MTC. Finally, the Alameda CTC could work with localities within the county to develop new revenue sources for transportation projects at the local level.

There might be resistance from private parties.

Private entities would likely be unwilling to contribute funding in the absence of a clear benefit or mandate. Experience from other areas does suggest, however, that they will do so if value can be demonstrated – that is, if businesses or property owners can be convinced that they will see returns on their investments.

There might be resistance from voters and elected officials.

Some proposed revenue sources may prove highly controversial, including those with broad impacts (such as taxes on the general public or user fees for motorists), those that would price a resource that has previously been heavily subsidized (such as new tolls), and those that would affect interest groups able to exert influence on elected officials. Even measures that require direct voter approval or that would be voluntary in nature, such as sponsorships, could prove controversial. Polling should be used to determine risks before committing resources to pursue new revenue sources; however, potential sources of opposition cannot always be anticipated.

6. PROJECTS AND PROGRAMS

Introduction

Alameda County's current and future transportation needs include smoother roads, more frequent and reliable transit services, reduced congestion, connected and safe bicycle and pedestrian facilities, and enhanced services for seniors and persons with disabilities. The Countywide Transportation Plan (CWTP) identifies transportation projects and programs to help the county meet these challenges while advancing progress towards the policy goals articulated in Chapter 2.

Developing the projects and programs for this update of the Countywide Transportation Plan (CWTP) has occurred under new planning requirements. SB 375, and its mandate for a regional Sustainable Communities Strategy (SCS), has expanded the traditional focus of the Countywide Transportation Plan beyond the movement of people and goods. Under SB 375, the region is now required to meet greenhouse gas (GHG) emission reduction targets by reducing the use of automobiles and light-trucks. This plan reflects Alameda County's efforts to contribute to that regional goal. As described in Chapter 5, the SCS requires closer coordination between land use patterns and investments in the transportation network. Ability to reduce GHG emissions is now a major factor in prioritizing and funding transportation improvements.

Developing the projects and programs in the CWTP entails more than simply identifying the most important or popular projects to fund. Funds are rarely interchangeable, as each fund source has restrictions on how it can be used. While there is never enough money available to fund all of the projects and programs that are submitted, Alameda County seeks to leverage the most transportation improvements with the limited financial resources available and find innovative ways to increase transportation funding, while striving to balance the transportation needs across modes, populations, and geography.

The result is a broad list of improvements with changes in emphasis for funding in this Countywide Transportation Plan. New and newly bolstered programs to be funded include transportation demand management (including parking management), land use (growth in Priority Development Areas and increased focus on transit oriented development), and environmental mitigation. Simultaneously, funding agencies are also responding by altering their policies to address and accommodate this shift.

This chapter discusses how projects and program ideas were identified, compiled, and evaluated; summarizes the funding of projects and programs; and demonstrates how they support the goals of the CWTP.

Projects and programs are presented in four tiers in this CWTP. These project "tiers" do not reflect priority – all Countywide Plan projects and programs are

important to Alameda County. Committed projects and Tier 1 projects are fully funded and ready for shorter term implementation. The four tiers are as follows, each tier is described in more detail later in this chapter:

- **Committed**: These are fully funded projects that are considered part of the baseline future transportation network. These projects are either under construction or moving toward construction. They have all been included in the Regional Transportation Plan as committed projects based on MTC's adopted Committed Project and Funding Policy (MTC Resolution 4006).

- **Tier 1**: These are the projects and programs that are fully funded in the Countywide Plan through identified discretionary fund sources. These projects and programs are the farthest along in project development and should be ready for implementation in the shorter term. These projects only requested discretionary funding, an indication of project readiness.

- **Tier 2**: These are projects and programs that are partially funded in the Countywide Plan. The Countywide Plan is committing partial funding to these projects to further project development and/or to fund some phases that are ready for construction. All these projects requested both discretionary and vision funding, an indication that only part of the project is ready to move forward in the short term. These projects will be eligible for additional funding in future updates of the Countywide Plan as project development continues and as additional fund sources are identified.

- **Vision**: These are the projects and programs that have not received discretionary funds in the Countywide Plan at this time. These projects remain important to the County and may be eligible to be funded if new fund sources are identified and/or in future updates of the Countywide Plan. Vision projects are eligible for project development funds as they become available.

> **Project "tiers" do not reflect priority – all Countywide Plan projects and programs are important to Alameda County. Committed projects and Tier 1 projects are fully funded and ready for shorter term implementation.**

The following sections describe how projects and program ideas were identified, compiled, and evaluated; and demonstrates how the funded list of projects and programs support the goals of the CWTP.

Transportation Project and Program Identification and Evaluation Process

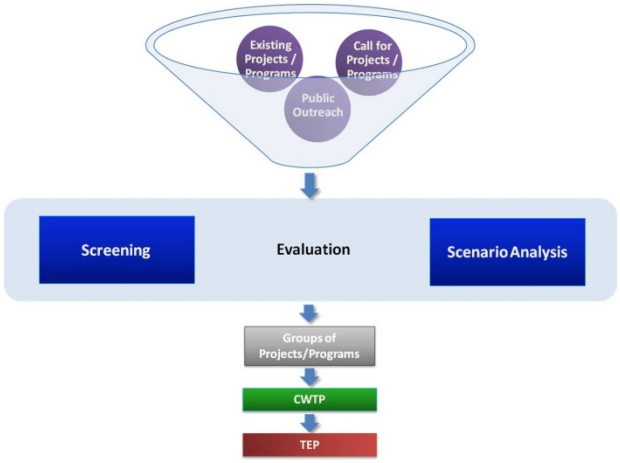
Overview

Identification and evaluation of projects and programs for the CWTP involved the following major steps:

1. **Collect** ideas for transportation projects and programs through a call for projects, public outreach, and other sources.
2. **Identify Committed Projects** and separate out these projects prior to the evaluation process.
3. **Extract programmatic projects** from the project list.
4. **Evaluate** the remaining project and program ideas through a two-part evaluation process consisting of individual project and program screening combined with project and program scenario analysis.
5. **Group** projects and programs into categories for implementation using the evaluation results along with other practical considerations.

These steps are shown in Figure 6-1 and discussed in more detail below.

Figure 6-1 Overview of the Project and Program Evaluation Process



Identify Project and Program Ideas

Project and program ideas for the Countywide Transportation Plan were collected from three sources:

- **Regional call for projects and programs.** In the spring of 2011, the Alameda CTC issued a call for projects and programs for the CWTP coinciding with the Metropolitan Transportation Commission's (MTC) Regional Transportation Plan call for projects. Any public agency in Alameda County could complete a project application. The list of submitted projects and programs is included in Appendix D. It should be noted that project sponsors could request discretionary funding to support the portions of a project that are ready to move forward and/or vision funding for later phases of a project that may not be fully developed. Project sponsors can request discretionary funds not only for immediate project implementation, but also for project development and initial phases of a project that are ready for implementation while flagging the need for future funding for later stages of project development.
- **Public outreach.** Project and program ideas generated during public outreach and research associated with development of the CWTP were also considered. While projects ultimately had to be submitted by an agency capable of implementing them, many ideas generated through public outreach were "matched" with a public agency that could actually apply for funding.
- **Prior CWTP.** All projects and programs from the last CWTP that have not yet been implemented were also included for consideration.

Committed Projects

The second step was to identify which projects are considered "committed." In general, committed projects are quite far along in project development and are fully funded. They are included as part of the baseline future transportation network. MTC defines committed projects or programs as those that meet at least one of the following four criteria:[1]

1. Project is under construction, as indicated by utility relocation, subsequent construction activities, or vehicle award by May 1, 2011. In addition, project has a full funding plan.

2. Proposition lB Corridor Mobility Improvement Account (CMIA) and Trade Corridor Improvement Fund (TCLF) projects with full funding and approved baseline agreements as of February 2011.

3. Resolution 3434 Program – Project has a certified Environmental Impact Report (EIR) and/or Record of Decision for Environmental Impact Statement (EIS) by May 1, 2011. In addition, project has a full funding plan.

4. Regional Programs – Regional programs with executed contracts through contract period only and 1st and 2nd Cycle Regional Programs with New Act Funding through 2015.

Figure 6-2 near the end of this chapter presents the current list of committed projects for Alameda County and their associated costs as defined by MTC. The list includes a number of projects aimed at reducing congestion at key bottlenecks as well as the completion of several major transit investments that are currently under construction.

It is important to note that these committed projects were not evaluated as part of the screening or scenario analysis process.

[1] Source: MTC. *Plan Bay Area Draft Revenue Projections*. June 10, 2011. http://apps.mtc.ca.gov/meeting_packet_documents/agenda_1680/3A_REV_PROJ.PDF

Programmatic Projects and Capital Projects

Projects that cannot be readily evaluated as standalone capital projects were grouped with similar types of investments and identified as "programmatic projects" in 15 program categories, shown in Figure 6-6 near the end of this Chapter. These programmatic projects may be funded by on-going pass-through or competitive grants. Examples of programmatic projects include groups of projects that contribute to a single goal, such as completion of the regional bicycle network, or a group of seismic upgrades that could be funded together or prioritized when grant funding becomes available. A significant amount of the investment in the transportation network occurs through funding this type of program.

Because these programmatic projects cannot be readily evaluated using traditional tools, they were extracted from the submitted project lists and considered separately.

Performance Based Project and Program Evaluation

All remaining projects and programs were analyzed to determine the degree to which they would help the county achieve its long-term goals for the transportation system (Chapter 2 lists these goals). The analysis had two components: (1) screening of individual projects/programs, and (2) evaluation of project/program packages to assess their performance when implemented together. The process and results are presented in Appendix D (Performance-Based Evaluation Process).

This performance evaluation was one consideration in deciding the funding priorities for the CWTP. The process for developing the financially constrained list of projects and programs is described below. It should be noted that no project or program has been eliminated from the Countywide Plan, as all projects and programs are important to our transportation future. The Plan, which is updated every four years, distinguishes between Tier 1 projects which are fully funded in the plan and are ready for short term implementation; Tier 2 projects and programs which are partially funded and may have specific phases or milestones funded; and Vision projects which are important to the County but which are largely unfunded at this time. All of these projects are eligible for additional funds if and when they become available and in future iterations of the CWTP. Should the County be in a position to augment local sales tax or other funding sources additional funding could accelerate the implementation of these projects.

Developing a Financially Constrained List of CWTP Projects and Programs

While all of the projects and programs submitted through the call for projects are important to Alameda County's future mobility, the total cost of implementation of those projects and programs far exceeds the amount of federal, state, and local funding Alameda County can expect to receive over the life of the plan. For that reason, a prioritized list was developed that identifies fully funded (Tier 1) projects, partially funded (Tier 2) projects and Vision projects that may be funded in the future. Funding levels for programs were also established to determine what portion of funds is dedicated to each program. The process that was followed to develop the financially constrained tiered lists is summarized below.

Allocating Project Funding

Committed projects, described earlier in this Chapter, were assumed to be included in the future baseline transportation network and were not further evaluated in the CWTP. These projects do not count against Alameda County's discretionary budget. These are listed in Figure 6-2 below.

The projects that are anticipated to be regionally funded were identified. These are projects that are regionally significant due to crossing county borders, filling a key missing link in the region's transit network, and contributing to the region's HOV/HOT lane network. These projects are anticipated to be funded by the region as allocated by MTC and will not require full funding from Alameda County's discretionary budget.

Building on the overall performance results described earlier in this Chapter and included in Appendix D, projects and programs were then sorted into five

groups labeled A-E, included in Appendix H. These groups were the foundation of the constrained list of projects and programs. These groups do not illustrate priorities, but simply provide a way to group similar projects together based on performance, cost, and inclusion in other planning processes, as described below. The five groups are:

- **Group A – Projects with Existing Measure B Commitments**: These projects are already funded to a large extent through the existing Measure B sales tax measure. They represent a level of local commitment to project implementation and generally performed well (high to medium) against the CWTP adopted goals. Nearly all these projects received some funding in this plan. Funded projects can be found in Tier 1 if they are considered fully funded in this CWTP and in Tier 2 if they require additional funding in the future. Please refer to Figures 6-3 through 6-5 to see funding recommendations for these projects.
- **Group B – High Performing Projects with Discretionary Requests under $5M**: This group includes all high performing projects with *discretionary* funding requests under $5M that are not included in Group A. This group can be thought of as "low hanging fruit" or projects that can provide benefits with very little capital support. Nearly all these projects received some funding in this plan. Funded projects can be found in Tier 1 if they are considered fully funded in this CWTP and in Tier 2 if they require additional funding in the future. Please refer to Figures 6-3 through 6-5 to see funding recommendations for these projects.
- **Group C – Projects resulting from a Policy or Technical Consensus Process**: This group includes projects that have already been vetted through prior planning processes. The County has a commitment to the outcomes of these prior consensus-based processes. These include projects adopted by the Alameda CTC in the I-880 Corridor Study, Central and South County Local Alternative Transportation Improvement Programs (LATIPs), the Triangle Study, and SMART Corridor planning as well as projects that were included in MTC's Resolution 3434. Because these projects have already been vetted and prioritized through other processes, they have all been fully funded in this plan in Tier 1 (with the exception of the "regional" projects that are not funded out of Alameda County's discretionary budget). Please refer to Figure 6-3 and 6-4 to see funding recommendations for these projects.
- **Group D – Other High Performing Projects:** This group includes all other high performing projects that are not included in the other groups. Because these projects performed well, they all received some funding in this plan. They can be found in Tier 1 if they are considered fully funded in this CWTP and in Tier 2 if they require additional funding in the future. Please refer to Figures 6-3 and 6-4 to see funding recommendations for these projects.
- **Group E – All Other Projects**: This group includes all remaining projects. Although these projects are medium and low performers against the adopted goals, these projects may be important to leveraging benefits across other projects or completing a network in a given area. They are included in Tier 1, Tier 2 and Vision categories, depending on their costs, project readiness and leveraged benefits to the system. Please refer to Figures 6-3 through 6-5 to see funding recommendations for these projects.

Step 4: Using the general guideline that approximately 40 percent (about $2.7 billion) of Alameda County's discretionary funding will be assigned to capital projects and approximately 60 percent, about $4.1 billion, will be assigned to programs, the five groups of projects and programs were consolidated into three tiers based on their funding status:

- **Tier 1** projects are considered fully funded. These projects are ready for shorter term implementation, and their full discretionary requests are funded in this CWTP. Several of the projects in this tier are designated as regional projects, which can be considered funded, but do not require significant local discretionary funds.
- **Tier 2** projects are partially funded in this Countywide Plan. These projects have both discretionary and vision funding requests; their entire discretionary requests are funded in this CWTP but additional funding will be needed in the future to fully implement the project.

- **Vision** projects are not funded from Alameda County's discretionary funds in this Countywide Plan. In many cases these projects are not yet ready for implementation and did not request discretionary funds. Those that made discretionary funding requests that were not met were low performers against the adopted CWTP goals.

All projects included on all the lists are considered important to Alameda County and are eligible for additional funding as it becomes available.

Figures 6-2 through 6-5 show all four project lists: Committed Projects, Tier 1, Tier 2, and Vision projects, respectively.

Allocating Programmatic Funding

While the evaluation steps described above were used to develop the draft lists of projects recommended for funding in the CWTP, some additional analysis was required to allocate funding to programs.

First, a subset of programmatic capital projects was extracted from the full list of programmatic projects to be eligible for direct funding allocations in the CWTP. The difference between programmatic capital projects and other projects in the program categories is that the former is a specific piece of transportation infrastructure where funding for that project can be spent only on the development and implementation of that specific project as opposed to the latter which is a group of projects or an on-going operational and maintenance need that is funded on an on-going basis. This subset of programmatic capital projects is shown in Figure 6-6.

The remainder of programmatic projects have been grouped together with other similar investments under fifteen overall program categories. These projects will be funded either through formula-based allocations to jurisdictions or through competitive grant processes in the future. The funding levels for these program categories was determined by looking at the total funding requested for programmatic projects in each category, the County's prior commitment to each program in the current Measure B sales tax and other plans and fees, such as Community Based Transportation Plans and Measure F vehicle registration fee, and the importance of new investment strategies to meet the mandates of SB 375. Figure 6-10 shows the fifteen programs, the total funding request for each program and the proposed funding allocation for each program.

Figure 6-2 Committed Alameda County projects contained in the 2035 Future Baseline

Project Name	Planning Area	Cost Estimate ($ millions)
Countywide Local Projects		
I-880 Widening for SB HOV Lane in Oakland and San Leandro	Central	$109.4
I-880 NB and SB Auxiliary Lanes	Central	$15.4
I-880 Auxiliary Lanes in Hayward	Central	$9.5
Rte 92/Clawiter Road Whitesell Interchange Improvement, Phase 1 (Hayward)	Central	$27.5
Route 238 Corridor Improvements in Hayward	Central	$118.7
Clawiter-Whitesell Interchange Improvements in Hayward	Central	$52.0
I-880 Industrial Parkway Interchange in Hayward	Central	$43.0
SR 92 Industrial Interchange in Hayward	Central	$6.0
East 14th Street/Hesperian Boulevard/150th Street channelization improvements in San Leandro	Central	$6.6
I-880 Davis Street Interchange in San Leandro	Central	$10.2
I-880 Marina Boulevard Interchange in San Leandro	Central	$31.8
SR 262 Widening and Interchange Improvements in Fremont	South	$58.1
Union City Intermodal, Phase 1	South	$57.0
I-580 Widening for HOV and Aux Lanes in Pleasanton and Livermore	East	$291.3
I-580 EB Express (HOT) Lane in Pleasanton and Livermore	East	$19.0
I-580 EB Auxiliary Lane Project (Isabel to Livermore Ave; Livermore Ave to First)	East	$40.0
Alamo Canal Trail under I-580 in Dublin	East	$2.7
Construct a 4-lane Major Arterial in Livermore	East	$12.0
Las Positas Road Connection, Phase 2, in Livermore	East	$3.5
I-680 Bernal Interchange Improvements in Pleasanton	East	$4.0
Stoneridge Drive Extension in Pleasanton	East	$16.2
I-880 Integrated Corridor Mobility (580/80/880 to SR-237)	Regional	$45.7
I-80 Integrated Corridor Mobility	Regional	$69.1
Subtotal		*$1,048.7*
Regional and Multijurisdictional Projects		
BART-Oakland International Airport Connector	North	$484.1
BART Warm Springs extension	South	$890.0
I-580 Corridor ROW Preservation	East	$120.7
I-580 Eastbound Truck Climbing Lane	East	$64.2
Subtotal		*$1,559.0*
TOTAL		*$2,607.7*

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Figure 6-3 Tier 1 Projects

Group ID	RTPID	Project Name	Project Sponsor	Planning Area	Other Planning Process	Composite Value (July 2011 analysis)	Transportation Type**	Total Cost Estimate	Funds Already Identified	Discretionary Funding Request	Proposed Funding	Vision Funding Request	Regionally Funded	CWTP Tier
Alameda County Projects														
A	240562	Rte 92/Clawiter Road Whitesell interchange improvement, Ph 2	City of Hayward	Central	Measure B, LATIP	L	H	$52	$52	$0	$0	$0	$0	1
A	230132	I-580/Isabel Avenue Intechange, Phase 2	City of Livermore	East	Measure B		H	$30	$25	$5	$5	$0	$0	1
A	22769	I-880 at 23rd/29th Avenue interchange safety and access improvements	ACTC	North	Measure B	L	H	$102	$99	$4	$4	$0	$0	1
A	22779	Route 262/I-880 interchange improvements, Ph 2 - Construct grade separation at Warren Avenue/Union Pacific RR	City of Fremont	South	Measure B (Partial), LATIP	M	H	$78	$0	$78	$78	$0	$0	1
A	240261	Scarlett Drive Extension from Dougherty Road to Dublin Boulevard	City of Dublin	East	Measure B	H	R	$13	$0	$13	$13	$0	$0	1
A	94506	East-West Connector Project in North Fremont and Union City	ACTC	South	Measure B (1986), LATIP	H	R	$190	$107	$83	$83	$0	$0	1
A	230110	Route 262 Mission Boulevard Cross Connector Improvements between I-680 and Warm Springs Boulevard SR 262 Mission Blvd Improvements	ACTC/ City of Fremont	South	Measure B, LATIP	M	R	$20	$0	$20	$20	$0	$0	1
A	230114	Auto Mall Parkway Cross Connector Widening between I-680 and I-880	City of Fremont	South	Measure B	M	R	$24	$0	$24	$24	$0	$0	1
A	21123	Union City Intermodal Station infrastructure improvements (Phase 2)	City of Union City	South	Measure B	M	TR	$26	$19	$6	$6	$0	$0	1
B	240139	I-680 Stoneridge Drive overcrossing widening	City of Pleasanton	East		H	R	$5	$1	$4	$4	$0	$0	1
B	240264	Widen Fremont Boulevard from I-880 to Grimmer Boulevard	City of Fremont	South		H	R	$5	$0	$5	$5	$0	$0	1
C	240037	I-880 Winton Avenue interchange improvements	City of Hayward	Central	LATIP	L	H	$25	$0	$25	$25	$0	$0	1
C	240047	I-880 West A Street Interchange	ACTC	Central	LATIP	M	H	$43	$0	$43	$43	$0	$0	1
C	230170	I-880: 42nd/High Street Access Improvements	City of Oakland	North	I-880 Study	L	H	$17	$6	$11	$11	$0	$0	1
C	240052	I-880 / Whipple Road Interchange Improvement	City of Union City	South	LATIP	L	H	$60	$0	$60	$60	$0	$0	1
C	21126	SR 84 WB HOV on ramp from Newark Blvd	Caltrans	South	LATIP	M	H	$13	$0	$13	$13	$0	$0	1
C	22062	Irvington BART Station	City of Fremont/ BART	South	Resolution 3434-related	M	TR	$123	$0	$123	$123	$0	$0	1
D	21477	I-580 Greenville interchange	City of Livermore	East		H	H	$46	$37	$9	$9	$0	$0	1
D	22002	I-880 NB HOV lane extension from HOV terminus at Bay Bridge approach to Maritime	Caltrans	North		H	H	$19	$0	$19	$19	$0	$0	1
D	240024	Oakland Army Base Transportation Infrastructure Improvements	City of Oakland	North		H	R	$209	$94	$115	$115	$0	$0	1
D	22760	Outer Harbor Intermodal Terminal (OHIT)	Port of Oakland	North		H	RF	$217	$170	$46	$46	$0	$0	1
D	22082	7th Street Grade Separation & Roadway Improvement Project	Port of Oakland	North		H	RF	$221	$110	$110	$110	$0	$0	1

Group ID	RTPID	Project Name	Project Sponsor	Planning Area	Other Planning Process	Composite Value (July 2011 analysis)	Transportation Type**	Total Cost Estimate	Funds Already Identified	Discretionary Funding Request	Proposed Funding	Vision Funding Request	Regionally Funded	CWTP Tier
Alameda County Projects														
E	230086	I-580 Interchange Improvements at Hacienda Drive and Fallon Road – Phase II	City of Dublin	East		L	H	$38	$22	$16	$16	$0	$0	1
E	22776	SR 84 Expressway Widening (Pigeon Pass to Jack London)	ACTC	East		L	H	$137	$127	$10	$10	$0	$0	1
E	21100	I-580 Vasco interchange	City of Livermore	East		M	H	$60	$52	$8	$8	$0	$0	1
E	21475	I-580 First St. interchange	City of Livermore	East		M	H	$40	$35	$5	$5	$0	$0	1
E	21489	I-580 /Foothill/San Ramon Interchange improvements	City of Pleasanton	East		M	H	$4	$3	$1	$1	$0	$0	1
E	240254	Greenville Widening	City of Livermore	East		M	R	$10	$5	$5	$5	$0	$0	1
E	230103	Grade Separation in the Decoto neighborhood	City of Union City	South		M	R	$130	$0	$130	$130	$0	$0	1
E	240053	Whipple Road from I-880 to Mission Boulevard Widening and Enhancement	City of Union City	South		M	R	$100	$0	$100	$100	$0	$0	1
E	21484	Kato Road widening from Warren Ave. to Milmont	City of Fremont	South		M	R	$12	$0	$12	$12	$0	$0	1
E	240051	Union City Boulevard (widen to 3 lanes from Whipple Road in Union City to Industrial Parkway in Hayward)	City of Union City	South		M	R	$10	$0	$10	$10	$0	$0	1
E	240272	Thornton Avenue Widening	City of Newark	South		M	R	$9	$0	$9	$9	$0	$0	1
E	240304	Platform Extension at Alameda and San Joaquin Co. ACE Stations	ACE	South		M	TR	$5	$0	$5	$5	$0	$0	1
Regional Projects														
A	22042	I-680 for NB HOV/HOT lane from SR 237 to SR 84 (includes ramp metering and auxiliary lanes)	ACTC	South	Measure B	H	H	$204	$22	$0	$0	$0	$182	1R
A	22455	AC Transit East Bay Bus Rapid Transit (BRT)	AC Transit	North	Measure B, Reso 3434	H	TB	$211	$173	$0	$0	$0	$38	1R
A	240018	Dumbarton Rail Corridor Phase I	ACTC/ SamTrans	South	Measure B, Reso 3434	M	TR	$164	$46	$0	$0	$0	$119	1R
B	22664	I-580 WB Express Lane from Greenville Road to Foothill Blvd	ACTC	East		H	H	$17	$4	$0	$0	$0	$12	1R
B	240061	I-680 widening for SB HOV/HOT from Alcosta Blvd to Route 84	ACTC	East		H	H	$136	$0	$0	$0	$0	$136	1R
B	240059	I-680 widening for NB HOV/HOT Lane from Route 84 to Alcosta Blvd	ACTC	East		H	H	$136	$0	$0	$0	$0	$136	1R
C	230088	I-880 NB HOV/HOT Extension from north of Hacienda to Hegenberger Phase 1 and 2: I-880 extend NB HOV lanes	ACTC	Central	LATIP	H	H	$276	$0	$0	$0	$0	$276	1R
C	230101	Union City Passenger Rail Station & Dumbarton Rail Segment G Improvement Union City BART Phase 2 /Passenger Rail Station	City of Union City	South	Resolution 3434 (partial)	M	TR	$180	$34	$147	$73	$0	$73	1R
E	240216	Dumbarton Rail Corridor Phase II	ACTC/ SamTrans	South	Measure B, Reso 3434	M	TR	$716	$259	$0	$0	$0	$457	1R

Figure 6-4 Tier 2 Projects

Group ID	RTPID	Project Name	Project Sponsor	Planning Area	Other Planning Process	Composite Value (July 2011 analysis)	Transportation Type**	Total Cost Estimate	Funds Already Identified	Discretionary Funding Request	Proposed Funding	Vision Funding Request	Regionally Funded	CWTP Tier
Alameda County Projects														
A	98207	I-880 Broadway/Jackson Interchange, ramp and circulation Improvements; and Alameda Point, Downtown Oakland, and Jack London SquareTransit Access	City of Alameda/City of Oakland	North	Measure B	H	H	$189	$8	$3	$3	$178	$0	2
A	240196	BART to Livermore Extension Phase 1	BART	East	Measure B	M	TR	$1,250	$145	$1,105	$300	$805	$0	2
B	240106	SR-84/Sunol Improvements	Alameda County	East		H	H	$8	$0	$2	$2	$6	$0	2
B	240282	Tidewater District Street Reconstruction	City of Oakland	North		H	R	$5	$0	$1	$1	$4	$0	2
B	240278	Harrison St-Oakland Avenue Major Street Improvements	City of Oakland	North		H	R	$12	$1	$3	$3	$8	$0	2
B	240280	Woodland - 81st Avenue Industrial Zone street reconstruction	City of Oakland	North		H	R	$12	$0	$3	$3	$9	$0	2
B	22780	AC Transit Grand-MacArthur BRT	AC Transit	North	Reso 3434	H	TB	$37	$0	$4	$4	$33	$0	2
D	22765	I-580/I-680 HOV Direct Connector - Project Development	ACTC	East		H	H	$1,167	$0	$17	$17	$1,150	$0	2
D	98139	Right-of Way Preservation and track improvements in Alameda County	Countywide/Ace submission	Central		H	TR	$200	$5	$195	$67	$128	$0	2
D	98139	Right-of Way Preservation and track improvements in Alameda County	Countywide/Ace submission	South		H	TR	$200	$5	$195	$67	$128	$0	2
E	240657	I-580 Spot Intersection Improvements	Alameda County	Central		M	H	$60	$0	$6	$6	$54	$0	2
E	230604	Contra Flow Lanes on Westbound Lanes of San Francisco-Oakland Bay Bridge	AC Transit	North		M	H	$611	$0	$5	$5	$606	$0	2
E	22021	AC Transit transfer station/park-and-ride facility in Alameda County (1. Central, 2. Northern)	AC Transit	Central		M	TB	$40	$0	$10	$10	$30	$0	2
Regional Projects														
C	22009	Capitol Corridor intercity rail service service expansion (Oakland to San Jose)	Capital Corridor	South	Resolution 3434	H	TR	$511	$16	$45	$0	$450	$45	2R

Figure 6-5 Vision Projects

Group ID	RTPID	Project Name	Project Sponsor	Planning Area	Other Planning Process	Composite Value (July 2011 analysis)	Transportation Type**	Total Cost Estimate	Funds Already Identified	Discretionary Funding Request	Proposed Funding	Vision Funding Request	Regionally Funded	CWTP Tier
Projects														
A	240092	Lewelling Blvd. / Hesperian Blvd. Intersection Improvements Project (I-880 Hesperian/Lewelling Interchange)	Alameda County	Central	Measure B	M	R	$5	$0	$0	$0	$5	$0	V
A	22667	BART to Livermore Extension Phase 2	BART	East	Measure B	L	TR	$2,927	$145	$0	$0	$2,782	$0	V
B	230099	I-580/I-680 Improvements Phase 1	ACTC	East		H	H	$528	$0	$0	$0	$528	$0	V
B	240180	BayFair Connection (Capacity Improvements)	BART	Central		H	TB	$150	$0	$0	$0	$150	$0	V
E	240144	I-580 Santa Rita Interchange improvements	City of Pleasanton	East		L	H	$3	$1	$2	$0	$2	$0	V
E	240141	I-680 Sunol Boulevard Interchange (Non-Capacity Increasing Freeway/Expressway Interchange Modifications)	City of Pleasanton	East		L	H	$1	$0	$1	$0	$1	$0	V
E	240062	SR 84 / I-680 interchange and SR 84 Widening	ACTC	East		L	H	$244	$0	$0	$0	$244	$0	V
E	21144	I-80 Gilman Street Interchange Improvements	ACTC /City of Berkeley	North		L	H	$25	$1	$24	$0	$24	$0	V
E	240318	I-80 Ashby Interchange	City of Emeryville	North		M	H	$52	$0	$0	$0	$52	$0	V
E	240249	San Leandro Street Circulation and Capacity Improvements	City of San Leandro	Central		L	R	$11	$0	$0	$0	$11	$0	V
E	240132	El Charro Road Construction	City of Pleasanton	East		L	R	$49	$0	$49	$0	$49	$0	V
E	240038	Dougherty Road Widening from Sierra Lane to North city Limit	City of Dublin	East		L	R	$18	$7	$11	$0	$11	$0	V
E	240250	Dublin Boulevard Widening from Sierra Court to Dublin Court	City of Dublin	East		L	R	$4	$1	$4	$0	$4	$0	V
E	240279	Mandela Parkway and 3rd Street Corridor Commercial/Industrial Area Street Reconstruction	City of Oakland	North		L	R	$157	$0	$12	$0	$157	$0	V
E	230243	Access Improvements to West End Transit Hub on Mariner Square Drive (MSD)	City of Alameda	North		M	R	$4	$0	$0	$0	$4	$0	V
E	240116	Powell Street Bridge Widening at Christie Avenue	City of Emeryville	North		M	R	$5	$0	$0	$0	$5	$0	V
E	21482	Extend Fremont Boulevard to connect to I-880/Dixon Landing Road	City of Fremont	South		L	R	$48	$0	$48	$0	$48	$0	V
E	240113	BART Hayward Maintenance Complex	BART	Central		M	TR	$585	$5	$0	$0	$580	$0	V
E	22089	Martinez Subdivision	Port of Oakland/MTC	North		M	TR	$100	$0	$0	$0	$100	$0	V

Figure 6-6 Draft CWTP Programmatic Capital Projects Selected for Direct Funding

#	Sponsor/ Location	Program Name	Planning Area	RTP ID# (if application submitted)	Cost Estimate ($M)	Programmatic Projects (capital)	Project Description
1	City of Berkeley	Bay Trail Extension - Berkeley Marina	1	240207	$31.0	$31.0	Complete the Bay Trail Extension to provide an accessible 1.3 mile loop trail for bicycles and pedestrians from the main spine of the Bay Trail at West Frontage Road to the Eastshore State Park, Berkeley Marina, Bay shoreline, and the proposed Berkeley Ferry Terminal.
2	City of Emeryville	I-80 Bike Ped Bridge (65th Street)	1	240003	$22.4	$22.4	This project includes the design and construction of a bike-ped bridge over the I-80 freeway at the location of the Ashby-Shellmound Interchange. Approaches to the crossover structure will connect to 65th Street on the east approach and to Frontage Road on the west approach. (Formerly listed in 1C)
57	City of Berkeley	Berkeley Ferry Terminal Access Improvements	1	240226	$106.0	$106.0	Construct capital expenditures for Berkeley WETA Ferry Terminal-associated landside improvements including roadway improvements, parking, lighting, traffic signal controls, surface transit infrastructure, bicycle and pedestrian infrastructure.
75	WETA	Construct new Ferry Operations and Maintenance Facility in Alameda.	1	240014	$37.0	$37.0	This project provides the landside site and infrastructure improvements required to house a Central Bay Operations and Maintenance Facility to serve as the central San Francisco Bay base for WETA's ferry fleet, administrative offices, Operations Control Center (OCC) and Emergency Operations Center (ECO). The landside components include fueling, shop, warehouse and office facilities, as well as security, access and mooring facilities. $24.5 m identified in existing funding. which includes $22m in Measure B funds.
79	AC Transit	College/ Broadway Corridor Improvements - Transit Priority Measures	1	240372	$5.0	$5.0	Improves speed and reliability for bus transit on the College/Broadway/University/Alameda corridor. Includes queue jump lanes, transit signal priority, pedestrian amenities and improvements, safety and security enhancements, geometric improvements to assist bus operations and real-time passenger information.
80	City of Alameda	Rapid Bus Service - City of Alameda and Alameda Point PDA (Alameda Naval Station) to Fruitvale BART	1	240077	$9.0	$9.0	Implement Rapid Bus Service from Alameda Point PDA via Webster Street, Lincoln Avenue, Tilden Way, Fruitvale Avenue Bridge (Miller Sweeney Bridge), and Fruitvale Avenue to Fruitvale BART Station.
81	City of Berkeley	Downtown Berkeley Transit Center	1	240179	$26.8	$26.8	Design and construct a Downtown Berkeley Transit Center, potentially including bus turn-around, boarding platforms, visitor information facilities, and safe pedestrian access to transit.
82	AC Transit	Grand/MacArthur Corridor Improvements - Transit Priority Measures	1		$3.6	$3.6	
158	City of Berkeley	Railroad Crossing Improvements @Gilman	1	230116	$108.2	$108.2	Design and construct railway crossing improvements, including grade separation at Gilman Avenue and quadrant gates, road closures, and at-grade improvements at other crossings, per Quiet Zone Study.
193	City of Oakland	Route 24 /Caldecott Tunnel Enhancements -Settlement Agreement projects	1	230171	$15.0	$15.0	Intersection improvements, bicycle and transit access improvements and soundwalls on Route 24 in Oakland. FORMERLY LISTED UNDER 5E COMPLETE STREETS
226	Alameda County	High Street Bridge Replacement Project	1	240099	$40.3	$40.3	Replace the existing railroad and vehicular bridges with one structure that can provide the only Lifeline access from Alameda. Provide dedicated bike lanes, median, and sidewalks. The Bridge is located on the Oakland Estuary between Marina Drive in Alameda and Tidewater Avenue in Oakland
227	Alameda County	Park Street Bridge Replacement Project	1	240100	$46.3	$46.3	Replace the existing railroad and vehicular bridges with one structure that can provide the only Lifeline access from Alameda. Provide dedicated bike lanes, median, and sidewalks. The Bridge is located on the Oakland Estuary between Park Street in Alameda and 29th Avenue in Oakland
228	Alameda County/City of Alameda	Fruitvale Avenue (Miller Sweeney) Lifeline Bridge Project (bike/pedestrian elements)	1	240324	$40.8	$40.8	Seismic retrofit of the existing bridge (with bicycle lanes, median and sidewalk) to provide lifeline access from Alameda.
229	City of Alameda / Alameda County	Fruitvale Avenue Lifeline Bridge Project (rail)	1	240101	$94.0	$94.0	Replace the existing railroad and vehicular bridges with one structure, and widen the roadway. Includes dedicated transit lanes.
11	City of Oakland	Bike/ped bridge over Lake Merritt Channel	1	240227	$77.0	$77.0	Access around existing bridges over Oakland Estuary, connections from existing facilities to Bay Trail
11		Gap Closure and Development of Three Major Trails in Alameda County (Iron Horse, Bay Trail, East Bay Greenway Project / UPRR Corridor Improvements Project)	1	240347	$114.0	$114.0	Construct new segments and close existing gaps within North County
151		North County CBTPs - implementation of specific recommendations - including transit, local road, streetscape, bike, pedestrian and TDM elements	1			$50.0	Includes (City of) Alameda CBTP, West Oakland CPTP, Central and East Oakland CBTP, and South and West Berkeley CBTP.
4	City of Hayward	Tennyson Road Pedestrian/bike bridge	2		$2.0	$2.0	Tennyson Road Pedestrian/bike bridge from Nuestro Parquecito to South Hayward BART station – Included in Bicycle Master Plan
84	AC Transit	Foothill TSP - Transit Priority Measures	2		$2.0	$2.0	
164	Alameda County	Crow Canyon Road Safety Improvements Project	2	240094	$15.7	$15.7	The project includes roadway realignment, shoulder widening, retaining wall systems, and guardrail modifications along Crow Canyon Road between E. Castro Valley Blvd. and the Alameda / Contra Costa county line.
167	City of Hayward	Tennyson Road Grade Separation	2	240055	$13.7	$13.7	Construct an underpass on Tennyson Road between Whitman and Huntwood Avenues
11		Gap Closure and Development of Three Major Trails in Alameda County (Iron Horse, Bay Trail, East Bay Greenway Project / UPRR Corridor Improvements Project)	2	240347	$115.0	$115.0	Construct new segments and close existing gaps within Central County
151		Central County CBTPs - implementation of specific recommendations - including transit, local road, streetscape, bike, pedestrian and TDM elements	2			$50.0	Includes Central Alameda County CBTP

#	Sponsor/ Location	Program Name	Planning Area	RTP ID# (if application submitted)	Cost Estimate ($M)	Programmatic Projects (capital)	Project Description
5	City of Fremont	Bicycle/Pedestrian Expansion: Pedestrian and Bicycle Access Way from Downtown to Fremont BART	3	240281	$0.5	$0.5	Construct bicycle and pedestrian facilities from Fremont BART Station to Fremont Midtown in the Central Fremont PDA .
27	City of Fremont	Greenbelt Gateway on Grimmer Boulevard	3	240260	$9.0	$9.0	Improvement of pedestrian and bicycle connection to Central Park between Fremont Blvd and Paseo Padre Parkway, including re-alignment of flood control channel, pedestrian path, landscape, curb, and a bridge connection to Central Park.
29	City of Fremont	Construct Bicycle/Pedestrian Grade Separation on Blacow Road at Union Pacific railroad tracks and future BART line in Irvington Area PDA	3	240287	$5.9	$5.9	Construct a bicycle/pedestrian grade separated crossing over UPRR/BART line to connect Blacow Road and Osgood Road in the Irvington Area PDA.
33	City of Union City	Bicycle/Pedestrian Connector Over UPRR Tracks to Jobs Center@Union City Intermodal Station	3	230100	$20.0	$20.0	Construct a pedestrian crossing over the UPRR tracks in the Union City Intermodal Station District
67	City of Fremont	Construct Altamont Commuter Express/Capitol Corridor Station at Auto Mall Parkway	3	240268	$15.0	$15.0	Construct a new train station (side platform) at the west end of Auto Mall Parkway in Fremont to serve Altamont Commuter Express and Capitol Corridor trains
169	City of Fremont	Safety improvements at UPRR - Fremont Blvd, Maple, Dusterberry, Nursery	3	240208	$3.1	$3.1	Improve highway-rail crossing safety at four at-grade crossings in the City of Fremont by installing raised medians, railroad gate improvements, and sidewalk. Rail crossing locations are: Fremont Blvd., Maple St., Dusterberry Way., and Nursery Ave.
171	City of Newark	Central Avenue Railroad Overpass	3	21103	$15.3	$15.3	Construct a grade separation structure on Central Avenue (4-lane arterial street) at Union Pacific Railroad crossing. Project is an enhancement.
172	City of Newark	Mowry Avenue Railroad Overpass	3	240273	$9.0	$9.0	Construct a grade separation structure on Mowry Avenue at the Union Pacific Railroad crossing to provide access to Area 4 in Newark.
11	City of Fremont	Rails to Trails Fremont UPRR/BART Corridor Trail	3	240291	$44.0	$44.0	
11		Gap Closure and Development of Three Major Trails in Alameda County (Iron Horse, Bay Trail, East Bay Greenway Project / UPRR Corridor Improvements Project)	3	240347	$214.0	$214.0	Construct new segments and close existing gaps within South County
230	City of Pleasanton	Bernal Bridge (west) second bridge construction (Non-Capacity Increasing Local Bridge Rehabilitation/Replacement/Retrofit)	4	240175	$5.0	$5.0	Bernal Bridge (west) second bridge construction.
11		Gap Closure and Development of Three Major Trails in Alameda County (Iron Horse, Bay Trail, East Bay Greenway Project / UPRR Corridor Improvements Project)	4	240347	$53.0	$53.0	Construct new segments and close existing gaps within East County
				GRAND TOTAL		**$1,418.6**	

Evaluating the Constrained List of Projects and Programs

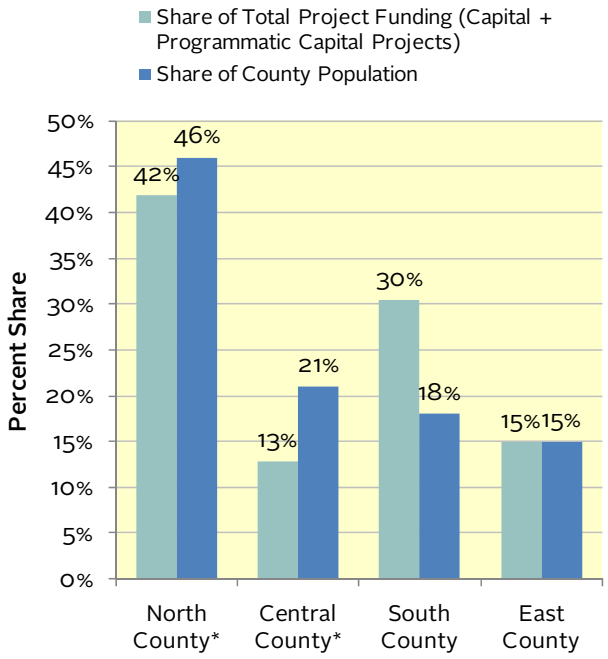
The performance of the projects and programs included in the administrative draft Countywide Plan will be evaluated in subsequent drafts and in the final plan. Following adoption of the proposed project list, the proposed investment strategies will be evaluated against adopted goals, and will be further analyzed for modal distribution, performance across different land uses and demographic users, and geographic equity.

The following sections provide a very high level review of the distribution of projects and programs in this initial draft.

Projects by Planning Area

Figures 6-7 and 6-8 show the breakdown of capital and programmatic capital projects in each of the four planning areas. Roughly $2.7 billion in capital projects were funded in the plan, including both specific capital investments and programmatic capital projects in North and Central County where there were fewer and less expensive discretionary capital requests, and a larger amount was allocated to programmatic capital projects.

Figure 6-7 Share of Project Allocations vs. Share of County Population, by Planning Area



It is important to note that the projects included in this plan and described in Figure 6-8 above do not include committed projects or regional projects which may benefit some parts of the county more than others.

Moving forward, the plan will seek to ensure that geographic equity is achieved. This can be achieved by rebalancing of programmatic spending, including the allocation of programmatic projects by planning area.

Figure 6-8 Summary of Project Allocations by Planning Area

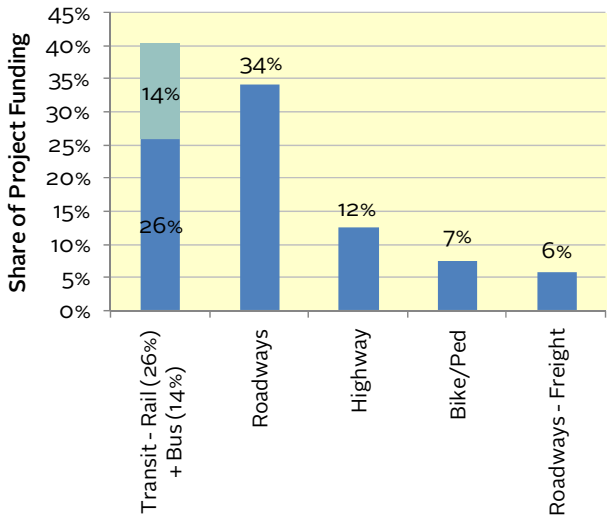
Planning Area	$ Amount Allocated (in millions)			% Share of Total Project Funding			Share of County Population
	Capital Projects	Programmatic Capital Projects	Total	Capital Projects	Programmatic Capital Projects	Capital + Programmatic Projects	
North County*	$390	$750	$1,140	14%	28%	42%	46%
Central County*	$150	$200	$350	6%	7%	13%	21%
South County	$818	$10	$828	30%	0.4%	30%	18%
East County	$395	$10	$405	15%	0.4%	15%	15%
Total	**$1,753**	**$970**	**$2,723**	**64%**	**36%**	**100%**	**100%**

** Includes $50m in Community Based Transportation Plan capital investments*

Projects and Programs by Mode

Figure 6-9 below shows the distribution of capital projects funded in the plan by mode. Transit, including both rail and bus projects, would receive the highest share of the Project budget at just over 40%. Roadways would be second with approximately 34%, while bicycle and pedestrian projects would receive roughly 7% of Project funding. This distribution does not include programmatic funding or regionally funded projects.

Figure 6-9 Project Allocations by Mode



Figures 6-10 and 6-11 show a breakdown of the programmatic spending, which accounts for 60% of the total transportation budget. Figure 6-10 includes a total of 15 categories of programmatic spending, a brief description of what is funded within each category, the estimated request for funding, and, finally, the proposed funding levels for each category. Figure 6-11 summarizes the share of the Program budget that has been proposed to be allocated to each program. The transit category, including enhancements, operations, maintenance, and paratransit, would receive approximately 51% of the project Program budget. The Local Road Improvement and Bicycle/Pedestrian program categories would receive the next highest share at 11.5% each.

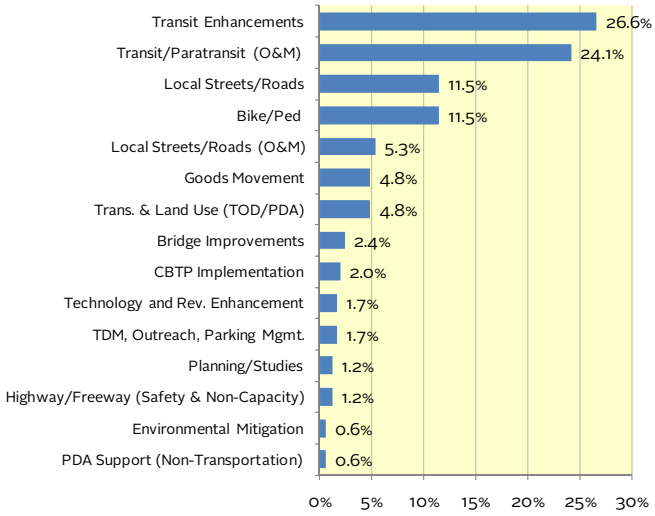
Figure 6-10 Summary of Program Allocations, by Category

	Category	Description	Total Estimated Request*		Proposed Funding**	
			$ Amount	% of Total	$ Amount	% of Total
1	Bicycle & Pedestrian	Infrastructure, support facilities (including operations), and maintenance	$2,344	24%	$475	11%
2	Transit Enhancements - Expansion & Safety	Capital rehabilitation, capacity expansion, safety, stations, communications, environmental	$1,891	19%	$1,100	27%
3	Transit & Paratransit - Operations & Maintenance	Operations restoration, service expansion, maintenance, transit priority measures (TPM), fare incentives	$1,745	18%	$1,000	24%
4	Community Based Transportation Plan (CBTP) Implementation	Improvements for transit, bike/pedestrian, safety, support services- focus on communities of concern	$236	2%	$82	2%
5	Local Road Improvements	Major Arterial Performance Initiative Program, safety, grade separations, signals, complete streets, signage, coordination with freeways	$1,054	11%	$475	11%
6	Local Streets & Roads - Operations & Maintenance	Pavement and other maintenance, signal operations, ITS	$972	10%	$220	5%
7	Highway/Freeway - Safety & Non-Capacity Improvements	Interchange improvements, freeway operations and maintenance, ramp metering, soundwalls	$27	0.3%	$50	1.2%
8	Bridge Improvements	Operations, replacement, repair, maintenance and expansion	$286	3%	$100	2%
9	Transportation & Land Use (TOD/PDA Program)	Supports Transit Oriented Development (TOD) and Priority Development Areas (PDA) through multimodal improvements and CEQA mitigation	$831	8%	$200	5%
10	Planning/Studies	Planning studies and implementation	$60	0.6%	$50	1.2%
11	TDM, Outreach, Parking Mgmt.	Range of programs includes Guaranteed Ride Home, Safe Routes to School (SR2S), Safe Routes to Transit (SR2T), travel training, variable parking pricing	$154	2%	$70	2%
12	Goods Movement	Improvements for goods movement by truck and coordinated with rail (and air) such as truck parking and truck/port/freight operations	$170	2%	$200	5%
13	PDA Support (Non-Transportation)	Non-transportation infrastructure to support PDAs such as sewer, utilities, etc.	$20	0.2%	$25	0.6%
14	Environmental Mitigation	Environmental Mitigation for major construction projects	$-	0%	$25	0.6%
15	Transportation Technology and Revenue Enhancement	Advancing technologies for transportation and revenue efficiency such as charging stations, communications, HOT/Express lanes toll collection, etc	$77	0.8%	$70	2%
TOTAL			$9,867	100%	$4,142	100%

* *Includes Programmatic Capital Projects*

** *Does not include Programmatic Capital Projects*

Figure 6-11 Share of Proposed Program Budget, by Category



Next Steps

Following adoption of the draft list of projects and programs, additional performance based evaluation will be completed. Performance results showing how this group of projects and programs impacts adopted goals will be available in November. At that time, additional adjustments to the project and program list may be necessary to ensure that the plan adopted by the Alameda County Transportation Commission in January, 2012 supports the goals adopted by the CTC and by the region.

7. NEXT STEPS

Next Steps

The Alameda County Transportation Plan sets a direction for Alameda County's transportation system. Changing emphasis from a transportation network that is designed to manage traffic congestion to one that is designed to maximize sustainability of the transportation system will take time, alternative investment strategies and changes in policy. Implementation steps will include identification of transportation funding, coordination with land use policy changes, and ongoing transportation system performance monitoring. In some cases, additional studies or legislative advocacy will be necessary to realize the vision described in this plan. These steps are discussed in this chapter along with areas for future study.

Implementation of Projects and Programs

Projects and programs included in this plan are eligible to receive local, regional, and federal funding through 2040. In many cases, additional steps are required before construction can occur, including securing full funding, conducting environmental review where required, acquiring right-way, and getting final project approvals. The schedule for beginning construction on specific capital projects depends on funding availability, project readiness, and many other factors. As discussed in Chapter 5, the amount of funding required to implement all projects in the plan far exceeds known available revenues, so advocating for and securing additional funding is a critical implementation step.

Some of the projects listed in the plan are funded through Alameda County's half-cent sales tax revenues. Projects funded through sales tax revenues are listed in the Transportation Expenditure Plan (TEP). The existing half-cent sales tax will continue to be collected until 2022. As discussed in Chapter 5, a new sales tax measure is being considered. If the Alameda CTC decides to move forward with a new TEP, it will be submitted to the voters of Alameda County on the 2012 ballot. It will require a two-thirds majority to pass.

Key steps required for implementation of the priority projects and programs outlined in this plan include:

Short Term:

- Continue to develop a sales tax expenditure plan that potentially augments and extends the current Measure B and work towards its passage.
- Continue to develop policies to encourage revenue generation from High Occupancy Toll (HOT) lane projects[1] and continue to develop policies regarding allocation of HOT lane funds.
- Work with MTC and project sponsors to shape projects to increase their ability to attract regional and federal funds.
- Continue to advocate for federal transportation funding renewal that emphasizes the values

[1] HOT lanes are essentially carpool lanes that allow non-carpool vehicles to pay to drive in the lane when there is available capacity.

expressed in this plan, including increased funding for transit, pedestrian and bicycle infrastructure, operations and maintenance.

- Develop specific policies addressing each of the programs included in the plan based on the guidelines established by the Transportation Expenditure Plan and other funding sources.
- Establish evaluation criteria for grant funded programs, including any pilot programs included in the plan.
- Prepare for "call for projects" or other distribution mechanism for programs eligible for grant funding.

Longer Term:

- Work with local jurisdictions on potential new revenue sources to meet the maintenance backlog of non-MTS streets and roads, non-pavement maintenance, bicycle and pedestrian facilities, and seismic retrofit of local bridges.
- Work with transit operators to identify revenue sources to address transit capital and operating shortfall needs beyond those currently identified in this plan.
- Work with local and regional agencies to secure new funds to make up the shortfalls in transportation improvements identified in the plan.
- Evaluate the effectiveness of all expenditures, particularly looking at pilot programs for their efficacy and for continued funding.
- Work with project and program sponsors to move projects and programs from development phases to operational or construction phases, and evaluate their performance.

Coordination with Land Use

Unlike prior countywide transportation plans, this CWTP considers how the county and its constituent jurisdictions can shape future land use development to support the regional Sustainable Communities Strategy (SCS) required by Senate Bill 375, as described in Chapter 4. The vision for future land use development is still being finalized through a coordinated effort involving cities, the Alameda CTC and regional planning agencies, as part of preparation of the 2040 Regional Transportation Plan, *Plan Bay Area.* This effort will continue after the CWTP is complete, as will the Alameda CTC's efforts to work with local jurisdictions to begin implementing the SCS. Figuring out exactly how the Alameda CTC and local jurisdictions can fully develop its Priority Development Areas (PDAs) and Growth Opportunity Areas (GOAs), and continue to improve linkages between land use and transportation will be a major effort in coming years. The following actions are intended to support local jurisdictions and regional governments in implementing land use plans that can be efficiently and effectively served by all modes:

Short Term:

- Maintain an accurate database of land uses (i.e., a database of general plan and zoning designations for all the jurisdictions in the county), as this is a fundamental building block for integrated transportation and land use planning.
- Provide funding, technical, and policy support to local jurisdictions to ensure adequate infrastructure in designated PDAs and GOAs, and encourage regional governments (MTC and ABAG) to do the same.
- Provide support for station area planning to ensure that local priorities meet MTC guidelines for future transit infrastructure, and that local plans and projects incorporate pedestrian and bicycle infrastructure from the outset.

Longer Term:

- Develop additional countywide focused studies to address policy and guidelines for transportation, land use and financing in Alameda County
- Continue to develop new modeling and evaluation tools that adequately assess the interactions between land use and transportation investments.
- Monitor the effectiveness of this plan using the adopted performance measures and the assumptions regarding land use as the plan develops. Some performance measures may require further refinement over time as tools are developed (discussed in more detail below).

Future Countywide Plans and Related Studies

The strategies necessary to achieve the vision for the future articulated in the CWTP will evolve over time. Regular updates of the Countywide Transportation Plan will be necessary to respond to changing transportation needs, fluctuations in funding availability, and new information. Chapters 3 and 5 describe the trends and uncertainties that could affect the county's transportation needs and the amount of available funding to address them. Major uncertainties include California's long-term economic outlook and the success of local, regional, and federal efforts to raise additional transportation funds.

Future studies would be undertaken to explore these uncertainties and to further investigate issues not fully addressed in this version of the plan. Many topics deserving further investigation were raised in transportation issue papers prepared for this plan (see Appendix C), including:

- Transit Sustainability and Integration. Information from the MTC Transit Sustainability Project (TSP) will help inform future efforts to improve the cost-effectiveness of providing transit service and can be integrated into the next countywide plan. MTC is also undertaking a Comprehensive Operations Analysis (COA) for the inner East Bay transit systems that will produce specific recommendations applicable to Alameda County transit agencies. A countywide transit plan will help define the County's role in implementing recommendations of the COA.
- TDM and parking management. TDM and parking management are key tactics to meet the requirements of SB 375, as they are an ideal complement to land use strategies that reduce greenhouse gases and vehicle miles traveled. The Alameda CTC could expand TDM program implementation through creation of a transportation demand management plan and/or a parking management plan for the county.
- Sustainability. While the Alameda CTC is already engaged in a number of actions directed at increasing transportation sustainability, further research into innovative sustainability solutions and emerging challenges could inform future CWTP efforts. For example, the CTC could study implementation of electric vehicle infrastructure or modification of investment priorities to address the likely impact of climate change related sea-level rise on low-lying transportation infrastructure.
- Land use and transportation. Integration of land use and transportation will require ongoing efforts in the years to come. In particular, figuring out how land use and transportation investments can work together to fully develop the PDAs throughout Alameda County will require ongoing work and study. A land use implementation plan for Alameda County will address these issues and ensure implementation of planned SB 375-supportive land use changes. Challenges such as funding gaps for pedestrian and bicycle infrastructure, CEQA barriers, changes to redevelopment and existing dispersed land use patterns will also need to be addressed.
- Goods movement. Challenges deserving additional study include identification of new technologies for enhancing freight's competitiveness, identification of a local truck route system to help address community and environmental impacts, additional work to ensure reduction in illegal truck parking, and truck safety. These issues will be addressed through creation of a goods movement plan for the county.
- Innovative funding opportunities. The upcoming sales tax reauthorization ballot measure creates an opportunity to preserve or expand the county's transportation funding but will not fully address all transportation needs. Future study is necessary to evaluate innovative funding opportunities such as public/private partnerships, value capture strategies, impact fees and loan backed tax revenue.

In addition to these general topic areas, local transportation issues may also be studied for specific transportation corridors within the county. For example, the Alameda Locally Preferred SCS Concept has identified the importance of improving transit access to the employment growth opportunity areas along the I-880 corridor, as well as the importance of making these places more pedestrian and bicycle friendly so they can be supportive of carpooling and other TDM measures.

Ongoing study of these issues could help better position the County for future iterations of the Countywide Transportation Plan and ensure that appropriate projects to address these issues are adequately defined so as to be ready for submission in the plan development process.

Ongoing Monitoring and Performance-Based Planning

The 2012 CWTP incorporates a new emphasis on performance-based planning by prioritizing projects against an adopted set of performance measures corresponding to CWTP goals such as improved connectivity, greenhouse gas reduction, safety improvement, etc. (These goals are described in Chapter 2.) This approach maximizes benefits to county residents and employees for each transportation dollar invested.

Performance-based planning does not stop with publication of the CWTP document. The Alameda CTC will continue to monitor the county's transportation performance in coming years and in preparation for the next CWTP. Ongoing performance monitoring helps the County measure the impact of plan investments on transportation performance over time, ensures progress is being made towards CWTP goals, and reveals emerging trends and future needs.

The Alameda CTC already publishes an annual performance report containing a variety of multi-modal transportation metrics consistent with CWTP goals. The Alameda CTC may also consider refining these metrics in light of new plans, programs, and policy developments. Specific actions include:

Short Term:

- Align plan metrics with annual reporting**.** The metrics used to evaluate projects and programs for the CWTP were similar, but not identical to, the set of metrics evaluated annually in the Alameda CTC performance report. Over time, the Alameda CTC may seek to bring metrics used in the CWTP into close alignment with metrics tracked annually by the agency.
- Incorporate metrics from the Bicycle and Pedestrian Plans into annual reporting. The Alameda CTC may consider continuing and expanding incorporation of metrics from the new countywide Bicycle and Pedestrian Plans into its annual performance monitoring program. These plans contain specific goals such as increasing the share of walking and bicycling trips in the county, reducing bicycle and pedestrian collisions (both of which are reported through annual counts and collision reports), and improving walk and bike access to transit.
- Incorporate metrics from the Transit Sustainability Project into the annual reporting metrics. The Alameda CTC could incorporate indicators from the regional transit sustainability project into its annual performance monitoring program. These indicators are under development but may include cost efficiency metrics such as the average cost of providing one hour of transit service.
- Incorporate metrics from additional countywide studies, as described above.
- Improve metrics and reporting on SB 375 Implementation. The Alameda CTC could incorporate new metrics for tracking progress towards revised land use patterns planned for as part of SB 375 implementation. For example, the Alameda CTC could track the percentage of county residents living or working in PDAs, the status of transportation project implementation in PDAs, or General Plan and zoning revisions that support the desired intensities and types of land use with PDAs.

Longer Term:

- Continue to update the existing Travel Demand Model and continue to develop new tools that provide additional clarity about attainment of performance goals.
- Continue to work with MTC, ABAG and local planning departments to refine land use assumptions in the Travel Demand Model, and continue to refine the SCS land use.

In all project and program implementation and evaluation efforts, continued coordination with local, regional, state and federal partners will be essential. In addition, ongoing legislative advocacy for additional funding, as well as the implementation of state laws requiring better coordination between transportation and land use, is of paramount importance.