

2014 Performance Report STATE OF THE TRANSPORTATION SYSTEM IN ALAMEDA COUNTY







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Purpose of the Performance Report

Each year, the Alameda County Transportation Commission (Alameda CTC) evaluates the state of transportation in Alameda County, tracks trends in a series of performance measures, and prepares a Performance Report based on these trends. Using quantitative metrics to track progress toward specific goals, the performance measures in the Alameda CTC Performance Report are designed to be evaluated using existing data sources and to align with the goals of the Alameda Countywide Transportation Plan (CTP) and the Congestion Management Program (CMP) statute.

Alameda CTC identifies transportation needs and guides investments through the CTP, CMP, and Comprehensive Investment Plan (CIP) documents prepared on regular cycles to identify short, medium, and long-term projects and programs. The Performance Report is critical to assessing the success of past transportation investments and provides information on transportation system performance that helps identify needs that may require future investments. The Performance Report together with Alameda CTC's other monitoring and analysis activities—provides a performance-based evaluation of projects and programs in Alameda County and provides a framework for identification of projects and programs for inclusion in the CTP and CMP that can deliver benefits to all users.

Ultimately, the Performance Report is a component of Alameda CTC's legislatively mandated duties as the County's congestion management agency and is a vital part of **The Performance Report fulfills Alameda CTC's requirements** as the congestion management agency for Alameda County pursuant to California **Government Code Section** 65089(B)(2). The Performance **Report includes performance** measures consistent with goals required by the CMP statute and articulated in Alameda CTC's adopted **Countywide Transportation Plan. The Performance Report is designed to use** either publically available data sources that have widespread use within the transportation planning industry or data sources that are readily available from local jurisdictions and agencies. Emphasis is placed on measures for which new data are available on an annual basis. The Performance Report is published in the spring following the most recently completed fiscal year. However, due to lags in availability of some data sources, data on several measures may be from before the stated year of the report. **Appendix B provides detailed** information regarding all data sources used in the **Performance Report.**

Alameda CTC's mission is to plan, fund and deliver transportation programs and projects that expand access and improve mobility to foster a vibrant and livable Alameda County. Alameda CTC's overall work to plan, fund, and deliver transportation projects and programs throughout Alameda County.

This Performance Report is intended to cover fiscal year 2013-2014 (FY2013-14). However, some data sources are reported based on calendar years, and some data sources lag preparation of this report. Therefore, this report uses the most current data available in the early-2015 time frame, when Alameda CTC prepared the 2014 Performance Report.



Note: Planning areas designated by purple dash lines.

Alameda County Population: 1.5 million Land Area: 739.02 sq. miles No. of Jurisdictions: 15 No. of Highways: 6 No. of Transit Operators: 6 No of Road Miles: 3,600 (centerline miles)



Executive Summary

Alameda County's extensive multimodal transportation network provides mobility and access for people and goods traveling within the County and beyond. Alameda CTC's fiscal year 2013-14 (FY2013-14) Performance Report describes trends in a series of performance measures that track progress toward key goals across overall travel patterns, roadways, transit, biking, walking, and livable communities.

Travel Patterns

Commutes of Alameda County residents have become more regional in recent years. From 2005 to 2013, the percentage of residents who also work within the County decreased from 67 percent to 65 percent. Significant job growth in San Francisco and the Peninsula/South Bay may be leading to this growth in commuting outside Alameda County.

Alameda County residents commute to work using various transportation modes. In 2013, 63 percent of Alameda County residents drove alone to work, while 10 percent carpooled. More than a quarter of residents used a non-driving mode to work, with transit riders accounting for more than half of workers who do not drive.

In the last decade, Alameda County's commute-to-work mode share has become more multimodal. Driving-alone and carpool mode shares to work have declined several years in a row and were at 63 percent and 10 percent in 2013, respectively. From 2000 to 2013, BART exhibited the largest commute mode share In the last decade, Alameda County residents' commutes to work have beome more regional, more multimodal, and longer. From 2005 to 2013, the percentage of residents who work and live in Alameda County decreased from 67 to 65 percent, due to job growth in other counties.



increase (3 percent), followed by work from home (2 percent), and bicycling (1 percent).

Alameda County residents' journey to work travel times also increased across all travel modes from 2005 to 2013; overall average travel time to work increased by about 3 minutes. During this time period, residents who commuted by bus saw the largest increase in average travel time (nearly 6 minutes). Alameda County workers commuting by BART experienced the longest average travel time; more than 40 percent of these workers experience commutes of longer than 1 hour.

The drivers' licensing rate of Alameda County residents has also decreased from 2005 to 2013; this trend is consistent with the national drivers' licensing rate trend. The greatest decrease in drivers' license rate is among drivers below age 35. From 2005 to 2013, the drivers' licenses per 100 people dropped from 49 to 39 for 16-19 year olds and from 96 to 80 for 20-34 year olds.

Roadways

A robust economy and regional employment growth have led to roadway traffic volume increases, particularly at freeways and bridges leading into Alameda County. From FY2012-13 to FY2013-14, median daily volumes at these key gateways grew around 1-2 percent. Traffic volumes on the San Mateo and Dumbarton Bridges grew around 8-9 percent, and could be attributed to employment growth on the Peninsula and in the South Bay.

The increase in roadway traffic volume led to slower and more congested roadway system performance in 2014. Average freeway speed in all time periods (weekday a.m., weekday midday, weekday p.m., and weekend midday) declined from FY2012-13 to FY2013-14. The a.m. and p.m. peak-hour speeds declined by more than 5 percent at many key freeway segments in the County. The most severe freeway delay (excess travel time from speeds dropping below 35 mph) climbed by 15 percent in FY2013-14 over the previous year. The Metropolitan Transportation Commission (MTC) found that in 2013, six of the Bay Area's 10 most congested freeway segments are in Alameda County; this finding corroborated the County's trends in freeway volume, speed, and congestion.

Local street and road average pavement condition Index (PCI), a measure of pavement quality, has remained relatively constant in recent years as cities have been unable to reduce a considerable backlog of deferred maintenance due to available repaving funding levels. In 2013, the local street and road PCI was 67. Around 22 percent of local street and road centerline mileage in Alameda County has a PCI of "poor" or "failed," and additional miles are "at risk," meaning they will deteriorate rapidly if preventive maintenance is not undertaken.

Pavement condition on the state highway system is assessed using three levels of distress—poor ride only, minor pavement distress (pavement in poor condition with significant cracks), and major pavement distress (pavement in poor condition with extensive cracks). The most recent California Department of Transportation (Caltrans) evaluation shows that in 2012, 22 percent of Alameda County's state highway system lane miles were in these three levels of distress with 7 percent and 3 percent of lane miles in minor and major distress, respectively. Poor pavement quality affects road users of all types, and addressing outstanding maintenance needs will require significant future funding and adherence to "fix it first" commitments.

Collisions on Alameda County roadways declined from 2002 to 2011, but increased from 2011 to 2012 (the most recent year for which complete data is available). From 2011-2012, the number of fatalities increased 31 percent to 77, and the number of injury and fatal crashes increased by 6 percent to 6,605. These increases indicate that roadway safety requires continued attention.



In Alameda County, 22 percent of roads are considered in poor condition. Addressing outstanding maintenance needs will require significant future funding.



Transit ridership growth reached its highest level in over five years, though ridership remains below pre-recession levels.

Transit

Transit plays a critical role in Alameda County by providing vital accessibility to individuals and businesses in the County. Transit ridership increased by 1.2 percent from FY2012-13 to FY2013-14, the third consecutive year of ridership growth. The growth brought ridership to its highest level in more than five years (more than 96 million annual boardings), though ridership remains below pre-recession levels. However, Alameda County's population growth has outpaced the transit ridership increase; in FY2007, Alameda County saw about 67 annual boardings per person, but saw only 61 annual boardings per person in FY2014.

Bus and ferry services saw ridership increases from FY2012-13 to FY2013-14, while BART and commuter rail ridership remained relatively constant. Bus ridership increased for the second consecutive year after four years of decline or stagnation during the recent recession, but remained roughly 10 million riders below the FY2007 level. Note that although bus ridership began to recover, service levels have generally not been restored from major service cuts instituted during the recession. BART ridership stayed flat in 2014 compared to 2013, most likely attributable to BART strike days in July and October 2014, but has grown more than 40 percent since 2005.

Service utilization—the ratio of how many people ride transit to the amount of revenue service operated—is a more accurate measure of transit operator success than just ridership, as it accounts for efficiency. BART's boardings per revenue vehicle hour (RVH) remained relatively constant from FY2012-13 to FY2013-14, following steady improvement since 2005, as BART successfully attracted new riders while adding minimal additional service. AC Transit's boardings per RVH have also remained relatively constant from FY2012-13 to FY2013-14 but have increased steadily since 2009. This trend can be attributed to AC Transit cutting service faster than boardings declined (FY2009 to FY2011) and ridership growth in the last two years. Other smaller operators exhibit a broad range of service utilization trends, as described in detail in this report. Commercial speed refers to the speed that transit vehicles travel, accounting for delays from traffic, signals, and boarding/alighting. It is a key indicator for passenger experience and operator costs. AC Transit has seen declines in commercial speed going back to 2005, and LAVTA saw declines in 2013 and 2014. Correcting this trend requires operator and local jurisdiction partnerships.

Transit service reliability can be measured by the time and distance operated between service disruptions. Vehicle breakdowns and other equipment failures are frequently a product of aging equipment and infrastructure. All transit operators saw a reduction in the distance or time that their vehicles operated between service interruptions in FY2014. These trends point to the fact that Alameda County's transit operators have a number of aging assets that require rehabilitation or replacement.

Bicycling

Bicycling is a form of transportation that can be affordable for users, is linked to positive public health outcomes, and contributes to environmental sustainability. Bicycling's work-trip mode share remained relatively consistent in 2013 as compared to 2012, but it has nearly doubled over the last decade. The number of cyclists observed at the 63 count locations monitored by Alameda CTC declined over the last year for all time periods. This trend could be attributed to the manual counts coinciding with the BART strike from September to October of 2013. Although no counts were conducted on strike days, the uncertainty around transit service may have led people to work from home or use other transportation modes instead of bicycling to access transit.

Collisions involving bicyclists dropped in 2012 from 2011, after having increased over the last decade. However, the bicyclist collision rate may be declining, as journey-to-work data suggests that the number of collisions involving cyclists has grown more slowly than participation in cycling. Yet, safety and perceived lack of safety remain barriers that prevent cycling from being a more prevalent activity.



Bicycling accounts for a small percentage of the total commute share, but overall trends show an increase in cyclists from 2010 to 2013



Walking accounts for 11 percent of all trips in Alameda County, excluding walking used to access transit and driving trips. During the last year, jurisdictions reported implementing over 40 miles of bikeways, including nearly 12 miles of Class I multiuse trails. The completion of the Bay Bridge bike and pedestrian path and the Iron Horse Trail segment from the Dublin-Pleasanton BART station to Santa Rita Road accounted for considerable mileage. Several jurisdictions also implemented various types of upgraded bicycle lanes including bicycle lanes that use buffers, green paint, and other treatments to increase visibility and comfort for cyclists.

At the conclusion of FY2013-14, nine of 15 jurisdictions had adopted local bicycle master plans within the last five years. Four of the remaining six have plan development or update work underway.

Thousands of Alameda County residents and workers participated in bike safety education classes (which have grown steadily since they began in FY2009-10), and many more have participated in or seen Alameda CTC's I Bike! encouragement campaign, which includes Bike to Work Day.

Walking

Walking is fundamental to all transportation modes—every trip begins and ends with walking. For many users of the Alameda County transportation system, walking is their sole mode of transportation. Walking has held steady as a commute mode used by between 3 percent and 4 percent of Alameda County workers for the past decade, though this statistic understates walking's role in the transportation system, as the vast majority of walking trips are made for non-work purposes. The most recent household travel survey with data on all types of travel found that walking accounts for 11 percent of all trips, and this statistic excludes walking's role as an access and egress mode for transit and driving trips.

Pedestrian counts collected through the Alameda Countywide Count Program showed a slight decrease from 2012 to 2013. This trend could be attributed to the manual counts coinciding with the BART strike from September to October of 2013. Although no counts were conducted on strike days, the uncertainty around transit service may have led workers to work from home or use other modes instead of walking to access transit.

Collisions involving pedestrians increased in 2012; in particular, the number of injury and fatal collisions involving pedestrians in 2012 was higher than the average number of collisions involving pedestrians from the last 11 years. This trend highlights the fact that pedestrian safety remains an issue that requires education, enforcement, and infrastructure-based strategies, especially as increasing transit and active transportation mode usage results in greater levels of walking.

In FY2013-14, 13 jurisdictions reported completing a total of 47 major pedestrian capital projects. These projects span a wide variety of improvement types, ranging from closing gaps in the County's trail and sidewalk network, to major trail and pathway rehabilitation, to improvements to the safety and comfort of pedestrian facilities and pedestrian crossings.

At the conclusion of FY2013-14, seven of 15 jurisdictions had adopted local pedestrian master plans within the last five years. Four of the remaining eight have plan development or update work underway.

In addition, the Alameda County Safe Routes to School Program, which promotes the use of alternative modes to get to school, continued its rapid growth; the program was in 130 total schools during the 2013-14 school year, an increase of eight schools over the previous school year.

Livable Communities

This Performance Report includes data on several measures that capture local efforts to coordinate transportation and land use planning and to promote usage of shared and non-driving travel modes.

Housing production and permitting are indicators of overall transportation and housing affordability. Housing production is a challenge in the Bay Area, and from 2007 to 2014, Alameda County met less than 40 percent of the regional housing needs allocation set by the Association of Bay Area Governments. With a recovering economy, FY2013-14 saw an active development market, for both residential and non-residential projects. Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland and Pleasanton all approved at least one residential project with over 100 housing units, while Alameda, Oakland, San Leandro, and Union City approved commercial or industrial projects of at least 100,000 square feet. In FY2013-14, 26 residential projects of more than 50 units were approved; of these, 17 were within one-half mile of regional transit (rail, ferry, AC Transit Major Corridors, or LAVTA Rapid). Also in FY2013-14, five non-residential projects of more than 100,000 square feet were approved, of which four were within one-half mile of regional transit.

To encourage alternate modes, Alameda County's jurisdictions have adopted Transportation Demand Management (TDM) policies and design guidelines related to bicycling, walking, transit, carpool/vanpool, and parkand-ride strategies. Alameda CTC requires that local jurisdictions report annually on how they have met the minimum requirements to adopt TDM policies and guidelines as part of the CMP. According to Alameda CTC's latest TDM checklist survey, jurisdictions have a high degree of adoption of bicycling- and walking-related strategies but a lower adoption rate of transit, carpool, and park-and-ride strategies. As TDM policies continue to develop, Alameda CTC plans to update the range of TDM strategies in the annual TDM checklist.



1. Alameda County's Transportation System

Multimodal Transportation Network and Planning Challenges

Alameda County has an extensive, multimodal transportation network that facilitates the safe and efficient movement of goods and people within the County and beyond. The physical transportation network includes freeways, highways, arterials, local roads, transit guideways and rolling stock, Class I railroad tracks, bicycling and walking lanes, paths, and sidewalks, and a major international airport and seaport.

Alameda County has 3,600 centerline miles of roadways. Six interstate freeways (1-80, 1-238, 1-580, I-680, I-880, and I-980) facilitate cross-county and regional accessibility, connecting residents with jobs and activity centers and providing businesses with access to a broad regional labor market and economy.





The freeway system provides vital goods movement connections, linking businesses throughout the region and state to world markets. Alameda County's freeway system also features an extensive network of carpool lanes and an emerging network of express lanes. Alameda County is linked to neighboring counties by three toll bridges (San Francisco-Oakland Bay Bridge, Hayward-San Mateo Bridge, and Dumbarton Bridge) as well as several other natural geographic gateways (the Caldecott Tunnel and Altamont Pass).

Beyond its freeway network, Alameda County has an extensive system of highways and local roads. Major arterial routes serve important county- and regional-level connectivity functions but are also frequently multimodal corridors with transit service, bikeways, and pedestrian accommodations. Many of these major arterial routes are non-freeway state routes that traverse many jurisdictions and are currently maintained by Caltrans.

In many cases, arterial routes are also downtown main streets. The majority of Alameda County's roadway mileage is actually





on local streets and roads, and roadways encompass not just the pavement but also curbs, gutters, sidewalks, signage, and traffic signals. On many roads, issues of delay, maintenance backlogs, and funding shortfalls affect driving trips as well as transit, bicycle, and pedestrian trips. The physical roadway infrastructure is supplemented by TDM programs that seek to

maximize limited capacity by shifting trips from single-driver vehicle trips to transit, carpooling, walking, or biking trips.

Transit service in Alameda County includes rail, bus, ferry, and shuttle service provided by a number of public and private operators (see Figure 2 on page 10). The major operators in the County are BART and AC Transit, which account for the majority of transit usage and provide mobility at both a regional and intracounty level. Other smaller operators including Altamont Corridor Express (ACE), Capitol Corridor, Livermore Amador Valley Transit Authority (LAVTA), San Francisco Bay Area Water Emergency Transportation Authority (WETA), and Union City Transit provide critical service to more specific travel markets (refer to Figure 3). Transit service entails significant public investment in both capital and operations but yields significant public benefits including congestion reduction, air-quality benefits, efficient utilization of space in urban environments, and mobility that is essential from both an economic vitality and social equity standpoint.

Alameda County has extensive infrastructure to serve bicycles and pedestrian trips and continues to invest in making these modes more safe and convenient options for users and trips of all types. The countywide bicycle network includes 394 miles of bikeways comprised of major interjurisdictional routes, trails, and other routes that provide key linkages to transit and regional activity centers. This network is supplemented by local bicycle networks that connect to countywide bikeways. Alameda County and the region have also focused on planning and investments that integrate bikes and transit. Pedestrian infrastructure includes every local road as well as trails and dedicated pathways, and the County prioritizes making pedestrian infrastructure more safe, accessible, and comfortable in areas of countywide significance such as downtowns and transit hubs. In addition to dedicated infrastructure, bicyclists and pedestrians are supported by educational and outreach programs and planning.

Alameda County's transportation system moves freight in addition to people. The Port of Oakland's maritime operations make it the fifth busiest seaport in North America, and this deep-water port has the distinction of being a net exporter. Meanwhile, the Oakland International Airport is the second busiest cargo airport in California and moves significant high-value goods. These goods movement hubs are connected to the region and mega-region by freeways and railroads. The major goods movement route connecting Central Valley agriculture to the Port of Oakland passes through Alameda County, and two major Class I railways connect Alameda County to the rest of the US.

Figure 2a: Alameda County Multimodal Freight System



Source: Cambridge Systematics Analysis; Truck route information collected from cities in Alameda County, FY2014-15.

Alameda County has an extensive transportation network; however, much of the transportation infrastructure in Alameda County is aging, and the County faces the challenge of maintaining it in an era of dwindling state and federal funding. Besides maintaining the existing system, numerous aspects of system enhancement must be addressed across all transportation modes including addressing congestion, issues of speed and reliability, and closing gaps in coverage or networks. Addressing safety, responding to environmental impacts and challenges, including poor air quality, greenhouse gas emissions, adapting to sea level rise, and ensuring that basic mobility and accessibility extend to travelers of all types remain central planning objectives in Alameda County. Transportation planning must also be coordinated with land use planning and economic development goals and actions of jurisdictions.

Demand Factors

2014 was a year of strong population growth for Alameda County. Alameda County added just over 20,000 new residents, or a

1.3 percent increase from 2013 (see Figure 3). Alameda County

was tied for the second fastest growing county in the state and the

region (trailing only Contra Costa County within the Bay Area). Since 2010, Alameda County's population has increased by nearly 71,000 residents, trailing only Santa Clara County for the largest percentage increase within the Bay Area during this period.

In the last two years, a long-term trend of net domestic migration has been reversed, and Alameda County has seen net positive population change from natural increase, foreign immigration, and domestic migration (see Figure 4).



Figure 3: Alameda County Population and Job Trends

Source: Department of Finance E-2 Report and Department of Finance E-6 Reports.



Figure 4: Alameda County Population Components of Change

Source: Department of Finance E-2 Report and Department of Finance E-6 Reports.

2014 also marked a year of strong job growth in Alameda County, as Alameda County employers added roughly 20,000 jobs. At the end of 2014, the fourth consecutive year of employment expansion, Alameda County employment topped its pre-recession levels seen from 2006-2008 (see Figure 3). As Figure 5 illustrates, a gap in unemployment rate between Alameda County and the region at large that has persisted since the start of the recession may be narrowing, as Alameda County's unemployment rate at the end of FY2014 (5.73 percent) was just slightly higher than the



Figure 5: Alameda County and Regional Unemployment Rate

Source: Bureau of Labor Statistics Local Area Unemployment Statistics for Alameda County and San Francisco-Oakland-San Jose Combined Statistical Area. regional rate (5.36 percent). However, employment levels in Alameda County remain below figures seen in the early 2000s, when the economy measured 710,000 jobs, just prior to the "dot com bust." In addition, Alameda County has generally not added as many jobs as San Francisco, San Mateo, and Santa Clara counties (relative to its population increase) since 2010, a trend which has implications for regional commute patterns (Figure 6 on page 15).



Figure 6: Employment and Population Growth by County (2010 to 2013)

Source: Employment data from the US Department of Labor, Bureau of Labor Statistics; Population data from the State of California, Department of Finance. This page is intentionally left blank.



2. Travel Patterns

Commute Flows

The commute patterns in Alameda County became more regional in nature between 2005 and 2013. Figure 7 shows the commute workplace breakdown of workers living in Alameda County.



Figure 7: Commute Flows of Workers Living in Alameda County

The share of workers living in Alameda County who also work within the County is decreasing. Alameda County workers have shown trends of seeking employment in other counties.

Source: American Community Survey (ACS), 2005 1-Year Estimate and 2013 1-Year Estimate, Table B08007.

Note: ACS asked respondents to report the work location at which they worked the greatest number of hours. If the respondents regularly work at several locations each day, ACS asked for the address where they began work each day.

Figure 7 shows that:

The share of workers living in Alameda County who also work within the County decreased by about 2 percent from 67 percent to 65 percent. From 2010 to 2013, the difference between employment growth and population growth is substantially lower in Alameda County as compared to other Bay Area counties. This pattern further highlights the increasing job-housing imbalance in these other counties, but also contributes to more Alameda County workers commuting out of the County.

Journey-to-Work Mode Share (2013)

Alameda County commuters use different travel modes to commute to work (Figure 8):

- Less than two-thirds of workers who reside in Alameda County commute by driving alone.
- About 10 percent of Alameda County residents carpool to work.
- Approximately a quarter of workers use a non-driving mode. Transit riders account for more than half of trips for those who do not drive and 14 percent of workers overall. Working from home is the next most common non-commuting option.
- Walking and biking are modest but critical contributors to the Alameda County commute mode mix. Walking and biking are also important as access and egress modes to other types of transportation, which are not captured in the statistics presented below.



Figure 8: Journey-to-Work Mode Share of Alameda County Residents

Source: American Community Survey 2013 1-Year Estimate, Table B08006.

Mode share varies between workers living in Alameda County who commute within the County (intra-county) and those who commute to jobs in different counties (inter-county). Figure 9 shows that in 2013:

- The percent of inter-county commuters who drove alone (60 percent) was lower than the percent of intra-county commuters who drove alone (68 percent). This difference in percentage of drive-alone commuters was greater in 2013 than in 2005 (66 percent for inter-county commuters and 72 percent for intra-county commuter). Some possible explanations are the doubling in percentage of intra-county workers who work from home since 2005 and greater congestion and tolls faced by intercounty commuters, which make transit an attractive option.
- The percent of inter-county carpool commuters (12 percent) was higher than the percent of intra-county carpool commuters (approximately 10 percent). This difference could be explained by the time savings offered by carpool facilities that commuters are more likely to use on inter-county commute trips. This difference in percentage of commuters who carpooled decreased slightly, since the percent of inter-county carpool workers decreased from 2005 (14 percent) to 2013 (12 percent), while the percent of intra-county carpool workers has not changed substantially.
- The percent of inter-county workers travelling by transit (approximately 25 percent) was higher than the intracounty workers travelling by transit (approximately 8 percent). This difference in percentage was greater in 2013 than in 2005 (18 percent for inter-county commuters and 7 percent for intra-county commuters).
- The percent of inter-county workers who walked (approximately 1 percent) is lower than the percent of intra-county workers who walked (5 percent). This difference in percentage was greater in 2013 than in 2005.



Figure 9: Mode Share of Alameda County Residents Who Commute Within and Out of the County (2005 and 2013)

Source: American Community Survey 2005 1-Year Estimate, Table B08130.

- The percent of inter-county workers who used other means such as taxicab, motorcycle, and bicycle (2 percent) is lower than the percent of intra-county workers who used other means (4 percent). This difference in percentage was greater in 2013 than in 2005.
- The percent of intra-county workers who work from home increased from 2005 (5 percent) to 2013 (10 percent).

Alameda County residents use different types of transportation modes in different areas of the County. In Figure 10, each dot represents 250 individuals who commute by a certain mode in each Alameda County census tract, and each dot's color corresponds to a distinct commute mode. Overall, commuters who drove alone (indicated by blue dots) or carpooled (indicated by green dots) live in all census tracts of the County. Residents who commute by transit live in census tracts located along BART corridors, while residents who commute by walking live in census tracts primarily in the northern portion of the County. These differences reflect the types of transportation systems and land use development in different areas of the County.

Long-Term Trends in Mode Share (2000 to 2013)

Over the last decade, commute mode share has become more multimodal, as the combined mode share of driving and carpooling for work commutes has declined from 80 percent in 2000 to 73 percent in 2013. Figure 11 and Table 1 show how the journey to work has evolved since the year 2000.

- Drive-alone mode share has declined four years in a row and is at its lowest level in more than a decade, declining from 66 percent in 2000 to 63 percent in 2013. Much of this decline has occurred between 2010 and 2013.
- Carpooling mode share dropped from 14 percent in 2000 to 10 percent 2013.
- BART exhibited the largest increase in commute mode share from 2000 (5 percent) to 2013 (8 percent), followed by work from home and bicycling.



Source: American Community Survey, 2009-2013 5-Years Estimate, Table B08006

• Bus mode share has remained relatively stable from 2000 to 2013, though overall ridership has declined as discussed in Chapter 4, "Transit."



• The relative stability in the commute mode share likely reflects

the maturity of Alameda County's transportation system and land use patterns.

 Areas of increased alternative (non-single occupancy automobile) mode usage for commuting purposes occur in all parts of Alameda County (refer to Figure 12).

Table 1: Changes in Journey-to-Work Mode Share of Alameda County Residents

	Mode Share			Difference in Mode Share	
	2000	2010	2013	2013 v. 2010	2013 v. 2000
Drive Alone	66.40%	66.90%	63.20%	-3.70%	-3.10%
Carpool	13.80%	10.80%	10.30%	-0.50%	-3.50%
Bus	4.50%	3.70%	4.40%	0.70%	0.00%
BART	5.30%	5.80%	7.90%	2.10%	2.60%
Other Public Transport	0.80%	1.30%	1.10%	-0.10%	0.40%
Bike	1.20%	1.40%	2.00%	0.60%	0.80%
Walk	3.20%	3.20%	3.50%	0.30%	0.30%
Work from Home	3.50%	5.90%	5.80%	-0.10%	2.30%
Taxi/Other	1.30%	0.90%	1.50%	0.60%	0.20%

Source: For Figure 11 and Table 1: US Census Bureau, 2005-2012 American Community Survey (ACS) 1-Year Estimates, Table B08006 and 2000 Census, Short Form 3, Table P030. For Figure 12, 2013 ACS 5-Year Estimates, Table B08006 and 2000 Census, Short Form 3, Table P030.

Note: Figures 11-12 are based on the primary commute mode (mode from longest leg of a trip) and the mode used the majority of week. Carpool mode share includes vanpool.

Difference in Alternative Mode Share Alameda County Non-Urbanized Areas **Alameda County Census Tracts** Freeways and Highways -5 percent to -1 percent -1 percent to 1 percent 1 percent to 5 percent Less than -5 percent More than 5 percent BART

Figure 12 : Difference in Journey-to-Work Alternative (Non-Single Occupancy Automobile) Mode Share (2009-2013 American Community Survey vs. 2000 Census)

Journey-to-Work Travel Time

- Figure 13 shows that average work trip travel times for workers residing in Alameda County increased for nearly all travel modes between 2005 and 2013. In addition, the share of workers with a commute longer than 60 minutes has increased for all travel modes.
- Overall, average travel time increased by about 3 minutes between 2005 and 2013.
- Bus trips saw the largest increase in average travel time at nearly 6 minutes between 2005 and 2013. More analysis is needed to determine the reason for this increase; however, bus operators have seen declines in operating speeds over the last decade (as discussed in Chapter 4, "Transit").
- Alameda County workers commuting by BART experience the longest average travel time, and more than 40 percent of these workers have commutes of longer than 1 hour.



Figure 13: Average Journey-to-Work Travel Time of Alameda County Residents

Source: American Community Survey 2005 and 2013 1-Year Estimate, Table B08134. BART is assumed to be "heavy rail." (ACE and Capitol Corridor, not shown, are assumed to be "commuter rail.")

Drivers' Licensing Rate

- Since 2005, the drivers' licensing rate has decreased among Alameda County residents, which is consistent with the national drivers' licensing rate trend.
- Figure 14 shows that among the five age groups, only residents in the age group 55-74 did not experience a drop in drivers' licenses per 100 people. The greatest decrease in drivers' licensing rate is among drivers below age 35.
- Between 2005 and 2014, the drivers' licensing rate of the age groups 16-19 and 20-34 decreased per 100 people from 49 to 39 (-20 percent) and 96 to 80 (-17 percent), respectively.

Figure 14: Drivers' Licenses per 100 People by Age Group for Alameda County Residents



Source: California Department of Motor Vehicles, American Community Survey 1-Year Population Estimates (Table B08006).

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3. Roadways

Gateway Traffic Volumes

Freeways and bridges leading into Alameda County (also known as gateways) experienced increased traffic volumes from FY2012-13 to FY2013-14. Figure 15 shows that median midweek daily volumes at most gateways grew around 1-2 percent, with the following exceptions:

- Traffic volumes on the San Mateo and Dumbarton Bridges grew more than 8-9 percent, respectively. This growth could be attributed to the employment growth on the Peninsula and in Santa Clara County.
- Traffic volume on westbound SR-24 at Caldecott Tunnel grew by 4 percent.
- Traffic volume on northbound I-680 at Contra Costa County line grew by 4 percent.

Travel Speeds (2011-2014)

Average freeway travel speed on interstate freeways in Alameda County declined in all time periods from FY2013-2014 to FY2012-13, reflecting increased travel from a robust economy (refer to Figure 16).

- The sharpest drop in speed was seen in the weekend midday period (1 percent decrease), which likely reflects more discretionary travel.
- Weekday p.m. peak-hour speed continues to remain the time of day with the lowest travel speed and decreased for the fourth consecutive year.

From 2012 to 2014, traffic volumes increased on freeways and bridges, particularly at gateway locations in Alameda County.



Source: Westbound Bridge Volume Data from Bay Area Toll Authority; all other volume data from Caltrans Performance Measure System. Notes: Weekday is defined as Tuesday through Thursday. WB indicates Westbound and EB indicates Eastbound volume.

- Weekday a.m. peak-hour speed declined for the second consecutive year.
- Weekday midday period had the smallest drop in speed and is now comparable with weekend midday period travel speed.

Weekday peak-hour speeds exhibit distinct performance across

different days of the week that have stayed consistent through

the economic recovery in Figure 16: Average Freeway Travel Speeds by Time of Day (2010 to 2014) recent years:

- Friday a.m. peakperiods are generally several miles per hour higher in speed, which may reflect increased telecommuting or alternative mode usage on this day.
- Friday p.m. peakperiod speeds are generally much lower, which may reflect weekend recreation travel overlapping with normal commute traffic.
- The drop in average freeway a.m.
 peak-period speed
 between FY2013-14
 and FY2012-13 was
 slightly bigger than
 the drop in average
 freeway a.m.
 peak-period speed
 between FY2012-13
 and FY2011-12 (See
 Figure 17).



Source: INRIX Commercial Speed Data.





Source: INRIX Commercial Speed Data.

 The drop in average freeway p.m. peak-period speed between FY2012-13 and FY2013-14 was larger than the drop in average freeway p.m. peak-period speed between FY2011-12 and FY2012-13 for Mondays and Tuesdays (see Figure 18). On the other weekdays, the drop between FY2013-14 and FY2012-13 was smaller than the drop between FY2011-12 and FY2012-13.



Figure 18: Average P.M. Peak-Period (7-9 a.m.) Freeway Travel Speeds (2010 to 2014)

Source: INRIX Commercial Speed Data.
Freeway Congestion

Freeway delay in Alameda County increased by 15 percent overall from FY2012-13 to FY2013-14. This 15 percent overall increase corresponds to a 14 percent increase in weekday freeway delay and a 29 percent rise in weekend freeway delay (refer to Figure 19 and Table 2).

- The increase in weekend delay corresponds with greater midday weekend travel and the drop in weekend midday freeway travel speed.
- Freeway delays vary seasonally:
 - Weekday delays are lowest in Quarter 1 (January through March) and Quarter 3 (July through September).
 - Weekend delays are highest in Quarter 2 (April through June) and Quarter 3 (July through September) when there are more recreational trips.

Figure 19 shows that seasonal variation in vehicle delays have changed slightly from FY2011-12 to FY2013-14:

• Overall, vehicle hours of delay in Quarter 1 continue to remain the lowest.







What Is Freeway Congestion?

Freeway congestion is defined as a condition with an excess of vehicles on a portion of freeway at a particular time, resulting in a slower speed than if the freeway volume is not excessive (or is operating at a free-flow speed). This report defines severe freeway delay as the additional time it takes a vehicle to travel a freeway segment due to the segment operating at a speed of less than 35 mph, which is the speed at which vehicle flow begins to diminish.

Source: INRIX Commercial Speed Data.

Notes: *The Bay Bridge was closed to traffic from August 28, 2013 (8 p.m.) to September 3, 2013 (5 p.m.). Grey hatched column indicates the additional vehicle hours of delay incurred in 2013 Quarter 3 from the Bay Bridge Closure.

- Overall, vehicle hours of delay in Quarter 2 and Quarter 3 have surpassed vehicle hours of delays of delay in Quarter 4 during this time period.
- The closure of the Bay Bridge from August 28, 2013 to September 3, 2013 more than doubled the vehicle hours of delay in 2013 Quarter 3, if included in statistics.

		Q3 (Jul-Sep)	Q4 (Oct-Dec)	Q1 (Jan-Mar)	Q2 (Apr-Jun)	FY Total
	FY2012-13	3,170	3,793	3,066	3,948	13,976
Weekday	FY2013-14	3,717	4,396	3,644	4,199	15,955
	Percent Change	17%	16%	19%	6%	14%
	FY2012-13	349	276	239	449	1,313
Weekend	FY2013-14	456	388	310	541	1,695
	Percent Change	31%	41%	30%	21%	29%
	FY2012-13	3,518,606	4,068,795	3,304,966	4,396,750	15,289,117
Overall	FY2013-14	4,172,649	4,783,997	3,953,554	4,740,022	17,650,222
	Percent Change	19%	18%	20%	8%	15%

Table 2: Total Severe Freeway Delay (thousand vehicle hours of delay vs. 35 mph threshold)*

Source: INRIX Commercial Speed Data.

Notes: *FY2013-14 data does not include delay during the period of the Bay Bridge closure from August 28, 2013 (8 p.m.) to September 3, 2013 (5 p.m.). Vehicle hours of delay vs. 35 mph threshold refers to increased time that it takes a vehicle to travel a freeway segment due to the segment operating at a speed of less than 35 mph.

Some of the most congested freeway segments in the Bay Area are in Alameda County. As shown in Figure 20, of the top 10 congested Bay Area freeway segments in 2013, six of them are within Alameda County:

- Interstate 880, southbound from I-238 to Dixon Landing Road in the a.m. period (ranked 2 in the map)
- Interstate 80, westbound from CA-4 to Powell Street in the a.m. period (ranked 4 in the map)
- Interstate 580, westbound from San Joaquin County Line to Fallon Road in the a.m. period (ranked 6 in map)
- Interstate 680, northbound from CA-262/Mission Boulevard to CA-84 in the p.m. period (ranked 7 in the map)

- Interstate 80, eastbound from West Grand Avenue to Gilman Street in the p.m. period (ranked 8 in the map)
- Highway 24, eastbound from 27th Street to Wilder Road in the p.m. period (ranked 9 in the map)

In addition, two congested segments are located outside of Alameda County but are on corridors that are gateways to Alameda County:

- Interstate 80, eastbound from US-101 to Treasure Island in the p.m. period (ranked 1 in the map)
- Interstate 680, northbound from Bollinger Canyon Road to Treat Boulevard in the p.m. period (ranked 5 in the map)

Figure 20: MTC's Top 10 Congested Corridors in the Bay Area



Source: MTC Vital Signs Initiative, http://files.mtc.ca.gov/pdf/congestion/BayArea_Top-10_Congestion_Hotspots_2013.pdf.



Local Road State of Repair

Pavement condition has largely remained constant in Alameda County from 2007 to 2013, reflecting limited funding to improve the condition of an extensive network of local roads (refer to Figure 21).

- In 2013, 22 percent of the centerline mileage in Alameda County has a pavement condition index (PCI) of "poor" or "failed." Additional miles are "at risk," meaning they will deteriorate rapidly if not repaved soon.
- Dublin has the best PCI in Alameda County at 86.
- Albany has the lowest PCI at 55.
- In general, the highest PCIs are in East County and the lowest PCIs are in North County and Central County, which may reflect the average age of roadways (refer to Table 3 on page 35).

Figure 21: Pavement Condition Index in Alameda County



Source: MTC StreetSaver database.

Notes: Average PCI is based on a weighted average of functional classifications, with weighting based on centerline-mile distance.

	2005	2006	2007	2008-9	2010	2011	2012	2013
Alameda	64	60	64	63	72	67	66	68
Alameda County	71	72	69	75	73	72	71	71
Albany	60	66	63	60	58	56	58	55
Berkeley	58	61	60	58	61	58	58	58
Dublin	78	82	80	80	87	84	87	85
Emeryville	82	78	76	74	80	79	75	73
Fremont	71	68	66	64	63	63	63	67
Hayward	67	69	68	69	70	68	69	67
Livermore	80	79	77	77	80	78	76	77
Newark	78	69	67	71	68	75	76	76
Oakland*	52	61	57	58	54	60	61	58
Piedmont	66	69	67	72	72	74	67	67
Pleasanton	74	75	76	78	77	76	77	78
San Leandro	62	60	59	56	56	56	57	57
Union City*	76	75	75	79	80	78	80	79

Table 3: Local Average Pavement Condition Index

Source: MTC StreetSaver database.

Notes: Average PCI is based on a weighted average of functional classifications, with weighting based on certerline mile distance. *PCI was correlated from an alternate scale prior to 2007.



Freeway and Highway State of Repair

The majority of Alameda County's state highway system lane miles are in good condition.

- To identify distressed pavement, Caltrans assesses the ride quality and structural distress on each pavement lane mile on the state highway system. There are three levels of distress: poor ride only, minor pavement distress (pavement in poor condition with significant cracks), and major pavement distress (pavement in poor condition with extensive cracks).
- Figure 22 shows that in 2012, 22 percent of Alameda County's state highway system lane miles were in these three levels of distress. Among distressed state highway lane miles, the majority were in poor ride only condition, and 7 percent and 3 percent of lane miles were in minor and major distress, respectively.
- Further analysis will have to be conducted to identify the locations of these distressed roadways in Alameda County.



Figure 22: 2012 Alameda County State Highway Lane Miles Pavement Condition

Safety

From 2001 to 2011, collisions in Alameda County declined steadily (refer to Figure 23 below and Table 4 on the next page). However, collisions increased from 2011 to 2012:

- The number of fatalities increased by 31 percent to 77 total fatalities in 2012.
- The number of injury and fatal crashes increased by 6 percent to 6,605 total crashes in 2012. Table 4 shows collision rates in Alameda County from 2005 to 2012.
- Unsafe speed was the most common cause for injury and fatal collisions in 2012 and accounted for more than twice as many collisions as the next highest cause (refer to Figure 24).



Figure 23: Roadway Collisions in Alameda County

Source: (Figures 23 and 24, and Table 4): The California Highway Patrol Statewide Integrated Traffic Record System (SWITRS) database.

Notes: The SWITRS database is continuously updated as collision reports are processed. The year 2012 is the most recent year for which updating is substantially complete.

3 | Roadways

Table 4: Collision Rates (2005 to 2012)

	2005	2006	2007	2008	2009	2010	2011	2012
Fatal Collisions	90	90	99	82	61	62	57	72
Severe Collisions	387	341	352	389	295	320	300	284
Total Collisions	27,244	25,995	24,961	22,477	20,583	19,285	18,324	18,670

Figure 24: Causes of Injury and Fatal Roadway Collisions (2012)



Notes: Other causes of collisions include driving on the wrong side of road, pedestrian violations, unsafe starting or backing, following too closely, improper passing, hazardous parking, impeding traffic, and other unknown or not stated causes.



4. Transit

Ridership

- Total transit boardings increased in FY2014, the third consecutive year of increase. The 1.2 percent growth in boardings brought total boardings to their highest level in more than five years, though ridership remains below prerecession levels (Figure 25).
- Transit ridership has not grown as fast over the last decade. Alameda County saw about 67 annual boardings per person in FY2007, but only 61 annual boardings per person in FY2014 (Figure 26 on the next page).
- BART has seen significant ridership growth over the last decade, though boardings in Alameda County dipped marginally in FY2014 (likely due to a strike).



Figure 25: Total Annual Transit Boardings in Alameda County (thousand boardings)



Figure 26: Annual Transit Boardings per Capita



Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

- Bus ridership in Alameda County has declined significantly over the last decade, though it did increase in 2014 (the second consecutive year of growth) and still represents the majority of transit boardings. Bus ridership in Alameda County was almost 10 million annual boardings lower in FY2014 than in FY2007.
 Service levels for AC Transit, which accounts for the vast majority of bus ridership, are still below pre-recession levels, as discussed further below.
- More investigation is needed as to what types of trips (e.g., commute vs. other trip purposes) are no longer being made by bus as well as what modes bus riders have switched to. Journey-to-work mode share data suggests that non-work travel may be the source of declines in bus ridership (bus work-trip mode share changed minimally between 2000 and 2013, from 4.5 percent to 4.4 percent (see Table 1 in Chapter 2, "Travel Patterns").

Service Utilization

Service utilization is a ratio of how many people use transit (demand) to how much service is provided (supply). Table 5 shows service utilization performance data since 2005 for Alameda County transit operators, while Figures 27 and 28 show trends for large and small operators, respectively.

- Between 2005 and 2014, BART, commuter rail, and ferry operators have generally seen increases in service utilization, indicating that they are carrying more passengers per hour of revenue service operated.
- AC Transit has kept its service utilization relatively flat (minimal decline) over the last decade, as declines in ridership have been only slightly greater than cuts to reductions in service levels that the operator instituted in response to sharp drops in revenue sources.
- LAVTA has seen a drop in service utilization since 2005; LAVTA has restored service to pre-recession levels, but has not seen a ridership recovery, leading to a decline in utilization.

Service Utilization Defined

Service utilization is a ratio of how many people use transit (demand) to how much service is provided (supply). It can be measured using boardings per revenue vehicle mile (RVM) or revenue vehicle hour (RVH). An increase in service utilization is a positive outcome for a transit operator as it implies more people rode transit for the same level of service operated, or that the operator served the same number of passengers while operating less service (incurring lower costs).

	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
BART	55.95	56.95	59.12	59.38	59.05	60.84	62.61	65.44	69.49	69.76
ACE	34.22	34.34	35.97	40.97	35.16	35.15	36.55	38.97	40.41	44.26
AC Transit	36.05	36.84	36.75	34.86	31.88	33.08	34.01	33.23	34.20	34.19
LAVTA	16.93	17.71	17.55	16.25	15.76	17.05	15.37	14.00	13.86	13.13
Union City Transit	10.05	10.33	10.85	11.05	11.70	11.34	12.13	12.74	12.52	11.38
WETA	75.46	80.05	85.35	92.35	85.54	89.96	100.50	110.22	110.11	136.84

Table 5: Boardings per Revenue Vehicle Hour for Alameda County Transit Operators

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

Note: The WETA figure is for Alameda County lines only (Alameda/Oakland – San Francisco, Harbor Bay – San Francisco, and Alameda/Oakland – South San Francisco).



Figure 27: Large Operator Boardings per Revenue Vehicle Hour Trend

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

- BART's service utilization has steadily climbed over the last decade, reflecting the continued growth in ridership in spite of minimal added service. BART now carries nearly 15 more passengers per revenue vehicle hour in FY2014 than in FY2005.
 BART has limited options to add service to accommodate significant growth in ridership until new train cars are delivered and other operational improvements can be funded.
- WETA saw a significant increase in service utilization in FY2014, which mostly reflects a growth in ridership and may been related to passengers switching to ferry services during the July and October 2013 BART strikes (refer to Figure 28 on the next page).



Figure 28: Smaller Operator Boardings per Revenue Vehicle Hour Trend

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

Note: The WETA figure is for Alameda County lines only (Alameda/Oakland – San Francisco, Harbor Bay – San Francisco, and Alameda/Oakland – South San Francisco).

Bus Operator Commercial Speed

Commercial speed is the average speed that buses achieve, taking into account delays from traffic signals, passenger boarding and alighting, and other factors. Figure 29 shows commercial speed for Alameda County's three bus operators.

- AC Transit saw a decline in its commercial speed in FY2014, continuing a nearly decade-long trend. Over the last 10 years, AC Transit's commercial speed has dropped from nearly 12 mph to slightly over 11 mph, a considerable change for a systemwide average statistic. This decline means riders do not get to their destination as quickly, and AC Transit must operate more buses (incur greater costs) to maintain the same frequency of bus arrivals.
- Further analysis is needed to identify sources of delay to AC Transit service, in particular to determine the role of local vs. Transbay service in AC Transit's commercial speed. Transbay routes, which operate considerable portions of the line on freeways, may increase the overall average speed but may also explain some of the decline (due to freeway congestion).



Commercial Speed Defined

Commercial speed is the average speed that buses achieve, taking into account delays from traffic signals, passenger boarding and alighting, and other factors. Average commercial speed is computed as the ratio of RVMs to RVHs. Commercial speed on particular routes or at particular times of day may be quite different than the operator overall systemwide average.



Figure 29: Alameda County Bus Operator Average Commercial Speed (miles per hour)

- LAVTA generally has high commercial speeds, which likely reflects differences in the built environment, stop spacing, levels of congestion, and other characteristics as compared to other Alameda County bus operators.
- Further analysis is needed to explain trends in Union City Transit's commercial speed, which shows a significant increase from FY2013 to FY2014.
- Partnerships between local jurisdictions and transit operators are needed to ensure fast, reliable service.

On-Time Performance

On-time performance is the percentage of time that a transit operator's vehicle arrives at its stop within some threshold of the scheduled time. Figure 30 shows on-time performance data since FY2011-12 for all Alameda County transit operators.

- Most transit operators saw minimal change in on-time performance in FY2014, compared to FY2013.
- Union City Transit has the highest overall on-time performance.
- Rail operators have generally 95 percent on-time performance, reflecting the fact that they operate on dedicated rights-of-way.
- AC Transit's overall on-time performance is below 70 percent, and many individual routes perform even worse. AC Transit operates many routes in dense urban conditions which complicates delivery of reliable service. In addition, some AC Transit routes have frequent headways (e.g., 15 minutes or less) meaning that while on-time performance may be lower, passengers may not wait as long on average if a bus is late.
- BART saw a slight dip in on-time performance for the second consecutive year, but generally operates very reliable service in spite of aging vehicles, track, and communications infrastructure.



On-Time Performance Defined

On-time performance is the percentage of time that a transit operator's vehicle arrives at its stop/station within some threshold of the scheduled time. Different operators define "on-time" differently, but no more than 5 minutes late or 1 minute early is a typical definition.



Figure 30: Alameda County Transit Operator On-Time Performance

Source: Provided by transit operators.

Cost Efficiency Defined

Cost efficiency in this report refers to a transit operator's operating cost normalized by some unit. Here, cost per rider is presented (cost per **RVH**, or the cost to operate a unit of service is presented in subsequent sections). Cost efficiency is an important metric to track, as transit operators have limited resources and increases in operating cost mean an operator may not provide the same level of service for the same available funding. A transit operator can increase its cost per rider either by attracting more riders or by controlling costs.

Cost Efficiency

Cost efficiency in this report refers to a transit operator's operating cost normalized by some unit. Table 6 shows service utilization performance data since 2005 for Alameda County transit operators, while Figures 31 and 32 show trend lines for large and small operators, respectively.

- BART has exhibited a steady decline in cost per rider, as it has kept operating costs largely steady while growing its ridership.
- AC Transit has seen an increase in cost per rider over the last decade, though it has kept this metric largely flat since 2009. The increase is mostly attributable to increases in the cost of operating service (the cost per RVH has grown 15 percent over this period). AC Transit now faces a cost per rider nearly a dollar higher than in 2005.
- LAVTA has seen a sharp increase in cost per rider, both since 2005 and from 2013 to 2014. Other operators have largely seen a decline or minimal change in cost per rider, though saw increases in FY2014. ACE in particular saw a large uptick in cost per rider as growth in operating expenses outpaced ridership growth. LAVTA's increase in cost per rider reflects ridership declines, as costs are spread across fewer riders. ACE's increase in cost per rider in FY2014 reflects high diesel fuel costs for much of the year.

	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
BART	5.16	4.88	4.91	4.70	4.74	4.74	4.38	4.33	4.27	4.24
ACE	21.33	22.99	17.95	16.16	17.48	19.56	17.63	16.31	16.32	22.17
AC Transit	4.44	4.56	4.68	4.92	5.49	5.41	5.37	5.77	5.48	5.39
LAVTA	5.93	6.10	5.91	6.25	6.53	7.09	7.29	7.57	7.34	8.73
Union City Transit	8.98	7.79	7.35	6.81	6.34	6.97	6.58	6.44	6.83	8.13
WETA	11.51	10.75	10.34	10.35	10.76	9.81	11.86	9.84	12.49	10.83

Table 6: Alameda County Transit Operator Cost per Rider (\$2014)

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

Note: The WETA figure is for Alameda County lines only (Alameda/Oakland – San Francisco, Harbor Bay – San Francisco, and Alameda/Oakland – South San Francisco).

 WETA's volatility in cost per rider reflects the introduction of new routes (service to South San Francisco beginning in FY2012) and the merger with Vallejo – San Francisco ferry service.



Figure 31: Alameda County Large Operator Cost per Rider Trend

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).



Figure 32: Alameda County Smaller Operator Cost per Rider Trend

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

Note: The WETA figure is for Alameda County lines only (Alameda/Oakland – San Francisco, Harbor Bay – San Francisco, and Alameda/Oakland – South San Francisco).

Farebox Recovery Defined

Farebox recovery ratio refers to the percentage of a transit agency's operating expenses that are covered by passenger fare revenues (as opposed to other revenue sources such as parking revenues, advertising revenues, and subsidies). Farebox recovery does not include capital costs.

Farebox Recovery

Farebox recovery is the amount of a transit agency's operating expenses that are covered by passenger fare revenues. Table 7 shows farebox recovery performance for Alameda County transit operators since FY2005.

- BART, AC Transit, and WETA all saw improvements in farebox recovery ratios in FY2014.
- ACE saw a decline, which is attributable to an increase in operating expenses from increasing diesel fuel prices, while LAVTA and Union City Transit saw declines that are attributable to reductions in ridership and fare revenue earned.
- BART has seen a dramatic improvement in farebox recovery ratio over the last decade from 57 percent to nearly 80 percent.
- AC Transit has kept its farebox recovery ratio relatively flat, even amid ridership declines, through fare policy and service reductions.
- Rail and ferry operators generally operate at considerable higher farebox recovery ratios than bus operators, reflecting the fact that their cost structure is more capital-intensive and less labor-intensive (with capital costs not factoring into farebox recovery calculations).

Table 7: Alameda County Transit Operator Farebox Recovery Ratio

	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
BART	0.57	0.61	0.61	0.64	0.66	0.72	0.76	0.75	0.77	0.78
ACE	0.27	0.28	0.37	0.38	0.37	0.34	0.37	0.34	0.39	0.29
AC Transit	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.19	0.20	0.21
LAVTA	0.17	0.16	0.19	0.18	0.18	0.19	0.18	0.16	0.19	0.15
Union City Transit	0.11	0.12	0.14	0.13	0.14	0.12	0.15	0.15	0.13	0.11
WETA	0.47	0.52	0.51	0.49	0.53	0.57	0.53	0.49	0.39	0.44

Fleet Age

BART and WETA both have fleets consisting of vehicles that are, on average, at or beyond the typical useful life of a fleet vehicle. BART in particular has the oldest train cars of any major heavy rail service in the country and is in the process of procuring new rail cars, the first shipment of which are expected to enter service in fall 2016.

- AC Transit unveiled a shipment of new buses in FY2014, bringing the average age of its fleet down to 6.5 years.
- Maintaining transit fleets in a state of good repair by replacing fleet vehicles at regular intervals is critical to maintaining service reliability.

Table 8: Fleet Size and Age by Operator

	Fleet Size	Average Age	Useful Life
BART	667	34.6	25
ACE - Locomotives	6	15	30
ACE - Passenger Cars	28	15	40
AC Transit	569	6.52	15
LAVTA	72	10	15
Union City Transit	18	5.3	12
WETA	11	15	15

Source: Provided by transit operators.

Service Interruptions

All transit operators saw a reduction in the time or distance operated between service interruptions in FY2014, except for ACE, which posted its highest time between service interruptions in the last six years (refer to Table 9).

- AC Transit in particular saw a sharp decline in miles operated between mechanical failures, which primarily reflects changes in accounting for fuel cell and warranty vehicle road calls as well as unveiling new fleet vehicles that should reduce road calls in FY2014-15 and beyond.
- Increases in the time or distance between service interruptions represent increased reliability for transit riders.

	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Rail	Mean Tin	ne Betwee	en Service	e Delay (i	n hours)	
BART	2,683	2,796	2,995	3,216	3,758	3,584
ACE	546	438	388	2,438	2,438	0
Bus	Average	Miles Bet	ween Me	chanical	Failure	
Bus AC Transit	Average 4,656	Miles Bet 5,727	ween Me 7,941	<mark>chanical</mark> 6,556	Failure 8,244	5,211
Bus AC Transit LAVTA	Average 4,656 4,904	Miles Bet 5,727 4,837	ween Me 7,941 6,353	chanical 6,556 15,249	Failure 8,244 17,397	5,211 13,249

Table 9: Time or Distance Between Service Interruptions

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

San Francisco Bay Area Rapid Transit District (BART)

BART is a heavy rail operator that provides regional transit service in four counties in the San Francisco Bay Area. BART carries more than 400,000 riders per day, and 20 of the 44 BART stations are located in Alameda County. Figure 33 shows trends in ridership, service operated, operating costs, and fare revenue, while Figure 34 shows trends in performance for BART.

• BART has seen significant growth in ridership over the last decade. Ridership stayed flat in 2014 as compared to 2013,

though this is likely reflective of strike days in July and October 2014. In fact, boardings per revenue vehicle hour actually increased slightly in 2014 as compared to 2013.





Figure 33: BART Trends in Boardings, Service Operated, Operating Costs, and Fare Revenue

Source: National Transit Database (FY2005-FY2013), Provisional data from transit operators (FY2014).







Over the past decade, BART has experienced significant increases in ridership and has 95 percent on-time performance.

- Further analysis is needed to reveal reasons for increases in BART ridership. Possible reasons could include increasingly regional commute patterns and a regional economic recovery that has seen record job creation in San Francisco, maturation of transit oriented development projects at BART stations, maturation of some system expansions (e.g., SFO line and West Dublin/ Pleasanton infill station), increasing prevalence of smart phones and other devices that let people work while in transit, and an emphasis on marketing around major events (BART has set a number of its record ridership days in recent years in conjunction with major sporting events, for instance).
- BART's increases in ridership have come even as the operator has not added significant new service, leading to peak direction crowding through the Transbay Tube during commute periods. In the short term, BART is constrained in its ability to operate more service by the need to have a certain number of cars in maintenance at any given time. BART is actually operating fewer RVHs of service now than it was in 2009, although this may reflect some shorter trains during offpeak periods and on weekends.
- BART has largely kept costs constant with minimal growth in the cost of operating a unit of service (operating cost per RVH has increased by less than 5 percent since 2005, adjusting for inflation).
- BART has seen fare revenue increases greater than growth in ridership, even after adjusting for inflation (the former has increased by more than 40 percent since 2005, while the latter has increased by about 30 percent). This may reflect longer trips, since BART has distance-based fares, and fewer discount fare instruments due to increasing Clipper use.

Alameda-Contra Costa Transit District (AC Transit)



AC Transit is the second largest bus operator in the San Francisco Bay Area, providing both local and Transbay service to Alameda and Contra Costa counties. Roughly 90 percent of AC Transit's service area is in Alameda County, covering North, Central, and South County. AC Transit carries nearly 200,000 riders per day. Figure 35 shows trends in ridership, service operated, operating costs, and fare revenue, while Figure 36 on the next page shows trends in performance concepts for AC Transit.

- AC Transit ridership began to recover in FY2013, and continued its recovery in FY2014. AC Transit's annual ridership increased by about 1.5 percent in FY2014.
- While ridership is recovering, service levels were still below pre-recession levels in FY2014. AC Transit operated almost 15 percent less service in FY2014 than in FY2009. Recovering revenue sources and the passage of Measure BB should permit AC transit to unveil service expansion in FY2015 and beyond.





Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).



Figure 36: AC Transit Trends in Performance Concepts

- AC Transit has seen a significant drop in boardings over the last decade. This drop was precipitated by the recession and drastic service cuts (as a result of funding cuts), but has persisted even as the economy has recovered. Ridership began to dip in FY2007-09 with the economic slowdown, and then dropped further in FY2010 and FY2011 due to major service cuts. After two years of recovery (FY2013 and FY2014), ridership is nearly 18 percent lower than it was in 2008.
- AC Transit's overall system ridership has declined from 67.0 million boardings per year in 2007 to 55.7 million boardings in 2014. In addition to service cuts, this may reflect some changes in regional economic composition, in particular the fact that the current economic recovery has centered in San Francisco and in Silicon Valley.
- Boardings per RVH have increased since FY2009, first as AC Transit cut service faster than declines in boarding (FY2009-11) and more recently due to growth in ridership (FY2012-14).

- Operating costs have decreased or stayed flat the last three years, even as service levels have remained relatively constant. However, operating expenses have grown over the last decade. AC Transit now faces a 15-percent-higher cost to operate a unit of service than in FY2005, after adjusting for inflation. More research beyond the scope of this report could identify the reasons for this growth in operating expenses.
- AC Transit has grown fare revenue over the last three years, even after adjusting for inflation and even with relatively minimal growth in ridership. AC Transit adopted a 10-year fare increase in May 2011 that increased fares from \$2.00 to \$2.10 in August 2012, and then to \$2.25 in FY2014. AC Transit planned another fare restructuring beginning in FY2015.





2014 continued a four-year trend of consecutive ridership growth.

Altamont Corridor Express (ACE)

ACE offers rail service between San Joaquin County, Alameda County, and Santa Clara County. The service includes four daily trains in each direction and stops at four stations in East and South Alameda County. ACE carries more than 4,000 riders daily, many of whom make trips of 50 or more miles. Figure 37 shows trends in ridership, service operated, operating costs, and fare revenue, while Figure 38 shows trends in performance concepts for ACE.

- ACE saw an increase in ridership in FY2014, the fourth consecutive year of increase. Ridership is now 33 percent higher than its pre-recession levels. ACE carried approximately 4,400 daily riders in FY2014. Growth in ridership may reflect congestion on the I-580 and I-680 corridors.
- ACE added a fourth daily train in September 2012, and the increase in RVHs in FY2014 reflects a full year of operations with the four daily train schedule.





- Ridership has increased by about 68 percent since 2010. During this period, service operated has increased by about 25 percent primarily due to the fourth daily train. Service utilization (boardings per RVH) have increased by about 26 percent since 2010, reflecting the fact that ridership has grown faster than service augmentations.
- ACE saw a sharp spike in operating costs in FY2014 compared to FY2013. The cost of operating a unit of service increased by almost 50 percent. This sharp increase in operating expenses is attributable to increases in diesel fuel prices.
- ACE increased fares by 10 percent in January 2013, and the increase in fare revenue in FY2014 vs. FY2013 reflects both an increase in ridership and a full year under the higher fares.



Figure 38: ACE Trends in Performance Concepts



Livermore Amador Valley Transit Authority (LAVTA)

LAVTA operates Wheels bus service, the primary bus service in the Tri-Valley area of Alameda County. LAVTA operates both local service within the Tri-Valley and express routes to destinations in Contra Costa County. LAVTA carries nearly 6,000 riders per day. Figure 39 shows trends in ridership, service operated, operating costs, and fare revenue, while Figure 40 shows trends in performance concepts for LAVTA.

- LAVTA saw a dip in ridership in FY2014 compared to FY2013. Ridership is now lower than the low point hit during the recession, representing the lowest overall ridership since 2005 (26 percent below 2008 levels). LAVTA carried approximately 5,700 riders per day in FY2014, down from approximately 7,800 per day in FY2008.
- Between 2011 and 2012, LAVTA restored service to levels similar to what was operated prior to cuts instituted during the recession. This service restoration has generally not resulted in a rebound in ridership, and service utilization (boardings



Figure 39: LAVTA Trends in Boardings, Service Operated, Operating Costs, and Fare Revenue

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

per RVH) is now 20 percent lower than in 2005. As a result, LAVTA will undertake a comprehensive operations analysis to investigate ways to restructure routes to better match service patterns to demand.

• LAVTA saw an increase in cost per RVH in FY2014, after three consecutive years of reduction in this metric. LAVTA has generally been successful at containing costs over the last decade, as cost per RVH is only about 10 percent higher than in 2005 (after adjusting for inflation). This may reflect the fact that as a contract operator, LAVTA is able to secure predictable cost increases over the long term.

- Despite cost containment success, declines in ridership mean that the cost per passenger served is now significantly higher than it was 10 years ago.
- Fare revenues dipped from FY2013 to FY2014, but are on par with pre-recession levels. LAVTA has not increased fares in five years, and the increase in fare revenue reflects developer contributions.



Figure 40: LAVTA Trends in Performance Concepts

Union City Transit

Union City Transit is operated by and provides bus service within the City of Union City. Union City Transit operates nine routes, and carries nearly 1,500 passengers per day. Figure 41 shows trends in ridership, service operated, operating costs, and fare revenue, while Figure 42 shows trends in performance concepts for Union City Transit.

- Union City Transit instituted service restructuring and fare increases in October 2013, which had a marked effect on ridership performance. The service restructuring consisted of introduction of pilot routes to increase coverage area, including a peak-hour express bus and circulator to serve job centers on the west side of the city. The service restructuring also included a reduction in service frequencies on some routes that previously had 20- and 30-minute headways made necessary due to limited revenue vehicles.
- Union City also introduced a fare increase and faced competition from a new AC Transit youth pass on Clipper in 2014, which negatively impacted ridership.



Figure 41: Union City Transit Trends in Boardings, Service Operated, Operating Costs, and Fare Revenue

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).



Figure 42: Union City Transit Trends in Performance Concepts

- Union City Transit saw a nearly 20 percent decline in ridership in FY2014 from FY2013. This sharp dip in ridership resulted in declines in service utilization (boardings per RVH) as well as fare revenue, and an increase in operating cost per rider.
- Union City Transit plans to consider restoring frequencies on some of the routes that saw reductions in service in spring/ summer 2015.



Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).



WETA has seen ridership increases for five consecutive years, and ridership now far exceeds prerecession levels.

San Francisco Bay Area Water Emergency Transit Authrity (WETA)

WETA operates ferry service between destinations in the East Bay and San Francisco. WETA terminals in Alameda County are located at Jack London Square in Oakland, Main Street in Alameda, and Harbor Bay in Alameda. WETA carries over 6,000 passengers daily and also serves as an important lifeline function in the event that bridges or the BART Transbay Tube are out of service. Figure 43 shows trends in ridership, service operated, operating costs, and fare revenue, while Figure 44 shows trends in performance concepts for WETA.

- WETA saw a significant increase in ridership in FY2014 over FY2013. WETA carried nearly 40 percent more riders on its Alameda County lines compared to the previous year.
- WETA has seen ridership increases for five consecutive years, and ridership now far exceeds pre-recession levels. WETA ridership in FY2014 was roughly double pre-recession levels.

Figure 43: WETA Trends in Boardings, Service Operated, Operating Costs, and Fare Revenue



Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

Note: Figure 43 shows only Alameda County lines (Alameda/Oakland – San Francisco, Harbor Bay – San Francisco, and Alameda/Oakland – South San Francisco).



Figure 44: WETA Trends in Performance Concepts

Source: National Transit Database (FY2005-FY2013); provisional data from transit operators (FY2014).

Note: Figure 44 shows only Alameda County lines (Alameda/Oakland – San Francisco, Harbor Bay – San Francisco, and Alameda/Oakland – South San Francisco).

- The long-term increase may reflect the strong economic performance in San Francisco and the Peninsula, particularly in neighborhoods located near ferry terminals. The sharp increase in ridership during FY2014 may partially reflect WETA providing additional transit service during the BART strike.
 WETA carries approximately 6,000 passengers regionwide on a typical weekday, such that replacing several peakperiod BART trains could conceivably result in a doubling of daily ridership.
- Strong ridership growth has generally meant that WETA has increased service utilization (boardings per RVH) since 2011 and over the last decade.
- WETA has seen significant cost increases and fluctuation over the last five years. These operating cost shifts may reflect costs associated with the consolidation of several smaller ferry services into a single agency.
- Increases in fare revenue have generally moved in tandem with boardings, and have generally kept pace with increases in operating costs for a steady farebox recovery.



Capitol Corridor

BART operates Capitol Corridor rail service between San Jose and Auburn with six stations in Alameda County, including 30 daily trains between Jack London Square and Sacramento and 16 daily trains between San Jose and Sacramento. Figure 45 shows trends in ridership, operating costs, fare revenue, and cost per rider for Capitol Corridor.

- Capitol Corridor saw a 20 percent dip in ridership in FY2014, the second consecutive year of decline. Ridership is slightly below pre-recession peaks and has generally stayed flat during the last half of the decade, after growing considerably during the first half of the last decade.
- Capitol Corridor introduced e-ticketing in 2013, which changed its method for accounting for monthly pass riders from an estimate to an actual count. The previous method had overestimated monthly pass riders, so the apparent decline in ridership in 2013 and 2014 may reflect slight overcounting in previous years. The decline may also reflect a slow ridership response to the recession and a response to a marginal service reduction instituted in 2012 from 32 to 30 daily trains.
- Capitol Corridor has generally held operating costs flat over the last five years, resulting in a steady farebox recovery ratio.



Figure 45: Capitol Corridor Trend in Ridership, Operating Costs, Fare Revenue, and Cost per Rider

Source: Capitol Corridor Joint Powers Authority Annual Report (FFY2005-FFY2013; data from transit operator FFY2014).



5. Bicycling

Counts

Alameda CTC conducts manual counts of bicyclists at 63 locations on an annual basis. These counts provide a consistent, longitudinal source of information on bicycling levels for all purposes (commuting, school, shopping, social/recreation, etc.). Figures 46, 47, and 48 show the number of bicyclists counted during p.m., midday, and school periods through the count program. Appendix E shows the count locations and provides more detail on the count methodology.

2013 saw a decline in observed levels of bicycling compared to 2012 in all time periods. 2013 data may have been influenced by the BART strike, as counts are conducted from September-October, which was within the same time frame as a multiday work stoppage.



Figure 46: P.M. Period (4-6 p.m.) Bicycle Counts

Source: Alameda CTC Countywide Bicycle and Pedestrian Count Program.

Note: The number in parenthesis is the number of count locations in each planning area.

This may be particularly true during the p.m. peak-period, given the prominent role bicycling plays as a commute transit access mode. Though no counts were conducted on strike days, the general uncertainty around whether transit service would be available may have led workers to work from home or explore other commute options on non-strike days as well.



Figure 47: Midday Period (12-2 p.m.) Bicycle Counts

Source: Alameda CTC Countywide Bicycle and Pedestrian Count Program.

Note: The number in parenthesis is the number of count locations in each planning area.

Figure 48: School Period (2-4 p.m.) Bicycle Counts



Source: Alameda CTC Countywide Bicycle and Pedestrian Count Program. Note: The number in parenthesis is the number of count locations.

- In spite of the 2013 decline, the long-term trend during most time periods appears to be growth. All planning areas in Alameda County saw increases in the number of bicyclists counted from 2010-2012.
- Research suggests
 that manual one-day
 counts can be subject
 to significant day to-day variability;
 the decrease in 2013
 may also reflect
 statistical variability
 rather than the end of
 a growth trend.
Safety

Figure 49 shows the trend in collisions involving bicyclists in Alameda County between 2002 and 2012, the most recent year for which complete collision data are available.

- Alameda County saw a drop in both total injury and fatal collisions and severe injury and fatal collisions involving bicyclists in 2012 vs. 2011.
- Over the long term, Alameda County has seen an increase in injury and fatal collisions involving bicyclists. To some degree, this may reflect an increase in levels of bicycling, which increases exposure of bicyclists to collisions, and not more dangerous bicycling conditions. For instance, journey-to-work bicycling mode share has nearly doubled between 2000 and 2013, which suggests the number of new people bicycling in Alameda County has increased more than the number of new collisions involving bicyclists.





Figure 49: Trend in Collisions Involving Bicyclists in Alameda County

Source: Statewide Integrated Traffic Reporting System Database.



Local jurisdictions implemented nearly 40 miles of bikeways in FY2013-14.

Network Completion

• Local jurisdictions implemented nearly 40 miles of bikeways in FY2013-14. Jurisdictions implemented more mileage of Class I trails, Class II bicycle lanes, and Class III bicycle routes in FY2013-14 than in the previous fiscal year (Figure 50). The completion of the Bay Bridge multiuse trail project and the Iron Horse Trail from Dublin-Pleasanton BART Station to Santa Rita Road accounted for considerable mileage.

Figure 50: New Bikeway Mileage Implemented in FY2013 and FY2014, by Bikeway Class



Source: Reported by local jurisdictions.

 Oakland implemented the most mileage of new bikeways in FY2013-14, the second consecutive year that it led Alameda County jurisdictions in expanding its bicycle network (Figure 51). Alameda County also striped more than 5 miles of new bicycle facilities in FY2013-14.



Figure 51: New Bikeway Mileage Implemented in FY2013 and FY2014, by Jurisdiction

Source: Reported by local jurisdictions.

- Jurisdictions implemented a wide range of bicycle facilities, continuing a trend in FY2012-13, including applying treatments to increase separation from and visibility by motor vehicles for on-street bikeways. In FY2013-14, these projects included upgraded bike lanes such as buffered bike lanes and bike lanes with green paint to denote conflict zones as well as a "super sharrow" project in Oakland (Figure 52).
- Many jurisdictions also rehabilitated a significant amount of new bikeway mileage in FY2013-14, ensuring that surfaces remain safe and comfortable and that striping remains visible (Figure 53).
- Oakland implemented the most mileage of new bikeways in FY2013-14, the second consecutive year that it led Alameda County jurisdictions in expanding its bicycle network (Figure 51). Alameda County also striped more than five miles of new bicycle facilities in FY2013-14.



• Figure 54 shows bikeway project implemented in FY2013-14 in a map, and Appendix F provides detailed information on bikeway projects implemented in FY2013-14.



Figure 52: New Bikeway Mileage Implemented in FY2014, by Detailed Bikeway Type

Source: Reported by local jurisdictions.

Notes: Upgraded bike lanes include bike lanes with buffers, green paint, and other treatments to enhance safety and comfort. Standard bike lanes include no such treatments.



Figure 53: Bikeway Mileage Implemented and Rehabilitated in FY2014, by Jurisdiction

Source: Reported by local jurisdictions.







Programs and Education

Infrastructure is only one aspect of providing a safe, comfortable bicycling system for Alameda County residents, workers, and visitors. Alameda CTC also funds and coordinates encouragement programs to raise awareness about bicycling as a healthy, environmentally sustainable option for transportation and recreation as well as education programs to teach bicyclists how to safely and legally interact with other road users.

- Bike to Work Day is an annual event celebrating commuting to work by bike. The event includes energizer stations with giveaway bags, refreshments, awards; participation by elected officials; and other activities. Bike to Work Day happens during May, which is also Bike Month, and Alameda CTC coordinates other bicycling encouragement efforts during this time.
- The number of energizer stations and the number of people who stop by energizer stations have both increased dramatically since 2006. In 2014, a new record was set for people tallied at energizer stations in Alameda County, as this number topped 15,000 (Figure 55).





Source: Bike to Work Day final reports.

- In 2014, Alameda CTC also revamped a bicycling encouragement advertising campaign that runs every May, unveiling the new slogan of I Bike! The campaign features advertisements in bus shelters, on buses, and via online media.
- Alameda CTC funds and coordinates a bicycle safety education program that has been in existence since 2007. The program is integrated with the Alameda County Safe Routes to School Program and is directly operated by Bike East Bay, a nonprofit bicycling advocacy group.
- Bicycle safety education classes and attendance have increased greatly over the program's last five years (Figure 56). In particular, the number and types of classes has greatly expanded as the bicycle safety education program has been able to leverage Alameda CTC funds with other funding sources.



• Nearly 120 classes were taught in FY2013-14 in Alameda County including classroom workshops; a half-day, on-road format class; 1-hour workplace lunchtime classes; family cycling workshops, adult learn-to-ride classes; children's

bike rodeos; and train-the-trainer classes that expand the pool of certified instructors. The program now offers classes in both Spanish and Cantonese, and classes are taught in all parts of Alameda County.

- Total attendance dipped slightly in FY2013-14 compared to FY2012-13; however, this mainly reflects a shift toward fewer bicycle rodeos, which are high-attendance classes, and more small-format classes with a lower ratio of students per instructor.
- FY2013-14 saw a considerable

Figure 56: Bicycle Safety Education Program Participation



Source: Bicycle Safety Education Program semi-annual monitoring reports.

Notes: Beginning in FY2012-13, statistics include some bicycle rodeos conducted in partnership with the Alameda County Safe Routes to School Program. Statistics also include classes funded by Alameda CTC and other grant funding sources.



expansion of classroom workshops (from 17 the previous year to 50), as well as a doubling of classroom workshops taught in Spanish and Cantonese. These workshops teach the core curriculum covering topics including rules of the road and how to avoid crashes by riding predictably and visibly, and communicating with other road users via actions and signals.

Local Master Plan Adoption

- Alameda CTC assists jurisdictions in preparing local bicycle master plans by providing funding. Local master plans are critical to identifying targeted areas for improvements, capital projects, and supportive programs. Local master plans are also typically an important means for ensuring that projects and programs are aligned with community priorities.
- No new or updated local master plans were adopted during FY2014. As of the end of FY2014, nine jurisdictions have bicycle master plans or combined bicycle/pedestrian master plans that were adopted within the last five years. Four other jurisdictions have a plan update underway. Two jurisdictions have a plan that is more than five years out of date (refer to Figure 57 on the next page).



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6. Walking

Counts

Alameda CTC conducts manual counts of pedestrians at 63 locations on an annual basis. These counts provide a consistent, longitudinal source of information on walking levels for all purposes (commuting, school, shopping, social/recreation, etc.). Figures 58, 59, and 60 summarize the number of pedestrians counted through this program during p.m., midday, and school periods. Appendix E shows the count locations and provides more detail on the count methodology.

2013 saw a decline in observed levels of walking compared to 2012 in the p.m. commute period and school time periods. 2013 data may have been influenced by the BART strike, as counts are conducted from September-October which coincided with a multiday work stoppage. This may be particularly true during the p.m. peak-period given the prominent role walking plays as a commute transit access mode.

Though no counts were conducted on strike days, the general uncertainty around whether transit service would be available may have led workers to work from home or explore other commute options on non-strike days as well.

• In spite of the 2013 decline, the long-term trend during most time periods appears to be a growth. All planning areas in Alameda County saw increases in the number of pedestrians counted from 2010-2012 during the p.m. and midday periods. Research suggests that manual one-day counts can be subject to significant day-to-day variability; the decrease in 2013 and decreases during the school period may reflect statistical variability rather than the end of a growth trend.



Figure 58: P.M. Period (4-6 p.m.) Pedestrian Counts

Source: Alameda CTC Countywide Bicycle and Pedestrian Count Program.

Note: The number in parenthesis is the number of count locations in each planning area.



Figure 59: Midday Period (12-2 p.m.) Pedestrian Counts

Source: Alameda CTC Countywide Bicycle and Pedestrian Count Program.

Note: The number in parenthesis is the number of count locations in each planning area.

Safety

Figure 61 shows the trend in collisions involving pedestrians in Alameda County between 2002 and 2012, the most recent year for which data are available.

- Injury and fatal collisions involving pedestrians in Alameda County declined in successive years from 2002 to 2007, but have generally stayed flat or increased between 2008 and 2012.
- 2012 saw a 10 percent increase in injury and fatal collisions involving pedestrians in Alameda County, compared to the previous year.
- The number of injury and fatal collisions involving Alameda County in 2012 (683 collisions) was higher than the average number of collisions involving pedestrians from the last 11 years (653 collisions). Pedestrian safety remains an issue that requires education, enforcement, and infrastructure-based strategies to address, particularly as aging populations and policy goals related to infill development and increased transit and active transportation mode usage result in greater levels of walking.



Figure 61: Trend in Collisions Involving Pedestrians in Alameda County

Source: Statewide Integrated Traffic Reporting System Database.

Project Completion

- In FY2014, jurisdictions reported completing a total of 47 major pedestrian projects (Figure 62). These completed projects span a wide variety of improvement types, ranging from closing gaps in the County's trail and sidewalk network, to major trail and pathway rehabilitation, to safety and comfort improvements to pedestrian facilities and pedestrian crossings.
- The most common types of pedestrian project completed were Americans with Disabilities Act (ADA) curb/ramp improvement programs or projects containing ADA curb/ramp upgrades, sidewalk gap closures, and major trail/pathway maintenance projects.
- All jurisdictions reported completing at least one pedestrian project in FY2014 (Figure 63). Appendix F provides details on all pedestrian projects completed in FY2013-14.



Figure 62: Pedestrian Projects Completed in FY2014 by Type

Source: Reported by local jurisdictions.

Note: Projects may appear in multiple categories. In 2014, 47 total projects were completed.



Figure 63: Pedestrian Projects Completed in FY2014 by Jurisdiction

Source: Reported by local jurisdictions.

Programs and Education

- Safe Routes to Schools (SR2S) refers to a variety of multidisciplinary programs aimed at promoting the use of alternative modes to get to school and improving the safety of using active and shared transportation modes around schools. The Alameda County SR2S program involves partnerships among municipalities, school districts, community and parent volunteers, students, and law enforcement agencies.
- The Alameda County SR2S program began in 2006 as a grantfunded pilot program in two schools, and has expanded significantly. The program shifted to a contracted program funded by federal, state, and local sales tax funding in the 2011-2012 school year and expanded its offering to cater to different levels of involvement from interested elementary, middle, and high schools. In 2013-14, the program added eight new schools and saw a 10 percent increase in the number of schools in the Comprehensive Program (Figure 64).



Figure 64: Alameda County Safe Routes to Schools Participating Schools

Comprehensive/Technical Assistance Combined

Local Master Plan Adoption

- Alameda CTC assists jurisdictions in preparing local pedestrian master plans by providing funding. Local master plans are critical to identifying targeted areas for improvements, capital projects, and supportive programs. Local master plans are also typically an important means for ensuring that projects and programs align with community priorities.
- No new or updated local master plans were adopted during FY2014. As of the end of FY2014, seven jurisdictions have pedestrian master plans or combined bicycle/pedestrian master plans that were adopted within the last five years. Four other jurisdictions have a plan update underway. Two jurisdictions have no pedestrian master plan, and two others have a pedestrian master plan that is more than five years out of date (refer to Figure 65).



6 | Walking

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7. Livable Communities

Housing Production

Housing production plays an important role in overall transportation-housing affordability as well as accessibility to jobs and services. Housing production is ultimately a function of both public policy and the development market, but local jurisdictions play an important role through local policies and discretionary land use actions.

- Figure 66 and Table 10 on the following pages summarize local jurisdictions' performance permitting housing units to meet their Regional Housing Needs Allocation between 2007 and 2014. The Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element.
 - Only one jurisdiction, Dublin, exceeded its RHNA.
 - Only seven of 15 jurisdictions met more than 50 percent of their RHNA.
 - Oakland, with the largest RHNA, met only 26 percent of its target.
- Figure 67 compares Alameda County's performance in meeting its RHNA to the rest of the Bay Area region. No county met its RHNA; however, Alameda County is below the regional average and was outperformed by the other most populous counties (Santa Clara, San Francisco, and Contra Costa) in housing production toward the RHNA target.

Livable communities are walkable, bikable and close to transit, giving people more transportation choices and reducing the pollution that causes climate change.



Figure 66: Alameda County Jurisdiction Housing Permitting Activity, 2007-2014

Source: Compiled by ABAG from local jurisdictions and local submissions of Housing Element Progress Reports to the California Department of Housing and Community Development.



Figure 67: Bay Area County Housing Permitting Activity, 2007-2014

Source: Compiled by ABAG from local jurisdictions and local submissions of Housing Element Progress Reports to the California Department of Housing and Community Development.

	RHNA	Permits Issued	Percent of RHNA
Alameda County	2167	900	42%
Alameda	2046	125	6%
Albany	276	195	71%
Berkeley	2431	1046	43%
Dublin	330	2644	801%
Emeryville	1137	729	64%
Fremont	4380	2416	55%
Hayward	3393	1717	51%
Livermore	3394	859	25%
Newark	863	10	1%
Oakland	14629	3852	26%
Piedmont	40	39	98%
Pleasanton	3277	961	29%
San Leandro	1630	1056	65%
Union City	1944	949	49%

Table 10: Alameda County Jurisdiction Housing Permitting Activity, 2007-2014

Source: Compiled by ABAG from local jurisdictions and local submissions of Housing Element Progress Reports to the California Department of Housing and Community Development.

Land Use Approvals

In FY2013-14, Alameda CTC began collecting data on land use approvals from local jurisdictions. This information includes the location, size, and use of development projects that were issued entitlements (approval of zoning, use permits, and other discretionary approvals). This information provides an indicator of future demand for travel.

- Major residential developments (100 units or more) approved in FY2013-14 by local jurisdictions include:
 - Wallis Ranch (Dublin) with 621 single-family homes and 185 multifamily homes
 - Subarea 3 (Dublin) with 330 single-family homes and 107 multifamily homes

- The Groves Lot 3 (Dublin) with 122 multifamily units
- Intersection Mixed Use (Emeryville) with 105 multifamily units
- Artist Walk (Fremont) with 185 multifamily homes
- Cannery Place (Hayward) with 157 single-family homes
- Eden Shores (Hayward) with 118 single-family homes
- Brisa Neighborhood Plan (Livermore) 246 single-family homes and 219 multifamily homes
- Trumark Timber (Newark) with 84 single-family homes and 80 multifamily homes
- SHH Project (Newark) with 160 multifamily homes
- Merrill Gardens (Oakland) with 127 multifamily units
- Broadway-Grand (Oakland) with 367 multifamily units
- Summerhill Homes (Pleasanton) with 177 multifamily units
- Major non-residential developments (100,000 square feet or more) approved in FY2013-14 by local jurisdictions include:
 - Alameda Landing Retail Project with 152,591 square feet of commercial land
 - Pleasant Valley Safeway (Oakland) with 145,500 net square feet of commercial land
 - Oakland Army Base with 1.5 million square feet of industrial land
 - San Leandro Tech Campus with 500,000 square feet of commercial land
 - Central Pacific Industrial Project (Union City) with 142,794 net square feet of industrial land
- Figures 68 and 69 which follow illustrate the locations of land use approvals in FY2013-14, including proximity to regional transit and freeway infrastructure.







Figure 69: Non-Residential Land Use Approvals in FY2013-14

Transportation Demand Management Policies

As the designated congestion management agency for Alameda County, Alameda CTC prepares a CMP which contains a TDM element that requires local jurisdictions to report annually on how they have met minimum requirements to adopt TDM policies and design guidelines. Tables 11 through 15 summarize how many jurisdictions have adopted policies and design guidelines related to bicycling, walking, transit, carpool/vanpool, and park-and-ride strategies. Appendix F shows results for each individual jurisdiction.

- Many jurisdictions have adopted strategies related to promoting bicycling and walking through good network and site design. Jurisdictions have a somewhat lower rate of adopting strategies related to transit, carpooling, and parkand-ride facilities.
- Local jurisdictions have implemented the policies in Tables 11 through 15 in a variety of ways, including as part of zoning ordinances, design review processes, as development of Standard Conditions of Approval, through Capital Improvement Programs, and as part of specific plans, general plans, Bicycle/Pedestrian Master Plans, and Climate Action Plans. Further analysis is needed to determine which implementation mechanisms have proved most effective at managing travel demand.

Table 11: Alameda County Jurisdi	ction Bicycle TDM Policy Adoption
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			NO
Design Guidelines or Adopted Policies That:	Yes	No	Response
Provide a system of bicycle facilities that connect residential and/or non-residential development to other major activity centers?	15	0	0
Provide access to transit by way of bicycle facilities?	14	0	1
Provide for construction of bicycle facilities needed to fill gaps?	14	0	1
Consider bicycle safety such as safe crossing of busy arterials or along bike trails?	14	0	1
Provide for bicycle storage and bicycle parking for (A) multifamily residents and/or (B) non- residential developments?	14	0	1

Source: Reported by local jurisdictions for CMP conformity, 2014.

Table 12: Alameda County Jurisdiction Pedestrian TDM Policy Adoption

Design Guidelines or Adopted Policies That:	Yes	No	No Response
Provide reasonably direct, convenient, accessible, and safe pedestrian connections to major activity centers, transit stops or hubs, parks/open space, and other pedestrian facilities?	15	0	0
Provide for construction of pedestrian paths needed to fill gaps, i.e., gap closure, not provided through the development process?	15	0	0
Include safety elements such as convenient crossing at arterials?	14	0	1
Provide for amenities that promote walking such as lighting, trees, trash receptacles?	14	0	1
Encourage pedestrian-oriented uses on the first floor, entrances that are conveniently accessible from the sidewalk or transit stops?	14	0	1

Source: Reported by local jurisdictions for CMP conformity, 2014.

Table 13: Alameda County Jurisdiction Transit TDM Policy Adoption

			No
Design Guidelines or Adopted Policies That:	Yes	No	Response
Provide for the location of transit stops that minimize access time, facilitate intermodal transfers, and promote reasonably direct, accessible, convenient, and safe conections to residential uses and major activity centers?	15	0	0
Provide for transit stops that have shelters or benches, trash receptacles, trees, or other street furniture that promote transit use?	15	0	0
Include a process for including transit operators in development review?	15	0	0
Provide for directional signage for transit stations and/or stops?	11	2	2
Include specifications for pavement width, bus pads or pavement structure, length of bus stops, and turning radii that accomodate bus transit?	12	1	2

Source: Reported by local jurisdictions for CMP conformity, 2014.

Table 14: Alameda County Jurisdiction Carpool and Vanpool TDM Policy Adoption

			No
Design Guidelines or Adopted Policies That:	Yes	No	Response
Provide for the location of transit stops that minimize access time, facilitate intermodal transfers, and promote reasonably direct, accessible, convenient, and safe conections to residential uses and major activity centers?	15	0	0
Provide for transit stops that have shelters or benches, trash receptacles, trees, or other street furniture that promote transit use?	15	0	0
Include a process for including transit operators in development review?	15	0	0
Provide for directional signage for transit stations and/ or stops?	11	2	2
Include specifications for pavement width, bus pads or pavement structure, length of bus stops, and turning radii that accomodate bus transit?	12	1	2

Source: Reported by local jurisdictions for CMP conformity, 2014.

Table 15: Alameda County Jurisdiction Park-and-Ride TDM Policy Adoption

Design Guidelines or Adopted Policies That:	Yes	No	No Response
Promote park-and-ride lots that are located near freeways or major transit hubs?	8	3	4
Include a process that provides input to Caltrans to ensure high-occupancy-vechicle lane bypass at metered freeway ramps?	5	6	4

Source: Reported by local jurisdictions for CMP conformity, 2014.



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Appendices

Α.	Performance Measures Not Included in This Performance Report
B.	Detailed Information on Data Source
C.	Freeway Speed and Travel Time Data 101
D.	Transit Operator Performance Data
E.	Bicycle/Pedestrian Count Locations and Methodology 114
F.	Bicycle/Pedestrian Project Completion 115
G.	Travel Demand Management Policies
H.	Bicycle Network Completion Maps 126
I.	Development Approval Maps

Performance Measure	Exclusion Rationale
Low-income households near activity centers	This measure is one of the "Livable Communities" performance measures added in the 2011 Performance Report. The measure is complex to compute and does not typically exhibit significant change on an annual basis. Alameda CTC will reevaluate the suitability of reporting on this measure in an annual document as part of the 2015 Alameda County Congestion Management Program (CMP) update.
Low-income households near transit	This measure is one of the Livable Communities performance measures added in the 2011 Performance Report. The measure is complex to compute and does not typically exhibit significant change on an annual basis. Alameda CTC will reevaluate the suitability of reporting on this measure in an annual document as part of the 2015 Alameda County CMP update.
CO ₂ emissions	This measure is one of the Livable Communities performance measures added in the 2011 Performance Report. The measure is computed using the Alameda Countywide Travel Demand Model rather than a longitudinal data source; therefore, Alameda CTC will reevaluate the suitability of reporting on this measure in an annual document as part of the 2015 Alameda County CMP update.
Fine particulate emissions	This measure is one of the Livable Communities performance measures added in the 2011 Performance Report. The measure is computed using the Alameda Countywide Travel Demand Model rather than a longitudinal data source; therefore, Alameda CTC will reevaluate the suitability of reporting on this measure in an annual document as part of the 2015 Alameda County CMP update.
Travel time of key origin- destination pairs	This measure is reported in the biennial level of service monitoring report in 2014.
Transit routing	This measure will be reported on in the CMP document.
Transit frequency	This measure will be reported on in the CMP document.
Coordination of transit service	This measure will be reported on in the CMP document.
Transit capital needs and shortfall	This measure is based on the Regional Transportation Plan financial analysis conducted every four years; therefore, there is no new information to report.
Countywide funds devoted to bicycle and pedestrian modes	Alameda CTC is exploring opportunities for reporting on this measure as part of Alameda CTC's Annual Report.

Measure	Data Source	Notes
Commuter flows	American Community Survey (ACS), 1-Year Estimates	This measure is based on a sample expanded to county-level population. The survey is conducted throughout the year. The ACS asked respondents to report the work location at which they worked the greatest number of hours. If the respondents regularly work at several locations each day, the ACS asked for the address where they began work each day.
Mode share	ACS, 1-Year Estimates	This measure is based on a sample expanded to county-level population. The survey is conducted throughout the year. The journey-to-work mode is the mode used the majority of days during week for the longest portion of trip.
Journey-to-work travel time	ACS, 1-Year Estimates	This measure is based on a sample expanded to county-level population. The survey is conducted throughout the year. Travel time to work refers to the total number of minutes that it usually takes the worker to get from home to work. The elapsed time includes time spent waiting for public transportation.
Driver license rate	California Department of Motor Vehicles (DMV) ACS, 1-Year Estimate	This measure is based on the number of driver licenses of Alameda County residents over the age of 16 provided by the California DMV. This number of driver licenses is divided by the population of Alameda County based on the ACS, 1-Year Estimate.
Freeway speeds – recent trends	INRIX, Inc. Analytics Tools	INRIX, Inc. is a commercial traffic information service provider. INRIX aggregates data from a variety of sources including mobile devices, fleet vehicles, and in- road sensors and serves a wide range of public and private clients. INRIX data has been validated against GPS-floating car collected data in Alameda County for freeways.
Gateway traffic volumes	Bay Area Toll Authority (BATA)	Bridge traffic volumes are BATA vehicle counts at the westbound toll plazas of the Dumbarton, San Mateo, and Bay bridges. Only Tuesday through Thursday volumes were used to calculate median weekday volume. Records were extracted from July 1, 2013 to June 30, 2014.

Measure	Data Source	Notes
Gateway traffic volumes (cont'd)	Caltrans, Performance Measure System (PeMs)	 Highway and state route volumes extracted from the PeMs detectors built into the roadway at 12 locations. PeMs detectors can go offline for a variety of reasons, which results in the readings not being taken. When working with PeMS hourly data, each station-hour has a percent observed associated with it (or the percent of records that were actually observed). To calculate median weekday volume at these locations, PeMS data were selected by the following criteria: Use only Tuesday through Thursday observations. Exclude holiday observations. For an individual hour, keep the observation if 50 percent or more of the data is observed. For a peak period or day, require that all of the hours that comprise that peak/day meet the 50 percent threshold.
		Records were extracted from July 1, 2013 to June 30, 2014.
Freeway congestion (vehicle hours of delay)	INRIX, Inc. Analytics Tools	INRIX, Inc. is a commercial traffic information service provider. INRIX aggregates data from a variety of sources including mobile devices, fleet vehicles, and in- road sensors and serves a wide range of public and private clients. INRIX data has been validated against GPS-floating car collected data in Alameda County for freeways.
Local streets and roads pavement condition index (PCI)	MTC's StreetSaver database	StreetSaver is an online pavement management system that enables local jurisdictions to track the PCI of their roadways.
Freeway and highway state of repair	Caltrans	State of repair is based on Caltrans' assessment of each pavement lane mile on the state highway system on its ride quality and structural distress. There are three levels of distress: poor ride only, minor pavement distress (pavement in poor condition with significant cracks), and major pavement distress (pavement in poor condition with extensive cracks).
Roadway collisions, injury and fatal collisions, and collision causes	Statewide Integrated Traffic Record System (SWITRS)	Caltrans and the California Highway Patrol partner to track collisions through SWITRS. Through this program, standardized accident reports are filed any time an officer responds to a traffic incident.
Transit ridership	FTA's National Transit Database (FY2005-FY2013) and special request from transit operators (FY2014)	
Transit service utilization (boardings per revenue vehicle hour)	FTA's National Transit Database (FY2005-FY2013) and special request from transit operators (FY2014)	

Measure	Data Source	Notes
Transit cost efficiency (operating cost per rider)	FTA's National Transit Database (FY2005-FY2013) and special request from transit operators (FY2014)	Operating costs are escalated to 2012 dollars using the Consumer Price Index for the San Francisco Bay Area.
Transit commercial speed (revenue vehicle miles per revenue vehicle hour)	FTA's National Transit Database (FY2005-FY2013) and special request from transit operators (FY2014)	
Transit on-time performance	Special request from transit operators	"On-time" threshold is as defined by operator (e.g., AC Transit uses a standard of no more than 1 minute early or 5 minutes late).
Farebox recovery ratio	FTA's National Transit Database (FY2005-FY2013)	
Transit fleet age	FTA's National Transit Database (FY2005-FY2013) and special request from transit operators (FY2014)	
Transit service interruptions	FTA's National Transit Database (FY2005-FY2013) and special request from transit operators (FY2014)	
Bicycle/pedestrian counts	Alameda CTC count program	The p.m. peak-hour counts (4-6 p.m.) are presented in this report. The count program has included 63 locations since 2010.
Bicycle/pedestrian collisions	Statewide Integrated Traffic Record System (SWITRS)	Caltrans and the California Highway Patrol partner to track collisions through SWITRS. Through this program, standardized accident reports are filed any time an officer responds to a traffic incident.
Bicycle/pedestrian updated local master plans	Reported by local jurisdictions	
Bicycle network completion/major pedestrian capital projects completed	Reported by local jurisdictions	
Bicycle/pedestrian program participation	Semi-annual progress reports (Bike Safety Education) and annual reports (Bike to Work Day and Safe Routes to School)	

Measure	Data Source	Notes				
Housing Production	California Department of Finance	Housing permits issued are compiled by ABAG from local jurisdictions and local submissions of Housing Element Progress reports to California Department of				
	ABAG, Housing Element Progress Reports	Housing and Community Development.				
Land Use Approvals	Special request from local jurisdictions	Includes developments that were issued entitlements between July 1, 2013 and June 30, 2014.				
Transportation Demand Management Policies	Reported by local jurisdictions					

Table C1: Detailed Speed Data A.M. Peak Period (7-9 a.m.)		FY2010 -11	FY2011 -12	FY2012 -13	FY2013 -14	% Change FY2013-14 v. FY2012-13
I-80 from I-80/I-580 Diverge to MacArthur Maze	EB	60.22	60.96	61.09	61.12	0%
I-80 from I-80/I-580 Diverge to MacArthur Maze	WB	41.46	42.54	40.17	37.73	-6%
I-80 from MacArthur Maze to San Francisco	EB	53.39	57.37	55.24	55.44	0%
I-80 from MacArthur Maze to San Francisco	WB	41	41.62	40.02	40.89	2%
I-580 from MacArthur Maze to CA-24/I-980	EB	57.69	58.23	59.17	58.4	-1%
I-580 from MacArthur Maze to CA-24/I-980	WB	50.53	50.7	51.59	49.19	-5%
I-580 from CA-24/I-980 to I-238	EB	65.97	66.83	67.51	66.86	-1%
I-580 from CA-24/I-980 to I-238	WB	58.15	58.85	57.72	56.01	-3%
I-580 from I-238 to I-680	EB	63.59	63.04	62.32	61.2	-2%
I-580 from I-238 to I-680	WB	62.66	62.12	62.76	63.37	1%
I-580 from I-680 to Vasco Rd	EB	63.65	65.44	66.7	65.9	-1%
I-580 from I-680 to Vasco Rd	WB	46.21	45.88	44.16	41.68	-6%
I-580 from Vasco Rd to I-205	EB	63.83	65.3	65.95	65.26	-1%
I-580 from Vasco Rd to I-205	WB	50.72	50.5	49.46	48.69	-2%
I-680 from CA-24 to I-580	NB	62.52	62.5	62.33	62.29	0%
I-680 from CA-24 to I-580	SB	57.14	57.51	57.18	56.25	-2%
I-680 from I-580 to CA-84	NB	67.01	66.8	67.6	66.95	-1%
I-680 from I-580 to CA-84	SB	55.24	55.14	55.57	53.43	-4%
I-680 from CA-84 to Auto Mall Pkwy	NB	64.81	65.03	66.36	65.4	-1%
I-680 from CA-84 to Auto Mall Pkwy	SB	56.73	58.63	58.58	58.19	-1%
I-680 from Auto Mall Pkwy to CA-237	NB	66.42	66.43	67.1	66.62	-1%
I-680 from Auto Mall Pkwy to CA-237	SB	63.28	63.9	63.5	62.84	-1%
I-880 from MacArthur Maze to I-238	NB	50.24	50.73	49.1	46.83	-5%
I-880 from MacArthur Maze to I-238	SB	59.68	61.46	60.85	60.86	0%
I-880 from I-238 to CA-92	NB	59.06	59.48	58.42	55.99	-4%
I-880 from I-238 to CA-92	SB	44.67	45.95	46.27	44.47	-4%
I-880 from CA-92 to CA-84	NB	53.42	56.74	56.29	56.29	0%
I-880 from CA-92 to CA-84	SB	41.92	40.78	41.7	37.79	-9%
I-880 from CA-84 to Auto Mall Pkwy	NB	63.62	64.5	64.18	64.27	0%
I-880 from CA-84 to Auto Mall Pkwy	SB	45.68	43.75	40.67	39.99	-2%
I-880 from Auto Mall Pkwy to CA-237	NB	65.14	66.06	66.01	66.05	0%
I-880 from Auto Mall Pkwy to CA-237	SB	56.91	57.01	54.74	54.79	0%
CA-24 from Caldecott Tunnel to I-580	EB	52.37	52.89	53.02	56.25	6%
CA-24 from Caldecott Tunnel to I-580	WB	60.02	59.39	60.21	59.65	-1%
I-238 from I-880 to I-580	NB	38.56	33.68	33.12	38.96	18%
I-238 from I-880 to I-580	SB	59.96	59.94	59.77	58.82	-2%

Appendix C | Freeway Speed and Travel Time Data (cont'd)

Table C2: Detailed Speed Data P.M. Peak Period (4-6 p.m.)		FY2010 -11	FY2011 -12	FY2012 -13	FY2013 -14	% Change FY2013-14 v. FY2012-13
I-80 from I-80/I-580 Diverge to MacArthur Maze	EB	32.39	31	30.52	28.96	-5%
I-80 from I-80/I-580 Diverge to MacArthur Maze	WB	33.52	32.34	33.45	33.4	0%
I-80 from MacArthur Maze to San Francisco	EB	45.65	45.44	44.16	42.46	-4%
I-80 from MacArthur Maze to San Francisco	WB	44.75	44.32	44.47	43.11	-3%
I-580 from MacArthur Maze to CA-24/I-980	EB	44.82	43.64	42.75	41.93	-2%
I-580 from MacArthur Maze to CA-24/I-980	WB	48.22	48.33	47.11	47.78	1%
I-580 from CA-24/I-980 to I-238	EB	57.89	56.91	56.45	54.54	-3%
I-580 from CA-24/I-980 to I-238	WB	66.09	66.57	67.15	66.1	-2%
I-580 from I-238 to I-680	EB	61.9	57.63	51.74	52.83	2%
I-580 from I-238 to I-680	WB	64.12	64.45	64.48	63.39	-2%
I-580 from I-680 to Vasco Rd	EB	56.11	52.44	45.98	42.17	-8%
I-580 from I-680 to Vasco Rd	WB	61.85	63.15	63.26	61.96	-2%
I-580 from Vasco Rd to I-205	EB	54.64	50.74	48.83	47.15	-3%
I-580 from Vasco Rd to I-205	WB	63.83	65.13	66.09	65.42	-1%
I-680 from CA-24 to I-580	NB	54.38	51.78	48.73	44.87	-8%
I-680 from CA-24 to I-580	SB	61.04	60.59	61.66	61.86	0%
I-680 from I-580 to CA-84	NB	65.92	64.24	65.16	65.81	1%
I-680 from I-580 to CA-84	SB	66.12	66.48	67.14	66.82	0%
I-680 from CA-84 to Auto Mall Pkwy	NB	44.09	39.69	31.09	27.34	-12%
I-680 from CA-84 to Auto Mall Pkwy	SB	65.07	66.43	67.39	66.91	-1%
I-680 from Auto Mall Pkwy to CA-237	NB	53.9	51	47.63	49.77	4%
I-680 from Auto Mall Pkwy to CA-237	SB	66.77	66.85	65.61	64.99	-1%
I-880 from MacArthur Maze to I-238	NB	57.99	58.94	58.92	58.1	-1%
I-880 from MacArthur Maze to I-238	SB	49.64	47.8	47.35	46.81	-1%
I-880 from I-238 to CA-92	NB	54.52	46.28	44.37	47.48	7%
I-880 from I-238 to CA-92	SB	51.02	51.63	53.12	53.86	1%
I-880 from CA-92 to CA-84	NB	36.77	36.58	35.34	35.61	1%
I-880 from CA-92 to CA-84	SB	52.79	52.84	53.3	53.1	0%
I-880 from CA-84 to Auto Mall Pkwy	NB	53.21	53.08	50.61	47.13	-7%
I-880 from CA-84 to Auto Mall Pkwy	SB	60.33	60.6	60.94	60.03	-1%
I-880 from Auto Mall Pkwy to CA-237	NB	52.82	52.33	43.31	37.02	-15%
I-880 from Auto Mall Pkwy to CA-237	SB	63.36	62.93	63.39	66.03	4%
CA-24 from Caldecott Tunnel to I-580	EB	38.21	32.88	32.36	28.64	-11%
CA-24 from Caldecott Tunnel to I-580	WB	61.64	59.66	61.83	62.85	2%
I-238 from I-880 to I-580	NB	58.32	57.32	54.04	53.78	0%
I-238 from I-880 to I-580	SB	55.62	50.3	48.07	52.15	8%
Table C3: Detailed Speed Data Weekend Midday Period (12-2 p.m.)		FY2010 -11	FY2011 -12	FY2012 -13	FY2013 -14	% Change FY2013-14 v. FY2012-13
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I-80 from I-80/I-580 Diverge to MacArthur Maze	EB	55.63	54.76	54.88	50.6	-8%
I-80 from I-80/I-580 Diverge to MacArthur Maze	WB	47.94	45.53	43.05	37.26	-13%
I-80 from MacArthur Maze to San Francisco	EB	53.86	57.96	55.04	54.79	0%
I-80 from MacArthur Maze to San Francisco	WB	47.68	44.26	44.05	42.54	-3%
I-580 from MacArthur Maze to CA-24/I-980	EB	57.11	57.12	58.1	57.28	-1%
I-580 from MacArthur Maze to CA-24/I-980	WB	40.58	40.97	41.3	42.27	2%
I-580 from CA-24/I-980 to I-238	EB	65.69	66.82	67.16	66.25	-1%
I-580 from CA-24/I-980 to I-238	WB	64.64	65.97	66	65.88	0%
I-580 from I-238 to I-680	EB	65.84	66.68	67.35	65.68	-2%
I-580 from I-238 to I-680	WB	65.63	67.45	67.26	66.82	-1%
I-580 from I-680 to Vasco Rd	EB	65.6	68.55	68.83	68.32	-1%
I-580 from I-680 to Vasco Rd	WB	60.44	62.89	61.68	57.44	-7%
I-580 from Vasco Rd to I-205	EB	64.97	68.32	67.25	66.97	0%
I-580 from Vasco Rd to I-205	WB	63.87	66.16	66.53	66.06	-1%
I-680 from CA-24 to I-580	NB	66.45	67.84	68.94	68.38	-1%
I-680 from CA-24 to I-580	SB	66.63	68.03	69.04	68.57	-1%
I-680 from I-580 to CA-84	NB	66.38	67.47	67.6	66.96	-1%
I-680 from I-580 to CA-84	SB	65.96	67.36	67.34	66.8	-1%
I-680 from CA-84 to Auto Mall Pkwy	NB	64.74	65.47	66.14	64.62	-2%
I-680 from CA-84 to Auto Mall Pkwy	SB	65	67.11	67.48	67.03	-1%
I-680 from Auto Mall Pkwy to CA-237	NB	65.87	67.03	67.46	67.17	0%
I-680 from Auto Mall Pkwy to CA-237	SB	66.37	67.86	68	67.33	-1%
I-880 from MacArthur Maze to I-238	NB	62.22	64.72	63.49	62.15	-2%
I-880 from MacArthur Maze to I-238	SB	61.35	65.25	64.14	62.65	-2%
I-880 from I-238 to CA-92	NB	63.12	66.32	65.4	63.3	-3%
I-880 from I-238 to CA-92	SB	63.34	65.59	64.83	63.02	-3%
I-880 from CA-92 to CA-84	NB	63.82	67.09	66.1	64.21	-3%
I-880 from CA-92 to CA-84	SB	64.11	66.38	65.64	63.19	-4%
I-880 from CA-84 to Auto Mall Pkwy	NB	64.95	67.96	67.32	66.94	-1%
I-880 from CA-84 to Auto Mall Pkwy	SB	64.17	65.94	64.62	61.85	-4%
I-880 from Auto Mall Pkwy to CA-237	NB	65.68	68.03	67.64	67.86	0%
I-880 from Auto Mall Pkwy to CA-237	SB	65.78	66.86	66.41	67.31	1%
CA-24 from Caldecott Tunnel to I-580	EB	55.88	53.55	54	57.54	7%
CA-24 from Caldecott Tunnel to I-580	WB	61.22	61.19	61.17	61.63	1%
I-238 from I-880 to I-580	NB	58.3	57.28	52.53	49.16	-6%
I-238 from I-880 to I-580	SB	61.94	63.74	63.41	62.4	-2%

Appendix C | Freeway Speed and Travel Time Data (cont'd)

Table C4: Detailed Travel Time Data A.M. Peak Period (7-9 a.m.)		FY2010 -11	FY2011 -12	FY2012 -13	FY2013 -14	% Change FY2013-14 v. FY2012-13
I-80 from I-80/I-580 Diverge to MacArthur Maze	EB	4.73	4.67	4.67	4.66	0%
I-80 from I-80/I-580 Diverge to MacArthur Maze	WB	7.1	6.9	7.33	7.72	5%
I-80 from MacArthur Maze to San Francisco	EB	7.43	6.92	7.19	7.15	-1%
I-80 from MacArthur Maze to San Francisco	WB	10.58	10.24	10.83	10.78	0%
I-580 from MacArthur Maze to CA-24/I-980	EB	2.29	2.27	2.24	2.27	1%
I-580 from MacArthur Maze to CA-24/I-980	WB	2.75	2.75	2.7	2.84	5%
I-580 from CA-24/I-980 to I-238	EB	15.05	14.86	14.7	14.83	1%
I-580 from CA-24/I-980 to I-238	WB	16.28	16	16.36	16.83	3%
I-580 from I-238 to I-680	EB	10.79	10.89	11.02	11.23	2%
I-580 from I-238 to I-680	WB	10.61	10.75	10.63	10.46	-2%
I-580 from I-680 to Vasco Rd	EB	11.06	10.75	10.55	10.68	1%
I-580 from I-680 to Vasco Rd	WB	16.62	16.65	17.32	18.22	5%
I-580 from Vasco Rd to I-205	EB	9.06	8.85	8.77	8.86	1%
I-580 from Vasco Rd to I-205	WB	12.33	12.39	12.67	12.86	1%
I-680 from CA-24 to I-580	NB	16.58	16.6	16.66	16.65	0%
I-680 from CA-24 to I-580	SB	19.48	19.34	19.6	19.92	2%
I-680 from I-580 to CA-84	NB	7.87	7.89	7.8	7.89	1%
I-680 from I-580 to CA-84	SB	11.56	11.5	11.39	11.88	4%
I-680 from CA-84 to Auto Mall Pkwy	NB	8.3	8.27	8.11	8.22	1%
I-680 from CA-84 to Auto Mall Pkwy	SB	9.74	9.38	9.35	9.41	1%
I-680 from Auto Mall Pkwy to CA-237	NB	6.79	6.78	6.72	6.76	1%
I-680 from Auto Mall Pkwy to CA-237	SB	7.64	7.55	7.64	7.73	1%
I-880 from MacArthur Maze to I-238	NB	17.59	17.37	18.11	19.14	6%
I-880 from MacArthur Maze to I-238	SB	15.07	14.63	14.78	14.77	0%
I-880 from I-238 to CA-92	NB	5.2	5.15	5.25	5.48	4%
I-880 from I-238 to CA-92	SB	9.21	8.59	8.54	8.9	4%
I-880 from CA-92 to CA-84	NB	9.3	8.58	8.65	8.63	0%
I-880 from CA-92 to CA-84	SB	10.46	10.64	10.43	11.49	10%
I-880 from CA-84 to Auto Mall Pkwy	NB	6.6	6.51	6.55	6.54	0%
I-880 from CA-84 to Auto Mall Pkwy	SB	9.12	9.55	10.27	10.41	1%
I-880 from Auto Mall Pkwy to CA-237	NB	7.7	7.59	7.6	7.45	-2%
I-880 from Auto Mall Pkwy to CA-237	SB	10.22	10.2	10.67	10.54	-1%
CA-24 from Caldecott Tunnel to I-580	EB	6.74	6.6	6.6	5.78	-12%
CA-24 from Caldecott Tunnel to I-580	WB	5.42	5.47	5.41	5.44	1%
I-238 from I-880 to I-580	NB	2.78	3.26	3.3	2.78	-16%
I-238 from I-880 to I-580	SB	2.33	2.33	2.34	2.2	-6%

Table C5: Detailed Travel Time Data P.M. Peak Period (4-6 p.m.)		FY2010 -11	FY2011 -12	FY2012 -13	FY2013 -14	% Change FY2013-14 v. FY2012-13
I-80 from I-80/I-580 Diverge to MacArthur Maze	EB	10.56	10.81	11.02	11.43	4%
I-80 from I-80/I-580 Diverge to MacArthur Maze	WB	8.93	9.23	8.97	9.07	1%
I-80 from MacArthur Maze to San Francisco	EB	9	9.18	9.35	9.83	5%
I-80 from MacArthur Maze to San Francisco	WB	9.01	9.07	8.96	9.32	4%
I-580 from MacArthur Maze to CA-24/I-980	EB	2.94	3.01	3.08	3.14	2%
I-580 from MacArthur Maze to CA-24/I-980	WB	3	3.02	3.15	3.11	-1%
I-580 from CA-24/I-980 to I-238	EB	17.72	18.07	18.33	19.15	4%
I-580 from CA-24/I-980 to I-238	WB	14.1	13.99	13.88	14.09	2%
I-580 from I-238 to I-680	EB	11.09	11.97	13.52	13.1	-3%
I-580 from I-238 to I-680	WB	10.31	10.26	10.26	10.43	2%
I-580 from I-680 to Vasco Rd	EB	12.68	13.83	15.97	17.1	7%
I-580 from I-680 to Vasco Rd	WB	12	11.77	11.76	12.02	2%
I-580 from Vasco Rd to I-205	EB	10.79	11.75	12.42	13.81	11%
I-580 from Vasco Rd to I-205	WB	9.61	9.42	9.29	9.38	1%
I-680 from CA-24 to I-580	NB	19.72	20.95	22.95	25.84	13%
I-680 from CA-24 to I-580	SB	17.62	17.83	17.46	17.28	-1%
I-680 from I-580 to CA-84	NB	8	8.22	8.1	8.03	-1%
I-680 from I-580 to CA-84	SB	9.49	9.44	9.35	9.39	0%
I-680 from CA-84 to Auto Mall Pkwy	NB	13.3	15.13	20.01	22.21	11%
I-680 from CA-84 to Auto Mall Pkwy	SB	8.39	8.22	8.1	8.17	1%
I-680 from Auto Mall Pkwy to CA-237	NB	9.22	10.24	12.09	11.37	-6%
I-680 from Auto Mall Pkwy to CA-237	SB	7.18	7.17	7.34	7.42	1%
I-880 from MacArthur Maze to I-238	NB	15.06	14.74	14.8	15.02	1%
I-880 from MacArthur Maze to I-238	SB	18.76	19.68	19.96	20.33	2%
I-880 from I-238 to CA-92	NB	5.73	6.9	7.28	6.73	-8%
I-880 from I-238 to CA-92	SB	7.69	7.39	7.17	7.07	-1%
I-880 from CA-92 to CA-84	NB	13.9	13.76	14.28	13.82	-3%
I-880 from CA-92 to CA-84	SB	8.47	8.3	8.21	8.22	0%
I-880 from CA-84 to Auto Mall Pkwy	NB	8.05	8.04	8.48	9.18	8%
I-880 from CA-84 to Auto Mall Pkwy	SB	6.84	6.81	6.78	6.89	2%
I-880 from Auto Mall Pkwy to CA-237	NB	9.58	9.63	11.69	13.68	17%
I-880 from Auto Mall Pkwy to CA-237	SB	9.2	9.32	9.28	8.64	-7%
CA-24 from Caldecott Tunnel to I-580	EB	9.22	11	11.04	12.46	13%
CA-24 from Caldecott Tunnel to I-580	WB	5.27	5.46	5.27	5.14	-2%
I-238 from I-880 to I-580	NB	1.79	1.82	1.93	2	4%
I-238 from I-880 to I-580	SB	2.53	2.84	2.99	2.5	-16%

Appendix C | Freeway Speed and Travel Time Data (cont'd)

Table C6: Detailed Travel Time Weekend Midday Period (12-2 p.m.)		FY2010 -11	FY2011 -12	FY2012 -13	FY2013 -14	% Change FY2013-14 v. FY2012-13
I-80 from I-80/I-580 Diverge to MacArthur Maze	EB	5.17	5.26	5.27	5.81	10%
I-80 from I-80/I-580 Diverge to MacArthur Maze	WB	5.76	6.06	6.46	7.49	16%
I-80 from MacArthur Maze to San Francisco	EB	7.33	6.78	7.16	7.21	1%
I-80 from MacArthur Maze to San Francisco	WB	8.3	8.97	9.04	9.48	5%
I-580 from MacArthur Maze to CA-24/I-980	EB	2.32	2.32	2.29	2.32	1%
I-580 from MacArthur Maze to CA-24/I-980	WB	3.54	3.53	3.47	3.44	-1%
I-580 from CA-24/I-980 to I-238	EB	15.11	14.85	14.78	14.97	1%
I-580 from CA-24/I-980 to I-238	WB	14.56	14.24	14.24	14.21	0%
I-580 from I-238 to I-680	EB	10.42	10.29	10.19	10.45	3%
I-580 from I-238 to I-680	WB	10.09	9.82	9.84	9.91	1%
I-580 from I-680 to Vasco Rd	EB	10.73	10.27	10.22	10.3	1%
I-580 from I-680 to Vasco Rd	WB	12.33	11.84	12.06	13.06	8%
I-580 from Vasco Rd to I-205	EB	8.9	8.46	8.6	8.63	0%
I-580 from Vasco Rd to I-205	WB	9.61	9.28	9.23	9.3	1%
I-680 from CA-24 to I-580	NB	15.56	15.24	15	15.12	1%
I-680 from CA-24 to I-580	SB	15.89	15.56	15.34	15.44	1%
I-680 from I-580 to CA-84	NB	7.94	7.81	7.8	7.88	1%
I-680 from I-580 to CA-84	SB	9.51	9.32	9.32	9.4	1%
I-680 from CA-84 to Auto Mall Pkwy	NB	8.31	8.22	8.13	8.32	2%
I-680 from CA-84 to Auto Mall Pkwy	SB	8.4	8.13	8.09	8.15	1%
I-680 from Auto Mall Pkwy to CA-237	NB	6.84	6.72	6.68	6.7	0%
I-680 from Auto Mall Pkwy to CA-237	SB	7.22	7.06	7.05	7.13	1%
I-880 from MacArthur Maze to I-238	NB	13.89	13.36	13.62	13.92	2%
I-880 from MacArthur Maze to I-238	SB	14.66	13.77	14.01	14.34	2%
I-880 from I-238 to CA-92	NB	4.85	4.61	4.67	4.83	3%
I-880 from I-238 to CA-92	SB	5.98	5.77	5.84	6.01	3%
I-880 from CA-92 to CA-84	NB	7.54	7.17	7.28	7.5	3%
I-880 from CA-92 to CA-84	SB	6.74	6.51	6.58	6.84	4%
I-880 from CA-84 to Auto Mall Pkwy	NB	6.47	6.18	6.24	6.27	0%
I-880 from CA-84 to Auto Mall Pkwy	SB	6.4	6.23	6.36	6.66	5%
I-880 from Auto Mall Pkwy to CA-237	NB	7.63	7.37	7.41	7.25	-2%
I-880 from Auto Mall Pkwy to CA-237	SB	8.81	8.68	8.75	8.48	-3%
CA-24 from Caldecott Tunnel to I-580	EB	5.82	6.22	6.12	5.58	-9%
CA-24 from Caldecott Tunnel to I-580	WB	5.31	5.32	5.32	5.26	-1%
I-238 from I-880 to I-580	NB	1.79	1.82	1.99	2.19	10%
I-238 from I-880 to I-580	SB	2.26	2.19	2.2	2.08	-5%

	FY2004-05	FY2005-06	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14 (P)
Table D1: BART Performance Data	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Supply										
Directional route miles	209	209	209	209	209	209	209	209	209	209
Alameda County	97	67	67	97	67	67	67	97	67	97
Revenue passenger car miles (million)	60	62.1	64.3	67	67.8	63.2	63.3	63.4	65.7	64.8
Alameda County (million)	27.6	28.6	29.6	30.8	31.2	29.1	29.1	29.2	30.2	29.8
Revenue passenger car hours (million)	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8
Alameda County (million)	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8
Demand										
Total annual boardings (million)	99.3	103.7	109	115.2	114.7	108.3	1.111	118.7	126.5	125.8
Alameda County (million)	32.9	34.9	36.3	37.8	37.8	36	37.4	40.5	43.3	43
Av erage weekday boardings	329,199	343,026	361,811	384,231	379,007	357,461	367,505	391,777	420,396	417,286
Alameda County	111,303	116,502	1 20,989	126,098	126,031	119,308	124,501	134,111	143,726	146,090
Passenger Miles Traveled (million)	1,256	1,307	1,368	1,449	1 ,442	1,391	1,443	1,546	1,649	1,655
Financials										
Operating expenses (2014 \$ x million)	\$512.0	\$506.0	\$535.2	\$541.8	\$543.7	\$513.0	\$486.2	\$514.0	\$539.9	\$533.6
Fare revenue earned (2014 \$ x million)	\$289.8	\$307.9	\$328.3	\$349.4	\$356.5	\$367.1	\$370.0	\$385.3	\$417.6	\$416.6
Service utilization (systemwide)										
Boardings per revenue passenger car mile	1.65	1.67	1.69	1.72	1.69	1.71	1.75	1.87	1.93	1.94
Boardings per revenue passenger car hour	55.95	56.95	59.12	59.38	59.05	60.84	62.61	65.44	69.49	69.76
Load factor	20.92	21.05	21.27	21.62	21.26	22	22.78	24.37	25.12	25.56
Financial performance (systemwide)										
Operating expense per passenger mile (2014 \$)	\$0.41	\$0.39	\$0.39	\$0.37	\$0.38	\$0.37	\$0.34	\$0.33	\$0.33	\$0.32
Operating expense per rider (2014 \$)	\$5.16	\$4.88	\$4.91	\$4.70	\$4.74	\$4.74	\$4.38	\$4.33	\$4.27	\$4.24
Operating expense per passenger car mile (2014 \$)	\$8.53	\$8.15	\$8.32	\$8.09	\$8.01	\$8.11	\$7.68	\$8.10	\$8.22	\$8.24
Operating expense per passenger car hour (2014 \$)	\$288.50	\$278.02	\$290.24	\$279.23	\$280.02	\$288.17	\$274.01	\$283.44	\$296.47	\$295.90
Farebox recovery ratio	57%	61%	61%	64%	66%	72%	76%	75%	77%	78%
Note: (P) means provisional.										

-	FY2004-05	FY2005-06	FY 2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14 (P)
Table D2: ACE Performance Data	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Supply										
Directional route miles	172	172	172	172	172	172	172	172	172	172
Alameda County	06	06	06	66	66	06	06	06	66	06
Revenue passenger car miles (million)	0.783	0.722	0.78	0.78	0.78	0.719	0.786	0.805	0.915	0.95
Alameda County (million)	0.01	0.01	0.01	0.01	0.012	0.01	0.01	0.011	0.012	0.013
Revenue passenger car hours (million)	0.019	0.019	0.02	0.02	0.023	0.019	0.02	0.02	0.023	0.024
Alameda County (million)	0.212	0.212	0.234	0.266	0.265	0.235	0.254	0.332	0.314	0.382
Demand										
Total annual boardings (million)	0.64	0.64	0.71	0.81	0.8	0.66	0.72	0.79	0.94	1.08
Alameda County (million)	0.21	0.21	0.23	0.27	0.27	0.24	0.25	0.33	0.31	0.38
Av erage weekday boardings	2,532	2,537	2,805	3,191	3,164	2,601	2,851	3,123	3,748	4,252
Alameda County	800	829	852	1,053	1,048	922	1,011	1,319	1,319	1,508
Passenger Miles Traveled (million)	33	30	34	38	36	29	33	36	42	48
Financials										
Operating expenses (2014 \$ x million)	\$13.7	\$14.8	\$12.7	\$13.0	\$13.9	\$12.8	\$12.7	\$12.8	\$15.4	\$23.8
Fare revenue earned (2014 \$ x million)	\$3.7	\$4.1	\$4.7	\$4.9	\$5.1	\$4.4	\$4.6	\$4.4	\$5.9	\$6.9
Service utilization (systemwide)										
Boardings per rev enue passenger car mile	0.82	0.89	0.91	1.03	1.02	0.91	0.91	0.98	1.03	1.13
Boardings per revenue passenger car hour	34.22	34.34	35.97	40.97	35.16	35.15	36.55	38.97	40.41	44.26
Load factor	42.49	41.8	43.08	48.39	45.83	40.84	41.9	44.66	46.07	50.95
Financial performance (systemwide)										
Operating expense per passenger mile (2014 \$)	\$0.41	\$0.49	\$0.38	\$0.34	\$0.39	\$0.44	\$0.38	\$0.36	\$0.36	\$0.49
Operating expense per rider (2014 \$)	\$21.33	\$22.99	\$17.95	\$16.16	\$17.48	\$19.56	\$17.63	\$16.31	\$16.32	\$22.17
Operating expense per passenger car mile (2014 \$)	\$17.45	\$20.45	\$16.26	\$16.67	\$17.87	\$17.83	\$16.11	\$15.94	\$16.79	\$25.09
Operating expense per passenger car hour (2014 \$)	\$729.87	\$789.33	\$645.68	\$661.98	\$614.61	\$687.48	\$644.42	\$635.58	\$659.53	\$981.28
Farebox recovery ratio	27%	28%	37%	38%	37%	34%	37%	34%	39%	29%
Note: (P) means provisional.										

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	FY2004-05	Y2005-06	FY 2006 -07	FY2007-08	FY2008-09	FY2009-10 F	Y2010-11	FY2011-12	FY2012-13	Y2013-14 (P)
Table D3: AC Transit Performance Data	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Supply										
Directional route miles	1351.8	1365	1364.6	1364.6	1363.5	1277.7	1254.2	1254	1254	1201
Alameda County	1,190	1,201	1,201	1,201	1,200	1,124	1,104	1,104	1,104	1,057
Revenue vehicle miles (million)	20.9	21.2	21.6	22	22.1	21.6	19.2	18.2	18	18.2
Alameda County (million)	18.4	18.7	19	19.4	19.4	19	16.9	16.1	15.9	16
Revenue vehicle hours (million)	1.8	1.8	1.8	1.9	1.9	1.9	1.7	1.6	1.6	1.6
Alameda County (million)	1.6	1.6	1.6	1.6	1.7	1.6	1.5	1.4	1.4	1.5
Demand										
Total annual boardings (million)	64.4	67	67	65.2	60.5	61.4	57.3	53.6	54.9	55.7
Alameda County (million)	56.7	58.9	58.9	57.4	53.2	54	50.5	47.2	48.3	49.6
Av erage weekday boardings	209,744	226,732	226,855	218,245	197,208	197,445	190,948	174,022	171,957	181,562
Alameda County	184,575	199,524	199,632	192,056	173,543	173,752	168,034	153,039	151,322	161,590
Passenger Miles Traveled (million)	198	209	204	198	192	174	187	187	203	210
Financials										
Operating expenses (2014 \$ x million)	\$286.1	\$305.1	\$313.7	\$321.0	\$331.8	\$332.0	\$307.6	\$309.4	\$300.8	\$300.3
Fare revenue earned (2014 \$ x million)	\$54.0	\$57.4	\$57.9	\$56.9	\$58.2	\$59.0	\$54.7	\$60.1	\$59.9	\$64.4
Service utilization (systemwide)										
Boardings per revenue vehicle mile	3.09	3.16	3.11	2.96	2.74	2.85	2.99	2.94	3.04	3.07
Boardings per revenue vehicle hour	36.05	36.84	36.75	34.86	31.88	33.08	34.01	33.23	34.2	34.19
Load factor	9.48	9.88	9.47	8.98	8.73	8.05	9.74	10.26	11.26	11.56
Financial performance (systemwide)										
Operating expense per passenger mile (2014 \$)	\$1.45	\$1.46	\$1.54	\$1.62	\$1.72	\$1.91	\$1.64	\$1.65	\$1.48	\$1.43
Operating expense per rider (2014 \$)	\$4.44	\$4.56	\$4.68	\$4.92	\$5.49	\$5.41	\$5.37	\$5.77	\$5.48	\$5.39
Operating expense per vehicle mile (2014 \$)	\$13.71	\$14.39	\$14.55	\$14.59	\$15.05	\$15.40	\$16.02	\$16.95	\$16.67	\$16.52
Operating expense per vehicle hour (2014 \$)	\$160.14	\$167.88	\$172.15	\$171.64	\$174.97	\$178.87	\$182.47	\$191.68	\$187.30	\$184.18
Farebox recovery ratio	19%	19%	18%	18%	18%	18%	18%	19%	20%	21%
Note: (P) means provisional.										

	FY2004-05	۲2005-06	FY 2006 -07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	Y2013-14 (P)
Table D4: LAVTA Performance Data	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Supply										
Directional route miles	430	309	356	306	323	289	280	300	336	366
Revenue vehicle miles (million)	1.68	1.71	1.76	1.98	2.02	1.5	1.64	1.86	1.83	1.82
Revenue vehicle hours (million)	0.11	0.12	0.12	0.14	0.14	0.1	0.11	0.13	0.12	0.13
Demand										
Total annual boardings (million)	1.94	2.04	2.14	2.23	2.2	1.74	1.71	1.75	1.73	1.65
Average weekday boardings	6,591	6,939	7,316	7,893	7,809	6,073	6,628	6,101	6,053	5,727
Passenger Miles Traveled (million)	9.4	10	10	10.6	10.4	8.3	8.3	8.5	8.4	9.1
Financials										
Operating expenses (2014 \$ x million)	\$11.5	\$12.4	\$12.6	\$14.0	\$14.3	\$12.3	\$12.5	\$13.3	\$12.7	\$14.4
Fare revenue earned (2014 \$ x million)	\$2.0	\$2.0	\$2.3	\$2.5	\$2.6	\$2.3	\$2.2	\$2.1	\$2.4	\$2.2
Service utilization (systemwide)										
Boardings per revenue vehicle mile	1.16	1.19	1.22	1.13	1.09	1.16	1.05	0.94	0.95	0.91
Boardings per revenue vehicle hour	16.93	17.71	17.55	16.25	15.76	17.05	15.37	14	13.86	13.13
Load factor	5.62	5.84	5.69	5.35	5.16	5.5	5.1	4.59	4.6	5.01
Financial performance (systemwide)										
Operating expense per passenger mile (2014 \$)	\$1.22	\$1.25	\$1.26	\$1.32	\$1.38	\$1.50	\$1.50	\$1.55	\$1.51	\$1.58
Operating expense per rider (2014 \$)	\$5.93	\$6.10	\$5.91	\$6.25	\$6.53	\$7.09	\$7.29	\$7.57	\$7.34	\$8.73
Operating expense per vehicle mile (2014 \$)	\$6.86	\$7.28	\$7.18	\$7.03	\$7.11	\$8.23	\$7.63	\$7.12	\$6.94	\$7.93
Operating expense per vehicle hour (2014 \$)	\$100.31	\$108.00	\$103.68	\$101.52	\$102.89	\$120.97	\$112.01	\$105.92	\$101.77	\$114.67
Farebox recovery ratio	17%	16%	19%	18%	18%	19%	18%	16%	19%	15%

Note: (P) means provisional.

	FY2004-05	-72005-06	FY 2006 -07	FY2007-08	FY 2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14 (P)
Table D5: Union City Transit Performance Data	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Supply										
Directional route miles	49	48	54	48	90	90	90	60	90	105
Revenue vehicle miles (million)	0.524	0.524	0.483	0.462	0.457	0.471	0.465	0.468	0.471	0.472
Revenue vehicle hours (million)	0.038	0.039	0.039	0.04	0.04	0.04	0.039	0.039	0.04	0.035
Demand										
Total annual boardings (million)	0.38	0.4	0.42	0.44	0.46	0.45	0.47	0.5	0.5	0.4
Av erage weekday boardings	1,319	1,335	1,464	1,518	1,637	1 ,567	1,793	1,780	1,783	1,443
Passenger Miles Trav eled (million)	1.19	1.21	1.28	1.4	1.42	1.45	N/A	N/A	1.6	N/A
Financials										
Operating expenses (2014 \$ x million)	\$3.4	\$3.1	\$3.1	\$3.0	\$2.9	\$3.1	\$3.1	\$3.2	\$3.4	\$3.3
Fare revenue earned (2014 \$ x million)	\$0.4	\$0.4	\$0.4	\$0.4	\$0.4	\$0.4	\$0.5	\$0.5	\$0.4	\$0.4
Service utilization (systemwide)										
Boardings per revenue vehicle mile	0.73	0.76	0.87	0.95	1.01	0.95	1.02	1.07	1.05	0.85
Boardings per revenue vehicle hour	10.05	10.33	10.85	11.05	11.7	11.34	12.13	12.74	12.52	11.38
Load factor	2.26	2.3	2.64	3.03	3.1	3.08	N/A	N/A	3.4	N/A
Financial performance (systemwide)										
Operating expense per passenger mile (2014 \$)	\$2.88	\$2.57	\$2.43	\$2.13	\$2.07	\$2.16	N/A	N/A	\$2.11	N/A
Operating expense per rider (2014 \$)	\$8.98	\$7.79	\$7.35	\$6.81	\$6.34	\$6.97	\$6.58	\$6.44	\$6.83	\$8.13
Operating expense per vehicle mile (2014 \$)	\$6.52	\$5.92	\$6.42	\$6.45	\$6.43	\$6.64	\$6.71	\$6.89	\$7.19	\$6.93
Operating expense per vehicle hour (2014 \$)	\$90.17	\$80.52	\$79.73	\$75.29	\$74.13	\$79.09	\$79.73	\$82.05	\$85.46	\$92.52
Farebox recovery ratio	11%	12%	14%	13%	14%	12%	15%	15%	13%	11%

Note: (P) means provisional.

	FY2004-05	'Y2005-06 F	-72006-07	FY2007-08	FY 2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13	FY2013-14 (P)
iable D8: WEIA/Alameda County Ferry Performance Data	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Supply										
Revenue vehicle miles (thousand)	75.6	76.5	77.9	7.77	78	78.7	73.2	82.2	295	310.6
Alameda County (thousand)	75.6	76.5	77.9	7.77	78	78.7	73.2	82.2	112.7	122.5
Revenue vehicle hours (thousand)	6.2	6.5	6.8	6.5	6.3	6.3	6.1	6.6	14.6	15.3
Alameda County (thousand)	6.2	6.5	6.8	6.5	6.3	6.3	6.1	6.6	7.7	8.4
Demand										
Total annual boardings (million)	0.5	0.5	9.0	9.0	0.5	0.6	9.0	0.7	1.5	1.9
Alameda County (million)	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.7	0.9	1.2
Average weekday boardings	1,419	1,594	1,777	1,873	1,694	1 ,760	1,945	2,274	4,677	6,086
Financials										
Operating expenses (2014 \$ x million)	\$5.30	\$5.60	\$6.00	\$6.30	\$5.80	\$5.60	\$7.20	\$7.20	\$10.60	\$12.50
Fare revenue earned (2014\$ x million)	\$2.00	\$2.40	\$2.60	\$2.70	\$2.80	\$2.90	\$3.50	\$3.40	\$4.00	\$5.40
Service utilization (Alameda County)										
Boardings per revenue vehicle mile	6.15	6.8	7.41	7.77	6.96	7.22	8.32	8.86	7.55	9.4
Boardings per revenue vehicle hour	75.46	80.05	85.35	92.35	85.54	89.96	100.5	110.22	110.11	136.84
Financial performance (Alameda County)										
Operating expense per rider (2014 \$)	\$11.51	\$10.75	\$10.34	\$10.35	\$10.76	\$9.81	\$11.86	\$9.84	\$12.49	\$10.83
Operating expense per vehicle mile (2014 \$)	\$70.73	\$73.15	\$76.59	\$80.50	\$74.82	\$70.87	\$98.74	\$87.15	\$94.32	\$101.88
Operating expense per vehicle hour (2014 \$)	\$868.54	\$860.79	\$882.17	\$956.22	\$920.19	\$882.62	\$1,192.27	\$1,084.72	\$1,374.81	\$1,482.32
Farebox recovery ratio	47%	52%	51%	49%	53%	57%	53%	49%	39%	44%
Note: (P) means provisional.										

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	FY2004-05 F	Y2005-06	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12	FY2012-13 F	Y2013-14
Table D7: Capitol Corridor Performance Data	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Daily Trains from Oakland to Sacramento	24	24/32*	32	32	32	32	32	32/30**	30	30
Daily Trains from San Jose to Sacramento	N/A	N/A	14	14	14	14	14	14	14	14
Total Annual Revenue Passenger Car Miles	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.09	5.09	5.09
Total Annual Ridership (million)	1.26	1.27	1.45	1.69	1.6	1.58	1.71	1.75	1.7	1.42
Total Annual Operating Expenses (2014 \$ x million)	\$47.08	\$42.48	\$46.15	\$51.69	\$53.70	\$58.24	\$60.57	\$59.91	\$59.37	\$55.28
Total Revenue Earned (2014 \$ x million)	\$18.98	\$18.87	\$22.59	\$26.81	\$26.41	\$27.00	\$29.37	\$31.01	\$30.02	\$29.18
Operating Expense Per Rider (2014 \$)	\$37.36	\$33.36	\$31.83	\$30.52	\$33.56	\$36.86	\$35.45	\$34.30	\$34.90	\$38.96
System Operating Ratio	47%	52%	51%	49%	53%	57%	53%	49%	39%	44%

Notes: *Added eight additional daily trains on August 28, 2006. **Decreased from 32 daily trains to 30 daily trains on August 13, 2012.

Alameda CTC conducts manual bicycle and pedestrian counts on an annual basis using the National Pedestrian and Bicycle Documentation Project methodology. Highlights of this methodology include:

- Counts are conducted for 2-hour periods (p.m. peak of 4-6 p.m. and either school period of 2-4 p.m. or midday period of 12-2 p.m.)
- Counts are conducted between September and October.
- Counts are not conducted on days with rain.
- Counts are conducted via field observation in 15-minute increment tallies.
- Bicycle counts are turning movement counts.
- Pedestrian counts note the number of intersection approaches that are pedestrians cross.

Figure F1 below illustrates the 63 locations at which bicycle and pedestrian counts are conducted.

Figure F1: Bicycle/Pedestrian Manual Count Sites in Alameda County



Table F2: Bikew	ay Project Completion Duri	ing FY2013-14						
Jurisdiction	Project Name	Roadway/Facility	Limits: From, To	Simplified Bikeway Type	Detailed Bikeway Type	Length (linear feet)	New Installation or Rehabilitation?	Coordinated w/Repaving (Y/N)?
Alameda County	Channel Street	Channel St	Bockman Rd: Grant Ave	Class III: Bike Route	Bike Route (Route with shared lane markings)	7920	New Bikeway	oN
Alameda County	, Grant Avenue	Grant Ave	W ashington Av e: Hesperian Blvd	Class III: Bike Route	Bike Route (Route with shared lane markings)	5280	New Bikeway	0 N
Alameda County	· Paseo Grande	Paseo Grande	Via Alamitos: Hesperian Blvd	Class III: Bike Route	Bike Route (Route with shared lane markings)	12672	New Bikeway	oN
Alameda County	 Via Alamitos 	Via Alamitos	Grant Ave: Bochman Rd	Class III: Bike Route	Bike Route (Route with shared lane markings)	10560	New Bikeway	o Z
City of Alameda	Fifth Street Bikeway	Fifth St	Willie Stargell Ave to Mitchell Ave	Class II: Bike Lane	Bike Lane (Standard*)	3000	New Bikeway	No
City of Alameda	Mitchell Avenue Bikeway	Mitchell Ave	Fifth St and Mariner Square Loop	Class II: Bike Lane	Bike Lane (Standard*)	3000	New Bikeway	oz
City of Alameda	Mariner Square Loop Bikeway	Mariner Square Loop	Mitchell Ave and the Athletic Club	Class II: Bike Lane	Bike Lane (Standard*)	2000	New Bikeway	oN
City of Alameda	Main Street Ferry Terminal W aterfront Path	Main St	Ferry Terminal and Dog Park	Class I: Multiuse Trail	Multiuse Trail (Paved)	850	New Bikeway	oz
City of Berkeley	Bay Trail	Bay Trail	University Ave/I-80 Frontage, Berkeley Marina	Class I: Multiuse Trail	Multiuse Trail (Paved)	2700	New Bikeway	OZ
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Central Ave	Logan Dr to Joseph St	Class II: Bike Lane	Bike Lane (Standard*)	2180	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Driscoll Rd SB/WB	Mission Blvd to Paseo Padre	Class II: Bike Lane	Bike Lane (Standard*)	3800	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Fremont Blvd	South Grimmer Blv d to 1-680 Bridge	Class II: Bike Lane	Bike Lane (Standard*)	3800	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Gallaudet Dr	W alnut Ave to Stevenson Blv d	Class II: Bike Lane	Bike Lane (Standard*)	2310	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Paseo Padre Pkwy (NB)	Dumbarton Circle to Kaiser Dr	Class II: Bike Lane	Bike Lane (Standard*)	1740	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Scott Creek Rd	I-680 SB Ramps to I-680 NB Ramps	Class II: Bike Lane	Bike Lane (Standard*)	1 000	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Cushing Pkwy SB	Bunche Dr to Future St	Class II: Bike Lane	Bike Lane (Standard*)	1360	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	East W arren Av e	Navajo Rd to Yakima Dr	Class II: Bike Lane	Bike Lane (Standard*)	1 690	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Fremont Blvd (SB/WB)	Walnut Ave to Sundale Dr	Class II: Bike Lane	Bike Lane (Standard*)	909	New Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Mission Blv d	Paseo Padre Pkwy to Curtner Rd	Class II: Bike Lane	Bike Lane (Standard*)	1150	Rehabilitated Bikewav	Yes

Appendix F | Bicycle/Pedestrian Project Completion

Table F2: Bikew	ay Project Completion Duri	ing FY2013-14 (conťd)						
Jurisdiction	Project Name	Roadway/Facility	Limits: From, To	Simplified Bikeway Type	Detailed Bikeway Type	Length (linear feet)	New Installation or Rehabilitation?	Coordinated w/Repaving (Y/N)?
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Mission Blvd (SB)	I-680 Off-Ramp to Mill Creek Rd	Class II: Bike Lane	Bike Lane (Standard*)	745	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Paseo Padre Pkwy	Ardenwood Blvd to Tupelo St	Class II: Bike Lane	Bike Lane (Standard*)	810	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Paseo Padre Pkwy (SB)	Tupelo St to Deep Creek Rd	Class II: Bike Lane	Bike Lane (Standard*)	3430	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	W arm Springs Blvd (NB)	Camphor Ave to Starlite W ay	Class II: Bike Lane	Bike Lane (Standard*)	860	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance - Cape and Slurry Seal	Stanford Ave	Mission Blvd to Vineyard Av e	Class II: Bike Lane	Bike Lane (Standard*)	2440	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance- Pavement Rehabilitation	Mowry Ave (EB)	Parkside Dr to Bonner Ave	Class II: Bike Lane	Bike Lane (Standard*)	1 600	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance- Pavement Rehabilitation	Paseo Padre Pkwy	Sequoia Rd to Peralta Blvd	Class II: Bike Lane	Bike Lane (Standard*)	2750	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance- Pavement Rehabilitation	Walnut Ave	Paseo Padre Pkwy to Mission Blvd	Class II: Bike Lane	Bike Lane (Standard*)	5900	Rehabilitated Bikeway	Yes
City of Fremont	Pavement Maintenance- Pavement Rehabilitation	Stevenson Blvd (NB/EB)	Fremont Blvd to Civic Center Dr	Class II: Bike Lane	Bike Lane (Upgraded*)	3600	New Bikeway	Yes
City of Fremont	Pavement Maintenance- Pavement Rehabilitation	South Grimmer Blvd	Old W arm S prings Blv d to W arm Springs Blv d	Class II: Bike Lane	Bike Lane (Standard*)	1520	Rehabilitated Bikeway	Yes
City of Fremont	Mowry and Overacker Intersection Improvements	Mowry Ave	Cherry Ln to Overracker	Class II: Bike Lane	Bike Lane (Standard*)	1 000	New Bikeway	N
City of Fremont	Kato Road Grade Separation	Kato Rd	Kato Terrace to NB Kato curve	Class II: Bike Lane	Bike Lane (Standard*)	1 200	New Bikeway	N
City of Hayward	Campus Drive Pavement Rehabilitation	Campus Dr	Highland Dr to 2nd St	Class II: Bike Lane	Bike Lane (Standard*)	6844	New Bikeway	Yes
City of Livermore	Multi Use Trail Imps, Project 2002-48	Bluebell Dr Trail	400' west of Bluebell Dr to Heather Lane	Class I: Multiuse Trail	Multiuse Trail (Paved)	3684	Rehabilitated Bikeway	Yes
City of Livermore	Multi Use Trail Imps, Project 2002-48	Paseo Laguna Seco Trail	550' north of end of Paseo Laguna Seco to 350' northwest of end of Las Positas Ct	Class I: Multiuse Trail	Multiuse Trail (Paved)	3700	Rehabilitated Bikeway	Yes
City of Livermore	2013-01 2013 Street Resurfacing Project	Various	Various	Class II: Bike Lane	Bike Lane (Standard*)	3780	Rehabilitated Bikeway	Yes
City of Livermore	Project	Various	Various	Class II: Bike Lane	Bike Lane (Standard*)	30778	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Cedar Blv d	Newark Blvd to Haley St	Class II: Bike Lane	Bike Lane (Standard*)	7290	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Central Ave	Timber St to Newark Blvd	Class II: Bike Lane	Bike Lane (Standard*)	4450	Rehabilitated Bikeway	Yes

Appendix F | Bicycle/Pedestrian Project Completion (cont'd)

Table F2: Bikew	ay Project Completion Duri	ng FY2013-14 (conťd)						
Jurisdiction	Project Name	Roadway/Facility	Limits: From, To	Simplified Bikeway Type	Detailed Bikeway Type	Length (linear feet)	New Installation or Rehabilitation?	Coordinated w/Repaving (Y/N)?
City of Newark	2013 Street Micorsurfacing Program	Central Ave	Newark Blvd to Cherry St	Class III: Bike Route	Bike Route (Wide curb lane or shoulder)	2045	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Central Ave	Cherry St to Filbert St	Class III: Bike Route	Bike Route (Wide curb Iane or shoulder)	6825	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Central Ave	Filbert St to Willow St	Class II: Bike Lane	Bike Lane (Standard*)	8070	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Cherry St	Stevenson Blvd to Central Ave	Class II: Bike Lane	Bike Lane (Standard*)	15855	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Cherry St	Central Ave to Thornton Ave	Class III: Bike Route	Bike Route (Signage only route)	4570	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Mowry Ave	City Limit near I-880 to Cherry St	Class III: Bike Route	Bike Route (Wide curb Iane or shoulder)	6664	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Mowry Ave	Cherry St to UPRR tracks	Class II: Bike Lane	Bike Lane (Standard*)	2605	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Newark Blvd	Thornton Ave to Dairy Ave	Class III: Bike Route	Bike Route (Wide curb Iane or shoulder)	1200	Rehabilitated Bikeway	Yes
City of Newark	2013 Street Micorsurfacing Program	Newark Blvd	Jarvis Ave to SR 84 Limits	Class III: Bike Route	Bike Route (Wide curb Iane or shoulder)	3350	Rehabilitated Bikeway	Yes
City of Oakland	Foothill Boulev ard Bikeway	Foothill Blvd	Austin St; 45th Ave	Class III: Bike Route	Bike Route (Route with shared lane markings)	11616	New Bikeway	Yes
City of Oakland	40th Street Bikeway	40th St	Adeline St; Martin Luther King, Jr W ay	Class III: Bike Route	Bike Route (Super sharrow, green-backed sharrows)	5772	New Bikeway	oz
City of Oakland	40th Street Bikeway	40th St	Telegraph Ave; Webster St	Class III: Bike Route	Bike Route (Super sharrow, green-backed sharrows)	2140	New Bikeway	Yes
City of Oakland	Bay Bridge Path	Bay Bridge Path	Segment 3; Treasure Island	Class I: Multiuse Trail	Multiuse Trail (Paved)	23232	New Bikeway	No
City of Oakland	Bay Bridge Path (Segment 2) Bay Bridge Path (Segment 2)	Shellmound Rd; Maritime St	Class I: Multiuse Trail	Multiuse Trail (Paved)	14784	New Bikeway	No
City of Oakland	Bay Bridge Path (Segment 3) Bay Bridge Path (Segment 3)	Segment 2; Bridge touchdown	Class I: Multiuse Trail	Multiuse Trail (Paved)	13728	New Bikeway	No
City of Oakland	Piedmont Ave Bikeway	Piedmont Ave	MacArthur Blv d; Pleasant Valley Ave	Class II: Bike Lane	Bike Lane (Standard*)	7392	New Bikeway	Yes
City of Oakland	48th St Bikeway	48th St	Shattuck Ave; Webster St	Class III: Bike Route	Bike Route (Route with shared-lane markings)	2112	New Bikeway	NO
City of Oakland	Oakland Ave Bikeway	Oakland Ave	Santa Clara Ave; Monte Vista Ave	Class II: Bike Lane	Bike Lane (Standard*)	2235	New Bikeway	No
City of Oakland	Bayo Vista Ave Bikeway	Bayo Vista Ave	Oakland Ave; Harrison St	Class III: Bike Route	Bike Route (Route with shared-lane markings)	285	New Bikeway	No

Appendix F | Bicycle/Pedestrian Project Completion (cont'd)

Table F2: Bikew	/ay Project Completion Duri	ng FY2013-14 (conťd)						
Jurisdiction	Project Name	Roadway/Facility	Limits: From, To	Simplified Bikeway Type	Detailed Bikeway Type	Length (linear feet)	New Installation or Rehabilitation?	Coordinated w/Repaving (Y/N)?
City of Oakland	Harrison St Bikeway	Harrison St	Bayo Vista Ave; Santa Clara Ave	Class III: Bike Route	Bike Route (Route with shared-lane markings)	1220	New Bikeway	oN
City of Oakland	Harrison St Bikeway	Harrison St	Santa Clara Ave; Fairmount Ave	Class II: Bike Lane	Bike Lane (Upgraded*)	2205	New Bikeway	N
City of Oakland	Lake Merritt Blvd/ 1st Ave Bikeway	Lake Merritt Blv d/1st Ave	E 12th St; International Blvc	d Class II: Bike Lane	Bike Lane (Upgraded*)	2112	Rehabilitated Bikeway	N
City of Oakland	Lakeshore Ave Bikeway	Lakeshore Ave	E 18th St; 1st Ave	Class II: Bike Lane	Bike Lane (Upgraded*)	1056	Rehabilitated Bikeway	N
City of Oakland	MacArthur Blvd Bikeway	MacArthur Blvd	Buell St; Seminary Ave	Class II: Bike Lane	Bike Lane (Upgraded*)	6336	New Bikeway	Yes
City of Oakland	MacArthur Blvd Bikeway	MacArthur Blv d	Lakeshore Ave; Excelsior Ct	Class II: Bike Lane	Bike Lane (Standard*)	528	Rehabilitated Bikeway	N
City of Oakland	Shattuck Ave Bikeway	Shattuck Ave	45th St; Woolsey St	Class II: Bike Lane	Bike Lane (Standard*)	13728	New Bikeway	Yes
City of Oakland	Lakeshore Ave Bikeway	Lakeshore Ave	Lake Park Av <i>e;</i> Mandana Blvd	Class III: Bike Route	Bike Route (Route with shared-lane markings)	3168	Rehabilitated Bikeway	Yes
City of Oakland	Alcatraz Ave Bikeway	Alcatraz Ave	Dover St; College Ave	Class II: Bike Lane	Bike Lane (Standard*)	9504	New Bikeway	Yes
City of Oakland	Piedmont Ave Bikeway	Piedmont Ave	MacArthur Blvd; Broadway	 Class II: Bike Lane 	Bike Lane (Standard*)	3168	New Bikeway	oz
City of Oakland	Fruitvale Ave Bikeway	Fruitvale Ave	Alameda Ave; E 7th St	Class II: Bike Lane	Bike Lane (Standard*)	2112	Rehabilitated Bikeway	on Na
City of Pleasanton	WB I-580 & Foothill Interchange Improvements	Foothill Rd	WB I-580 off ramp to Dublin Canyon Rd	Class II: Bike Lane	Bike Lane (Standard*)	3600	New Bikeway	N
City of Pleasanton	Gibraltar Dr Streetscape	Gibraltar Dr	Hacienda Dr (S) to Stoneridge Dr	Class II: Bike Lane	Bike Lane (Standard*)	5154	New Bikeway	N
City of Pleasanton	Santa Rita Road CIP	Santa Rita Rd	Sutter Gate Ave to Stoneridge Dr	Class II: Bike Lane	Bike Lane (Standard*)	1680	Rehabilitated Bikeway	N
City of Pleasanton	Stoneridge Drive Extension	Stoneridge Dr	Trevor Pkwy to El Charro Rd	I Class II: Bike Lane	Bike Lane (Upgraded*)	6528	New Bikeway	Yes
City of Pleasanton	Iron Horse Trail Extension	Iron Horse Trail	Dublin/Pleasanton BART Station to Santa Rita Rd	Class I: Multiuse Trail	Multiuse Trail (Paved)	6685	New Bikeway	N
City of San Leandro	Merced Street	Merced St	Marina Blvd to Fairway Dr	Class II: Bike Lane	Bike Lane (Standard*)	1760	New Bikeway	Yes
City of San Leandro	Floresta Blv d	Floresta Blvd	Monterey Blvd to Corv allis St	Class II: Bike Lane	Bike Lane (Standard*)	1690	New Bikeway	Yes
City of Union City	y 2013-14 Citywide Overlay	Non-class 1 Bike Routes/ Lanes	Miscellaneous locations	Class II: Bike Lane	Bike Lane (Standard*)	43000	Rehabilitated Bikeway	Yes

Appendix F | Bicycle/Pedestrian Project Completion (cont'd)

ole F3: Pedes	trian Project Completion Duri	ing FY	2013-1	4 (con	(p,	_	_						
di ci on	Project Name	Major	Trothic Cothway A.	Crossing Element	siua siua siua siua siua siua siua siua	Silie Molte	New Holl	Sulliy Bi	touge copies	OHT OHT KOWN	Sci. Jour	adway or Intersection	Limits (From, To - If Roadway)
of Berkeley	Bay Trail Extension						×				t u	iversity Ave/I-80 Frontage Road UC Aquatic Center	N/A
f Dublin	Annual Sidewalk Repair and Curb Ramp Installation Program								×		Ž	×	N/A
Emeryville	Powell Street Sidewalk		×	×		×			×		Ро	well St	Captain, Anchor
Fremont	PWC8706 E. Warren Sidewalk Improvements					×			×		Ž	A	N/A
Fremont	Niles Blvd Street Improvements		×	×					×		Ž	<pre></pre>	N/A
Fremont	Nicolet & Alder Sidewalk Improvements			×		×			×		Ž	Ą	N/A
Hayward	New Sidewalks FY14 - Huntwood Ave					×					귀	untwood Ave/Leidig Ct	N/A
Hayward	New Sidewalks FY14 - D Street					×					Ő	St/ Panda W ay; D St/ Beaver Dr (Pvt)	Panda Way To City Limit
Hayward	New Sidewalks FY14 - Industrial BIv d					×					- un	dustrial BIv d/Cryer St	N/A
Hayward	ADA Curb Ramps								×		Ž	Ą	N/A
Livermore	2013-01 2013 Street Resurtacing Project								×		< C <	arious (49 locations)	Various
Liv ermore	2013-07 2013 ADA Access Ramp Project								×		~	arious (31 locations)	Various
Livermore	Traffic Signal Reconstruction City Project No. 2010-21			×				×		×	at a	Vasco Rd at Brisa St 2. Vasco Rd at atterson Pass Rd and 3. Railroad Ave P St	Traffic signal modifications
Newark	Citywide Park Pathways Resurfacing for ADA Access	×							×	×	Wr W	ultiple City Parks	N/A

Table F3: Pedes	trian Project Completion Du	ring FY	12013-1	4 (con	iťd)							•	
Jurisdiction	Project Name	Wollor	ITOPHE POHNON .	Crossin Coliming Elenne	Miden en e	side won	NEW LIGH	Sulting Light	roudscopie	ADA/CUID R.	sdup, 19410	Roadway or Intersection	Limits (From, To - If Roadway)
City of Newark	2013/14 Citywide W heelchair Accessibile Ramps									×	×	Multiple Citywide locations (57 total ramps)	N/A
City of Newark	2013 Curb, Gutter & Sidewalk Repair Program										×	Multiple Citywide locations	N/A
City of Oakland	Davidson Way Stair Path	×				×					- ×	N/A	Grand Ave ascending to Vermont St
City of Oakland	Upper Bonham W ay Stair Path Repairs	×				×					- ×	N/A	Grand Ave ascending to Valle Vista
City of Oakland	Lower Bonham W ay Stair Path	×				×					 	N/A	Valle Vista ascending to Wala Vista
City of Piedmont	Ramona-Ronada Triangle		×	×	×				×	×	_	Intersection of Ramona & Ronada Aves	Intersection of Ramona and Ronada Aves
City of Piedmont	Dudley Ave Sidewalk Extension Project					×		×				Dudley Ave	Near Blair Ave to near Mountain Ave
City of Pleasanton	Iron Horse Trail Extension	×		×	×	×	×		×	×		N/A	Dublin/Pleasanton BART to Santa Rita Rd
City of Pleasanton	Santa Rita Rd CIP			×					×	×	_	N/A	Santa Rita Rd and Stoneridge Dr
City of Pleasanton	Stoneridge Dr Extension			×	×	×		×	×	×		Stoneridge Dr	Trev or Pkwy to B Charro Rd
City of San .eandro	Annual Overlay/ Rehab 2012-13									×		Fremont Ave	Alvarado St to Floresta Blvd
City of San eandro	Annual Overlay/ Rehab 2012-13									×	×	Floresta Blv d	Monterey Blvd to Fremont Ave
City of San eandro	Annual Sidewalk Repair Program 2013-14									×	~ ×	N/A	N/A
City of Union City	/ Meyers Dr Sidewalk					×					-	Meyers Dr	Generally between Decoto Rd and Alv arado-Niles Road
City of Union City	Citywide Trail System Rehabilitation Project	×									- /	Miscellaneous Class I trails at various locations	Miscellaneous locations
City of Union City	 Sidewalk Repair Project 					×					~ 	Miscellaneous locations	Miscellaneous locations



Table G2: Local TDM Policy Adoption – Pedestrian Policies																	
Does your jurisdiction have design guidelines or an adopted policy that	Alamede	Alamedo County		Berkeler	ulland	EMERYNII	Frendons Freinons	HOMMOR	Liverna	Nemour Ole	Ooklone	Piedmos	14050 ald	2011 10°S	Union S.	14-	
Provide reasonably direct, convenient, accessible, and safe pedestrian connections to major activity centers, transit stops or hubs, parks/open space, and other pedestrian facilities?	~	≻	≻	≻	≻	≻	≻	≻	≻	≻	≻	≻	≻	~	≻		
Provide for construction of pedestrian paths needed to fill gaps, i.e., gap closure, not provided through the development process?	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~		
Include safety elements such as convenient crossing at arterials?	~	~	~	R	~	~	~	~	~	~	~	~	~	~	~		
Provide for amenities that promote walking such as lighting, trees, trash receptacles?	~	~	~	R	~	~	≻	~	≻	≻	~	≻	≻	~	~		
Encourage pedestrian-oriented uses on the first floor, entrances that are conveniently accessible from the sidewalk or transit stops?	~	~	~	R Z	~	~	~	~	≻	~	~	~	~	~	~		



Table G4: Local TDM Policy Adoption – Carpool/Rideshare	Policie	SS														
Does your jurisdiction have design guidelines or an adopted policy that	Alamede	Alomedo County	Vibdin Vibdin	Berkelen	DUBIN	EMENNING		HOLMOID	Tiverinore	YIOM ONY	Pilond Okland	tuoupa:	uojuoso -	Unis Unis	AND YOU	<
For publicly owned parking garages or lots, provide preferential parking spaces and/or charge for carpools or vanpools?	Z	≻	Z	N N N	Z	≻	Z	z	7	Z 	Z	~	NR	Z		
Provide for convenient or preferential parking for carpools and vanpools in non-residential developments?	z	~	z	R	~	~	z	z	z	7	Z 	~	RR	Z		
Table G5: Local TDM Policy Adoption – Park and Ride Polici	es	Aunos n						*	•		*	14	40,	Li ato	14	
Does your jurisdiction have design guidelines or an adopted policy that	Alomed	Alamed	AIBONY	Berkele	ulldud	EMBINU	LIGWON H	HOWWOH	TINGLINO	THOMONY	Puopland	loupa:	uosp-	1007 III	1040	
Promote park-and-ride lots located near freeways or major transit hubs?	~	~	NR	N N N	~	≻	≻	z	, 	~	Z	~	NR	Z		
Include a process that provides input to Caltrans to ensure high- occupancy-vehicle lane bypass at metered freew ay ramps?	z	z	R Z	R R	~	z	~	~	~	7		~	Х Ж	Z		























Note: Includes developments entitled between July 1, 2013 and June 30, 2014, as reported by local planning staff



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Figure 16: FY2013-14 Non-Residential Development Approvals - Central Planning Area



Note: Includes developments entitled between July 1, 2013 and June 30, 2014, as reported by local planning staff.

Figure 17: FY2013-14 Non-Residential Development Approvals - South Planning Area



Note: Includes developments entitled between July 1, 2013 and June 30, 2014, as reported by local planning staff.

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