LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY

STAFF REPORT

SUBJECT: Short Range Transit Plan FY2016-2025

FROM: Christy Wegener, Director of Planning & Communications

DATE: March 28, 2016

Action
Review the draft Short Range Transit Plan FY2016-2025.

Background
Federal transportation statutes require that the Metropolitan Transportation Commission (MTC), in partnership with state and local agencies, develop and periodically update a long-range Regional Transportation Plan (RTP), and a Transportation Improvement Program (TIP) which implements the RTP by programming federal funds to transportation projects contained in the RTP. In order to effectively execute these planning and programming responsibilities, MTC requires that each transit operator in its region which receives federal funding through the TIP, prepare, adopt, and submit to MTC a "full" Short Range Transit Plan (SRTP) every four years and a "mini" SRTP in the intervening three years. This 2016 SRTP represents a "full" SRTP.

Since the last full SRTP update in 2012, major events impacting LAVTA include:

2013 Phase I and II of the Atlantis Satellite Fuel and Wash Facility opened

2014 Medical Transportation Management (MTM) was awarded a contract to deliver high quality, on demand paratransit service. Under the MTM business model, a flexible mobile fleet is owned and operated by independent subcontractors, eliminating fleet maintenance and fleet replacement costs to LAVTA. Additional efficiencies include a streamlined call center which takes reservations, dispatches trips, and provides customer service.

2015 LAVTA began providing static schedule information to Google® for the Google® Transit Trip Planner

2015 LAVTA began its first ever Comprehensive Operations Analysis (COA) study, which examines the existing fixed route service and makes recommendations for immediate improvements. The study involves significant public input and direction from policy makers.

2015 Clipper began to be accepted on Wheels Buses in November 2015

2015 LAVTA launched a new www.Wheelsbus.com website

Discussion

This SRTP update was built upon the detailed analysis that was undertaken as a part of LAVTA's 2015 Comprehensive Operational Analysis (COA). The SRTP provides an opportunity to examine if LAVTA's service redesign as a part of the COA is able to meet the needs of future Tri-Valley markets. In making the service recommendations, the COA considered population and employment data from the 2010 Census, fiscal year 2014 and 2015 ridership data, prior SRTPs, on-time performance data, feedback from both riders and non-riders, input from Board members and stakeholders, as well as existing and future land uses. Nelson Nygaard was tasked with leading the COA and with making recommendations for service improvements to be implemented in Fiscal Year 2017.

Fixed Route

For the fixed route system, Nelson Nygaard made significant recommendations to change the routes to become more streamlined, more productive, less circuitous, and to reduce duplication of services along certain route segments. For example, Nelson Nygaard has recommended that Route 10 and the Rapid no longer overlap along the East Ave segment in Livermore, and that Route 12 be eliminated and the Rapid be realigned to serve Portola Ave, Las Positas College, Canyons Parkway and Dublin Blvd. The Rapid is also recommended to terminate at the West Dublin/Pleasanton BART Station. Route 10 is recommended to operate between the Livermore Transit Center and the East Dublin/Pleasanton BART Station, and to move to 15-minute headways during the day (effectively doubling the existing service levels). Route 8 is recommended to change from two one-way loops to a bi-directional line and to no longer serve Santa Rita Road, where Route 10 would provide service. Due to extremely low ridership, Routes 3 is recommended to be realigned to serve the East Dublin/Pleasanton BART Station and the Stoneridge Mall, no longer providing service to the City of Dublin. Additionally, due to low ridership, Route 2 is recommended to be eliminated. Due to coverage availability of other routes, Route 9 is recommended to be eliminated. Route 14 in Livermore is recommended to be modified to provide service along Jack London Blvd to Stoneridge Drive, terminating at the East Dublin/Pleasanton BART Station.

The COA recommends the elimination of the low productivity services in Dublin (routes 2 and 3), replacing the routes with a demonstration projected called *Wheels-on-Demand.* Wheels-on-Demand is envisioned to be a real time dynamic ridesharing service provided through collaborative partnerships.

The service changes that are recommended represent a flat level of service hours from what exists today. After the implementation of the COA changes in FY 2017, staff will be closely monitoring system performance and is expected to make minor adjustments to improve operations and respond to customer requests over time. However, no substantial growth in hours is expected in the system for the next 10 years.

The ridership on the system is projected to grow at a modest rate, beginning in FY2018 with a 5% increase associated with the maturation of the COA changes. From FY19-25, we have projected a modest 2% ridership increase per year.

Paratransit

The LAVTA paratransit service is a premium service with a service delivery model that provides beyond the minimum requirements of the Americans with Disabilities Act (ADA). Paratransit ridership has grown significantly between FY14 and FY15, and is on an upward trend for FY16. In order to contain costs and manage demand for service, plans for an analysis of the Paratransit service delivery model are being considered for FY17. Staff is also looking into immediate program modifications, include the eligibility process, trip negotiation, fares, and subscription trip rates.

Finances and Fares

In addition to service planning, the SRTP includes a ten year financial and capital plan. The financial plan assumes revenue hours to remain fairly flat or slightly rising over the next ten years. Fares are assumed to rise commensurate with ridership over the next ten years. Staff is going to take a series of fare change recommendations to the LAVTA Board for approval in mid-2016.

With the passage of Measure BB in 2014, additional funding for transit operations is available starting in 2015. However, LAVTA has lost some revenue from expired completive Measure B grants, so rather than seeing a growth in total revenues, LAVTA was able to use BB funds to maintain previous revenue levels. LAVTA is currently receiving a number of other competitive grants and anticipates additional ones to become available during the period. Additionally, a few new non-competitive funding sources such as Cap and Trade funding have become available to LAVTA. RM2 funding for the Rapid was put on hold by MTC for FY16, but is expected to return to LAVTA in FY17 after the Board approves the COA changes.

Through FY22, reserves are sufficient to offset the difference between revenues and expenses, but starting in FY23, there is a deficit, and LAVTA would no longer be able to balance its budget. The deficit is shown to continue to increase through FY2025, reaching a total of $10 million. LAVTA will pursue strategies to achieve a balanced budget. These strategies may include:

- Reduce expenses/costs (e.g. paratransit)
- Increase current revenue sources (e.g. fares, advertising, contract services)
- Pursue other revenue sources (e.g. new local taxes, grants, etc.)

The SRTP informs LAVTA to be conservative in service planning and to continue to strive for opportunities to build ridership. There are several capital projects on the horizon within the next five years, including bus stop maintenance and development, electric bus technology, Historic Depot relocation in Livermore, next phases of the Atlantis maintenance facility, additional Transit Signal Priority, a real time passenger information phone app, and

technology upgrades such as Wi-Fi on the buses. LAVTA staff will have to continue to be resourceful with identifying local, state, and federal dollars to fund the capital projects.

Next Steps

The draft SRTP will be submitted to the MTC for review and comment by mid-April. Staff will take the Committee's and MTC's comments into consideration when developing the final SRTP. The final approved SRTP is due to MTC in May 2016.

Attachments:

1. Draft Short Range Transit Plan, 2016-2025

Attachment 1

LAVTA Short Range Transit Plan

FY 2016 - 2025

February 2016

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Table of Figures

1 INTRODUCTION & OVERVIEW

This Short Range Transit Plan (SRTP) will cover a 10 year period between FY 2016 and FY 2025. The purpose of this SRTP is to provide an understanding of Livermore Amador Valley Transit Authority (LAVTA)'s existing conditions, discuss standards achieved, evaluate performance metrics, provide recommendations, and plan for operational sustainability over the next 10 years.

AGENCY HISTORY

LAVTA, also known as Wheels, was established in May 1985 as an independent agency by a Joint Powers Agreement (JPA) between the cities of Dublin, Livermore, Pleasanton, and Alameda County to develop and operate local and intercity public transportation in the Tri-Valley. LAVTA's first start in providing transit service began with four fixed routes on nine leased buses in the cities of Dublin and Pleasanton. On July 1, 1987, the City of Livermore's Rideo system fully merged with LAVTA, providing connections between cities within the Tri-Valley area, including the unincorporated portions of Alameda County.

The LAVTA Maintenance, Operations and Administration (MOA) facility was built in 1991 on Rutan Court. This facility is the main base for all Wheels' operations, providing all maintenance and dispatch. The Wheels administration, including agency and contracted operations staff, are located at the MOA as well.

In 1996, LAVTA became fully compliant with the provisions of the Americans with Disabilities Act (ADA), with a fully wheelchair accessible fixed-route and paratransit fleet.

In 1997, the SF Bay Area Rapid Transit (BART) Dublin/Pleasanton extension was completed, which necessitated Wheels to provide service to the new station. That same year, Direct Access Responsive Transit (DART) was established, which was a fixed-route system with demand-responsive capabilities. Midday and Saturday service for local routes were also discontinued.

In 1999, LAVTA started regional express service, routes 70X and 20X, and a subscription service to Silicon Valley, named the Prime Time Express. Also that year, the Livermore Transit Center was completed at the Railroad and Old First Street intersection in downtown Livermore. This transit center currently allows Wheels riders to transfer seamlessly with Altamont Commuter Express (ACE).

In 2008, the Great Recession occurred, which led to diminished federal, state, and local funding sources. This necessitated LAVTA to reduce revenue hours by 25% in 2009. Additionally, the fare structure was reconfigured to provide increased fare revenue, resulting in increases in fares and the loss of free fixed route services that were available to senior and disabled passengers.

In January 2011, the bus rapid transit (BRT) line, named the Rapid, was implemented, leading to some increases in ridership through 2013. In 2011, LAVTA changed its model for paratransit service delivery from contracted-directly operated to contracted-brokerage and hired American Logistics Company (ALC) to provide the service. Between 2011 and 2014, ALC operated LAVTA's

paratransit services. However, the contract ended in 2014 at which time Medical Transportation Management (MTM) assumed paratransit services.

In 2013, LAVTA completed Phase I and II construction of the Atlantis Operations and Maintenance Facility, a secured parking facility with bus wash and fueling functions. This facility is prepared to take on fleet expansions or additions, should they occur in the future.

In 2015, LAVTA joined the majority of the Bay Area transit operators in accepting Clipper® cards onboard all buses.

GOVERNANCE

LAVTA is governed by a seven member Board of Directors. The Board is responsible for establishing policies for the agency and consists of two representatives from the cities of Livermore, Dublin, and Pleasanton, and one member representing Alameda County. Board meetings are held at LAVTA's MOA facility.

The mayors of each municipality appoint elected city council members to terms on the LAVTA Board, with each mayor having sole appointment authority. Board authority is based on a Joint Exercise of Powers Agreement that was approved by all member jurisdictions in 1985. There are no term limits on Board appointments, and Board members may be appointed or discharged at any time. The current members of the LAVTA Board include:

- Lauren Turner, Councilmember, City of Livermore
- Jerry Pentin, Councilmember, City of Pleasanton
- Scott Haggerty, Supervisor, First District, Alameda County
- David Haubert, Mayor, City of Dublin
- Steven Spedowfski (Board Vice Chair), Councilmember, City of Livermore
- Karla Brown, Councilmember, City of Pleasanton
- Don Biddle (Board Chair), Councilmember, City of Dublin

Board Chair and Vice Chair serve one-year terms beginning on July 1 of every year. There are no term limits on either position. The Agency's bylaws mandate that the Chair represents the Dublin area, while the Vice Chair represents the City of Livermore.

LAVTA's Board is divided into two committees that meet regularly to consider items within each committee's purview. These two committees are Finance and Administration, and Projects and Services.

The current members of the Finance and Administration Committee are:

- Don Biddle
- Lauren Turner
- Jerry Pentin

The current members of the Projects and Services Committee are

- Scott Haggerty
- Karla Brown

- Steven Spedowfski
- David Haubert

In 2015, the LAVTA Board took action to form the Altamont Regional Rail Working Group. The Working Group was formed to focus on the decades of planning for BART to Livermore and the need to have BART go to Greenville Road in Livermore, with the goal of an inter-regional connection with the San Joaquin Valley via the Altamont Corridor Express (ACE rail service). Members of the Altamont Regional Rail Working Group consist of elected officials from the cities of Dublin, Livermore, Pleasanton and Tracy; supervisors from the Counties of Alameda and San Joaquin; and board members/directors from ACE, BART and LAVTA.

ORGANIZATIONAL STRUCTURE

Organizational Hierarchy

LAVTA's seven-member Board of Directors governs the activities of the LAVTA staff. The Agency is headed by an Executive Director, who oversees planning, communications, finance, administration, and Agency contracts for transit and paratransit services. An organizational flow chart is shown in Figure 1.

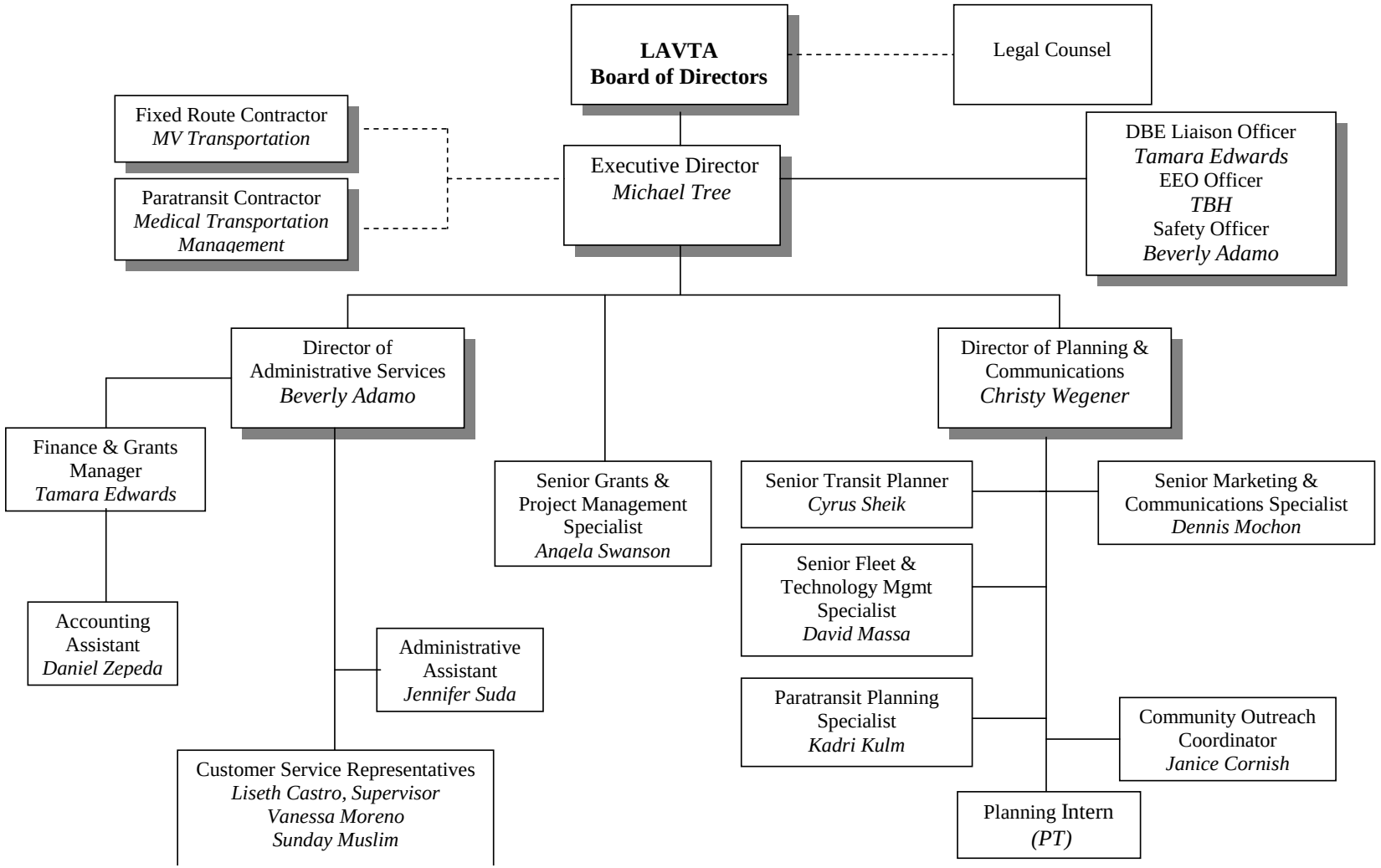
Transit and Paratransit Service Contracts

LAVTA contracts with outside companies for both transit and paratransit management, operations, and maintenance. Medical Transportation Management, Inc. (MTM) operates paratransit and MV Transportation, Inc. (MV) operates fixed-route transit.

MTM's contract began on May 1, 2014 and ends on June 30, 2017, with four optional one-year extensions. The company bills LAVTA on a per-trip basis, at a current cost of $32.51 per trip, with a cost increase of two percent per year through the end of the contract.

MV's contract began on July 1, 2011 and has been extended for an additional one-year term each year since June 30, 2014. MV bills the Agency per revenue hour, with a current rate of $40.77 per hour. MV also bills the Agency a separate fixed monthly rate for additional costs. This monthly rate currently stands at $249,885.15. Fixed-route operators are represented by International Brotherhood of Teamsters (IBT) Local #70. The current collective bargaining agreement between IBT Local #70 and MV is in effect from July 1, 2015 to June 30, 2016.

Figure 1 LAVTA Organization Flow Chart



2 DEMOGRAPHIC ANALYSIS

This chapter presents demographic information regarding LAVTA's service area to better understand how portions of the service area differ in terms of characteristics that affect transit usage. The evaluation includes the following characteristics and is based on the 2010 US Census, 2013 American Community Survey (ACS), and 2011 Longitudinal Employer-Household Dynamics (LEHD).

Demographic characteristics covered in this chapter include:

- Population Density
- Employment Density
- Rental households
- Households vehicle ownership
- Households living in poverty
- Older adult populations
- Youth populations
- Demographic trends

SPATIAL DEMOGRAPHIC ANALYSIS

Population

Public transportation is most efficient when it connects population and employment centers where people can easily walk to and from bus stops. The reach of transit is generally limited to within ¼ to ½ mile of the transit line (depending on the built environment), or a 10-minute walk, and thus the size of the travel market is directly related to the density of population and employment in that area.

In general, areas need at least 7 persons per acre to support productive bus service. The average population per census block in the LAVTA service area is 53 persons, or an average population density of 7 persons per acre. Given that this is an average, some areas will be above the 7 person per acre threshold, while others will not. As shown below in Figure 2, there are numerous areas with relatively high population density, including parts of Dublin north of I-580, parts of Pleasanton east of I-680, and much of Livermore and Springtown. In addition, high-density residential development is planned for Hacienda Business Park near the East Dublin/Pleasanton BART Station, which is not reflected in Figure 2. There are also large expanses of sparsely populated areas between population centers and major barriers that divide residential development (primarily major freeways and other roadways), making efficient transit routing more challenging.

In general, neighborhoods that have the population density required to support transit are currently served by Wheels bus service. Areas that may justify service (based on population density) that do not currently have it include neighborhoods along Stoneridge Drive in east Pleasanton, Valley Avenue in Pleasanton, Concannon Boulevard in Livermore, and San Ramon Road in Dublin. Note that sufficient population density alone is not enough to support productive transit service, as street design and other factors must be supportive as well.

Employment

Employment density is shown in Figure 3. Employment clusters are scattered throughout the Wheels service area, and the locations with the highest density include Lawrence Livermore National Laboratory, Stoneridge Mall and the surrounding area, the Bernal Corporate Park, downtown Livermore, and office and medical facilities in north Pleasanton (Hacienda Business Park). All major employment areas in the Wheels service area are currently served by transit but may not be in the future when service changes proposed in the Comprehensive Operational Analysis are implemented.

Rental Households

The prevalence and density of rental households is another important factor in determining potential transit use, as transit ridership is typically higher in areas with a high percentage of renters. Rental household density is shown in Figure 4. As can be seen, areas with above-average density of rental households include the area near the Stoneridge Shopping Center, Pleasanton near the Tassajara Creek, south Pleasanton, west Livermore, and in Livermore immediately adjacent to the Lawrence Livermore National Laboratory (where several apartment complexes are located). Most areas with significant densities of rental households are served by Wheels, with the exception of rental housing near the intersection of Holmes & Concannon in Livermore, and Valley & Hopyard in Pleasanton.

Household Vehicle Ownership

For self-evident reasons, individuals without access to a vehicle represent a particularly strong market for transit. In some cases, individuals do not have access to an automobile for health, financial, or legal reasons, while others simply choose to live car-free. The Census Block south of Stanley Boulevard in Livermore has the highest density of households without a vehicle (see Figure 5), with the surrounding area of Livermore and Pleasanton east of 1st Street and south of Arroyo Valley also relatively dense. Overall the census blocks with low vehicle ownership closely mirror those with high rental densities. All areas with high densities of zero vehicle households are currently served by transit.

Households Living in Poverty

Poverty status is another strong indicator of a higher-than-average propensity to use transit. Figure 6 identifies the number and density of households in the service area living below the federal poverty line. As can be seen below in Figure 6, Census Blocks with above average population living in poverty are located along Bernal Avenue in Pleasanton, south of Stanley Boulevard in west Livermore, and in central Livermore. Most areas with higher poverty levels are currently served by transit, with the exception of neighborhoods along Stoneridge Drive in east Pleasanton and areas of south Livermore near Holmes & Concannon.

Older Adults Population

Older adults (65 and older) are an important transit ridership group since seniors may have limited mobility on foot and may not be able to drive. Many seniors are retirees, and as a result, take fewer daily trips. Transit provides an important option for this population to remain as active and independent as possible, and to age in place. The region's density of older adults is shown in Figure 7. High densities of older adults can be found where there are numerous senior housing complexes, such as west of the intersection of Sunol Boulevard and Bernal Avenue and north of Vineyard Avenue in Pleasanton, as well as scattered throughout Livermore. The Stoneridge Creek Retirement Community in northwest Pleasanton was built too recently to be accounted for in currently available Census data.

Youth Population and Millennials

College-aged youth (18-24) and Millennials (defined here as people born between 1981 and 1997) are also an important transit demographic since many are students who do not own a vehicle for financial or other reasons, or may prefer transit to driving. As illustrated in Figure 8, the heaviest concentrations of college-aged youth (excluding the Santa Rita Jail) are mostly found at apartment developments located throughout the service area. Youth density is comparatively low in Pleasanton and denser in central Livermore north of Railroad Avenue and along East Avenue.

As illustrated in Figure 9, dense concentrations of Millennials are found throughout the LAVTA service area. These areas are mostly served by LAVTA, but there are significant concentrations unserved in south Livermore, central Pleasanton, and west Dublin.

Figure 2 Population Density

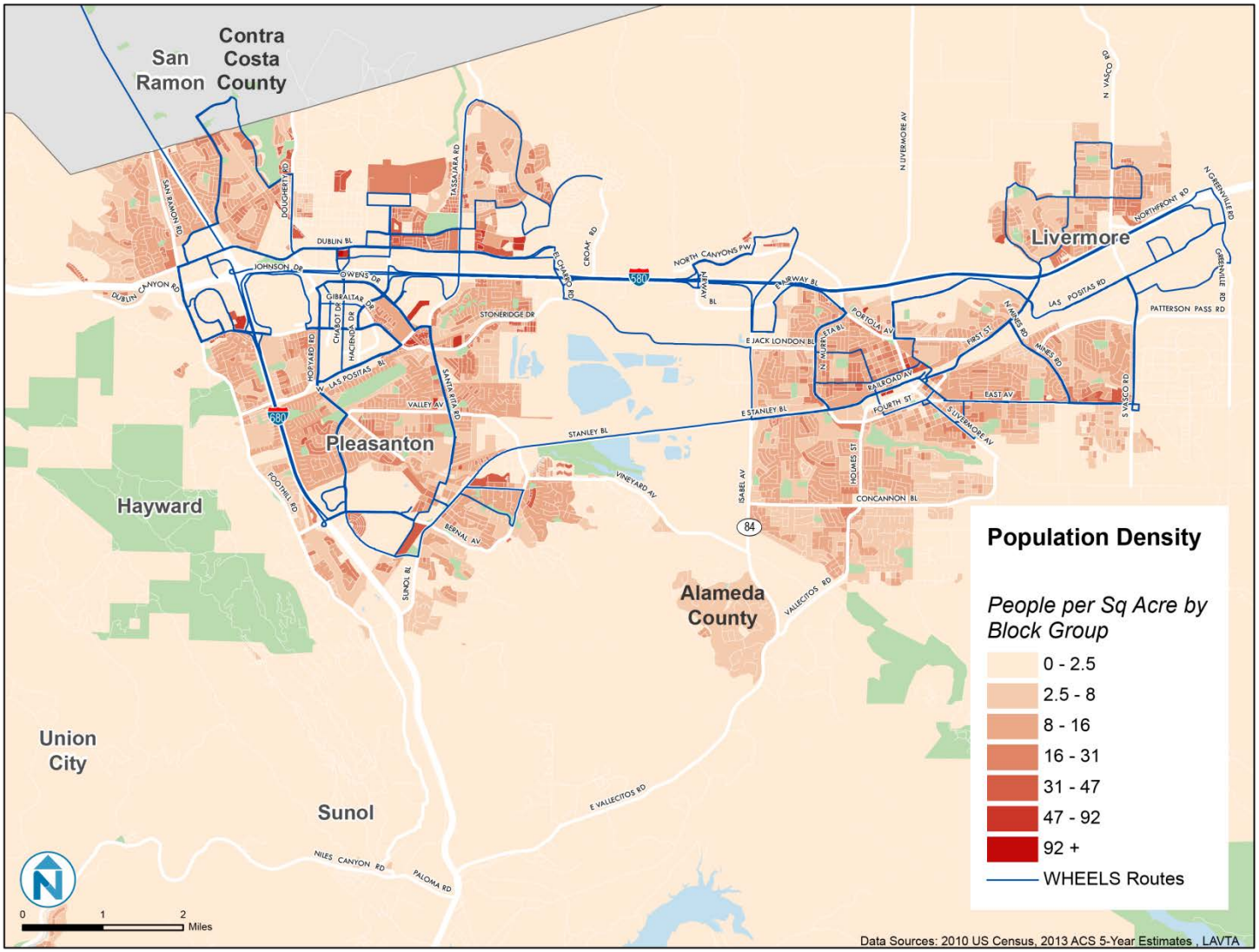


Figure 3 Employment Density

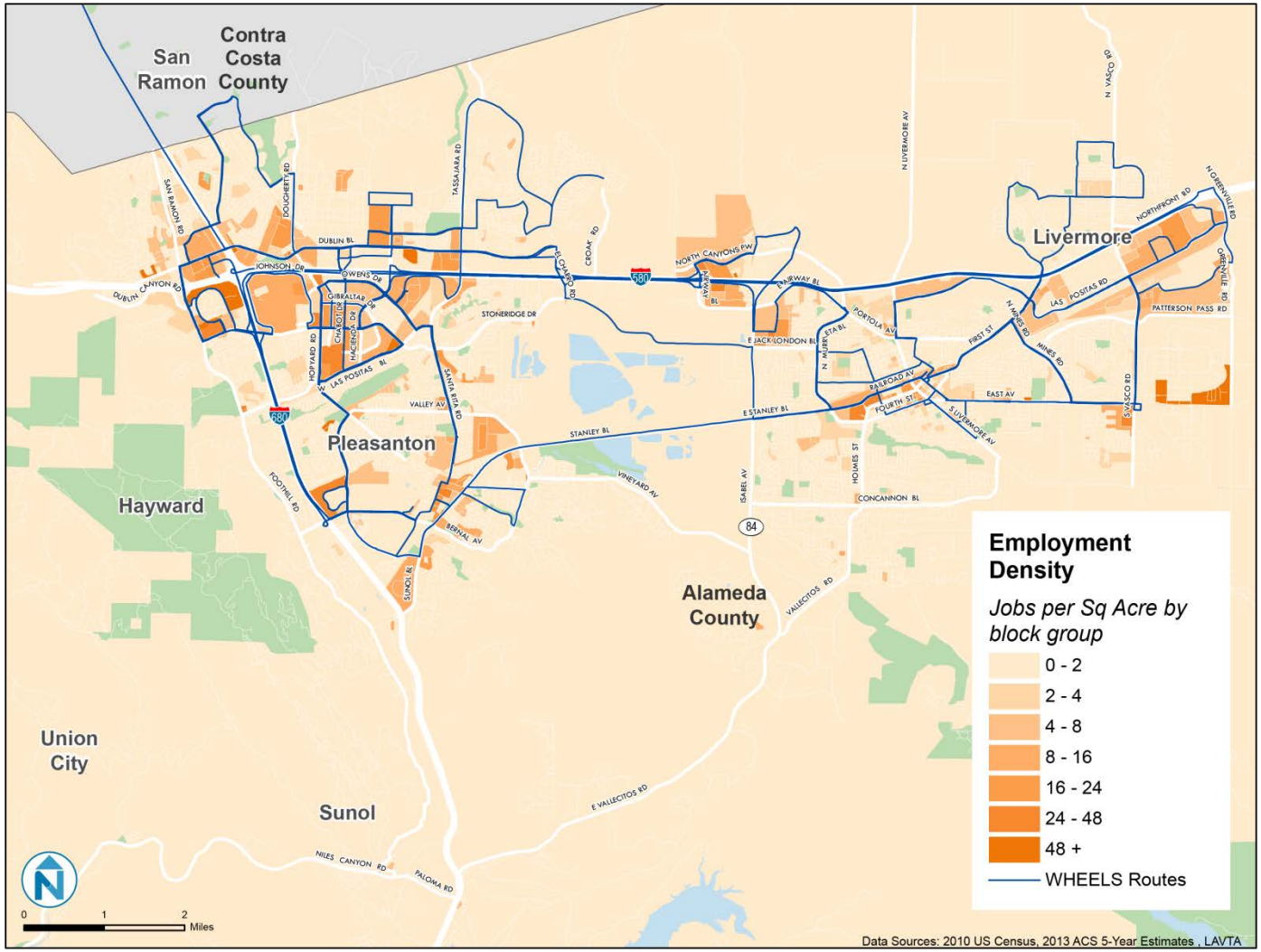


Figure 4 Density of Rental Households

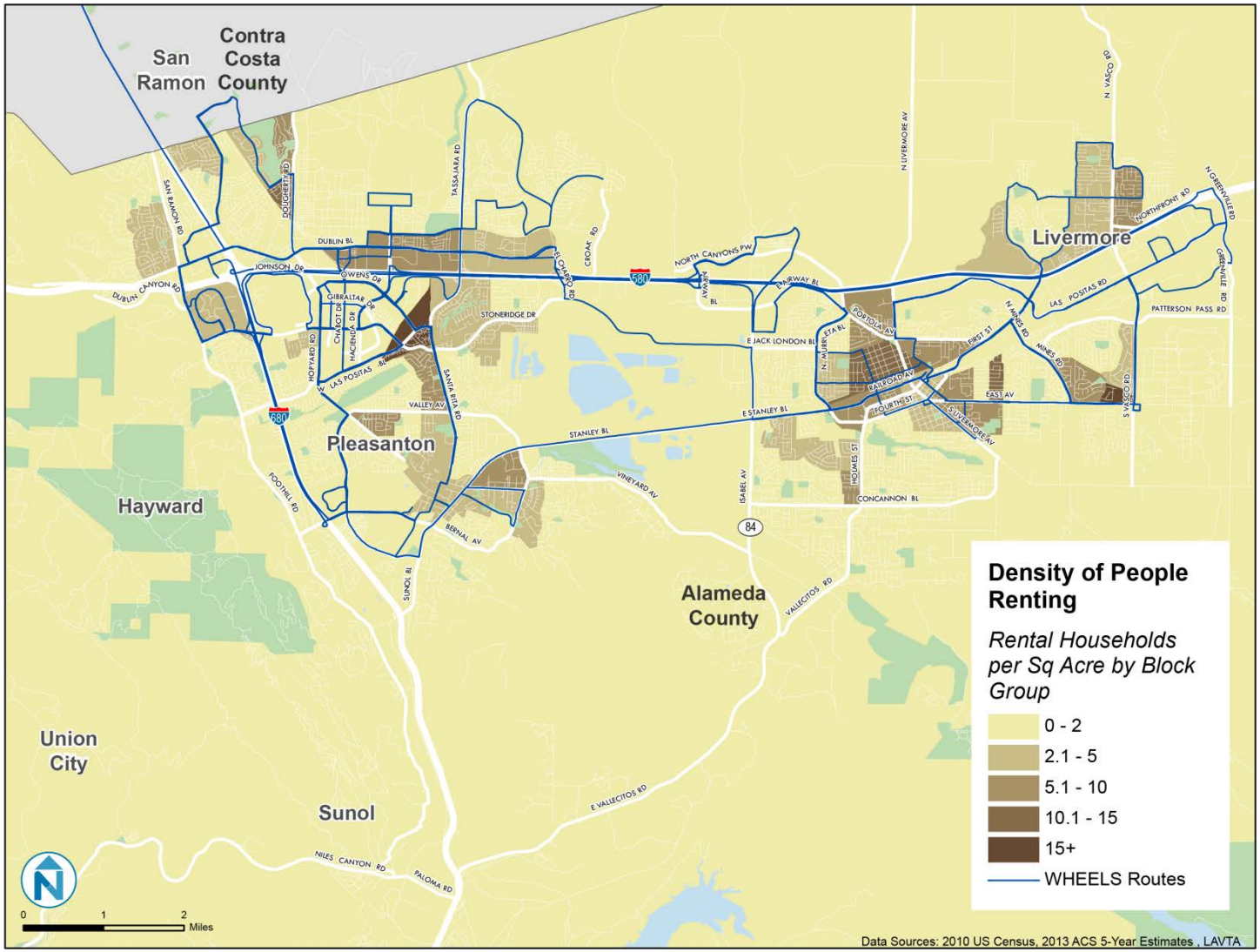


Figure 5 Density of Zero Vehicle Households

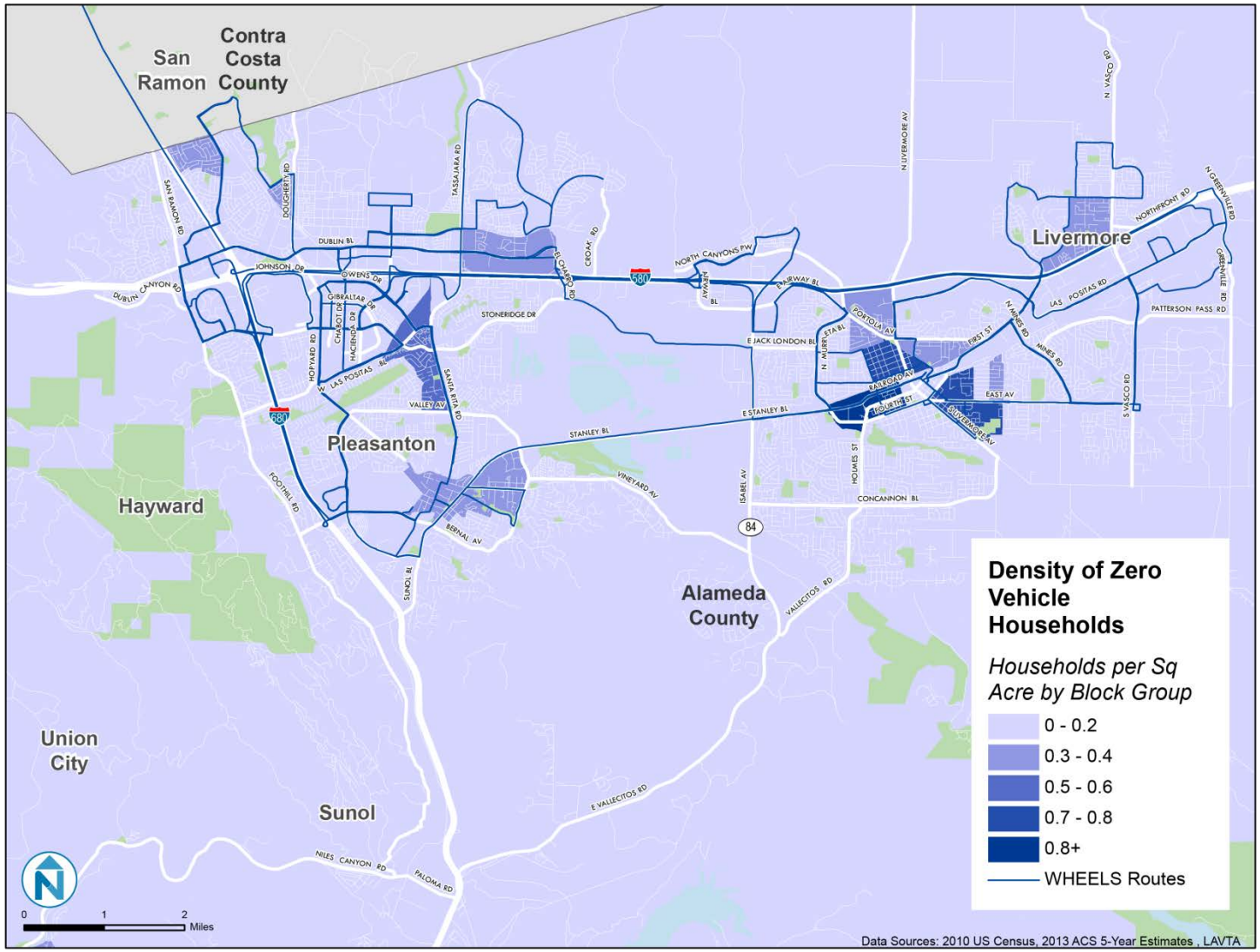


Figure 6 Density of Individuals below Poverty

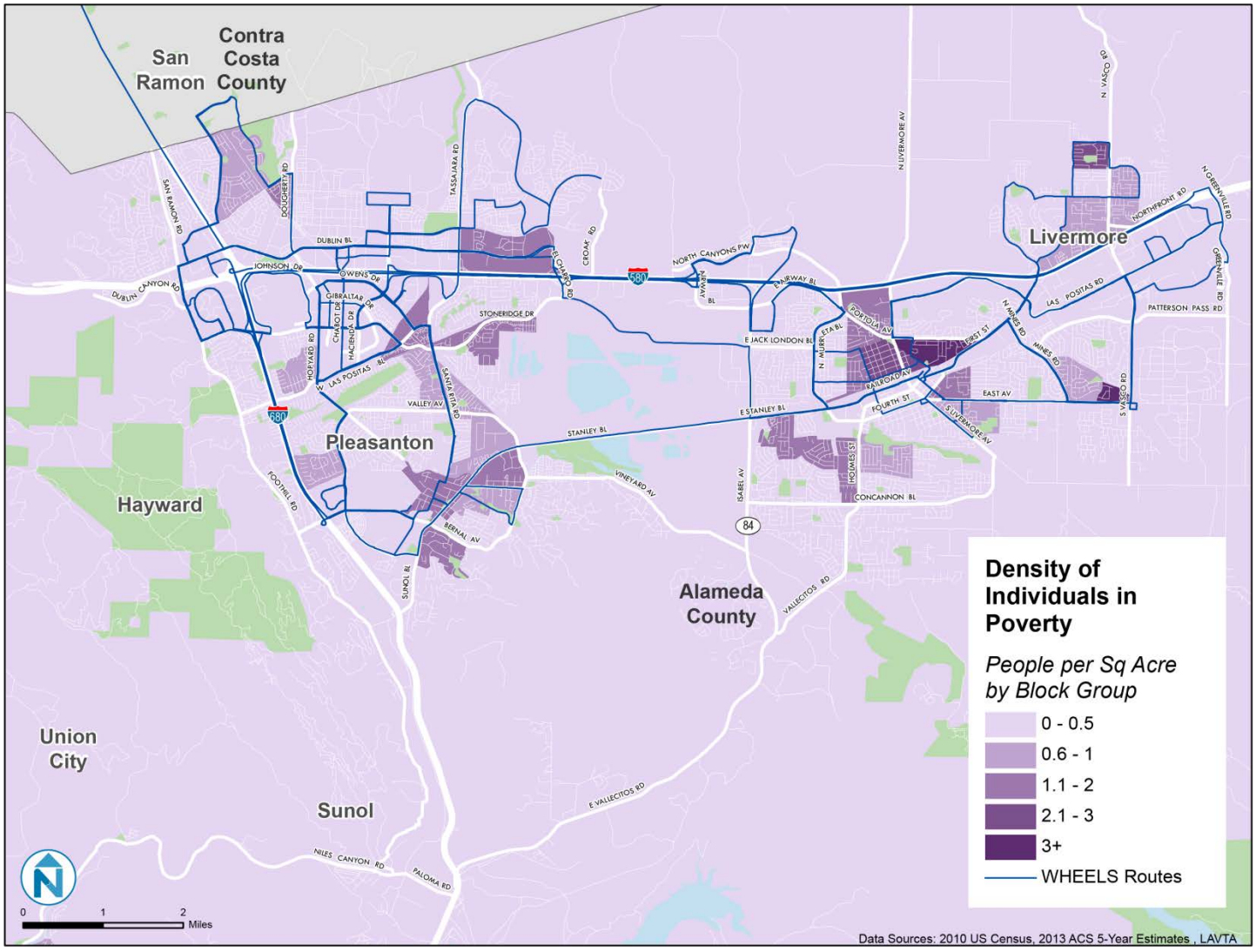


Figure 7 Density of Seniors Aged 65 and Above

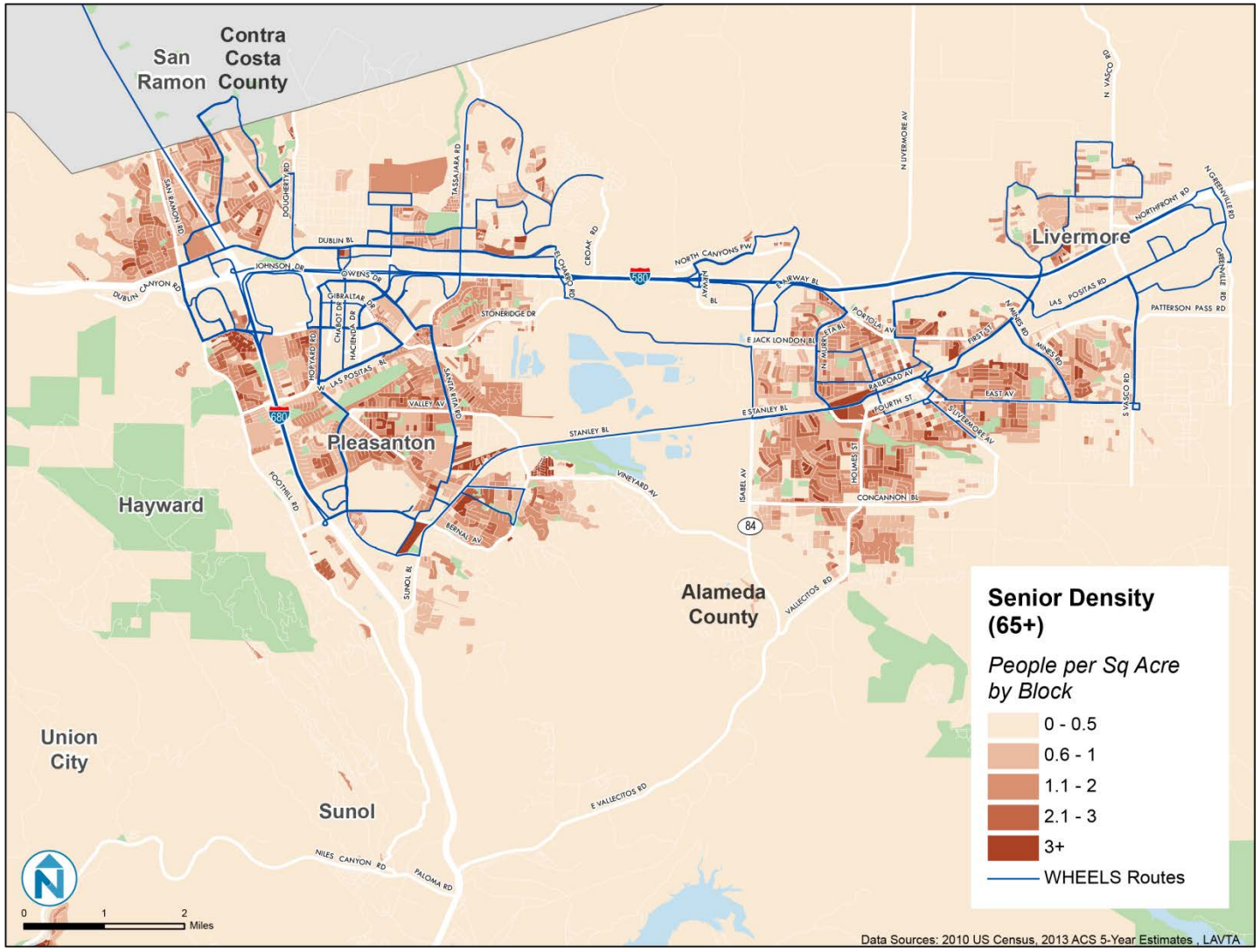


Figure 8 Density of College-Aged Adults Aged 18-24

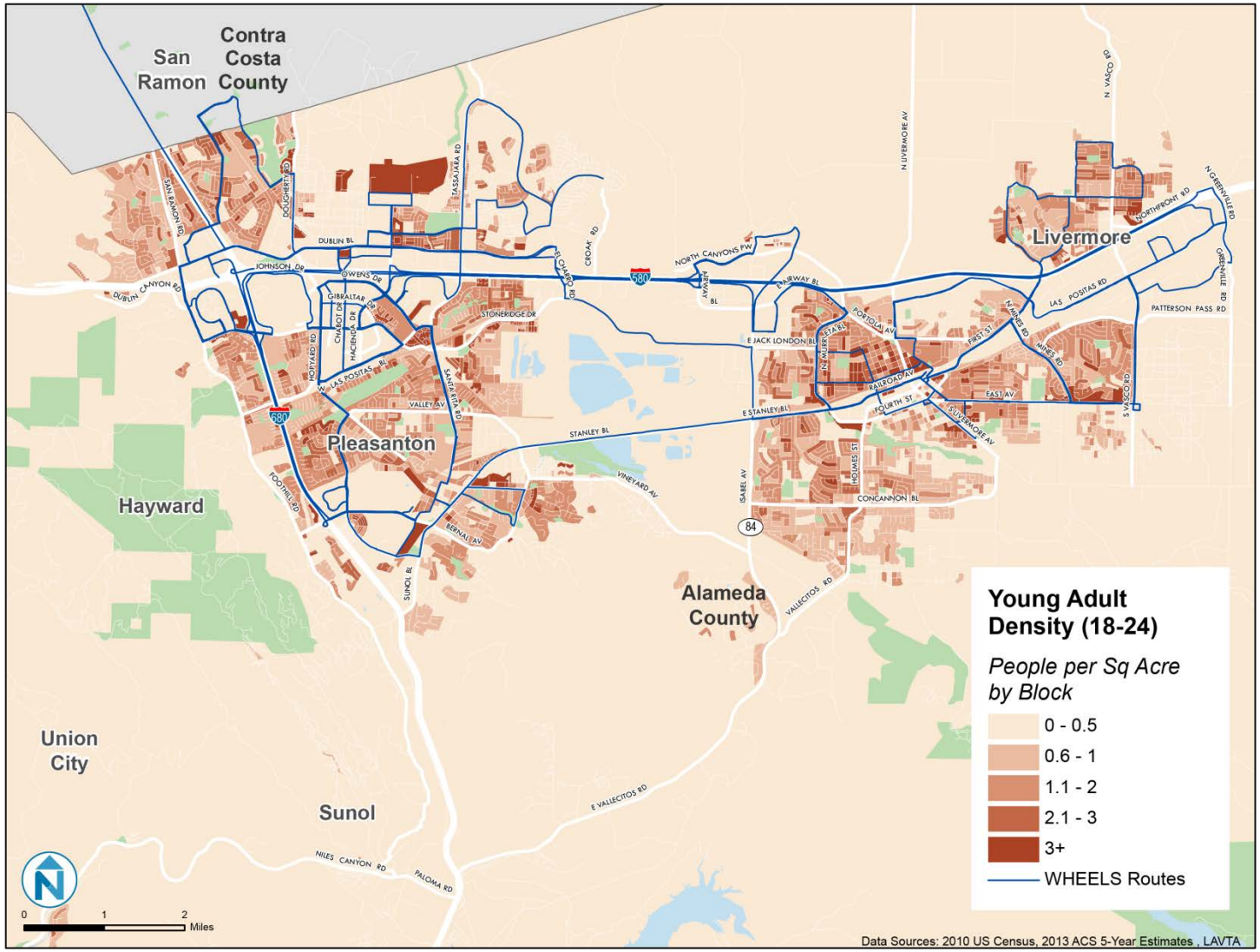
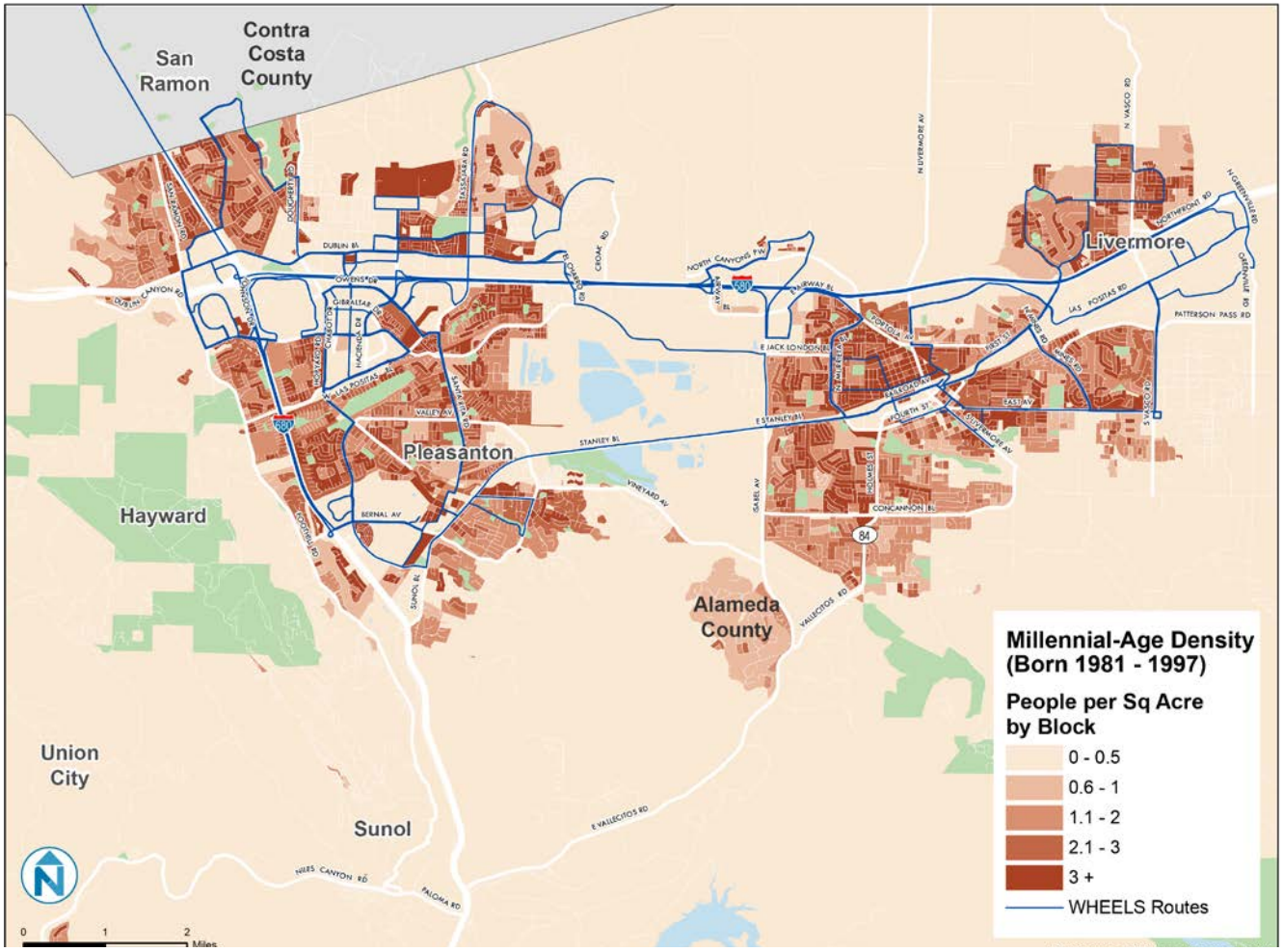


Figure 9 Density of Millennials (Born 1981-1997)

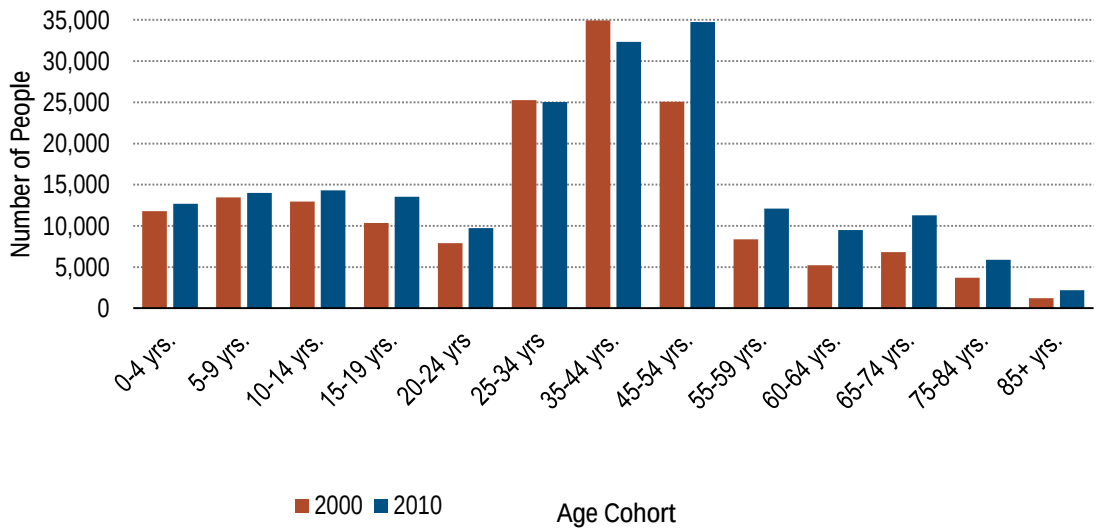


DEMOGRAPHIC TRENDS

Population by Age

The population in the LAVTA service area grew from 166,972 to 197,289 between 2000 and 2010. Figure 10 is a general population comparison from the U.S. Census of Dublin, Livermore, and Pleasanton from 2000 to 2010. City-wide general population statistics were summed for a service-area estimate by age cohort. While nearly every cohort grew from 2000 to 2010, the 45 to 54 year cohort increased by almost 10,000 residents. Additionally, cohorts 55 to 59 years, 60 to 64 years, and 65 to 74 all increased by about 5,000 residents. The 35 to 44 cohort declined by about 2,500 residents. This indicates that the population growth in the Tri-Valley is driven in large partly by growth in the 45 and over population, including seniors. Increases in the senior-age population will increase demand for paratransit, thus increasing costs for Wheels to provide the service. The population of Millennial-age population increased by approximately 7,500 residents from 2000 to 2010. Given that residents in this age group tend to ride transit more than others, if this trend continues it should have a positive impact on Wheels ridership.

Figure 10 Population in Service Area by Age Cohort



Race/Ethnicity

Figure 11 shows of the racial demographics of populations in Dublin, Livermore, and Pleasanton from 2000 to 2010. The city-wide race statistics were summed for a service-area estimate. The service area is becoming more racially diverse with a decrease in the percentage of people who identify as white, and increases in the percentage of people who identify as all other categories: Asian, Other, Multiracial, black or African American, and Native Hawaiian and Other Pacific Islander. The only category that did not increase from 2000 to 2010 was American Indian and Alaska Native.

Figure 11 Race in Service Area

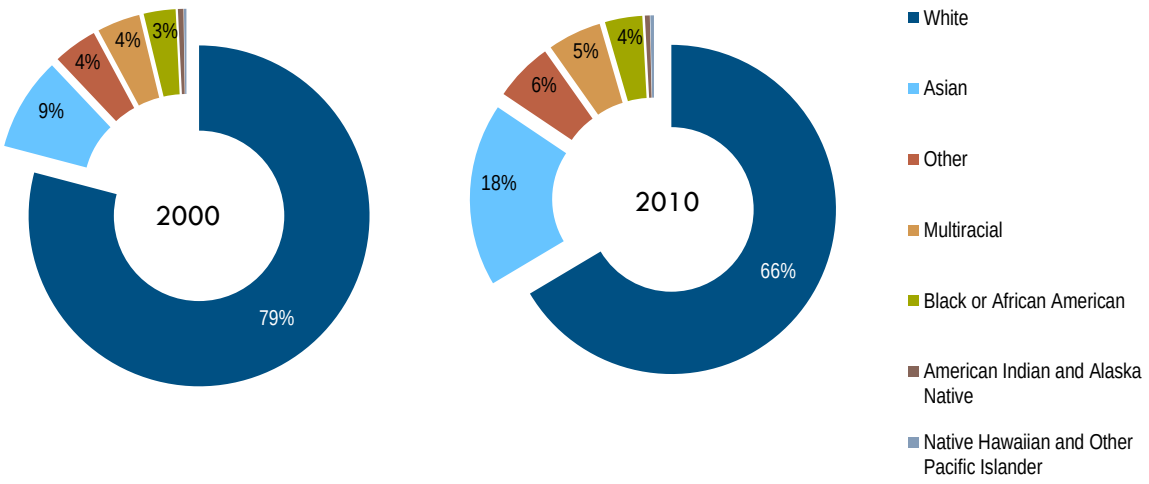
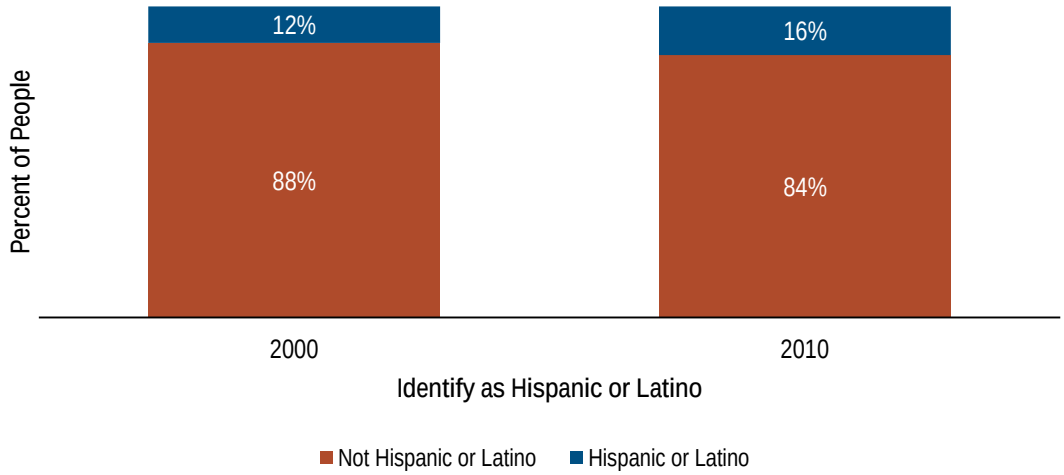


Figure 12 shows people who identify as Hispanic or Latino of Dublin, Livermore, and Pleasanton from 2000 to 2010. Each city-wide statistic was summed for a service-area estimate. The percentage of people who identify as Hispanic or Latino increased in the service area (from 12% to 16%) between 2000 and 2010.

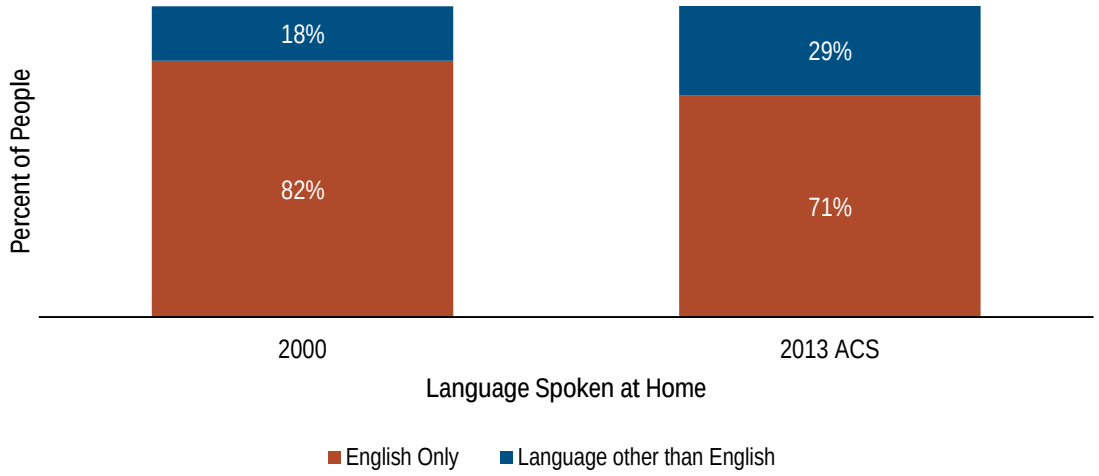
Figure 12 Hispanic or Latino People in Service Area



Language

Figure 13 shows people who speak another language other than English in Dublin, Livermore and Pleasanton from 2000 to 2013. Each city-wide statistic was summed for a service-area estimate. The percentage of people who speak a language other than English at home has increased from 18% to 29% between 2000 and 2013, indicating an increasing need for rider information in languages other than English.

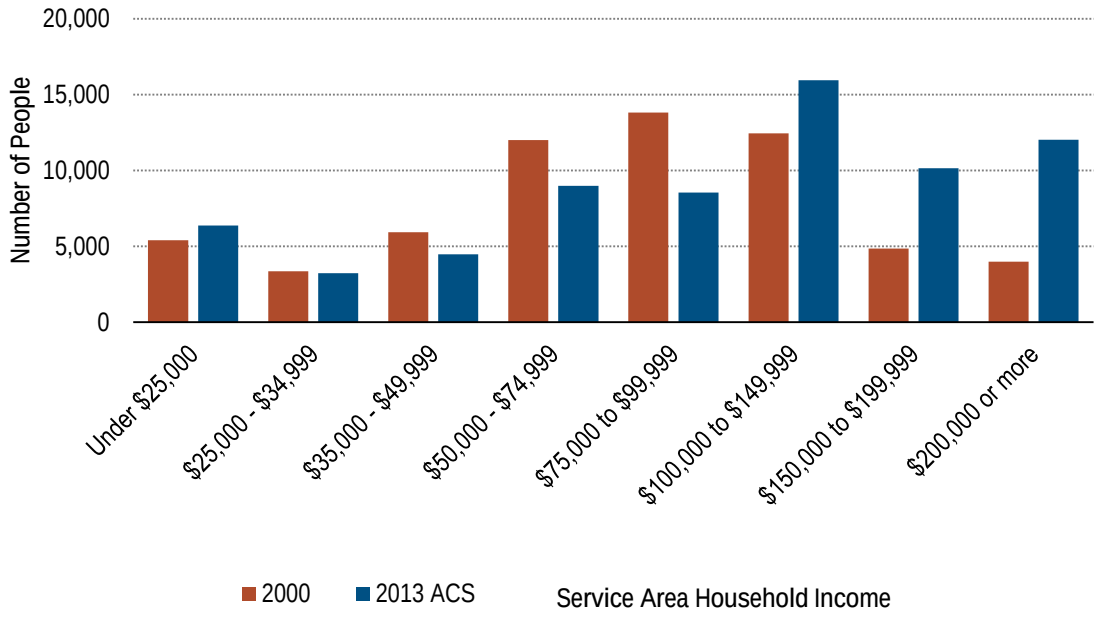
Figure 13 Language Spoken at Home in Service Area



Income

Figure 14 shows income across Dublin, Livermore, and Pleasanton from 2000 to 2013. Each city-wide statistic was summed for a service-area estimate. In general, the population of higher income groups has increased substantially, while lower income groups have declined, indicating that people with high incomes have been moving into the area at a much faster rate than people with lower incomes. In addition, some people with lower incomes have likely been displaced due to the rising cost of housing. Given that LAVTA's riders tend to have incomes below $75,000, declines in this income group may be hurting ridership. If these trends continue, LAVTA may need to explore additional strategies to attract choice riders.

Figure 14 Service Area Household Income



3 SYSTEM OVERVIEW

This chapter provides an overview of the existing services provided by LAVTA. In addition to presenting the type of transit services provided and associated service areas, this chapter provides information on the system's fare structure, existing fleet, and facilities.

EXISTING TRANSIT SERVICES AND SERVICE AREA

The LAVTA Wheels bus system includes a network of 33 routes serving the Dublin, Pleasanton, and Livermore area, including one Rapid route and 16 school-focused routes.

LAVTA/Wheels fixed route service can be divided into four main categories, as follows:

- **Primary:** *Routes 10, 12/12x, and Rapid.* Primary routes operate between the municipalities in the service area. Primary routes generally operate all day with regular frequencies, usually at least half hourly or hourly service. This category includes the Rapid, a high-frequency bus line that connects East Livermore with West Pleasanton and points in-between, including West and East Dublin Pleasanton BART stations.
- **Regional Express:** *Routes 20X and 70X/70XV.* Regional Express service operates at 30-45 minute headways during peak periods. Route 70X/70XV provides peak hours-only service connecting East Dublin/Pleasanton BART to Pleasant Hill BART and Walnut Creek BART, and Route 20X provides peak-hour service from East Dublin/Pleasanton BART to locations in Livermore, including Lawrence Livermore National Laboratory.
- **Neighborhood Feeder:** *Routes 1, 2, 3, 8A/8B, 9, 11, 14, 15, 51, 53, and 54.* Neighborhood Feeder routes serve smaller geographic areas and may operate with limited spans of service, with the exception of Route 15, which operates regularly throughout the day.
- **School:** *Routes 401, 402, 403, 501, 502, 503, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611.* School routes operate Monday through Friday and are intended to help area students get to and from school. Service is always open to the general public.

LAVTA also operates Dial-A-Ride service in compliance with the Americans with Disabilities Act (ADA). This demand-responsive service provides accessible door-to-door paratransit service to eligible people with disabilities in Livermore, Pleasanton, Dublin, and the surrounding unincorporated areas of Alameda County. Dial-A-Ride is public, shared ride transportation and available during the days and times Wheels fixed route bus service is operating. Service in Dublin and Livermore is seven days a week from approximately 4:30 a.m. to 1:30 a.m. Service in Pleasanton is provided by the City of Pleasanton and supplemented by Wheels Dial-A-Ride when Pleasanton paratransit is unable to fulfill trips or is not operating (weekdays from 4:30 a.m. to 8:00 a.m., and 5:00 p.m. to 1:30 a.m., and Sundays and holidays from 4:30 a.m. to 1:30 a.m.).

Fixed-Route Services

The non-school routes vary widely in terms of service frequency and span. Routes operate with headways ranging from 15 to 120 minutes depending on the day and time period. Eight routes provide all day service. Some routes operate only during peak times, while others operate nearly all day from 5 a.m. to midnight or later. Service frequencies and spans for each route are shown in Figure 15. Six routes operate on Saturdays, and five on Sundays.

Figure 16 below shows LAVTA's system-wide routes, and Figure 17 shows the service network with connecting agency routes. Service is strongly oriented towards connections to BART service, with focal points at the East and West Dublin/Pleasanton stations. Several routes also serve stations of the Altamont Corridor Express (ACE), providing rail connections between San Jose to the south and Stockton to the northeast. Several County Connection bus routes also service the LAVTA service area in Dublin and Pleasanton, while LAVTA routes 70X and 70XV serve Walnut Creek BART and Pleasant Hill BART in Contra Costa County.

All fixed-route vehicles are equipped with bike racks. Each bike rack holds at least two bikes, with space available on a first-come, first-served basis. LAVTA's policy also allows riders to bring bikes onboard buses if the rack is full, at the driver's discretion.

LAVTA is funded by a combination of passenger fares and funding from federal, state, and local sources, including the following agencies:

- Alameda County Transportation Commission
- Caltrans
- Metropolitan Transportation Commission
- Bay Area Quality Management District
- CalEMA
- Federal Transit Administration

Figure 18 illustrates the average February 2015 weekday boarding activity at every fixed-route stop in the LAVTA bus system.

Figure 15 Frequency and Span of Service by Route

Route	Frequency of Service					Span of Service		
	AM	Midday	PM	Saturday	Sunday	Weekday	Saturday	Sunday
Route 1	30	30	30	30	30	6:00 a.m. – 8:55 p.m.	8:01 a.m. – 9:25 p.m.	8:01 a.m. – 9:25 p.m.
Route 2	60	-	60	-	-	6:30 a.m. – 9:20 a.m. 3:20 p.m. – 6:48 p.m.	-	-
Route 3	30	-	30	60	-	5:55 a.m. – 9:20 a.m., 3:30 p.n. – 8:50 p.m.	9:01 a.m. – 5:51 p.m.	-
Route 8A	60	60	60	-	-	6:15 a.m. – 7:02 p.m.	-	-
Route 8B	60	60	60	-	-	6:45 a.m. – 8:32 p.m.	-	-
Route 8	-	-	-	50-60	40	-	8:01 a.m. – 11:11 p.m.	9:01 a.m. – 2:18 p.m.
Route 9	15-30	-	15	-	-	6:30 a.m. – 9:19 a.m. 3:30 p.m. – 6:19 p.m.	-	-
Route 10	30	30	40	16-48	40	4:12 a.m. – 1:44 a.m.	4:57 a.m. – 1:14 a.m.	5:17 a.m. – 1:14 a.m.
Route 11	45	-	45	-	-	6:42 a.m. – 8:48 a.m. 4:12 p.m. – 6:18 p.m.	-	-
Route 12	15-30	60	15-60	60	120	5:58 a.m. – 10:42 p.m.	9:01 a.m. – 9:47 p.m.	9:02 a.m. – 8:47 p.m.
Route 14	30	30	30	-	-	6:42 a.m. – 8:06 p.m.	-	-
Route 15	30-60	30-60	30-60	60	60	5:12 a.m. – 11:58 p.m.	6:02 a.m. – 11:48 p.m.	7:08 a.m. – 8:43 p.m.
Route 20X	45	-	45	-	-	6:15 a.m. – 9:54 a.m. 3:52 p.m. – 6:36 p.m.	-	-
Route 51	-	-	30	-	-	3:12 p.m. – 6:57 p.m.	-	-
Route 53	65-75	-	60	-	-	6:51 a.m. – 8:41 a.m. 3:55 p.m. – 7:31 p.m.	-	-
Route 54	65 – 75	-	60	-	-	5:33 a.m. – 8:23 a.m. 3:47 p.m. – 6:28 p.m.	-	-
Route 70X/70XV	30	-	30			5:43 a.m. – 8:53 a.m. 4:00 p.m. – 6:41 p.m.	-	-
Rapid	15	15	15	-	-	5:16 a.m. – 8:04 p.m.	-	-

Figure 16 Systemwide Routes

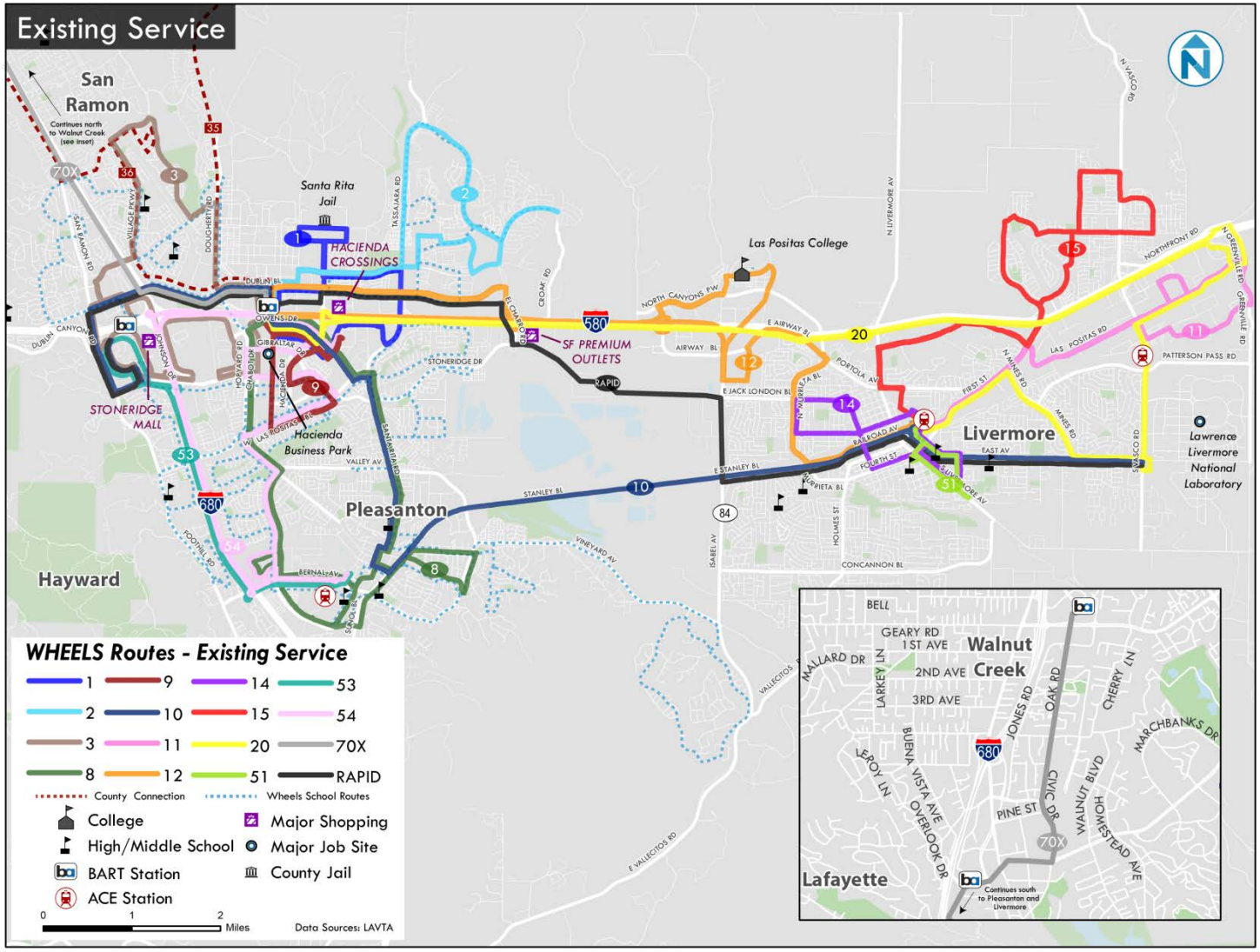


Figure 17 Transit Service in the LAVTA Service Area

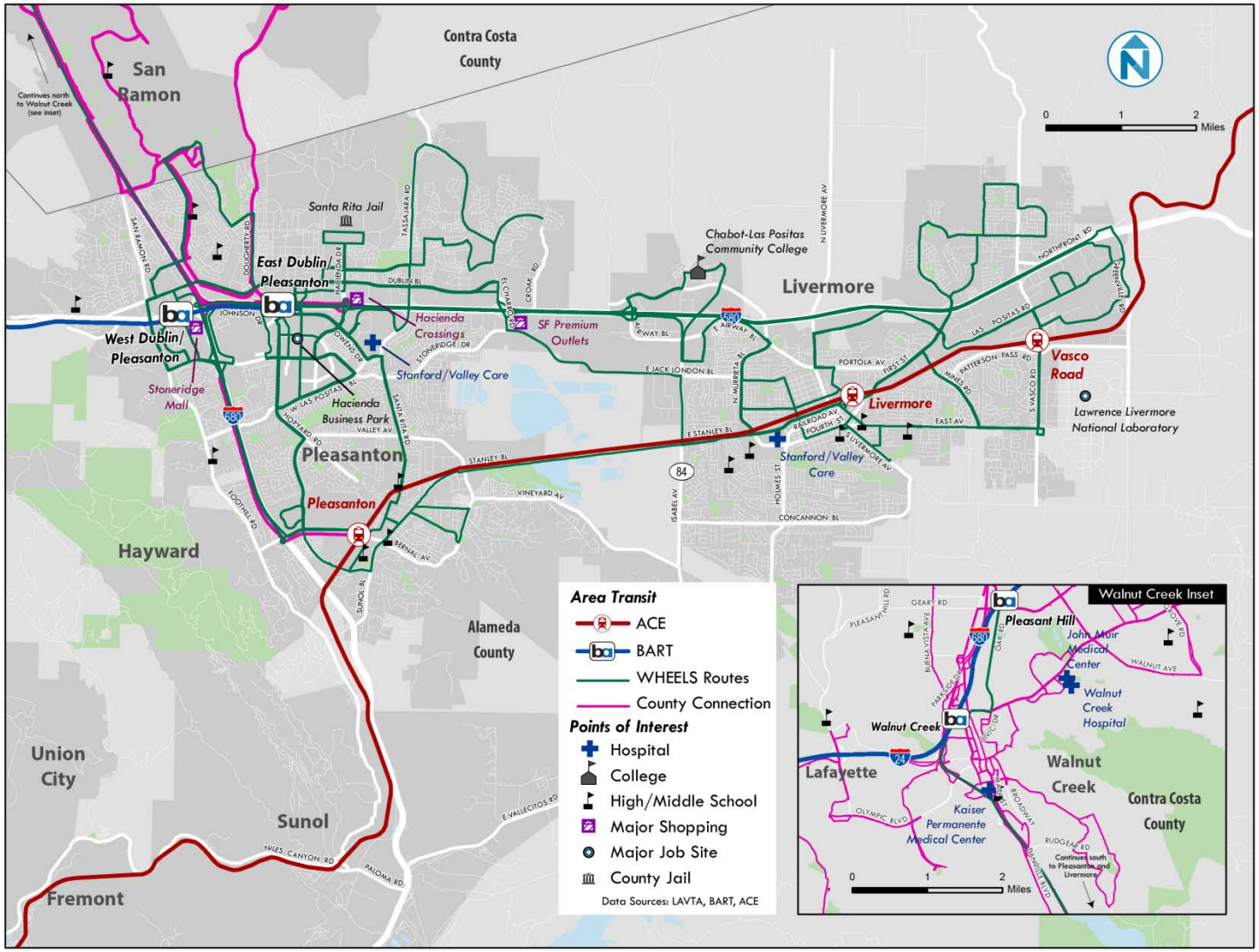
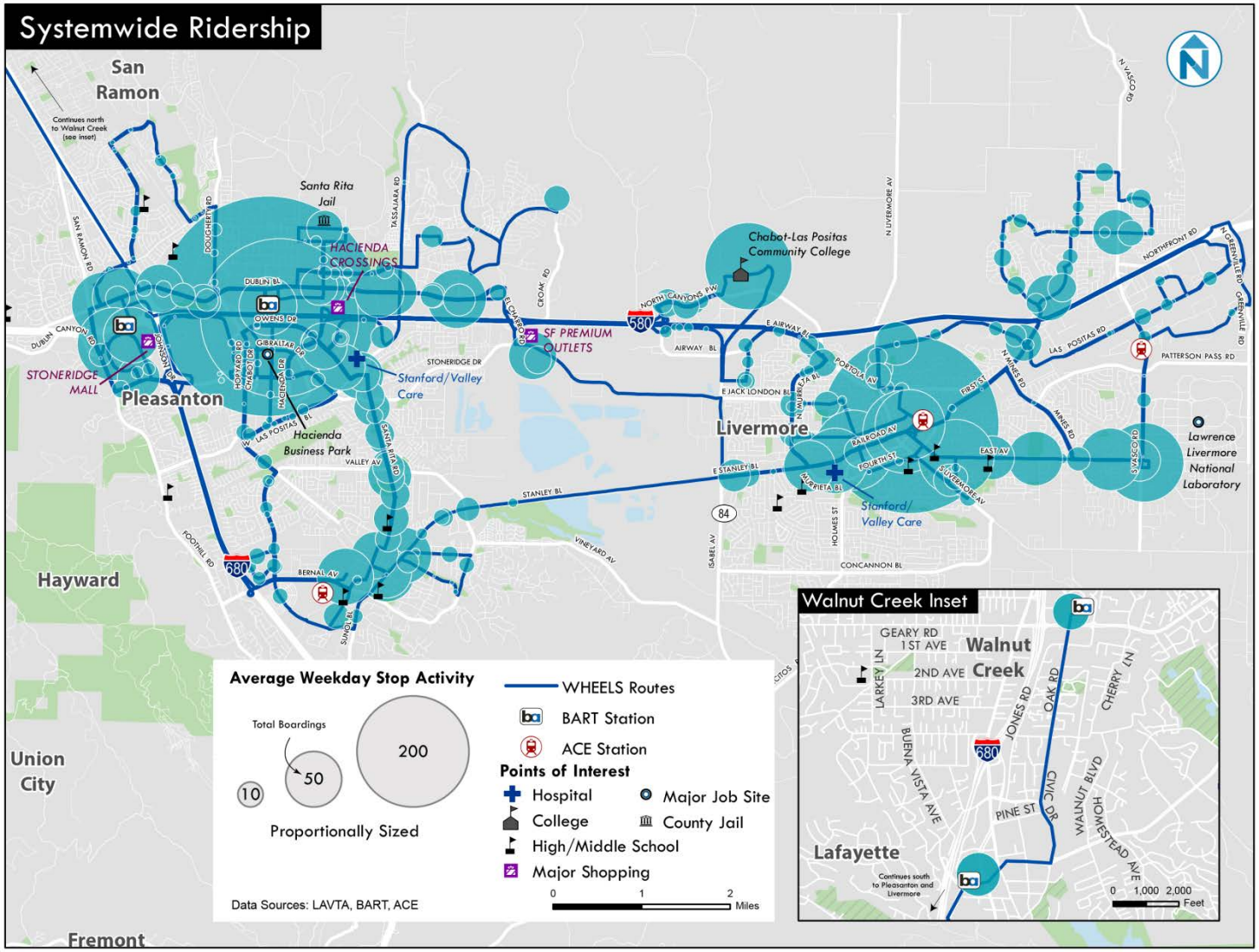


Figure 18 LAVTA Systemwide Boardings



School Routes

In addition to its base fixed-route service, LAVTA also operates supplemental services as part of its fixed-route system. The supplemental services are mainly geared toward providing additional coverage and capacity for middle and high school students, as well as to cover special events. Services geared toward schools are often operated as "trippers," meaning that a bus pulls from the yard, operates one trip, and then returns to the yard. School trippers are operated during school days only, providing one or two trips in the morning and afternoon, respectively. Figure 19 below shows the regular school routes and the schools they serve. It is important to note that all services operated by LAVTA, except paratransit, are open to the general public, and school routes are no exception.

Demand-Responsive Services

Wheels operates ADA paratransit service for people who cannot use the fixed-route bus system in Livermore, Dublin, Pleasanton, and surrounding unincorporated areas of Alameda County. The service is available wherever and whenever fixed-route service is operating. As an exception, service is also provided to and from the San Ramon Medical Center and to the V.A. hospital in Livermore if one end of the trip is in Livermore, Dublin, or Pleasanton.

A person must be eligible for paratransit under the ADA to be eligible for Wheels Dial-A-Ride. A person can be ADA paratransit eligible for some or all of their transit trips depending on the individual's specific condition(s). The guiding principle for paratransit eligibility is the inability to independently use the fixed-route transit due to a disability or health-related condition. Individuals must fill out an application with Wheels, and processing of eligibility occurs within 21 days. Once the individual is ADA-certified, the person may then reserve a paratransit trip one to seven days before the ride is needed.

Reservations are taken seven days a week from 8:30 a.m. to 5 p.m. Passengers are given an approximate 30-minute pick-up window time. For repeated trips, passengers may set a standing order, which is an ongoing reservation for a trip that has the same starting and ending location and the same pick-up day and time.

Wheels Dial-A-Ride coordinates trips with East Bay Paratransit and County Connection LINK. The designated transfer point between Dial-A-Ride and neighboring paratransit services is the East Dublin/Pleasanton BART station. When Wheels Dial-A-Ride receives a passenger from East Bay Paratransit or County Connection LINK, a fare is not collected for the second part of the trip.

Figure 19 School Tripper Route Descriptions

City	Route Number	Route description	Schools Served
Livermore	401	Big Trees Park to Transit Center	Livermore High School, East Ave Middle School
	402	Airway Park N Ride to Junction Avenue Middle School	Junction Ave Middle School
	403	Transit Center to Granada to Transit Center	Del Valle High School, Granada High School, Vineyard High School, Mendenhall Middle School, Joe Mitchell Elementary School
Dublin	501	East Dublin to Dublin High School	Fallon Middle School, Dougherty Elementary School, Wells Middle School, Dublin High School
	502	Dublin Ranch Village to Dublin High School	Dublin High School, Wells Middle School
	503	W. BART to Dublin High School to E. BART	Dublin High School, Wells Middle School
Pleasanton	601	Ruby Hill to Pleasanton Middle School	Pleasanton Middle School
	602	Del Prado Park to Foothill High School	Village High School, Pleasanton Middle School, Foothill High School
	603	Muirwood Park to Hart Middle School to Muirwood Park	Hart Middle School
	604	Fairlands to Foothill High School	Hart Middle School, Foothill High School
	605	Fairlands to Amador Valley High School	Amador Valley High School
	606	Vintage Hills to Pleasanton Middle School to Vintage Hills	Pleasanton Middle School
	607	Laguna Oaks to Hart Middle School	Foothill High School, Hart Middle School
	608	Kamp Drive to Harvest Park Middle School	Harvest Park Middle School
	609	Del Prado Park to Hart Middle School	Hart Middle School
	610	Fairlands to Hart Middle School	Hart Middle School
	611	Ruby Hill to Vintage Hills to Amador Valley High School	Amador Valley High School

FARE STRUCTURE

Fare Categories

There are five main categories for Wheels fare products: adult, youth, children, senior citizens or disabled persons, and Americans with Disabilities Act (ADA) certified persons for paratransit. Each is described below.

Adult

Adult fares are a full-fare category and do not require any additional identification beyond valid fare payment.

Youth

While LAVTA lists a youth fare for youth between the ages of 6 and 18 as part of the overall fare structure, the fare is the same as the fare for adults and does not require additional identification beyond valid payment.

Children

Children under the age of 6 ride free with a paying adult.

Senior Citizens/Disabled Persons

Discounted fares are available to seniors (ages 65 and older), disabled persons, and Medicare recipients. To qualify for the Senior/Disabled fare, passengers must present one of the following:

- Valid Medicare card. Photo identification must be shown.
- DMV disabled license plate registration
- DMV disabled parking placard printout
- Regional Transit Connection (RTC) discount card, which allows reduced fare rides across all Bay Area transport systems. Individuals must apply to a central office for review. If eligible and application is approved, participants receive a RTC photo ID card within 21 days. The Bay Area Partnership Transit Coordination Committee (PTCC) administers the program.

ADA-Certified Persons for Paratransit

Wheels Dial-A-Ride service provides door-to-door, shared ride transportation service for ADA paratransit eligible passengers. Dial-A-Ride fares cost 1.5 times the amount of a regular adult fare, and service eligibility is determined on a case-by-case basis.

Fare Products

Single Rides

Single-ride cash fares are $2 for adults or youth, and $1 for senior citizens or disabled persons. Children under age 6 and eligible employees and family members can ride for free. Figure 20 summarizes single ride fares for fixed-route service, and Figure 21 shows examples of special one-way ride tickets.

Figure 20 Single Ride Fares

Single Ride Products	Fare
Adults	$2.00
Youths between ages 6 and 18	$2.00
Senior Citizens age 65 and over	$1.00
Disabled Persons or Americans with Disabilities Act (ADA) Certified persons (with RTC Card)	$1.00
Children under age 6 when accompanied by a fare paying passenger	FREE
Eligible employees and family members/dependents with applicable ID	FREE

Source: Resolution No. 27-2015, "A Resolution for the Board of Directors of the Livermore Amador Valley Transit Authority Updating the Consolidated Fare Schedules and Transfer Agreements for Passengers"

Figure 21 One-Way Ride Tickets

Senior/Disabled Ticket	Promotional Ticket	FareBuster Ticket
		
▪ $1 ticket used by seniors or disabled persons, used with proof of age or disability ▪ Not valid on Dial-A-Ride	▪ "Free Ride" Tickets are given as a courtesy for complaints and marketing campaigns ▪ Rides must be used prior to expiration date stamped in the middle	▪ Example of individual FareBuster ticket bought in a ride book/script

Source: LAVTA (2015)

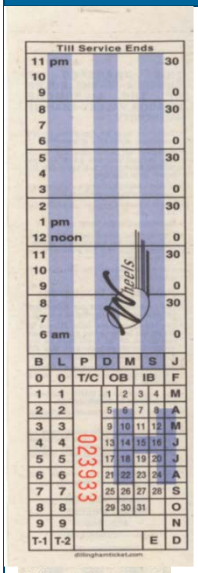
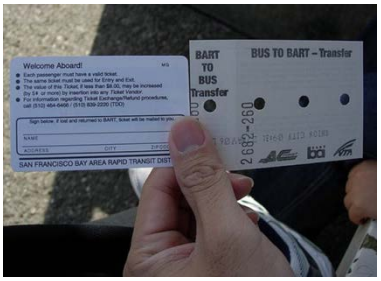
Transfers

There are more than two dozen transit agencies that serve the San Francisco Bay Area. As such, several trips that begin or end with Wheels may require transfers. The following agencies have reciprocal agreements with LAVTA:

- **City of Pleasanton, Downtown Pleasanton Route (DTR)**. Transfer to and from Wheels is free.
- **County Connection (CCCTA)**. Transfer to and from Wheels is free within a two hour period of boarding.
- **San Joaquin Regional Rail Commission (SJRRC) aka Altamont Corridor Express (ACE)**. Transfer to Wheels is free. No discount is available from Wheels service.
- **Bay Area Rapid Transit (BART)**. $1 transfer from BART to Wheels. No discount is available from Wheels service.
- **East Bay Paratransit**. Free interagency paratransit transfers to Wheels service. Free interagency paratransit transfers are not available from Wheels service.
- **County Connection Links**. Free interagency paratransit transfers to and from Wheels.

Transfers among different Wheels routes are also free within two hours from the time of fare payment. In late 2015, Wheels integrated its fare payment system with Clipper—the Bay Area's transit smart card – making riding Wheels and transferring to other East Bay providers easier and more seamless for the rider. With a Clipper card, only one transfer will be allowed within a two-hour window. Figure 22 provides more detail about local transfers.

Figure 22 Wheels Transfers

County Connection	BART	ACE
 	 **BART Plus Ticket Change** Effective January 1, 2014 BART Plus Ticket color is Fluorescent Yellow 	
▪ Free transfer to and from County Connection ▪ Transfers are given only when paid fare has been received. ▪ Transfers may be retained for a two hour window. When two hours has expired, another fare must be paid to ride. ▪ Transfers are not given to yearly or monthly pass holders.	▪ $1 transfer from BART to Wheels ▪ May be obtained at vending machines at foot of escalators at BART stations	▪ Free transfer from ACE to Wheels ▪ ACE tickets come in variety of colors and corridor pricings. ▪ ACE tickets must be validated in order to transfer to Wheels. Ticket validating machines are located at all ACE stations. ▪ Tickets are only valid for current day and are accepted as general fare.

Source: LAVTA (2015)

Passes

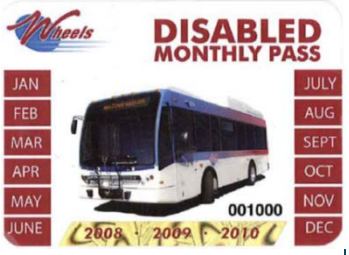
LAVTA offers numerous transit pass options including multiple-ride and unlimited-ride products. Figure 23 summarizes current paper pass products as well as pass products available with the integration of Clipper. Figure 24 provides additional details on current paper pass offerings.

Figure 23 Pass Products Summary

	Pass Products	Fare
Paper Passes	FareBuster 10-ride tickets (Adults and Youths aged 6 through 18 Monthly 10 Ride Book/Script)	$16.00
	Regular Monthly Pass (or East Bay Value Pass) (Regular Monthly (Calendar) Unlimited Rides Pass)	$60.00
	Senior Monthly Pass (Senior Citizens Monthly (Calendar) Unlimited Rides Pass)	$18.00
	Disabled Monthly Pass (Disabled Persons Monthly (Calendar) Unlimited Rides Pass)	$18.00
Clipper Card passes	Regular Monthly (Rolling 31 Day) Unlimited Rides Pass (or East Bay Value Pass)	$60.00
	Senior Citizens Monthly (Rolling 31 Day) Unlimited Rides Pass	$18.00
	Disabled Persons Monthly (Rolling 31 Day) Unlimited Rides Pass	$18.00
	Day Pass Accumulator Regular	$3.75
	Day Pass Accumulator Senior/Disabled	$1.75

Source: Resolution No. 27-2015, "A Resolution for the Board of Directors of the Livermore Amador Valley Transit Authority Updating the Consolidated Fare Schedules and Transfer Agreements for Passengers"

Figure 24 Paper Passes – Monthly Unlimited Ride Passes

East Bay Monthly Pass	Senior Monthly Pass	Disabled Monthly Pass
		
▪ $60 ▪ Pass is used for general fare. ▪ Pass can be used on all East Bay group agencies – Wheels, County Connection, Tri Delta Transit, and WestCat. ▪ Pass must have the correct month and year punched, and is invalid if punched more than twice. ▪ Pass is valid from 1st of the current month until end of month	▪ $18 ▪ Must be 65 years or older ▪ Pass must have the correct month and year punched, and is invalid if punched more than twice. ▪ Pass is valid from 1st of the current month until end of month ▪ 3-day grace period is given to purchase a new pass	▪ $18 ▪ Must show proof of disability to use (Dial-A-Ride ID card, RTC card, physician's letter, DMV placard, etc.) ▪ Pass must have the correct month and year punched, and is invalid if punched more than twice. ▪ Pass is valid from 1st of the current month until end of month ▪ 3-day grace period is given to purchase a new pass

Source: LAVTA (2015)

In addition to the pass products offered to the public, LAVTA offers annual unlimited ride passes to eligible employees and family members. Employees of LAVTA and MV Transportation, which operates the fixed-route services, as well as eligible family members and dependents, are granted free rides on Wheels through a picture identification card and annual sticker showing eligibility. Picture IDs are issued upon date of hire for a period not to exceed one year. Annual stickers are issued to each employee and eligible dependents on July 1st at the beginning of each fiscal year. In addition to LAVTA staff, dependents, and contractor staff, Board Members and their dependents are eligible for an ID. Contractor dependents are not eligible for an ID until 90 days after the employee's hire date. Retirees of the agency are not eligible for the ID.[1]

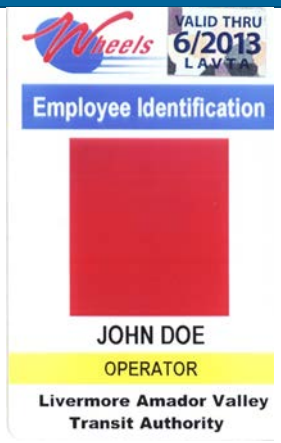
An eligible family member or dependent is defined as a person who is claimed by the employee on their tax return, or a person who is covered on the employee's health benefits. If no tax return is filed and the employee does not elect health benefits, then a notarized statement documenting a dependent would be required.

Dial-A-Ride trips are free for LAVTA and contracted employees who are also eligible for participation in the ADA Paratransit program. These trips must be work related, and dependents are not eligible for complementary Dial-A-Ride trips.

[1] Resolution No. 27-2015, "A Resolution for the Board of Directors of the Livermore Amador Valley Transit Authority Updating the Consolidated Fare Schedules and Transfer Agreements for Passengers."

Additionally, members of the Wheels Accessible Advisory Committee (WAAC) and the Ambassador Program receive a pass. Figure 25 shows the annual unlimited ride passes issued to eligible employees and members.

Figure 25 Annual Unlimited Ride Passes

MV/LAVTA Pass	WAAC/Ambassador Pass
	

Source: LAVTA (2015)

Dial-a-Ride Paratransit Service

LAVTA offers Wheels Dial-A-Ride, a door-to-door shared ride transportation service for ADA paratransit eligible passengers. Figure 26 details fares for paratransit rides.

Figure 26 Dial-A-Ride Paratransit Fares

Dial-A-Ride Paratransit	Fare
Cash fare	$3.50
Companions accompanying passenger	$3.50
Dial-A-Ride 10 tickets	$35.00
Inbound (Wheels receiving) interagency transfers from County Connection Links or East Bay Paratransit	FREE
Personal Care Attendants (PCA) traveling with fare paying passenger	FREE

Source: LAVTA (2015)

Clipper Card Implementation

Public transit in the San Francisco Bay Area is arguably the most complex in the United States, with more than two dozen unique transit agencies serving the area. Clipper is the all-in-one transit smart card that allows ease of payment and supports transfers across multiple Bay Area agencies. Clipper is overseen and sponsored by Metropolitan Transportation Commission (MTC), the Bay Area's metropolitan planning organization. First introduced as Translink in 2002, Clipper was rebranded to its current form in 2010. Implementation rolled out beginning with the largest Bay Area transit agencies—BART, Muni, AC Transit, SamTrans, Caltrain, Golden Gate Transit, and VTA.

The implementation of Clipper on Wheels and the East Bay group in 2015 accounts for the most significant fare change in recent history. Most notably, LAVTA is introducing the day pass accumulator, a new fare media that is only available through the use of the Clipper card. LAVTA currently does not have a day pass, unlike its peers WestCat and Tri Delta. Current fareboxes on Wheels do not have the ability to print day passes, but staff are looking for funding opportunities to upgrade the fareboxes in the next few years.

The Clipper Day Pass Accumulator acts as an unlimited day pass, where Wheels riders pay a maximum of $3.75 per day. For example, riders who ride on Wheels and use Clipper would get $2 deducted on their first trip. On their return trip, they would get $1.75 deducted instead of $2 regular fare due to the maximum of $3.75 being reached. In other words, adult and youth passengers may make unlimited local bus trips for $3.75 per day; seniors and disabled passengers pay a maximum of $1.75 per day.

Figure 27 Clipper Card

Fare Programs and Promotions

ECO Pass[2]

An ECO Pass is offered to employees within the Hacienda Business Park, or residents who live in one of the Hacienda residential communities (Anton Hacienda, Avila, Park Hacienda, Siena, or Verona). The ECO Pass is issued as an annual flash pass sticker and valid for unlimited rides on Wheels service. Photo identification for verification may be required.

Established in 1989 and funded by Hacienda, the ECO Pass represents an excellent longstanding public-private partnership. In 2015, Wheels Bus and Hacienda recognized more than 5 million passenger trips utilizing the free ECO Pass program since its inception. Hacienda subsidizes the service based on the number of revenue hours serving the Hacienda Business Park.

[2] Details about the Hacienda Business Park and ECO Pass program eligibility available online: http://www.hacienda.org/form/details/wheels%20eco%20pass; accessed October 12, 2015.

Ambassador Program[3]

Since 2007, LAVTA has offered an "Ambassador Program" to train helpers to assist others in learning how to travel and understand the routes, maps, and all fixed-route service on Wheels. Trainers help promote public transit and support other passengers, giving them the best travel options to suit their needs. The Ambassador Program historically was for senior and ADA riders; however, due to a lack of interest the program has shifted to focus on high school students. Currently, LAVTA staff recruits two high school students each from Dublin, Pleasanton, and Livermore high school, who then help their peers navigate the Wheels system.

Participants attend a minimum two hour classroom training, two hours of onboard training, and one hour of staff observation at the transit center. Ambassadors work with at least eight new riders each year, and spend at least one hour a month on board buses talking to passengers and offering assistance. In return for the service, ambassadors are granted a yearly pass valued at $720.

Class Pass Program[4]

LAVTA offers a Wheels class pass program, which offers a free bus ride for up to 25 passengers, including children, teachers, and adult supervisors from a school to any Tri-Valley destination that Wheels currently serves. Teachers may request up to two (2) class passes per school year.

Try Transit to School Promotion[5]

Since 2000, Wheels has offered a special two-week promotion during the beginning of the school year to encourage middle and high school students to ride transit. The "Try Transit to School" promotion ran September 7-18 in 2015 and allowed students to ride Wheels to and from school and other destinations for free.

FLEET INFORMATION

The LAVTA fleet currently consists of a mixed fleet of 40' and 29' diesel and hybrid fixed-route buses. There are currently 66 fixed-route standard buses. Forty of LAVTA's 40' diesel buses will be retired by 2017 and replaced with a mix of 35' and 40' hybrid electric and/or electric coaches.

Figure 28 Description of LAVTA's Revenue Vehicle Fleet

Year	Manufacturer	Fuel	Type of Vehicle	Number in Fleet	Capacity	Use
1996	New Flyer	Diesel	40-ft bus	2	33	Fixed route service
2000	Gillig	Diesel	40-ft bus	2	43	Fixed route service
2002	Gillig	Diesel	40-ft bus	8	Four with 40 seats; four with 39 seats	Fixed route service

[3] Ambassador program overview and application available online: http://wheelsbus.com/index.aspx?page=267; accessed October 12, 2015.

[4] Resolution No. 27-2015, "A Resolution for the Board of Directors of the Livermore Amador Valley Transit Authority Updating the Consolidated Fare Schedules and Transfer Agreements for Passengers."

[5] Try Transit to School Promotion information available online: http://wheelsbus.com/index.aspx?recordid=243&page=33; accessed October 12, 2015.

2003	Gillig	Diesel	29-ft bus	10	23	Fixed route service
	Gillig	Diesel	40-ft bus	24	39	Fixed route service
2007	Gillig	Hybrid (diesel/ electric)	29-ft bus	2	22	Fixed route service
2009	Gillig	Hybrid (diesel/ electric)	40-ft bus	12	39	Fixed route service
			29-ft bus	2	22	
2011	Gillig	Hybrid (diesel/ electric)	29-ft bus	4	22	Fixed route service

EXISTING FACILITIES

The LAVTA maintenance, operations, and administration (MOA) facility on Rutan Court was built in 1991 and is located in a light industrial/office park area near the Livermore general aviation airfield. The facility is well situated within the overall Wheels service area and is near the I-580/Isabel Avenue interchange and Stanley Boulevard. A second property on Atlantis Court, also near the airfield, provides overflow vehicle parking but has limited on-site facilities until construction is completed. A bus probing station, including fueling and washing capabilities as well as a drivers' lounge, has been completed to date. LAVTA is pursuing the option of potential sources that could help fund the completion of additional infrastructure at the Atlantis site. LAVTA owns all fixed facilities and makes them available to MV Transportation for use in the operation and maintenance of Wheels service.

Administration

All administrative services of the agency are housed within the Rutan MOA facility, including those for executive, planning, finance, and administrative functions. This location also provides office space for the contractor's management and operation functions, such as those for site manager offices, dispatch work stations, and driver break room facilities. Board meetings and other public meetings are held in the Administration building. The Front Desk sells tickets and assists customers with applying for regional transit passes or Clipper cards.

Maintenance and Fueling

The Rutan MOA facility contains a maintenance facility with a total of six indoor vehicle bays as follows:

- 1 steam bay
- 2 rack lift bays
- 3 general bays

A canopied outdoor area provides two lanes for fueling incoming buses that have returned to the yard from their runs. At that location, the vehicle fareboxes are emptied and the bus interiors are cleaned. Adjacent to the fuel island is an automated bus washer for daily bus washes.

Vehicle Storage and Staging

With a theoretical maximum capacity of 70 vehicles, the Rutan MOA facility is insufficient for the current daily staging and operation of the entire LAVTA revenue and support fleet. Therefore,

some vehicles are stored at the Atlantis location. At the time of the current fall 2015 signup, no vehicles are dispatched directly to or from the Atlantis facility, but given the capacity constraints of the Rutan facility, any notable increase in peak vehicle pull may require that some vehicles be staged from Atlantis.

Park-and-Ride Lots

There are five park-and-ride locations within the Wheels service area that provide all day parking for the purposes of carpooling or taking transit. The downtown Livermore parking structure is the largest facility and is located adjacent to the Transit Center. The downtown Livermore parking structure offers top deck parking for Wheels and ACE Train passengers. It is a dual-purpose facility in the sense that it also serves as parking for downtown Livermore shoppers or other general trips that terminate in the vicinity of the garage. The California Department of Transportation (CalTrans) operates two surface lots, one on Portola Avenue in Livermore, which is lightly used, and one on Johnson Drive in Pleasanton, which is heavily used by private shuttles. In addition, the BART District owns and maintains a park-and-ride on Airway Boulevard that is minimally used. Finally, there is a park-and-ride-designated portion of the parking lot at the Dublin Center office complex off Tassajara Road which is utilized by private shuttles. All these facilities have lighting and passenger shelter areas. Figure 29 summarizes these locations and their respective car parking capacities.

Figure 29 Description of Park-and-Ride Lots in the LAVTA Service Area

Location	Number of Spaces	Year Built
Transit Center/Livermore Downtown	500 (133 for transit use)	2005
Dublin Center/Tassajara Rd and Dublin Blvd	200	2001
BART Park-and-Ride/Airway Dr and Rutan Ct	150	1990
CalTrans/Portola Road and P St	100	2003
CalTrans/Johnson Dr and Stoneridge Dr	100	2003

Although LAVTA service is not focused on serving park-and-rides, most of these park-and-ride facilities are served directly or are in the vicinity of Wheels routes. However, many of the park-and-rides are currently used by carpoolers or private shuttle buses and not Wheels passengers.

Transit Stops and Stations

Transit Stops

There are approximately 900 active bus stops in the LAVTA service area. Of these, approximately half are located on mainline routes while the other half are located in areas only served by school tripper routes. The signage and amenities at each individual stop vary widely depending on service levels, patronage, and right-of-way constraints. At the lowest end of the scale, school tripper-only stops are simply a red-and-white stencil marking on the curb. This is not ideal, as it can be difficult for riders to locate these stops. At a minimum, all stops should have a pole and sign. Highly-patronized stops in backbone service corridors typically feature seating, shelters, and full signage including route numbers, schedules, and vicinity maps. Approximately 50 bus stops feature digital displays showing real-time arrival information generated by the agency's

automatic vehicle locator (AVL) system. Stops with real-time arrival information are located along the Rapid bus line, at select locations in the Hacienda Business Park area, and also at the Livermore Transit Center and E. Dublin/Pleasanton BART station.

En-route bus stops located within public right-of-way are subject to the features and improvements completed by the municipality that these are located in. Not all bus stops have the same level of improvement. For example, bus stops are not equally well-lit at night or wheelchair accessible, and may have other site-specific or contextual deficiencies. Similarly, a stop may be safe in its immediate spot, but may not have a crosswalk available nearby. The agency works to identify stops with needed safety or ADA improvements and makes the necessary upgrades as funding allows.

The agency provides cleaning and maintenance of its owned bus stop facilities. The remaining locations are the responsibility of their respective owner, typically an apartment complex or a business park. Maintenance for shelters, benches, and signs at the agency-owned locations is performed by LAVTA's operations contractor. Periodic cleaning, such as emptying trash receptacles and power washing, is performed by a separate contractor.

LAVTA has been conducting an inventory of its bus stops approximately every five years. The last such effort was completed in 2010 and included updating an amenities and attributes database as well as digital imagery of each stop. An assessment was also done for each location with regard to accessibility and condition of all stops. School tripper-only stop locations were included for the first time in the 2010 inventory. An informal inventory of sheltered stops was conducted in summer 2015 and a list of shelters in need of updates was generated. LAVTA will be making improvements to these shelters in FY2016.

GPS-satellite based surveys to geocode the bus stop locations are entered into the AVL system. This information is used for passenger counts and to track on time performance.

Transit Center

The only facility owned by LAVTA classified as a "station" is the Livermore Transit Center, which was built in 1999 in downtown Livermore. The Transit Center features eleven bus bays, restroom facilities, bike racks, and the agency's customer services which sells tickets on site. It is located adjacent to the Livermore ACE Train Station and also is served by one Amtrak bus.

In partnership with the City of Livermore, the Livermore Historic Train Depot, currently located on the southeast corner of Railroad Ave and S. L Street, will be relocated to the Livermore Transit Center. The existing Transit Center building will be demolished and a temporary ticket office will be utilized until the Depot can be relocated, which is expected to occur in 2017.

BART Stations

The Dublin/Pleasanton BART station was opened in 1997 and is owned and operated by the BART District. The facility features a total of 17 bus bays and enables bus-exclusive through operation via a tunnel under the freeway. One elevator and three escalators link the fare gate area on the ground level with the train platform above. Prior to the beginning of recent housing construction activity, a mix of structured and open parking spaces provided close to 3,000 parking spaces at this station exclusively for use by train patrons. However, this number will be eventually be reduced by 800 parking spaces and confined to the structured parking area as the immediate vicinity continues to develop.

The new West Dublin/Pleasanton BART station, opened in February 2011, provides a total of six bus dwelling locations and approximately 1,150 parking spaces. Bus operations at this station are constrained by the lack of vehicle through access between the Dublin and Pleasanton sides of the station. One elevator and two escalators link the fare gate area on the mezzanine level with the train platform below. A pedestrian bridge across I-580 provides access to the station, which is located in the median.

Bicycle Facilities

Bicycles are accommodated on Wheels buses when available capacity and space permit. For this purpose, all vehicles in the fleet are equipped with a 2- or 3-slot bicycle rack that is mounted on the front outside of the bus.

Stationary bicycle storage is limited; LAVTA does provide bike racks at a few of its Rapid branded bus stops and at the Transit Center. Wheels passengers may also use the bike lockers provided at BART and ACE stations, including the ACE bike lockers located at the Livermore Transit Center.

4 SERVICE STANDARDS

MISSION, VISION, VALUES, GOALS, AND STRATEGIES

In 2012, the Board of Directors for the Livermore Amador Valley Transit Authority (Wheels) adopted a new LAVTA Strategic Plan. The Strategic Plan—developed from interviews and workshops with policy makers and management staff—provides a set of guiding principles, beginning with the overall mission of the agency and ending with a set of goals and strategies.

Mission

The Mission of the Livermore Amador Valley Transit Authority (Wheels) is to provide equal access to a variety of safe, affordable, and reliable public transportation choices, increasing the mobility and improving the quality of life of those who live or work in and visit the Tri-Valley area.

Vision

An essential link in the regional transportation system, Wheels strives to be a well-recognized highly respected, integrated public agency utilizing appropriate tools and technologies to provide cost-effective, exceptional transit service in response to the needs and priorities of those who live or work in or visit the Tri-Valley area.

Values

We value...

- **Integrity** *We act ethically and with integrity in all we do.*
- **Accountability** *We are accountable and responsible for our actions.*
- **Service Quality** *We do high quality work and maintain high standards in order to exceed customer expectations by providing friendly, personable and equal opportunity service.*
- **Community** *We are a viable part of the community we serve and seek community involvement in developing and fostering transit service as an essential aspect of community quality of life.*
- **Cooperation** *We partner with other regional and local agencies to ensure full access to a comprehensive range of community mobility options.*
- **Environment** *We view public transit as a means of improving air quality and conserving our natural resources.*

- **Respect** *We treat all persons with dignity, respecting life, property, and the environment; capitalizing on the wealth of viewpoints that reside in our multi-faceted community; all contributions are valued.*
- **Stewardship** *We are prudent and resourceful stewards of the public dollars with which we have been entrusted.*

Goals and Strategies

The following are goals identified by the LAVTA Board of Directors:

A. **Service Development:** Provide effective transit services that increase accessibility to community, services, and jobs.
B. **Marketing and Public Awareness:** Improve visibility, image and awareness of Wheels.
C. **Community and Economic Development:** Utilize transit as an essential community and economic development tool for local communities.
D. **Regional Leadership:** Strengthen Wheels' leadership position within the region to enhance opportunities for development and maintenance of quality transit service.
E. **Organizational Effectiveness:** Strengthen organization wide capabilities and resources to improve overall performance and customer satisfaction.
F. **Financial Management:** Maintain fiscal responsibility to ensure the financial sustainability of existing and new transit services.

The following are strategies designed to help meet the goals outlined above. Strategies highlighted in bold indicate the LAVTA Board of Directors' highest priorities.

Figure 30 Goals and Strategies

Goals	Strategies	
A. Service Development	A1	Provide routes and services to meet current and future demand for timely and reliable transit service subject to fiscal restraints
	A2	Increase accessibility to community, services, senior centers, medical facilities, and jobs
	A3	Optimize existing routes and services to increase productivity and respond to MTC's Transit Sustainability Project and MTC's TriCity/Tri Valley Transit Study
	A4	Improve connectivity with regional transit systems and participate in the activities of projects like BART to Livermore and Altamont Commuter Express to ensure future connectivity
	A5	Explore innovative fare policies and pricing options
	A6	Provide routes and services to promote mode shift from personal car to public transit
B. Marketing and Public Awareness	B1	Continue to build the Wheels brand image, identity and value for customers
	B2	Improve the public image and awareness of Wheels

Goals	Strategies	
	B3	Increase two-way communication between Wheels and its customers
	B4	Increase ridership, particularly on the Rapid, to fully attain community benefits achieved through optimum utilization of our transit system
	B5	Promote Wheels to new businesses and residents
C. Community and Economic Development	C1	Integrate transit into local economic development plans
	C2	Advocate for increased transit friendly and transit oriented developments in the Cities' planning departments and in the site development processes, MTC's Regional Transportation Plan and Sustainable Communities Strategy, and ACTC's Countywide Transportation Plan, all of which respond to the climate change issue of SB375
	C3	Partner with employers in the use of transit to meet transportation demand management goals or requirements
D. Regional Leadership	D1	Advocate for local, regional, state, and federal policies that support Wheels' goals
	D2	Support Staff involvement in leadership roles representing the agency at regional, state, and federal forums
	D3	Promote transit priority and improvements initiatives with city and county governments
	D4	Develop regional initiatives, for example the Clipper Card, that support riders mobility through more seamless passenger use, in coordination with MTC and nearby CATS operators, in response to what has emerged as regional policy in the Transit Sustainability Project
E. Organizational Effectiveness	E1	Promote system wide continuous quality improvement initiatives
	E2	Continue to expand the partnership with contract staff to strengthen teamwork and morale and enhance the quality of service
	E3	Establish performance based metrics with action plans for improvement; monitor, improve, and periodically report on on-time performance and productivity
	E4	Strengthen human resources through staff development and a focus on employee quality of life and strengthen technical resources throughout the organization
	E5	Enhance and improve organizational structures, processes and procedures to increase system effectiveness
	E6	Develop policies that hold Board and Staff accountable, providing clear direction through sound policy making decisions
F. Financial Management	F1	Develop budget in accordance with the Strategic Plan, integrating fiscal review processes into all decisions
	F2	Explore and develop revenue generating opportunities

Goals	Strategies	
	F3	Maintain fiscally responsible long range capital and operating plans

PERFORMANCE STANDARDS

Goals of Standards

Service standards provide a consistent framework for the effective management, evaluation, and planning of public transit services. At the system level, an agency can see big picture operational and financial trends. At the route level, performance can be compared to the system averages, and can give transit planners information to justify service decisions. Service standards should:

- Reflect and support community goals and strategies for transit, program objectives and service policies. Goals and strategies serve as guidance for the transit agency to best serve riders in the community, whereas standards provide a formal, quantifiable structure for how the service should perform and be implemented.
- Provide a clear rationale for service increases, expansion, and reductions. Service standards help management justify critical decisions affecting service delivery.
- Provide benchmark measures that should strike a balance between setting realistic goals and aspiring for a level of service that will ensure a quality of service for riders.
- Ensure compliance with all applicable federal, California, and local regulatory requirements.
- Provide criteria for the design and operation of safe and effective transit service.

Existing Standards

LAVTA's existing objectives and standards were outlined in the 2009 Strategic Plan and include numerous objectives and standards related to service development, marketing and public awareness, community and economic development, and financial management. The standards are a mix of quantitative and qualitative standards, some of which are straightforward to track and others that are not. In this SRTP, it is proposed to modify and simplify the performance standards while reducing the overall number to make tracking them more feasible for LAVTA staff, while still ensuring that they are still useful in monitoring performance.

Proposed Fixed-Route Standards

The following categories of fixed-route standards are proposed:

- System-Level Productivity Standards
- Route-Level Productivity Standards
- Route-Level On-Board Load Standards
- System-Level Service Quality Standards

System-Level Productivity Standards

LAVTA's ongoing performance trends and anticipated service improvements were taken into account in formulating attainable short-term goals. It is an industry wide practice that targets

should generally reflect current performance. Service standards should be thought of as benchmarks that are adjusted as needed to continue to improve the system. Evaluating performance measures such as passengers per hour, passengers per mile, and farebox recovery ratio will help LAVTA evaluate whether the system as a whole is meeting expectations.

Efficiency standards were developed based on LAVTA's current performance and standards of comparably sized systems. Farebox recovery ratio is set at 20% to meet the requirements of the local Transportation Development Act (TDA) funding statute. Standards should be attainable in the next year to five years and should be reevaluated annually in order to keep improving the system. The proposed service standards that LAVTA can use to work towards improving system efficiency are described below and summarized in Figure 31. For comparison, 2015 performance data is included.

Figure 31 Proposed System-Level Productivity Standards

Category/Measure	2015	Systemwide Service Standards	Explanation
Ridership	1,650,388	Increase from prior year	Ridership should be expected to increa se every year.
Passengers per Revenue Hour	13.2	At least 15.0	Passengers per revenue hour on LAVTA routes has been below 15 since 2011. A standard of 15 passengers per hour is attainable in the next 1-5 years, and the standard should be increased in the long term if ridership increases.
Passengers per Revenue Mile	0.90	At least 1.0	Passengers per revenue mile on LAVTA routes has been below 1.0 since 2011. A standard of 1 passenger per mile is attainable in the next 1-5 years, and the standard should be increased in the long term if ridership increases.
Farebox Recovery Ratio	18%	At least 20%	Farebox recovery ratio is set at 20% to meet the requirements of the local Transportation Development Act (TDA) funding statute.
Change in Operating Cost per Hour	-2.5%	Growth less than five percentage points above change in Bay Area CPI (2.3% in FY 2015)	Operating costs generally rise due to inflation, but they are significantly influenced by wages and the cost of fuel and parts. This performance standard provides a reasonable goal to maintain efficiency and reduce growth in operating costs.

Route-Level Standards

Route Classification System

A route classification system has been developed to reflect the array of travel markets and customer needs. Route types are designed to permit a consistent means of evaluating service. This approach avoids the difficulty of comparing routes with fundamentally different designs, purposes, and operating characteristics.

For example, a route that runs all day on a primary arterial that connects passengers to a major commercial destinations and a BART station would be expected to carry far more passengers per unit of service than a route that only serves a specific neighborhood for a few hours a day.

Recommended fixed-route types are described below. Complementary paratransit services must be designed in accordance with specific Federal Transit Administration (FTA) regulations and are not addressed in this document.

1. **Primary (Trunk) Routes:** Trunk routes are typically direct and operate along main arterials, constituting a primary form of local fixed-route bus service. Typically, trunk routes operate every 15 to 30 minutes on weekdays, with a relatively long service span.
2. **Regional Express Routes:** Regional Express routes provide direct service during peak commute hours, focusing on linking cities or neighborhoods with high concentrations of passengers traveling to a specific employment area or a major transit hub.
3. **Neighborhood Feeders:** Feeder buses are designed to "feed" trunk routes and intercity express bus services. They often cover shorter distances and typically have longer headways.
4. **School Trippers:** School trippers look like neighborhood feeders, but are designed to serve a specific market – students – and are often provided as a way to address what would be overcrowding on primary and neighborhood feeder routes. These routes are open to the general public, but run very limited schedules on school days only.

A list of routes by classification is provided in Figure 32. These classifications represent existing routes, and new classifications may be added in the future.

Figure 32 LAVTA Route Classification

Route Classification	Routes
Primary	Rapid, 10, 12/12X
Regional Express	20X, 70X, 70XV
Neighborhood Feeder	1, 2, 3, 8, 9, 11, 14, 15, 51, 53, 54
School Tripper	All 400, 500, 600 series routes

Route-Level Productivity Standards

LAVTA tracks ridership, vehicle hours, and vehicle miles on a route-level basis. Primary and neighborhood feeder routes are evaluated based on passengers per revenue hour, which is calculated by dividing the total number of boardings by the total number of vehicle revenue hours. Regional express routes and school trippers are unique in that passengers typically ride for a longer period of time or a high percentage of the one-way route length. Ridership productivity for these services is based on passengers per revenue trip, as described in Figure 33.

The following standards should be used for evaluating existing, modified, and proposed services. Any newly proposed services should be evaluated against the standards to ensure they will meet them.

Figure 33 Proposed Route-Level Service Standards

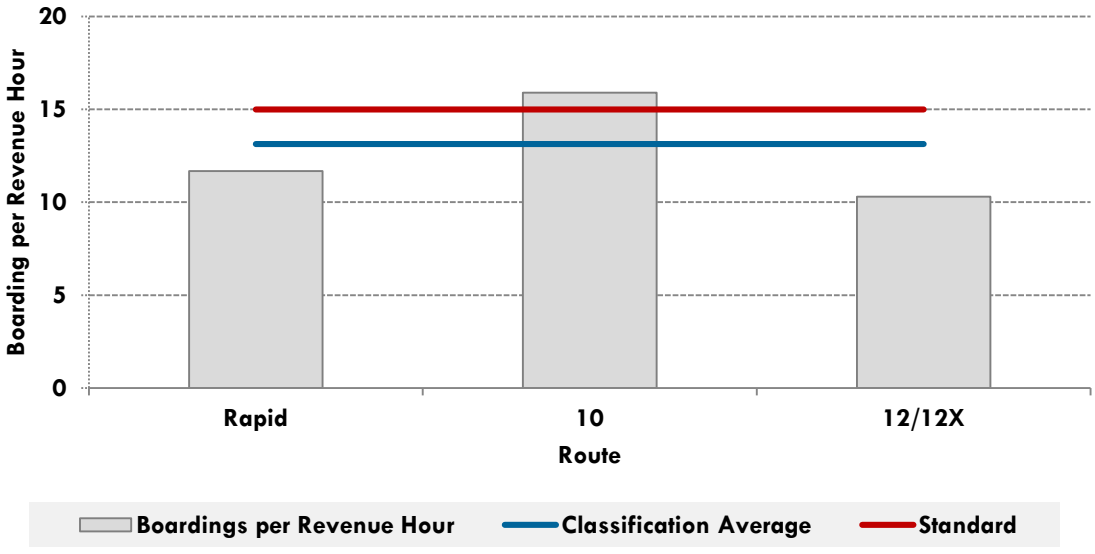
Category	Measure	Service Standard
Primary	Passengers per Revenue Hour	Greater than 15 boardings per revenue hour
Regional Express	Passengers per Trip	Greater than 15 boardings per trip
Neighborhood Feeder	Passengers per Revenue Hour	Greater than 10 boardings per revenue hour
School Tripper	Passengers per Trip	Greater than 15 boardings per trip

Primary Routes

Primary routes serve as the backbone of the LAVTA system and are expected to perform higher than neighborhood feeder routes. The average productivity of primary routes was 13.1 passengers per hour in FY15. This is relatively low, as similar routes at peer agencies are typically closer to 20 boardings per hour. LAVTA's primary routes have lower productivity than those at peer agencies in part because of the land use patterns in the Tri-Valley. Significant portions of LAVTA primary routes serve low-density areas, including areas with little development between Livermore and Pleasanton, and inward-oriented subdivisions surrounded by walls which make it difficult for residents to access transit. There is little ridership in these areas, which contributes to low route productivity.

Primary routes averaging fewer than 15 boardings per revenue hour should be evaluated for schedule modifications or alignment modifications to improve productivity. Routes averaging fewer than 10 boardings per hour should be considered for route elimination or consolidation. Figure 34 depicts the 2015 ridership productivity of primary routes.

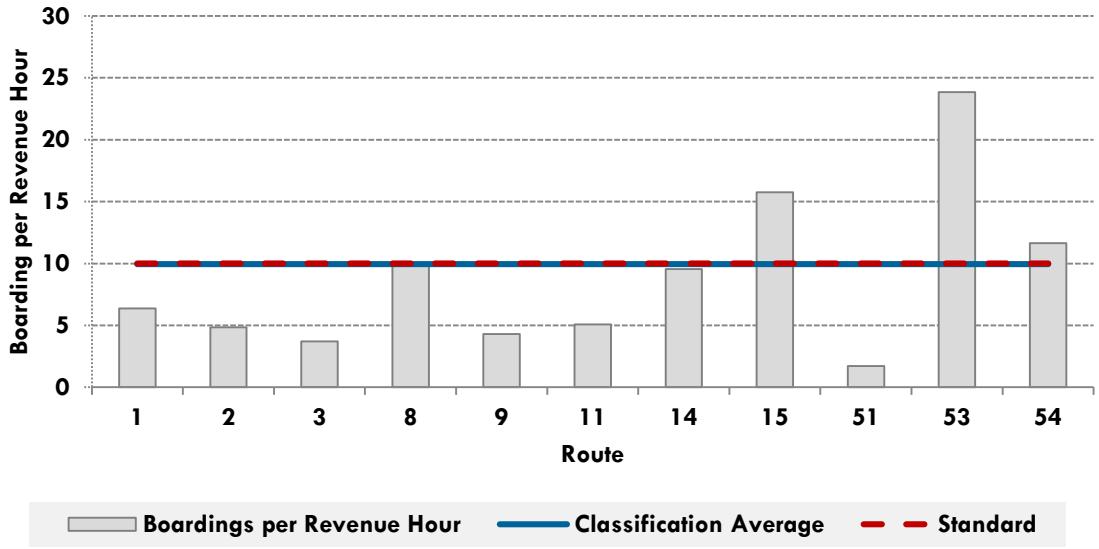
Figure 34 Ridership Productivity Comparison: Primary Route Classification



Neighborhood Feeder Routes

Figure 35 depicts the 2015 ridership productivity of routes classified as neighborhood feeders. The average boardings per revenue hour for these routes is 10.0, equal to the standard of 10. Neighborhood feeder routes averaging fewer than 10 boardings per revenue hour should be evaluated for schedule modifications or alignment modifications to improve productivity. Routes averaging fewer than 5 boardings per hour should be considered for route elimination or consolidation.

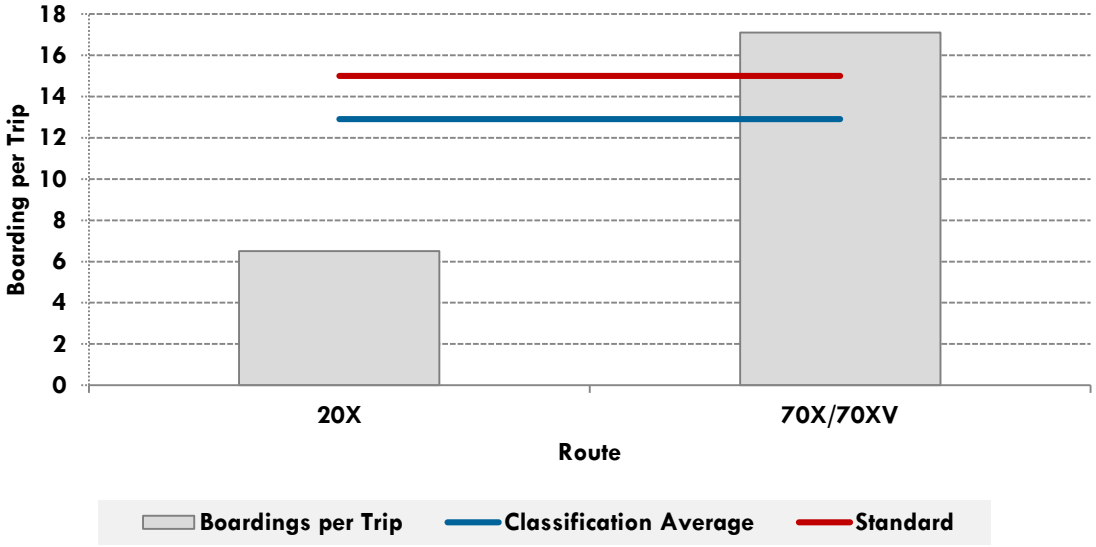
Figure 35 Ridership Productivity Comparison: Neighborhood Feeder Route Classification



Regional Express Routes

Figure 36 depicts the 2015 ridership productivity of Regional Express routes, which include Route 20X and Route 70X/70XV. Regional express routes averaging fewer than 15 boardings per trip should be evaluated for schedule modifications or alignment modifications to improve productivity. Routes averaging fewer than 10 boardings per trip should be considered for route elimination or consolidation.

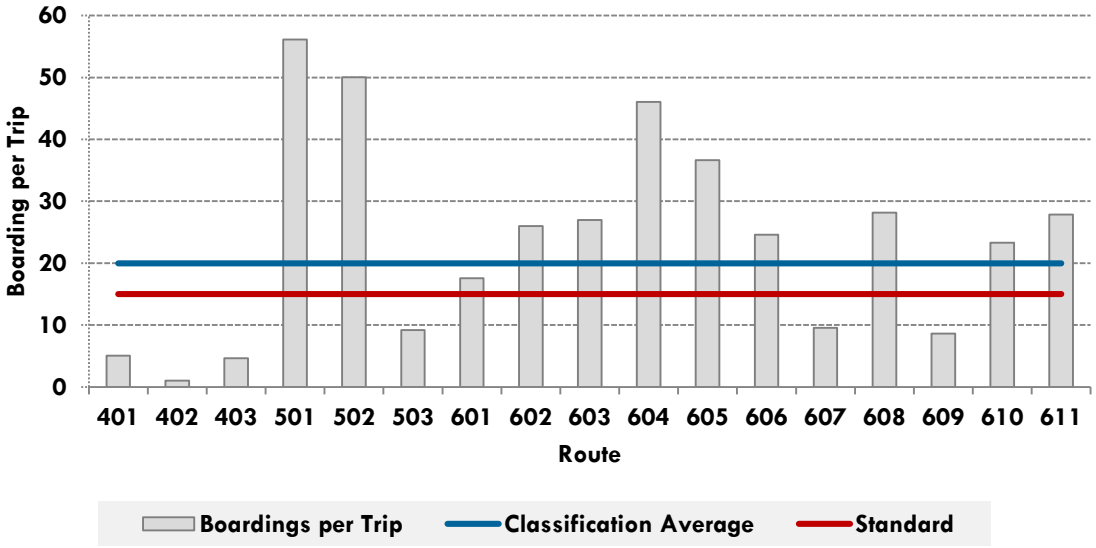
Figure 36 Ridership Productivity Comparison: Regional Express Route Classification



School Routes

Figure 37 depicts the 2015 ridership productivity of School routes. School routes averaging fewer than 15 boardings per trip should be evaluated for schedule modifications or alignment modifications to improve productivity. Routes averaging fewer than 10 boardings per trip should be considered for route elimination or consolidation.

Figure 37 Ridership Productivity Comparison: School Route Classification



On-Board Load Standards

The route-level productivity standards discussed above are designed to ensure that routes have a minimum level of ridership to warrant operating the service. In addition to these ridership minimums, it is important to have ridership maximums that identify when a route is experiencing

overcrowding. The LAVTA Board has adopted the on-board load standards shown in the table below to identify routes where additional service is needed to relieve overcrowding. Local and school routes have load standards of 60 riders. The seating capacity of 40-foot buses is approximately 40 passengers, so a load of 60 would mean there are approximately 20 passengers standing, or 1.5 times the seated load. Regional express routes operate for long distances on the freeway, making standing uncomfortable, so the load standards for those routes are at 40 passengers so that each passenger has a seat.

Figure 38 Route-Level Overcrowding Standards

Category	Measure	Service Standard
Primary	On-Board Load	Load greater than 60 riders (1.5x seated capacity)
Regional Express	On-Board Load	Load greater than 40 riders (1x seated capacity)
Neighborhood Feeder	On-Board Load	Load greater than 60 riders (1.5x seated capacity)
School Tripper	On-Board Load	Load greater than 60 riders (1.5x seated capacity)

System-Level Service Quality Standards

Service quality standards encompass measures that influence riders' and potential riders' perception of the transit service. High service quality standards communicate to riders that they can depend on transit service, and improving service quality increases the likelihood of attracting choice riders.

Proposed Service Quality Measures

LAVTA currently tracks a number of measures of service quality to monitor performance by the operations contractor, including measures of complaints, accidents, fleet readiness, on-time performance, miles between roadcalls and missed trips, and overall customer satisfaction. Of these measures, the following are proposed to measure system performance. LAVTA does not have a single existing standard for these measures, but the contractor is awarded a bonus or penalty based on a sliding scale of performance. Figure 39 below illustrates past performance on these metrics and includes a proposed standard for each.

- **Overall Customer Service Satisfaction – Fixed Route:** A simple survey of Wheels riders is conducted annually of fixed-route passengers. The measure is determined by the percentage of "5" and "4" ratings on fixed-route divided by total respondents.
- **Total Complaints/Passenger – All Modes:** The number of valid complaints per ridership.
- **Miles between Preventable Accidents:** Total Number of preventable accidents divided by total number of systemwide miles (revenue and non-revenue).
- **Fleet Readiness – Percent Bus Days Out of Service:** Tracked per vehicle, the total number of days out of service is divided by the total number of vehicles in the LAVTA fleet. The measure is based upon the sum total of downed vehicle days/ total vehicle days.

- **On-Time Performance:** The percentage of time a route leaves timepoints between one minute early and five minutes late of the time listed on the published timetable.
- **Miles between Preventable Roadcalls and Missed Trips:** Total number of preventable roadcalls divided by total f systemwide miles (revenue and non-revenue).

Figure 39 LAVTA Service Quality Measures

Measure	Proposed Standard	2011	2012	2013	2014	2015
Overall Customer Service Satisfaction – Fixed Route	>85%	89%	94%	90%	81%	80%
Total Complaints/Passenger – All Modes	<1/10,000	1/12,824	1/12,436	1/11,514	1/17,032	1/18,543
Miles Between Preventable Accidents	>100,000	139,923	109,143	62,857	113,557	83,156
Fleet Readiness – Percent Bus Days Out of Service	<8%	6.18%	9.99%	5.18%	5.54%	5.26%
On-Time Performance	>85%	81%	81%	79%	81%	80%
Miles between Preventable Roadcalls and Missed Trips	>25,000	5,323	37,866	56,965	43,260	44,620

On-time performance can be measured a number of ways. LAVTA considers a trip on time if it departs a timepoint between zero minute early tofive minutes late of the time listed on the published timetable, and it is recommended that this measure continue to be used.

Having reliable vehicles and a strong maintenance program means fewer breakdowns while passengers are on board. Road calls per revenue miles operated is a way to measure this. A high number of road calls reflects poor bus reliability, and may indicate the need for changes to maintenance procedures and practices. In 2012, LAVTA averaged over 15,000 miles between revenue vehicle failures, compared to fewer than 6,500 miles in the three previous years.

Fixed-Route Service Quality Standards Index

LAVTA holds its fixed-route contractor to specific standards, which make up the Service Quality Standard Index (SQSI). There are ten total metrics, as illustrated in Figure 41. The contractor is awarded a bonus or given a penalty based on its performance for the metric on an annual or quarterly basis.

Paratransit Service Standards

LAVTA also holds its paratransit contractor to specific standards outlined in a Service Quality Standard Index (SQSI), which contains four metrics. The contractor is awarded a bonus or given a penalty based on whether they've met the SQSI per quarter. In FY 2013 and FY 2014, the contractor was ALC (American Logistics Company), and the quarterly bonus and penalty for SQSI was only based on a single metric: valid complaints per 1,000 passengers. Currently, quarterly bonus and penalty for SQSI necessitates the contractor to meet four out of four metrics. The following table shows these standards:

Figure 40 Paratransit Service Standards

Measure	Service Standard
Valid Complaints per 1,000 Passengers	Less than 1.0
On Time Performance	Greater than 95%
Phone Calls Answered within 60 seconds	Greater than 95% of the time
Preventable Accidents per 100,000 Miles	Less than 1.0

Figure 41 Fixed-Route Service Quality Standards Index

COURTESY BASED PROGRAM (Awarded Annually)							
Category		Source	A	B	C	D	F
			$2,000	$1,000	$0.00	($1,000)	($2,000)
Overall Customer Service Satisfaction – Fixed Route only	A simple survey of Wheels riders shall be conducted annually of fixed-route passengers. The measure will be determined by the % of "5" and "4" ratings on fixed-route divided by total respondents is the measure	Annual Survey	95% and Above	94.9% to 90.0%	89.9% to 85.0%	84.9% to 80.0%	79.9% and Below
Driver Courtesy	A simple survey of Wheels riders shall be conducted annually of fixed-route passengers. The measure will be determined by the % of "5" and "4" ratings on fixed-route divided by total respondents is the measure	Annual Survey	95% and Above	94.9% to 90.0%	89.9% to 85.0%	84.9% to 80.0%	79.9% and Below
COURTESY BASED PROGRAM (Awarded Quarterly)							
Category		Source	A	B	C	D	F
			$2,000	$1,000	$0.00	($1,000)	($2,000)
Total Complaints - All modes	The number of valid complaints per ridership	Customer service database and Fixed-Route Task Force	< 1/10,000	Between 1/10,000 and 1/5,000	Between 1/5,000 and 1/1,000	Between 1/1,000 and 1/750	> 1/750
PREVENTABLE ACCIDENT BASED PROGRAM (Awarded Annually)							
Category		Source	A	B	C	D	F
			$4,000	$2,000	$0	($2,000)	($4,000)

Severity of Claims	Total monetary payments per year	Claims Reports (York Insurance Adjusters)	20%+ below average	11-20% below average	-/+10% of the three-year average	11-20% above average	20%+ above average
PREVENTABLE ACCIDENT BASED PROGRAM (Awarded Quarterly)							
Category		Source	A	B	C	D	F
			$1,000	$500	$0	($500)	($1,000)
Miles Between Preventable accidents (Systemwide)	Total Number of Preventable Accidents divided by total number of Systemwide Miles (Revenue and Non-Revenue)	Contractor Monthly Reporting and Safety Task Force/Committee	200,000 and Above	199,999 to 100,000	99,999 to 85,000	84,999 to 65,000	64,999 and below
Claims Submittals	Total number of claims submitted within 24 hours of an incident	Monthly Incident Log and Claims Reports (York Insurance Adjusters)	Greater than 90%	82.1-90%	82-78%	77.9-65%	Less than 65%
PRODUCTIVITY BASED PROGRAM (Awarded Monthly)							
Category		Source	A	B	C	D	F
			$1,000	$500	$0.00	($500)	($1,000)
On Time Performance – Fixed Route, Express Bus, Subscription	AVL Siemens On-Time Performance Reports (excluding missing trips)	Siemens AVL Transitmaster OTP Reports	Above 96.1%	96-92.1%	92-88%	87.9-84%	Below 84%
CORRECTIVE ACTION BASED PROGRAM (Awarded Quarterly)							
Category		Source	A	B	C	D	F
			$1,000	$500	$0.00	($500)	($1,000)
Miles between Preventable Roadcalls and Missed Trips (Systemwide)	Total number of Systemwide Miles (Revenue and Non-Revenue) divided by the sum of Loss of Service Roadcalls and Missed Trips	Contractor Monthly Reporting	25,000 and Above	24,999 to 20,000	19,999 to 17,000	16,999 to 13,500	13,499 and below

Preventive Maintenance Program	Percentage of PMs completed within 10% of the scheduled mileage	Contractor Monthly Reporting	100-96.1%	96-92.1%	92-88.1%	88-84.1%	Below 84%
Fleet Readiness - Percent Bus Days Out of Service (Based on Down Vehicles - Average Number of Days)	Tracked Per Vehicle, the total number of days out of service is divided by the total number of vehicles in the LAVTA fleet. The measure is based upon the sum total of downed vehicle days/ total vehicle days	Contractor Monthly Reporting	8% (.08) or fewer	8.1% (.081) to 9% (.09)	9.1% (.091) to 10% (.10)	10.1% (.101) to 11% (.11)	11.1% (.111) and higher

5 SERVICE EVALUATION

ROUTE LEVEL EVALUATION

System-Level Comparison

In order to analyze the productivity of routes, LAVTA's 2012 - 2021 Short Range Transit Plan (SRTP) proposed route categories so that routes with a similar purpose were compared against each other. The categories of routes as they exist today are as follows:

- Primary: Routes 10, 12/12x, and Rapid
- Regional Express: Routes 20X and 70X/70XV
- Neighborhood Feeder: Routes 1, 2, 3, 8A/8B, 9, 11, 14, 15, 51, 53, and 54
- School: 401, 402, 403, 501, 502, 503, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611

Primary routes operate between municipalities in the service area and generally operate all day with regular frequencies, usually at least half hourly or hourly service. Regional Express service operates at 30 minute headways during peak periods. This is specifically a peak hours-only service to connect people to multiple BART stations. Neighborhood Feeder routes serve smaller geographic areas and may operate with limited spans of service, with the exception of Route 15, which operates regularly throughout the day. School routes operate Mondays through Fridays, and are intended to help area students get to and from school, although the service is always open to the general public.

Due to the special nature of school-based services, these routes will not be evaluated at the same level of detail as the other routes in this document. School-based services are an important part of any transit system because they provide coverage to a transit-dependent cohort. They can be very expensive due to the fact that they usually only have one or two trips but require a vehicle and driver at peak times.

Figure 42 Annual Revenue Hours by Route

Route	FY 2013	FY 2014	% Change	FY 2015	% Change
1	5,214.4	5,242.7	0.5%	5,244.9	0.0%
2	1,531.5	1,556.3	1.6%	1,547.1	-0.6%
3	3,328.5	3,921.3	17.8%	3,888.7	-0.8%
8A/B	6,827.9	7,938.3	16.3%	7,706.2	-2.9%
9[A]	2,329.9	1,248.3	-46.4%	1,590.4	27.4%
10	31,946.0	30,938.3	-3.2%	31,003.9	0.2%
11	1,212.5	1,075.4	-11.3%	1,054.2	-2.0%
12/X	13,997.4	14,697.8	5.0%	14,721.9	0.2%
14	3,344.5	3,324.7	-0.6%	3,359.0	1.0%
15	8,479.8	8,752.8	3.2%	8,761.2	0.1%
18	1,832.8	NA	NA	NA	NA
20X	1,564.8	1,717.6	9.8%	1,648.0	-4.1%
30 (Rapid)	32,418.9	31,121.8	-4.0%	31,348.6	0.7%
51	NA	NA	NA	937.5	NA
53	1,452.0	1,608.3	10.8%	1,622.9	0.9%
54	1,528.7	1,403.9	-8.2%	1,339.5	-4.6
70X/70XV[A]	3,834.8	5,173.6	34.9%	4,994.4	--3.5%
401	405.0	405.0	0.0%	409.0	1.0%
403	NA	789.5	NA	566.7	-28.2%
501	210.0	276.0	31.4%	374.4	35.6%
502	168.0	168.0	0.0%	193.1	14.9%
601	309.0	316.6	2.4%	334.6	5.7%
602	312.5	306.6	-1.9%	324.2	5.8%
603	90.0	90.5	0.6%	90.0	-0.6%
604	282.0	288.7	2.4%	337.2	16.8%
605	174.0	175.0	0.6%	199.7	14.2%
606	198.0	199.1	0.6%	186.0	-6.6%
607	129.0	129.7	0.6%	129.0	-0.6%
608	159.0	159.9	0.6%	159.0	-0.6%
609	150.0	150.8	0.6%	150.0	-0.6%
610	114.0	114.6	0.6%	111.0	-3.2%
611	270.0	271.5	0.6%	267.0	-1.7%
701	51.3	18.6	-63.6%	NA	NA
702	58.7	122.8	109.1%	18.7	-84.8%
703	55.0	115.0	109.1%	17.5	-84.8%
704	NA	761.3	NA	Renamed Route 51	NA

Note: [A] In 2015, some Route 70X service was converted to Route 9 service, leading to an increase in Route 9 service and a decrease in Route 70X service.

Figure 43 Annual Boardings per Revenue Hour by Route

	FY 2013		FY 2014			FY 2015		
Route	Boardings	Boardings/Hr	Boardings	Boardings/Hr	Change	Boardings	Boardings/Hr	% Change
1	37,287	7.2	35,628	6.8	-4.4%	33,385	6.2	-6.3%
2	7,870	5.1	7,491	4.8	-4.8%	7,508	4.9	0.2%
3	10,017	3.0	14,177	3.6	41.5%	14,448	3.9	1.9%
8A/B	60,536	8.9	64,124	8.1	5.9%	75,609	10.2	17.9%
9	34,639	14.9	10,446	8.4	-69.8%	6,837	4.3	-34.5%
10	560,478	17.5	522,622	16.9	-6.8%	493,421	16.8	-5.6%
11	7,611	6.3	4,240	3.9	-44.3%	5,339	5.1	25.9%
12/X	158,463	11.3	146,247	10.0	-7.7%	151,491	10.1	3.6%
14	46,204	13.8	28,552	8.6	-38.2%	32,045	9.5	12.2%
15	141,627	16.7	136,965	15.6	-3.3%	138,108	15.9	0.8%
18	5,782	3.2	NA	NA	NA	NA	NA	NA
20X	16,849	10.8	16,040	9.3	-4.8%	14,743	8.9	-8.1%
30 (Rapid)	358,447	11.1	363,420	11.7	1.4%	367,082	11.7	1.0%
51	NA	NA	NA	NA	NA	2,168	2.3	NA
53	33,924	23.4	35,738	22.2	5.3%	37,755	23.3	5.6%
54	23,678	15.5	24,748	17.6	4.5%	23,733	17.7	-4.1%
70X/70XV	48,847	12.7	64,530	12.5	32.1%	60,449	12.1	-6.3%
401	4,484	11.1	3,731	9.2	-16.8%	3,601	8.8	-3.5%
403	NA	NA	3,736	4.7	NA	3,814	6.7	2.1%
501	23,621	112.5	27,371	99.2	15.9%	30,150	80.5	10.2%
502	13,360	79.5	14,416	85.8	7.9%	17,916	92.8	24.3%
503	4,519	12.1	4,287	11.2	-5.1%	4,921	12.2	14.8%
601	9,880	32.0	10,051	31.7	1.7%	10,246	30.6	1.9%
602	15,822	50.6	15,461	50.4	-2.3%	15,414	47.5	-0.3%
603	10,245	113.8	7,603	84.0	-25.8%	9,823	109.1	29.2%
604	22,962	81.4	26,392	91.4	14.9%	27,440	81.4	4.0%
605	9,650	55.5	9,951	56.9	3.1%	13,262	66.4	33.3%
606	8,481	42.8	7,035	35.3	-17.0%	8,907	47.9	26.6%
607	7,727	59.9	5,681	43.8	-26.5%	3,515	27.2	-38.1%
608	15,666	NA	14,892	93.1	-4.9%	15,451	97.2	3.7%
609	2,572	17.1	2,378	15.8	-7.5%	3,115	20.8	31.0%
610	11,509	101.0	10,786	94.1	-6.3%	8,434	76.0	-21.8%
611	12,469	46.2	10,546	38.8	-15.4%	10,089	37.8	-4.3%
701	3	0.1	4	0.2	33.3%	NA	NA	NA
702	280	4.8	181	1.5	-35.5%	60	3.2	-67.0%
703	242	4.4	223	1.9	-7.9%	52	2.9	-76.9%
704	NA	NA	1,542	2.0	NA	356	2.3	-76.9%

Figure 44 On-Time Performance by Route

Route	FY 2013	FY 2014	FY 2015
1	91.3%	92.1%	91.2%
2	90.1%	88.9%	89.2%
3	76.1%	67.8%	67.1%
8A/B	80.0%	76.3%	80.3%
9	67.7%	80.4%	72.9*%
10	83.3%	81.7%	81.8%
11	89.8%	86.8%	81.7%
12/V/X	82.5%	77.9%	77.0%
14	87.1%	82.8%	83.2%
15	84.4%	80.3%	76.3%
18	90.5%	85.0%	NA
20X	84.4%	83.8%	76.3%
30 (Rapid)	NA	82.6%	78.4%
51	NA	NA	93.5%
53	91.0%	85.6%	89.7%
54	82.2%	79.0%	66.9%
70X/70XV	62.7%	60.7%	58.5%
401	95.0%	83.2%	83.8%
403	86.4%	85.4%	82.8%
501	90.1%	55.4%	70.6%
502	81.1%	72.4%	55.4%
601	79.5%	69.9%	88.2%
602	93.8%	71.7%	82.7%
603	84.3%	85.1%	90.6%
604	78.4%	68.6%	76.7%
605	87.6%	79.1%	77.9%
606	87.6%	81.2%	81.6%
607	87.8%	59.7%	75.4%
608	88.3%	87.5%	89.1%
609	96.4%	70.4%	82.6%
610	94.2%	74.9%	75.4%
611	76.5%	59.3%	81.5%
701	72.7%	44.4%	NA
702	70.9%	40.5%	27.5%
703	73.1%	57.5%	50.0%
704	NA	93.7%	87.1%
Total	84.0%	80.3%	79.5%

Local Routes

The following charts illustrate levels of service, ridership, and productivity by route and route category. Figure 45 shows the annual revenue hours by route, and Figure 46 illustrates the annual ridership by route.

Boardings per revenue hour is one of the most commonly used measures to identify the efficiency of a route. This metric helps account for differences in levels of service provided, and Figure 47 illustrates this measure by category.

Figure 45 Annual Revenue Hours by Route

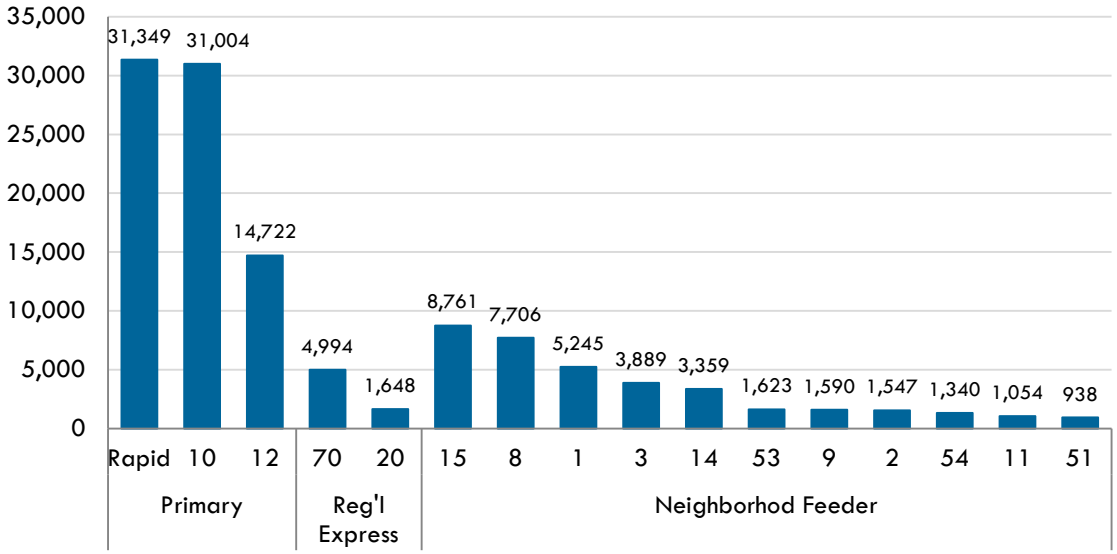


Figure 46 Annual Boardings by Route

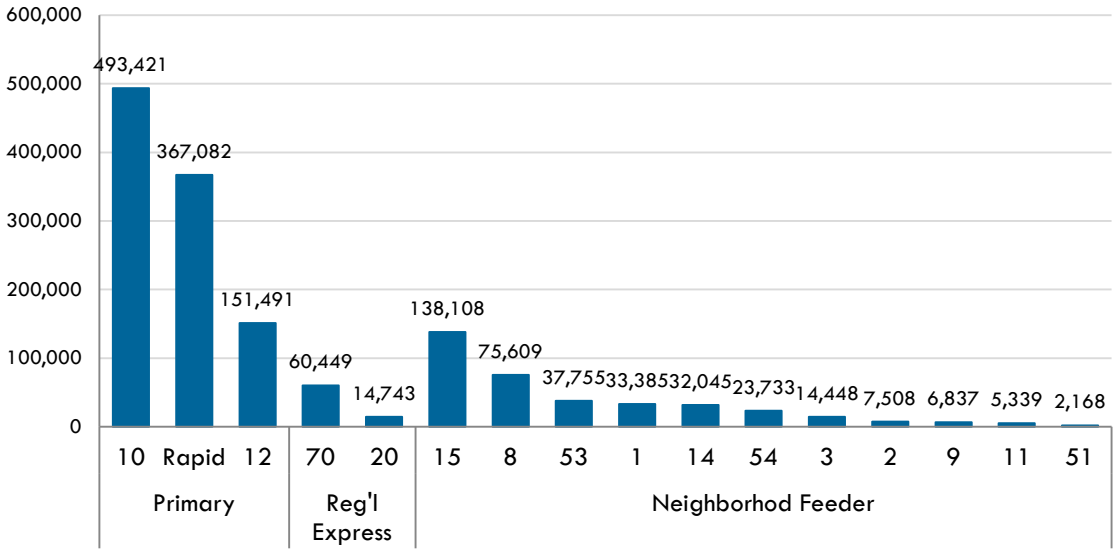
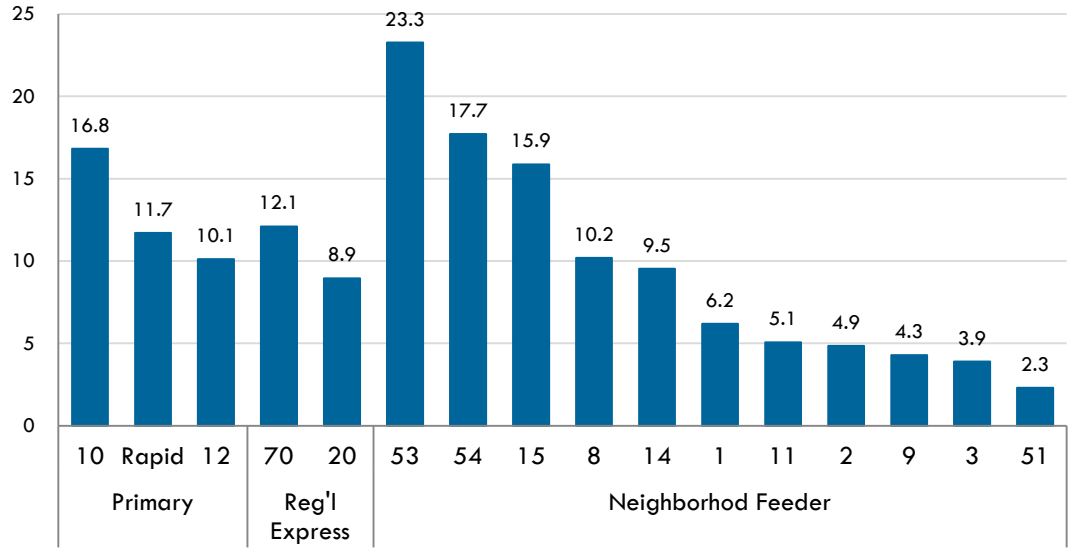


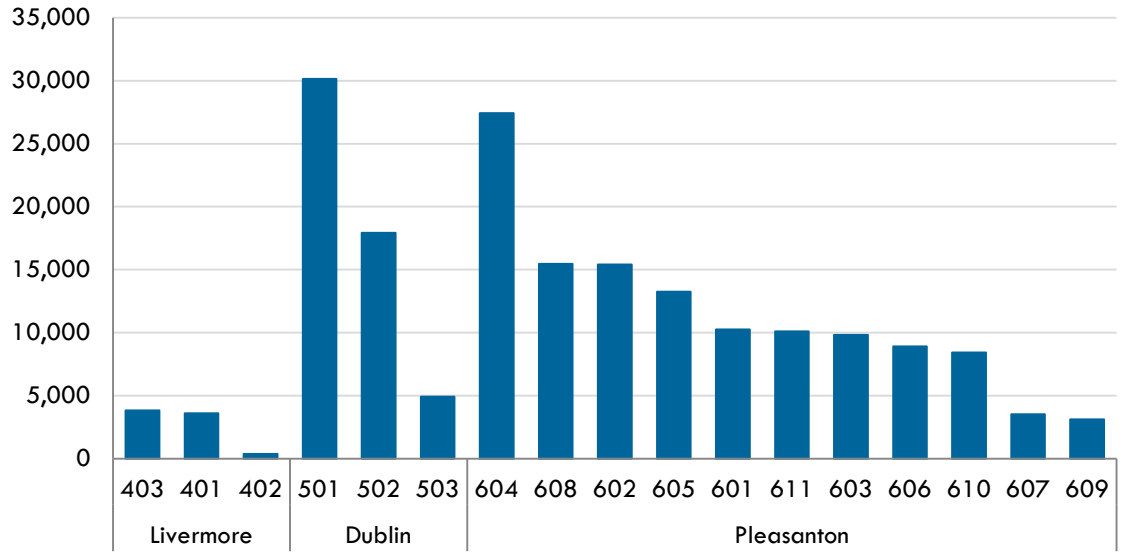
Figure 47 Average Boardings per Revenue Hour by Route



School Routes

The following charts illustrate levels of ridership and productivity by school route and city. Figure 48 illustrates the annual ridership by route.

Figure 48 School Route Annual Boardings



Boardings per trip is the most appropriate measure of service productivity for school routes, as the number of trips is limited and a trip should have a sufficient amount of riders to justify operating it. Figure 49 illustrates this measure by city.

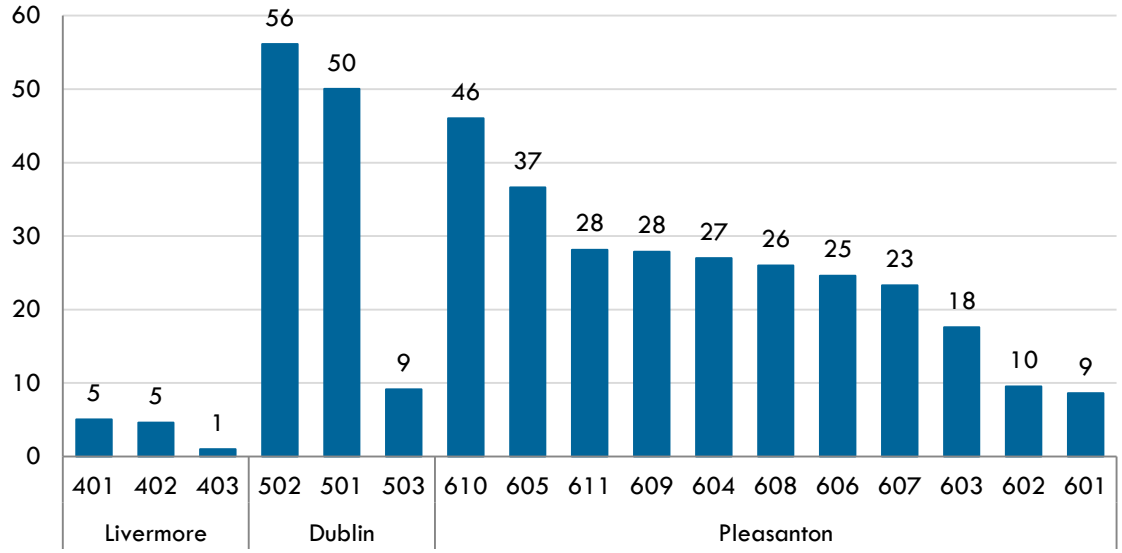
Livermore school trippers are underperforming. Route 402 averages only one passenger per trip. Most of Route 402's alignment duplicates Route 12 and Route 14. Route 401 averages 5 passengers per trip, and Route 403 averages 6 passengers per trip. These routes do not meet the

performance standard of 15 boardings per trip for school routes. It should be noted that many Livermore students utilize the fixed route buses for their transportation, including routes 10, 15 and the Rapid.

In Dublin, school trippers are significantly more utilized. Both Routes 501 and 502 carry students from East Dublin to Dublin High School and Wells Middle School. Due to high demand on these routes, additional vehicles have been added to provide sufficient capacity. Route 503 has lower performance at 9 boardings per trip, which is under the performance standard.

All Pleasanton school trippers average approximately 10 boardings per trip or higher. Several trips, including afternoons on 604 and 608 require more than one vehicle to accommodate passenger loads. Two routes, 601 and 602, do not meet the performance standard.

Figure 49 School Route Boardings per Trip



Local Route by Route Evaluation

This section describes performance on a route-by-route basis for local non-school services. Ridership data comes from multiple sources. Overall daily ridership and productivity comes from farebox data, while ridership at the stop level and by time period (e.g. AM peak, midday) comes from weekday automatic passenger counter (APC) data.

Route 1 – E. BART to East Dublin to E. BART

Route 1 is a neighborhood feeder route operating between the East Dublin/Pleasanton BART station and East Emerald Glen Park, operating primarily in a one-way loop along Dublin Boulevard, Central Parkway, and Santa Rita Road.

Productivity on Route 1 is 6.2 boardings per revenue hour, which is well below the performance standard of 10 boardings per revenue hour. The biggest generators on Route 1 East are Dublin/Pleasanton BART and Santa Rita Jail. Productivity does not vary much by time – there are no real peak trips or peak times, as almost every trip carries fewer than 5 passengers. The recent relocation of the Ross Stores headquarters on XXX drive, and the opening of the Alameda

County Hall of Justice (across from the Santa Rita Jail) provide an opportunity to improve ridership. Productivity

Route 1 has above average on-time performance, with 91% of trips arriving on time to scheduled time points.

Route 2 – E. BART to Dublin Ranch to E. BART

Route 2 operates between the East Dublin/Pleasanton BART station and the Positano master-planned community in Dublin. From the BART station, Route 2 operates along Central Parkway before completing a one-way clockwise loop consisting primarily of Tassajara Road and Fallon Road. Route 2 was extended to Positano Parkway in August 2014.

Productivity on Route 2 is very low with 4.9 boardings per revenue hour, which is well below the performance standard of 10 boardings per revenue hour. Only one daily trip carries more than 6 passengers.

Route 2 has 12 minutes of layover mid-route at Positano/Valentano, which reduces route productivity. APC data show 19 riders a day at this stop, but they are likely to be operators boarding and alighting the bus, and not passengers.

Route 2 has the second-best on-time performance systemwide, with 95% of trips arriving on time to scheduled time points.

Route 3 – E. BART to Stoneridge Mall to West Dublin to E. BART

Route 3 operates as a large loop, providing service between East Dublin/Pleasanton BART, Stoneridge Mall, and west Dublin. Route 3 operates primarily along Johnson Drive before serving Stoneridge Mall and continuing north primarily along Village Parkway. It returns south along Stagecoach Road and Dougherty Road. The route operates clockwise in the morning and counter-clockwise in the afternoon.

Route 3 has the lowest productivity of any neighborhood feeder route at 3.9 boardings per revenue hour. Ridership is highest at the two BART stations, with the overall pattern being oriented to serving stops north of the BART stations. Overall, ridership is low throughout the route, with only two trips carrying more than 6 people. The segments south of the BART stations attract only 6 passengers on a circuitous alignment, resulting in productivity less than half that of the northern segments. Overall, there are no times when Route 3 carries more than 7 passengers per hour.

Route 3 has below average on-time performance, with 64% of trips arriving on time to scheduled time points, 35% late, and 1% of trips arriving early.

Route 8A – E. BART to Downtown Pleasanton to E. BART

Route 8A operates counterclockwise between the East Dublin/Pleasanton BART station and downtown Pleasanton Routes 8A and 8B are combined for the purposes of ridership tracking, and together they have 9.8 boardings per revenue hour, just below the productivity standard of 10 for neighborhood feeder service.

Ridership productivity is highest on the route segment from the East Pleasanton BART station to Hopyard Road & Las Positas Boulevard, with an average of 38.7 weekday boardings per service hour. Ridership productivity is lowest on the route segment from Koll Center Parkway & Koll

Center Drive to Neal Street & First Street, with 1.2 weekday boardings per service hour. The biggest generators on Route 8A are the East Pleasanton BART station and Pleasanton Middle School.

Morning and afternoon peak periods are the most productive, and midday service is also more productive than the route average. Evening service is the least productive (5.9 weekday boardings per hour). Load factors on Route 8A are relatively constant throughout the day with no trips exceeding 10 passengers.

Routes 8A and 8B have above average on-time performance, with 81% of trips arriving on time to scheduled time points. Early running occurs at a rate of 17%.

Route 8B – E. BART to Downtown Pleasanton to E. BART

Route 8B operates clockwise between the East Dublin/Pleasanton BART station and downtown Pleasanton. Routes 8A and 8B are combined for the purposes of ridership tracking, and together they have 10.2 boardings per revenue hour, just above the productivity standard of 10 for neighborhood feeder service.

Ridership productivity is highest on the route segment from the East Pleasanton BART station to Santa Rita Road & Valley Avenue, with an average of 32.1 weekday boardings per service hour. This segment duplicates Route 10. The only other segment with productivity greater than 10 passengers per service hour is the segment from Neal Street & First Street to Bernal Avenue & Palomino Drive, with an average of 14.5 weekday boardings per service hour. Ridership productivity is lowest on the route segment from Bernal Avenue & Palomino Drive to Valley Avenue & Wild Rose Place, with 5.9 weekday boardings per service hour. The biggest generators on Route 8B are the East Pleasanton BART station, Amador Center, and downtown Pleasanton.

The afternoon peak period is the most productive (16.1 weekday boardings per service hour), while morning and midday services are also more productive than the route average. Evening service is the least productive (10.0 weekday boardings per service hour). Load factors on Route 8B are consistent throughout the day, and no trips experience a maximum load greater than 10 passengers.

Routes 8A and 8B have above average on-time performance, with 81% of trips arriving on time to scheduled time points. Early running occurs at a rate of 17%.

Route 9 – E. BART/California Center/Hacienda Business Park/E. BART

Route 9 operates between the East Dublin/Pleasanton BART station and Las Positas Boulevard, providing service to the Hacienda Business Park. In the morning, Route 9 operates a clockwise loop consisting primarily of Owens Drive, Hacienda Drive, Stoneridge Drive, Las Positas Boulevard, and Willow Road. The route is reversed in the afternoon, operating in the counterclockwise direction.

Route 9 has 4.3 boardings per revenue hour, which is well below the neighborhood feeder productivity standard of 10. Ridership productivity is highest on the route segment from the East Pleasanton BART station to California Center, with an average of 18.5 weekday boardings per service hour. No other segment has ridership productivity greater than 10 weekday boardings per service hour. Ridership productivity is lowest on the route segment from California Center to Stoneridge Drive & Gibraltar Drive, with 2.1 weekday boardings per service hour. The biggest

ridership generators on Route 9 are the East Dublin/Pleasanton BART station and California Center. No Route 9 trips having a maximum load exceeding 5 passengers.

Route 9 has below average on-time performance, with 72% of trips arriving on time to scheduled time points. Most trips that are not on time are caused by trips arriving late (27% of all trips).

Route 10 – Livermore, Pleasanton, Dublin, E. BART

Route 10 operates between the Lawrence Livermore National Laboratory (LLNL) and downtown Livermore, Pleasanton, and Dublin. From LLNL, Route 10 operates primarily along East Avenue, Stanley Boulevard, Santa Rita Road, and Dublin Boulevard.

The route serves LLNL, Livermore Transit Center, Valley Care Livermore Campus, Village High School, Amador Valley High School, Walmart, and East Dublin/Pleasanton BART station. On evenings and weekends when Rapid is not operating, Route 10 is extended to serve Dublin Plaza, West Dublin/Pleasanton BART station, and Stoneridge Mall.

Route 10 is very productive, with 16.8 boardings per revenue hour, which meets the standard of 15 boardings per revenue hour for primary routes.

Ridership productivity is highest on the route segment from the East Pleasanton BART station to Santa Rita Road & Valley Ave, with an average of 37.4 weekday boardings per service hour. The only other segment that has more than 20 weekday boardings per service hour is the segment from Stanley Boulevard & Valley Memorial Hospital to Livermore Transit Center (22.4 weekday boardings per service hour). Ridership productivity is lowest on the route segment from Dublin Boulevard & Golden Gate Drive to East Pleasanton BART station, with 6.2 weekday boardings per service hour. The biggest generators on Route 10 are the East Dublin/Pleasanton BART station and Livermore Transit Center.

Morning and afternoon peak periods are the most productive, and midday service is also more productive than the route average. Early morning service is the least productive (9.0 weekday boardings per service hour). Load factors on Route 10 are consistent throughout the day with no trips having a maximum load of greater than 25 passengers.

Route 10 has above average on-time performance, with 81% of trips arriving on time to scheduled time points. Trips that are not on time are caused by late running in 17% of those instances.

Route 11 – Transit Center to Greenville Road to Transit Center

Route 11 operates between the transit center in downtown Livermore and Greenville Road. Three morning and three afternoon trips are offered. From the transit center, Route 11 operates via 1st Street and Las Positas Road before operating in a clockwise loop consisting of Greenville Road and National Drive.

The route serves the downtown Livermore Transit Center and Target, as well as industrial and commercial districts northeast of Livermore.

Route 11 has low productivity at 5.1 boardings per revenue hour, which does not meet the neighborhood feeder standard of 10 boardings per revenue hour.

Ridership is heavily centered on the Livermore Transit Center, with more than half of the daily 31 boardings coming from that location. No other stop had more than 2 boardings or 3 alightings. This ridership pattern (along with survey data) suggests that most Route 11 riders transfer to other routes.

Route 11 only operates during the morning and afternoon peak periods, with the morning period (9.1 boardings per service hour) having a slightly better productivity than the afternoon (8.1 boardings per service hour). Load factors on Route 11 are highest on the first trip of each peak period. No trips have maximum loads exceeding 10 passengers.

Route 11 has below average on-time performance, with 74% of trips arriving on time to scheduled time points. Trips that are not on time are more often early (21 %) than late (3%).

Route 12/12X – Transit Center to E. BART

Route 12 and Route 12x operate between the East Dublin/Pleasanton BART station and the downtown Livermore Transit Center. Route 12 operates primarily along Dublin Boulevard, Canyons Parkway, Isabel Avenue, Airway Boulevard, Murrieta Boulevard, and Stanley Boulevard. Route 12x is an express variant that operates along I-580 before following the same alignment as Route 12 along Isabel Avenue towards Livermore.

Route 12 has 10.1 boardings per revenue hour, which is below the performance standard of 15 boardings per revenue hour for primary routes. Ridership productivity for Route 12 is highest on the route segment from the East Dublin BART station to Dublin Boulevard & Fallon Gateway, with an average of 32.2 weekday boardings per service hour. Ridership productivity is lowest on the route segment from Las Positas College to Airway Boulevard Park-and-Ride, with 10.6 weekday boardings per hour. Only 2 boardings and 2 alightings occur at the Airway Boulevard Park-and-Ride, and there are only 21 boardings in the 3.5 mile long segment between the Airway Boulevard Park-and-Ride and Los Positas College.

For Route 12x, the segment with the highest productivity is from Stanley Boulevard & Valley Memorial Hospital to the Livermore Transit Center, with an average of 9.2 weekday boardings per service hour. It is worth noting that this is lower than the worst performing segment on Route 12. Ridership productivity is lowest on the route segment from Kittyhawk Road & Armstrong Street to Airway Boulevard Park-and-Ride, with 4.6 boardings per service hour.

The biggest trip generators on Route 12 are the East Dublin BART station, the Livermore Transit Center, and Las Positas College. Route 12x's highest ridership stops are the East Dublin BART station and the Livermore Transit Center.

Midday service is the most productive on Route 12, with an average of 22.6 boardings per service hour on weekdays. Ridership productivity is also above average in the morning and afternoon peak periods. Night service is the least productive at 9.2 boardings per hour on weekdays. Load factors on Route 12 are relatively consistent throughout the day, with a peak in the eastbound direction in the morning (towards Livermore Transit Center) and in the westbound direction in the afternoon (towards East Dublin BART station). This suggests that the route may primarily be used for directional commuting.

Route 12x only operates during peak times. The 7:30 a.m. eastbound trip carries 8 passengers, with none of the remaining trips carrying more than 4 passengers.

Route 12 has average on-time performance with 78% of trips arriving on time to scheduled time points. Trips that are not on time are mostly caused by late running (21%). For Route 12x, 63% of trips arrive on time to scheduled time points, and 36% are late.

Route 14 – Transit Center to Downtown Livermore to Transit Center

Route 14 is a neighborhood circulator that operates between the Livermore Civic Center and downtown Livermore, serving the Livermore Transit Center. Route 14 operates in a one way loop primarily along Chestnut Street, Pine Street, P Street and 4th Street.

The route serves the Livermore Transit Center, Junction Avenue Middle School, Livermore High School, and the Livermore Public Library and Civic Center.

Route 14 has 9.5 boardings per revenue hour, which is just below the neighborhood feeder standard of 10 boardings per revenue hour. Ridership productivity is highest on the route segment from the Livermore Transit Center to Murrieta Boulevard & Olivina Avenue, with an average of 32.8 boardings per service hour. Productivity is also high on the segment from Pacific Avenue & South Livermore Avenue to Livermore High School with an average of 22.6 boardings per service hour. The 4th Street & P Street to Pacific Avenue & South Livermore Avenue segment has the lowest productivity, carrying only 1.7 passengers per service hour. The biggest generators on Route 14 are the Livermore Transit Center and the Livermore Public Library and Civic Center.

The morning peak period is the most productive with boardings per service hour declining throughout the service day. Night service is the least productive (9.5 boardings per service hour). Load factors on Route 14 are relatively low throughout the day, peaking at 8 passengers in the morning.

Route 14 has slightly below average on-time performance with 76% of trips arriving on time to scheduled time points, 21% late, and 3% arriving early.

Route 15 – Transit Center to Springtown to Transit Center

Route 15 operates between the transit center in downtown Livermore and Springtown. From downtown Livermore, Route 15 operates via Las Positas Road before operating in a figure eight pattern consisting primarily of Springtown Boulevard and Scenic Avenue.

The route serves the downtown Livermore Transit Center, Walmart, Kaiser, Target, and the Christensen School

Route 15 has strong productivity at 15.9 boardings per revenue hour, which is significantly higher than the neighborhood feeder standard of 10 boardings per revenue hour. Ridership productivity is highest between the Livermore Transit Center and Las Positas Road & Hilliker Place (Walmart), with an average of 74.9 weekday boardings per service hour along this segment. The only other segment with productivity greater than 20 weekday boardings per service hour is Bluebell Drive & Las Flores Road to Las Positas Road & Hilliker Place (Walmart), with 23.5 weekday boardings per service hour. Ridership productivity is lowest on the segment from Bluebell Drive & Galloway Street to Dalton Avenue & Pasatiempo Street, with 3.8 weekday boardings per service hour. The highest ridership stop on Route 15 is the downtown Livermore Transit Center, followed by Walmart.

Service is most productive during midday and afternoon peak periods with 29.4 and 29.3 weekday boardings per service hour, respectively. The morning peak period also performs above the route average with 24.1 weekday boardings per service hour. Early morning service is the least productive (9.1 weekday boardings per service hour). Load factors on Route 15 range from 5 to 20 passengers most of the day.

Route 15 has slightly below average on-time performance, with 75% of trips arriving on time to scheduled time points. Late running occurs at a rate of 22%.

Route 20X – BART to Vasco Road to Transit Center

Route 20X operates between the East Dublin/Pleasanton BART station and the downtown Livermore Transit Center. From the BART station, Route 20x operates for almost 10 miles on I-580 and then circulates on Las Positas Road, Vasco Road, and 1st Street.

The route provides peak directional service between the East Dublin/Pleasanton BART station, Lawrence Livermore National Laboratory (LLNL), the Vasco ACE station, and the downtown Livermore Transit Center. Trips originate in the morning at BART and terminate in the afternoon at BART, so the route serves the reverse commute market.

Route 20X averages 8.9 boardings per trip, which is well below the regional express standard of 15 boardings per trip. The East Dublin/Pleasanton BART station is the highest ridership stop. No other stop attracts more than 10 boardings. The LLNL is the primary single destination for passengers boarding at the BART station. The segment of the route between East Ave & Vasco Rd and Livermore Transit Center has very little boarding activity, with just two daily boardings at Livermore Transit Center and very little activity at other stops.

Six of the nine Route 20x trips carry 6 or fewer passengers, which is low for a peak oriented commuter route that operates for 10 miles on the freeway. The highest observed load was 11 passengers.

Route 20X has above average on-time performance, with 82% of trips arriving on time to scheduled time points. Late running occurs at a rate of 16%.

Route 51 – Transit Center to Civic Library

Route 51 operates on a loop between the Livermore Transit Center in downtown Livermore and the Livermore Civic Library. From the transit center, Route 51 travels via Maple Street, Livermore Avenue, and Dolores Street. The route also serves Livermore High School. It only operates in the afternoons and evenings on weekdays.

Route 51 averages just 2.3 boardings per revenue hour, which does not meet the neighborhood feeder productivity standard of 10 boardings per revenue hour. Ridership productivity is highest on the route segment from the downtown Livermore Transit Center to the Livermore Library and Civic Center, with an average of 19.1 boardings per service hour. Ridership productivity is lowest on the route segment from Livermore Library to Livermore High School, with 12.4 boardings per service hour. The biggest generators on Route 51 are the Livermore Transit Center and Livermore Library.

Average boardings per service hour is slightly higher in the afternoon peak, with an average of 13.2, compared to the evening productivity of 12.7 boardings per service hour. Load factors fluctuate throughout the day, peaking at four passengers on the 5:12 p.m. trip.

Route 51 has the best on-time performance systemwide at 98%.

Route 53 – Pleasanton ACE Station to W. BART

Route 53 operates between the Pleasanton ACE station and West Pleasanton BART Station. From the ACE station, Route 53 travels via Bernal Avenue, I-680, and Stoneridge Mall Road. The route serves the Pleasanton ACE Station, Corporate Commons, Safeway Corporate Headquarters, and

Stoneridge Mall. Schedules on Route 53 are coordinated with ACE trains, with ACE subsidizing the route through a grant from the Bay Area Air Quality Management District (BAAQMD).

Route 53 has high productivity at 23.3 boardings per revenue hour which is well above the performance standard of neighborhood feeders of 10 boardings per revenue hour. Morning ridership is heavily oriented to connections between ACE and BART, as it is a quick, freeway-based trip between the two. Likewise, the predominant pattern in the afternoon is connecting BART to ACE. The biggest generators on Route 53 are the Pleasanton ACE station, the West Dublin/Pleasanton BART station, and Stoneridge Mall.

Morning and afternoon peak periods are the most productive, with an average productivity of 35.8 and 36.4 boardings per service hour, respectively. Evening service is the least productive time period with 13.3 boardings per service hour. Load factors are highest in the morning and decline throughout the service day. On average, no trips exceed 25 passengers on board at one time.

Route 53 has the third-highest on-time performance systemwide, with 92% of trips arriving on time to scheduled time points.

Route 54 – Pleasanton ACE Station to Hacienda Business Park to BART

Route 54 operates between the Pleasanton ACE Station, Hacienda Business Park, and the Dublin/Pleasanton BART Station. From the ACE Station, it travels northbound primarily along Valley Avenue and Las Positas Boulevard before returning southbound along I-680. The direction of travel is reversed during the afternoon peak. Major destinations on the route include the Pleasanton ACE Station, Bernal Business Park, Hart Middle School, Alameda County Court, Rosewood Commons, and the East Dublin/Pleasanton BART Station. Schedules on Route 54 are coordinated with ACE trains, with ACE subsidizing the route through a grant from the Bay Area Air Quality Management District (BAAQMD).

Route 54 has 17.7 boardings per revenue hour, which exceeds the neighborhood feeder standard of 10 boardings per revenue hour. Ridership productivity is highest between the East Dublin BART Station and California Center, with an average of 37.4 boardings per service hour. The Pleasanton ACE Station and the East Dublin/Pleasanton BART Station are the biggest trip generators.

The first morning trip was eliminated in August 2015 due to low ridership. In the afternoon, load factors are highest on the first trip and decline throughout the rest of the peak. The highest load recorded was 20 passengers.

Route 54 has below average on-time performance, with 70% of trips arriving on time to scheduled time points. Running early occurred on 11% of trips, and 18% run late.

Route 70X/70XV – Pleasant Hill BART to E. Dublin/Pleasanton BART/Pleasant Hill BART to E. BART

Route 70X operates every 30 minutes during peak periods between the East Dublin/Pleasanton BART station and the Pleasant Hill BART station during weekdays and on holidays. From the East Dublin/Pleasanton station, it travels via Dublin Boulevard, I-680, and Oak Road. The route serves the East Dublin/Pleasanton BART station, the Walnut Creek BART station, and the Pleasant Hill BART station.

Route 70XV operates one morning trip from Pleasant Hill BART station to the East Dublin/Pleasanton BART station, and one evening trip between the East Dublin/Pleasanton BART station and Pleasant Hill BART station. Unlike the 70X, both travel deviate to Stoneridge Mall. Route 70XV travels along Johnson Drive to Stoneridge Mall and then along I-680.

Route 70X was modified in August 2015 to bypass Walnut Creek in the general noncommute direction in order to improve on-time performance.

Route 70X/70XV averages 12.1 boardings per trip, which is short of the regional express performance standard of 15 boardings per trip. Farebox data do not distinguish between Routes 70X and 70XV, but APC data indicate that productivity on Route 70XV is much lower, with just 5 passengers per trip, which is below the performance standard.

For Route 70X, productivity is relatively consistent across route segments; ridership is highest between the Walnut Creek BART station and the Pleasant Hill BART station. In contrast, Route 70XV has significant variation in productivity along the route. Ridership productivity is highest on the route segment from Stoneridge Mall Road & McWilliams to Stoneridge Mall with 13.8 boardings per service hour. Productivity is the lowest on the route segment between Stoneridge Drive & Hopyard Road to Johnson Drive & Commerce Drive at 1.8 boardings per hour, which is not surprising given the low density in this area. The biggest trip generators on Route 70X and 70XV are the East Dublin and Walnut Creek BART stations.

Load factors on Route 70X are relatively consistent throughout the day, and no trips experience maximum loads greater than 15 passengers.

Route 70X and Route 70XV have the lowest average on-time performance systemwide, with only 57% and 35% of trips arriving on time to scheduled time points, respectively. For both routes, the remaining trips run late.

Rapid – Livermore to E. BART to Stoneridge Mall

The Rapid operates between Stoneridge Mall in Pleasanton, downtown Livermore, and Lawrence Livermore National Laboratories (LLNL). From LLNL, the Rapid travels via East Avenue, Stanley Boulevard, Isabel Avenue, Fallon Road, Dublin Boulevard and Foothill Boulevard.

The route serves Stoneridge Mall, the West Dublin/Pleasanton BART station, the East Dublin/Pleasanton BART station, the downtown Livermore Transit Center, Livermore High School, Valley Memorial Medical Center, and Lawrence Livermore National Laboratories. The Rapid does not operate on weekends.

The Rapid has 11.7 boardings per revenue hour, which does not meet the performance standard of 15 for primary routes. Ridership productivity is highest on the route segment from Stanley Boulevard & Murdell Lane to Railroad Avenue & Bankhead Theater, averaging 30.5 boardings per service hour. The only other segment with ridership productivity above 20 boardings per service hour is between the East Dublin BART station and Dublin Boulevard & Keegan Street. Ridership productivity is lowest on the segment from Dublin Boulevard & Keegan Street to Stanley Boulevard & Murdell Lane, with 3.4 boardings per service hour, where density is low. The biggest generators along the Rapid are the East Dublin BART station, Livermore Transit Center, and Dublin Blvd @ Golden Gate Drive (by the West Dublin/Pleasanton BART station).

Boardings per service hour are highest in the afternoon peak, with 18.1 boardings per service hour, followed by the early morning (16 boardings per hour). Evening service is the least productive, with 12.8 boardings per service hour. Load factors on the Rapid increase throughout

the day in the eastbound direction and decline throughout the day in the westbound direction, indicating that the route is likely being used for directional commuting. The Rapid does not have any trips that experience a maximum load greater than 20 passengers.

The Rapid has above average on-time performance, with 81% of trips arriving on time to scheduled time points. On average, trips run late 18% of the time.

THREE-YEAR RETROSPECTIVE OF PERFORMANCE MEASURES

Fixed-Route Operation

The following tables summarize fixed- route operations in the past three years.

- Operating costs increased by a total of 3.2% from 2013 to 2015. In 2014, revenue hours increased by 1,191; however, the agency reduced revenue hours by 625 in 2015 to ensure costs were reduced and more sustainable into the future (see Figure 50). Ridership declined by 4.4% over the three year period.
- Productivity declined from 2013 to 2014 but increased very slightly in 2015 due to a decrease in revenue hours (see Figure 50).
- Service quality measures have varied over the past three years. Overall Customer Service Satisfaction has declined from 90% in 2013 to 80% in 2015, but total complaints per passenger have gone down. On-time performance has been relatively steady (see Figure 52).

Figure 50 Fixed Route Statistics

Measure	2013	2014	2015	3-Year Total
Operating Cost	$12,333,360	$13,062,559	$12,733,073	$38,128,992
% Change	-	*5.9%*	*-2.5%*	*3.2%*
Passenger Fares	$1,787,567	$1,723,635	$1,781,547	$5,292,749
% Change	-	*-3.6%*	*3.4%*	*-0.3%*
Net Subsidy	$10,545,793	$11,338,924	$10,951,526	$32,836,243
% Change	-	*7.5%*	*-3.4%*	*3.8%*
Revenue Vehicle Miles	1,826,997	1,818,649	1,831,125	5,476,771
% Change	-	*-0.5%*	*0.7%*	*0.2%*
Revenue Vehicle Hours	124,635	125,826	125,201	375,662
% Change	-	*1.0%*	*-0.5%*	*0.5%*
Annual Ridership	1,727,085	1,652,151	1,650,388	5,029,624
% Change	-	*-4.3%*	*-0.1%*	*-4.4%*

Figure 51 Fixed Route Performance Metrics

Measure	2013	2014	2015	3-Year Average
Passengers per Revenue Hour	13.9	13.1	13.2	13.4
% Change	-	*-5.2%*	*0.4%*	*-4.9%*
Passengers per Revenue Mile	0.9	0.9	0.9	0.9
% Change	-	*-3.9%*	*-0.8%*	*-4.7%*
Operating Cost per Passenger	$7.14	$7.91	$7.72	$7.59
% Change	-	*10.7%*	*-2.4%*	*8.0%*
Operating Cost per Revenue Mile	$6.75	$7.18	$6.95	$6.96
% Change	-	*6.4%*	*-3.2%*	*3.0%*
Operating Cost per Revenue Hour	$98.96	$103.81	$101.70	$101.49
% Change	-	*4.9%*	*-2.0%*	*2.8%*
Net Subsidy per Passenger	$6.11	$6.86	$6.64	$6.53
% Change	-	*12.4%*	*-3.3%*	*8.7%*
Farebox Recovery Ratio	14%	13%	14%	13.9%
% Change	-	*-9.0%*	*6.0%*	*-3.5%*

Figure 52 Fixed Route Service Quality Metrics

Measure	2013	2014	2015
Overall Customer Service Satisfaction – Fixed Route	90%	81%	80%
Total Complaints/Passenger – All Modes	1/11,514	1/17,032	1/18,543
Miles Between Preventable Accidents	62,857	113,557	83,156
Fleet Readiness – Percent Bus Days Out of Service	5.18%	5.54%	5.26%
On-Time Performance	79%	81%	80%
Miles between Preventable Roadcalls and Missed Trips	56,965	43,260	44,620

Figure 53 Fixed-Route System Level Service Standards

Measure	Service Standard	2013	2014	2015
Ridership	Increase from prior year	-1.4%	-4.3%	-0.1%
	Standard Met?	**No**	**No**	**No**
Passengers per Revenue Hour	At least 15.0	13.9	13.1	13.2
	Standard Met?	**No**	**No**	**No**
Passengers per Revenue Mile	Greater than 1.0	0.9	0.9	0.9
	Standard Met?	**No**	**No**	**No**
Farebox Recovery Ratio	At least 20%	14%	12%	14%
	Standard Met?	**No**	**No**	**No**
Change in Operating Cost Per Hour	Growth less than five percentage points above change in Bay Area CPI (2.3% in FY 2015)	-1.8%	15.9%	-11.3%
	Standard Met?	**Yes**	**No**	**Yes**

Standards that were not achieved in FY 15 include:

- Ridership: this has decreased for the past three years; however the rate of ridership loss is slowing; route changes made as part of the COA will seek to increase ridership.
- Passengers per Revenue Hour: this has consistently stayed around 13-14 passengers for the past three years, but attaining 15 passengers per revenue hour in the next several years is possible.
- Passengers per Revenue Mile: this has consistently stayed at 0.9 passengers for the past three years, which is very close to the standard; as with passengers per revenue hour, it will be possible to reach the standard over the next several years.
- Farebox Recovery Ratio: with the loss in ridership and addition of service over the past several years, it has been difficult reaching the standard of 20%.

Paratransit Operations

Paratransit performance metrics are shown below in Figure 54. Significant increases in the number of paratransit trips have occurred over the years, which have been largely due to group trips provided to social service agencies as well as individual trips provided to dialysis centers and adult day programs. It can be seen that total costs have significantly increased due to the increase in total trips and the increased cost per trip from LAVTA's new contractor, MTM. Over the three-year period, total cost jumped almost 36%. While farebox revenue also increased, it was not enough to cover the increased costs. To ensure the increased costs were balanced in the budget, LAVTA utilized a greater amount of TDA revenue each year, resulting in the need to utilize 73% more TDA revenue in FY 2015 than FY 2013.

Figure 54 Paratransit Performance Metrics

Measure	2013	2014	2015	3-Year Average
Total Fare Revenue	$173,817	$196,974	$203,821	$574,612
% Change	-	*13.3%*	*3.5%*	*17.3%*
Total TDA Revenue	$410,101	$519,139	$709,263	$1,638,502
% Change	-	*26.6%*	*36.6%*	*72.9%*
TDA Revenue per Trip	$9.80	$11.87	$15.27	$12.31
% Change	-	*21.2%*	*28.7%*	*55.9%*
Total Trips	41,855	43,731	46,441	44,009
% Change	-	*4.5%*	*6.2%*	*11.0%*
Operating Cost per Trip	$28.80	$31.23	$35.21	$31.74
% Change	-	*8.4%*	*12.8%*	*22.3%*
Total Cost	$1,205,257	$1,365,572	$1,635,154	$1,401,994
% Change	-	*13.3%*	*19.7%*	*35.7%*
Farebox Recovery Ratio	14%	14%	12%	13.44%
% Change		*0.0%*	*-2.0%*	*-13.6%*

It is expected that the number of trips will only increase into the near future, which is not sustainable to LAVTA's operations as funding sources diminish and change. Staff is currently considering a comprehensive assessment of paratransit services in the Tri-Valley to evaluate the paratransit service delivery model which will provide a plan of action in creating a more sustainable paratransit service. The assessment will include a market analysis, peer review, community outreach, utilization analysis, ridership forecasts, and recommendations for modification.

The following is an excerpt from a staff report presented on October 5, 2015 regarding the areas that may be examined in the paratransit comprehensive assessment.

- *Service Area: The Americans with Disabilities Act (ADA) requires that complemenary paratransit services be provided no less than ¾ miles from a fixed-route bus line. LAVTA's paratransit service area is extended to all the cities in the Tri-Valley, and as far north as San Ramon medical center, beyond the ¾ mile boundary of the fixed route system.*
- *Functional Assessments: ADA allows agencies to assess the passenger's ability to utilize (or not utilize) the fixed-route bus system based on trip purpose. Currently, LAVTA certifies a passenger as ADA eligible with an application signed by their doctor. However, many other agencies who provide paratransit service require in-person functional assessments to determine whether a passenger may be eligible to ride fixed-route buses for particular trips.*

- *Subscription Trips: ADA does not require that an agency offer subscription trips, which are trips that are scheduled to occur at regular intervals (i.e. once per week) that do not require the customer to call and make a reservation. The majority of the current subscription trips are for adult daycare programs and dialysis.*
- *Group Trips: Providing group trips to and from the social service centers and activity sites could be examined.*
- *Negotiating Pickup Time: Currently, a paratransit trip can be scheduled at any time requested by the passenger and pickups occur within a 30-minute window. ADA allows for an agency to negotiate a pick-up time up to one hour before and after the requested time.*
- *Fare: The current fare to ride Paratransit is $3.50. ADA allows agencies to charge up to double the base fixed route fare for paratransit trips. LAVTA may want to explore a fare increase for paratransit trips.*

Figure 55 presents qualitative service standards that LAVTA holds to its paratransit contractors, which is called the Service Quality Standard Index (SQSI); it contains four metrics. The contractor is awarded a bonus or given a penalty each quarter based on whether they meet the SQSI per quarter. In FY 2013 and FY 2014, the contractor was ALC (American Logistics Company) and the quarterly bonus and penalty for SQSI was only based on a single metric: Valid Complaints per 1,000 passengers. Currently, quarterly bonus and penalty for SQSI necessitates the contractor to meet four out of four metrics. As of FY 2015, the paratransit contractor is MTM (Medical Transportation Management). They were able to meet three out of four metrics; MTM did not answer phone calls within 60 seconds 95% of the time, which resulted in some quarterly penalties. LAVTA will continue to hold its paratransit contractors to these standards throughout the SRTP period.

Figure 55 Paratransit Service Standards

Measure	Service Standard	2013	2014	2015
Valid Complaints per 1,000 Passengers	Less than 1.0	2.1	2.15	0.24
	Standard Met?	No	No	Yes
On Time Performance	Greater than 95%	94%	95%	97%
	Standard Met?	No	Yes	Yes
Phone Calls Answered within 60 seconds	Greater than 95% of the time	97%	92%	80%
	Standard Met?	Yes	No	No
Preventable Accidents per 100,000 Miles	Less than 1.0	0.00	0.00	0.02
	Standard Met?	Yes	Yes	Yes

OTHER MTC PERFORMANCE RELATED CATEGORIES

Equipment and Facility Deficiencies/Remedies

LAVTA's capital assets include its bus fleet, its Rutan Maintenance/ Operations/ Administration Facility (MOA), Atlantis Court bus staging facility, 90 bus stops, and one transit center (in

Downtown Livermore). The MOA facility includes a bus probing area that fuels and washes the bus fleet, allowing for clean and well maintained vehicles.

LAVTA does not foresee significant deficiencies with its equipment or facilities during the SRTP period. The agency expects its fleet to remain at the same size during this period; the existing facilities would be able to accommodate more vehicles should there be a need.

Community-Based Transportation Planning Program (CBTP)

LAVTA does not have any CBTP or welfare-to-work programs. Low-income projects and services that have received lifeline funding include bus stop improvements and Route 14 service.

Title VI and Equity Policies

LAVTA operates its services without regard to race, color, and national origin in accordance with Title VI of the Civil Rights Act. LAVTA's latest Title VI Program was submitted on April 1, 2013 and includes the following sections to comply with FTA Circular 4702.1B:

- Notify beneficiaries of protection under Title VI
- Title VI discrimination complaint procedures
- Title VI investigations, complaints, and lawsuits records
- Public participation plan
- Language assistance to persons with limited English proficiency
- Racial breakdown of LAVTA's appointed committees
- Reporting subrecipient compliance (not applicable)
- Equity analysis for the location of new construction (not applicable)
- Fixed-route transit provider requirements
  - System wide service standards
  - Systemwide policies

FTA Triennial Review

LAVTA completed the FTA Triennial Review in March 2015. The review focused on 17 areas; 10 deficiencies within the following 7 areas were found:

- Technical Capacity
- Maintenance
- ADA
- Procurement
- DBE
- Planning/Program of Projects
- Charter Bus

These deficiencies were not found in previous FTA Triennial Reviews. In response to the review, LAVTA has taken the following corrective actions:

- LAVTA submitted to FTA regional office procedures for spending older funds first, tracking projects, identifying project balances, reprogramming the unused project funds to other projects, or closing out the projects.
- LAVTA submitted to FTA regional office a revised facility/equipment maintenance program.
- LAVTA submitted to the Regional Civil Rights Officer procedures for monitoring its operations for compliance with required ADA service provisions. In addition, fixed-route contractor training and inspection forms have been updated to include appropriate ADA compliance and were also submitted for review.
- LAVTA submitted to the Regional Civil Rights Officer procedures for its ADA eligibility appeals process to meet the regulatory requirements.
- LAVTA provided the FTA regional office documentation that it has updated its procurement process to include development of independent cost estimates prior to receipt of bids or proposals. For the next procurement, LAVTA will submit to the FTA regional office documentation that the required process was implemented.
- LAVTA submitted to the FTA regional office procedures to search the System of Award Management (SAM) website before entering into applicable transactions. For the next procurement, the grantee must submit to that same office documentation that the required process was implemented.
- LAVTA submitted a missing Uniform Report of DBE Awards or Commitments and Payments in TEAM-Web. It also submitted to the Regional Civil Rights Officer an implemented procedure to ensure that future reports are submitted on time.
- LAVTA submitted documentation to the Regional Civil Rights Officer to demonstrate that it has implemented a corrective action plan establishing specific steps and milestones to correct problems related to DBE goal achievement analysis.
- LAVTA submitted to FTA regional office language relating to the program of projects public participation procedures and a listing of designated recipient transit operators.
- LAVTA submitted a missing quarterly report in TEAM-Web related to charter buses. It also submitted to the FTA regional office procedures for completing the required reports for all applicable exceptions on time.

Environmental Justice

To ensure that service and fare changes are not disproportionately impacting any populations within the LAVTA service area, extensive public outreach and involvement is performed prior to any major service change or fare increase.

The most recent public outreach and involvement process occurred in October 2015 was to present proposed alternative service scenarios for the LAVTA route network as part of the Wheels Forward planning effort (or Comprehensive Operational Analysis). Three workshops were held at various locations in the Tri-Valley area including one meeting each in Dublin, Livermore, and Pleasanton. All venues were ADA accessible, and interpreters were available with advance notification.

To advertise these events, flyers were posted in the communities, on buses, at bus stops, and at transit facilities the weeks before the meetings. Meeting advertisements were provided in English, Spanish, and Mandarin. Information about the proposed service scenarios was available in

English and Spanish on the LAVTA website. Radio advertisements and newspaper notices were also incorporated into the public outreach. Based on input from the community, LAVTA created a recommended service change plan. This plan will be presented to the LAVTA Board of Directors in February 2016, and a public hearing will be conducted in March 2016. As a public hearing, public comment on the service changes will be taken prior to the Board of Directors voting on adopting the plan. The plan is expected to be in front of the Board for approval in April 2016.

6 OPERATIONS PLAN & BUDGET

OPERATIONS PLAN

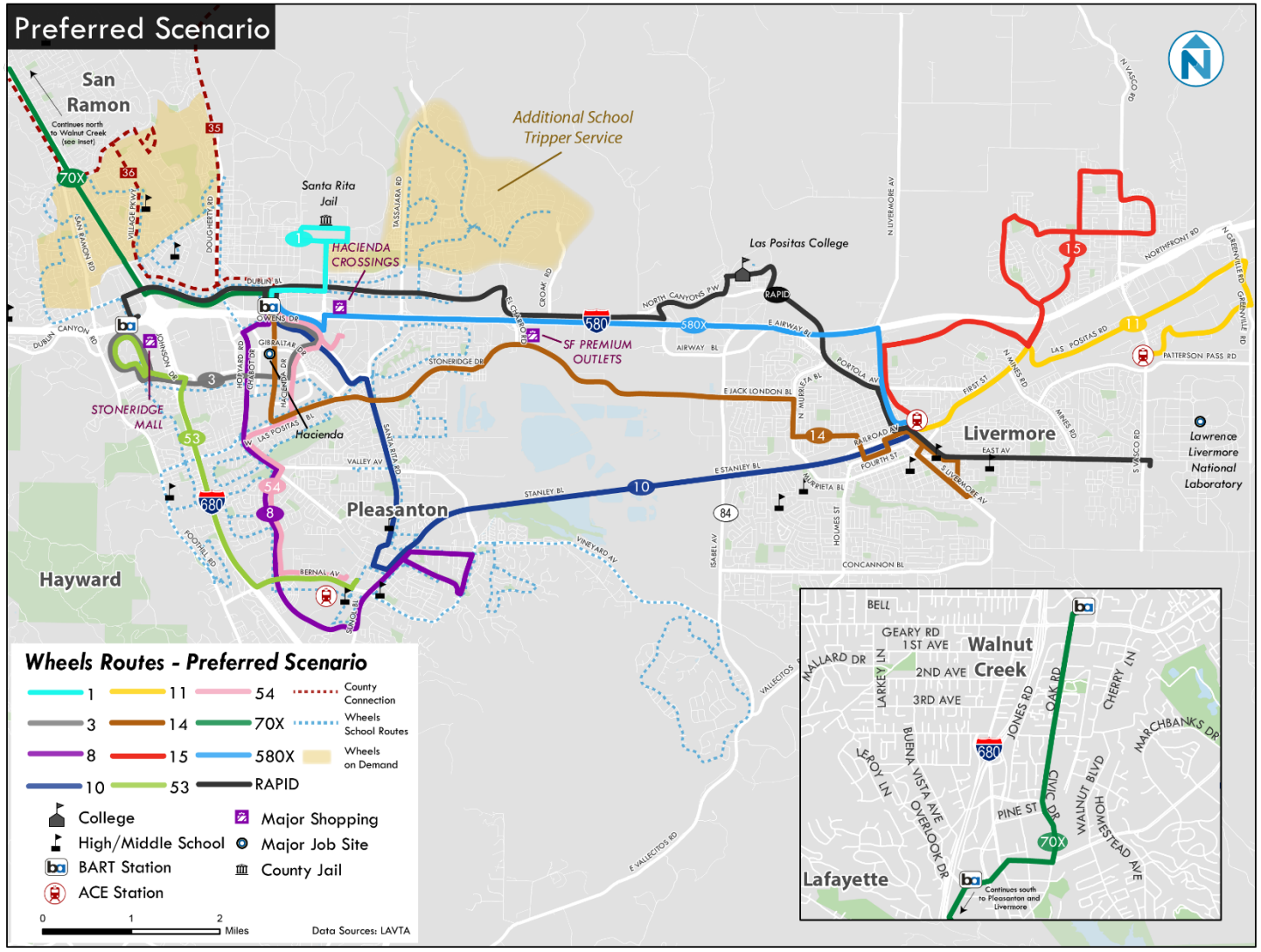
Introduction

As a result of the Comprehensive Operational Analysis (COA), to be completed in 2016, LAVTA is planning a series of service changes to improve ridership and utilization. Four common themes guided the development of the service changes:

- Improve ridership and farebox recovery ratio of the Rapid
- Improve access to BART
- Reduce duplication of service
- Simplify the service

A map of the future service network is shown on the following page, and route-by-route changes are described in the following section.

Figure 56 Future LAVTA Network Map



Local Routes

Rapid

The ridership and productivity of the Rapid service has not met market expectations. Moreover, due to poor performance, MTC is withholding operating funding. Rapid also suffers from variable running times. The Stoneridge Mall area is the area where travel time differences by time of day are most acute. Recommendations include:

- **End the Rapid at the West Dublin/Pleasanton BART station** – the existing alignment to the Stoneridge Mall is indirect, fraught with traffic conflicts, and is less productive than almost all other segments. Stoneridge Mall itself could still be accessed from the Rapid via a walk across the BART station skybridge. A restructured Route 3 will continue to provide service to Stoneridge Mall and the Stoneridge Mall Road loop.
- **Extend Hours of Service** – Rapid service currently ends at about 7 p.m. and does not operate on weekends. Rapid should operate 7 days a week to be consistent. In addition, Rapid should operate to midnight 7 days a week.
- **Extend Rapid to serve Las Positas Community College via I-580 –** Rapid's alignment should be adjusted to serve a bigger all-day market. Stops on Stanley Boulevard in Livermore would no longer be served by Rapid, but would be served by expanded Route 10 service. The Outlet Mall would be served by a revised Route 14.
- **Reduce Duplication of Service with Local Routes** – In conjunction with recommendations for Route 10 no longer operating on East Avenue in Livermore and Route 12 no longer operating on Dublin Boulevard in Dublin, Rapid service would need to add additional stops along both East Avenue and Dublin Boulevard. Travel time would increase slightly as a result.

These recommendations will improve ridership and likely achieve the 20% farebox recovery ratio goal set by MTC.

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	5:15 - Midnight	5:15 - Midnight	5:15 - Midnight

Headways (min)	Weekday	Saturday	Sunday
Early AM	15	60	60
AM peak	15	60	60
Midday	15	60	60
PM peak	15	60	60
Evening	30	60	60
Night (after 9 pm)	60	60	60

Route 1 – Santa Rita Jail to E. BART

Route 1 is a feeder route for the E Dublin/Pleasanton BART station whose only unique market is service to the Santa Rita jail and the Rose Pavilion. Route 1 is a one-way loop which ensures out-of-direction travel on any round trip. Route 1 duplicates segments of Routes 2, 12, and 9. Recommendations for Route 1 are designed to create a unique market for Route 1, and include:

- **Operate as a connector between East Dublin/Pleasanton BART to the Santa Rita Jail** – This recommendation will provide bi-directional service between the Jail, employers along Hacienda Drive, and BART. It will reduce duplication of service with other routes in both Dublin and Pleasanton. The Rose Pavilion stops will no longer be served, but are within a 0.4 mile walk of frequent Route 10 service.
- **Interline Route 1 with a restructured Route 8**

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	6:00 a.m. - 9:00 p.m.	8:00 a.m. - 9:00 p.m.	8:00 a.m. - 9:00 p.m.

Headways (min)	Weekday	Saturday	Sunday
AM peak	30	60	60
Midday	60	60	60
PM peak	30	60	60
Evening	60	60	60

Route 2 – E. BART to Dublin Ranch to E. Bart

Route 2 is a feeder route for the E Dublin/Pleasanton BART station that operates during peak hours only. Its markets are service to BART as well as to Fallon Middle School. The route includes a circuitous one-way loop, and it carries few riders. Recommendations include:

- **Delete Route 2 due to low ridership**
- **Replace Route 2 with a demonstration project named *Wheels-On-Demand,*** which will utilize real-time, dynamic ridesharing in the East Dublin area instead of a large, fixed-route bus.
- **Add school tripper trips in the area currently served by Route 2** to replace service to Fallon Middle School.

Route 3 – E. BART to Stoneridge Mall

Route 3 is a peak-only feeder route serving two BART stations. Despite 30-minute peak frequency, Route 3 is a very low performing route. The alignment is circuitous, difficult to understand, and requires out-of-direction travel. It is a peak only route on weekdays, and operates one direction in the morning and another in the afternoon. Two County Connection routes (35 and 36) provide service between the Dublin/Pleasanton BART station and the area of Dublin served by Route 3. Recommendations for Route 3 include:

- **Delete segments serving Village Parkway and Dougherty Road –** Ridership is low in these areas and County Connection serves these corridors. County Connection has similar fares and accepts transfers from Wheels as well. Additional replacement service would be provided by the "*Wheels on Demand*" demonstration project.
- **Restructure Route 3 to feed BART and serve area around Stoneridge Mall–** Route 3 would operate bi-directionally between the two Dublin/Pleasanton BART stations, serving the Hacienda Business Park and Stoneridge Mall.
- **Extend Route 3 span of service to 1:00 a.m.**
- **Operate every 45 minutes during the day on weekdays, every 40 minutes on weekends, and every 60 minutes at night**
- **Operate seven days a week**
- **Interline Route 3 with Route 10 after 9:00 p.m.**

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	6:00 a.m. – 1:00 a.m.	8:00 a.m. – 1:00 a.m.	8:00 a.m. – 1:00 a.m.

Headways (min)	Weekday	Saturday	Sunday
AM peak	45	40	40
Midday	45	40	40
PM peak	45	40	40
Evening	45	40	40
Night (after 9 pm)	60	60	60

Route 8 – E. BART to Downtown Pleasanton

Routes 8A and 8B are feeder routes that operate as large counter-clockwise and clockwise loops on weekdays, with several differences in route deviations. There are three different variants of this route, depending on day and time. The following recommendations are made for Route 8:

- **Create a consistent bi-directional route between BART and Pleasanton** – Route 8 would operate the same alignment, seven days a week. The Santa Rita segments of the route would no longer be served by Route 8, but instead be served by more frequent Route 10 service.
- **Streamline Route 8 so that it can operate hourly all-day, seven days a week -** The deviations into the Bernal Business Park would be eliminated due to low ridership.
- **Operate the existing Kottinger loop seven days a week**
- **Operate every 30 minutes during peak periods, and hourly during the off peak**
- **Interline with Route 1**
- **Expand span of service until 9 p.m. on Sundays**

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	6:00 a.m. - 9:00 p.m.	8:00 a.m. - 9:00 p.m.	8:00 a.m. - 9:00 p.m.

Headways (min)	Weekday	Saturday	Sunday
AM peak	30	60	60
Midday	60	60	60
PM peak	30	60	60
Evening	60	60	60

Route 9 – E. BART/California Center/Hacienda Business Park

Route 9 is a feeder route designed as a short collector to distribute BART passengers to the Hacienda Business Park. Despite operating every 15 minutes during peak periods, ridership is very low. Recommendations for Route 9 include:

- **Delete Route 9 due to low productivity.** Route 9 would be replaced by enhanced Route 10 service, a revised Route 3, a revised Route 14, and Route 54 service.

Route 10 – Livermore, Pleasanton, Dublin, E. BART

Route 10 is a one of LAVTA's strongest performers. Route 10 has several different variants. During early mornings and late evenings, and weekends (when Rapid is currently not operating), Route 10 is extended to serve Stoneridge Mall. In Livermore, not all trips are extended to the East Avenue terminus. The East Avenue and Stanley Boulevard segments duplicate the Rapid. Recommendations include:

- **Terminate Route 10 at the Livermore Transit Center to reduce duplication with Rapid on East Avenue.** Rapid would continue to serve East Avenue, including new service on evenings and weekends.
- **Improve weekday frequency to every 15 minutes during peak and midday hours** – This will improve the ability for Livermore and Pleasanton residents to access BART, and will facilitate transferring to other local routes along the alignment.
- **Operate Route 10 at 30 minute service during Saturdays and Sundays –** Waits at BART will still be reasonable, but this will also enhance connections with other LAVTA routes, including Route 15, 3, 8, and 1.
- **Cease the extension to Stoneridge Mall** – A restructured Route 3 will make that connection 7 days a week.
- **Interline with Route 3 after 9:00 p.m.**

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	4:30 a.m. - 1:00 a.m.	5:30 a.m. - 1:00 a.m.	6:00 a.m. - 1:00 a.m.

Headways (min)	Weekday	Saturday	Sunday
Early AM	30	45	-
AM peak	15	45	45
Midday	15	30	30
PM peak	15	30	30
Evening	30	45	45
Night (after 9 p.m.)	60	60	60

Route 11 Transit Center to Greenville Road and Vasco Road ACE

Route 11 is a peak only service that connects the Livermore Transit Center with employment sites in northeast Livermore. Service is every 45 minutes, and ridership is low. Recommendations include:

- **Extend to Vasco Road ACE Station –** Route 11 would be converted to a bidirectional route between Livermore Transit Center and the Vasco Road ACE station, serving the industrial area in between. In the morning, the route would connect to two ACE trains at Vasco Road, and another ACE train at the Transit Center. In the afternoon, it would connect with three ACE trains at Vasco Road. This will improve connections for the many workers who live in the San Joaquin Valley and work in the industrial area.
- **Adjust schedule to operate every 60 minutes to facilitate transfers –** Transfers to Route 10 and 15 could be made at the Livermore Transit Center for all trips in both directions, which should increase the ridership market.

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	6:00 a.m. – 9:00 a.m. 4:00 p.m. – 7:00 p.m.	-	-

Headways (min)	Weekday	Saturday	Sunday
AM peak	60	-	-
Midday	-	-	-
PM peak	60	-	-
Evening	-	-	-

Route 12 – Livermore Transit Center to E. BART

Route 12 connects Livermore with Las Positas College and Dublin. Route 12 duplicates Route 10 and Rapid service on Stanley Boulevard. Route 12 duplicates Rapid service on Dublin Boulevard. The unique market of Los Positas College is the defining feature of Route 12. Recommendations for Route 12 include:

- **Consolidate Route 12 with Rapid –** With the recommendation to revise the Rapid to serve Las Positas College, Route 12 no longer has a unique market. Rapid would serve the Dublin Boulevard segments and a restructured Route 14 would serve the Livermore segments of the existing Route 12.

Route 12X – Livermore Transit Center to E. BART Express

Route 12X is designed to be an express version of Route 12 that skips Las Positas College during peak times. Route 12X and Route 20 are interlined, so the same vehicle does both. Route 12X is does not attract significant ridership. Recommendations for Route 12X include:

- **Delete route due to low ridership and duplication with Rapid**

Route 14 West Livermore – Outlet Mall – E. Dublin BART

Route 14 is a feeder/circulator route in Livermore that has above average ridership. Recommendations include:

- **Extend Route 14 to Dublin via Stoneridge** – This recommendation would transform Route 14 from a neighborhood circulator to a regional connector. It will also provide one-seat ride service from multiple Livermore neighborhoods to BART and employment areas in Pleasanton. Route 14 would be extended to serve Jack London, San Francisco Premium Outlets, Hacienda Business Park, and the E. Dublin BART station. This route would also address one of the biggest requests for service to Stoneridge Creek. Route 14 would operate within ¼ mile of the LAVTA facility on Rutan Court, but not serve it directly. The route would also serve the Civic Center Library seven days a week, which was a frequent request by the public.
- **Operate on weekends –** Route 14 would operate on weekends. Employer access to the Premium Outlets is one of the prime drivers of this recommendation.

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	7:00 a.m. – 10:00 p.m.	8:00 a.m. – 10:00 p.m.	8:00 a.m. – 10:00 p.m.

Headways (min)	Weekday	Saturday	Sunday
AM peak	30	60	60
Midday	60	60	60
PM peak	30	60	60
Evening	60	60	60
Night (after 9 p.m.)	60	60	60

Route 15 – Livermore Transit Center to Springtown

Route 15 is productive feeder route in Livermore. Recommendations include:

- **Operate every 30 minutes during midday weekday periods** – This will improve frequency for Route 15 riders and improve transfers between Route 15 and other routes, such as Route 10, at Livermore Transit Center.
- **Modify alignment to improve route directness** - Route 15 should have a minor realignment to operate on Junction Ave to N. Livermore Ave.

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	5:00 a.m. – Midnight	6:00 a.m. – 10:00 p.m.	7:00 a.m. – 9:00 p.m.

Headways (min)	Weekday	Saturday	Sunday
Early AM	60	-	-
AM peak	30	60	60
Midday	30	60	60
PM peak	30	60	60
Evening	60	60	60
Night (after 9 p.m.)	60	60	-

Route 20X – BART to Vasco Road to Transit Center

Route 20X is a Primary route that travels on I-580 to the LLNL via Vasco Road. Despite travel time between BART and Lawrence Livermore National Laboratory being quicker on Route 20X, fewer than 15 people a day are making this trip. Recommendations for Route 20X include:

- **Delete Route 20X service due to low ridership** – there are insufficient numbers of passengers to warrant express service between BART and the employment areas of East Livermore.
- **Two alternatives are proposed for Route 20X riders**:
  - **A new Route 580X would provide non-stop service between BART and the Livermore Transit Center.** At the Livermore Transit Center, connections to the Lawrence Livermore National Laboratory would be available via the Rapid and connections to the industrial area along Los Positas would be available via Route 11.
  - **BART-Based Vanpool Service**– Alternatively, Route 20X service can be provided with a BART-Based vanpool service. A vanpool(s) would be better able to match times with BART and be able to distribute riders within the Lab itself. Vans would have reserved parking at BART.

Route 51 – Transit Center to Civic Library

Route 51 is a feeder route that operates only in the afternoons and evenings. Almost the entire route is served more frequently by Route 14. Recommendations for Route 51 include:

- **Consolidate Route 51 with Route 14.** The restructured Route 14 would serve the Civic Center/Library stop every 30 minutes during the afternoon peak times, which would remove the need to operate Route 51.

Route 53 Pleasanton ACE Station to W. BART

Route 53 provides a peak-hour connection between ACE trains and BART and has very high productivity. No changes are recommended to Route 53.

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	5:30 a.m. – 8:45 a.m. 4:00 p.m. – 7:15 p.m.	-	-

Headways (min)	Weekday	Saturday	Sunday
AM peak	25 - 75	-	-
Midday	-	-	-
PM peak	60	-	-
Evening		-	-

Route 54 – Pleasanton ACE Station to Hacienda / E. BART

Route 54 provides peak-hour connections between ACE trains and BART, but is designed to circulate through the Hacienda business park. Ridership is relatively high, especially near the BART station. Recommendations for Route 54 include:

- **Streamline route** – To provide faster travel times, streamline the route to serve Bernal, Hopyard, Las Positas, Hacienda, Owens, and Rosewood. The deviation to serve Bernal Business Park would be eliminated due to low ridership.
- **Connect BART to Rosewood Commons** – Current out-of-service trips between the BART and ACE stations would stop at Rosewood Commons to provide a direct connection between the employment site and BART.
- **Route 54 would continue to meet the ACE trains it currently meets.**

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	6:50 a.m. – 8:30 a.m. 3:45 p.m. – 6:30 p.m.	-	-

Headways (min)	Weekday	Saturday	Sunday
AM peak	2 trips	-	-
Midday	-	-	-
PM peak	3 trips	-	-
Evening	-	-	-

Route 70X and 70XV – Pleasant Hill BART to E. Dublin BART

Routes 70X and 70XV are peak bi-directional express routes between the Dublin/Pleasanton BART line and the Pittsburg/Bay Point line at Walnut Creek and Pleasant Hill. Productivity for Route 70X is better than 70XV. Recommendations include:

- **Eliminate Route 70XV –** Route 70XV does not show the ridership to support a separate targeted trip. Existing Route 70XV riders can utilize Route 70X and transfer to the Rapid or Route 3 to access their destinations.

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	5:45 a.m. – 9:00 p.m. 4:00 p.m. – 7:00 p.m.	-	-

Headways (min)	Weekday	Saturday	Sunday
AM peak	30	-	-
Midday	-	-	-
PM peak	30	-	-
Evening	-	-	-

Route 580X Livermore to BART Express

In order to better connect Livermore residents to BART, and address concerns regarding parking availability at BART, a new Route 580X should be operated, connecting the Livermore Transit Center and BART.

Route 580X would operate on weekdays only, providing non-stop service between these two transit centers. Route 580X would utilize the HOT lanes on I-580 to improve speed and reliability between these two destinations.

During weekday midday and evening periods, patrons who have either walked to or parked their vehicle at the Livermore Transit Center would have the option of returning to the Livermore Transit Center with the Rapid route.

Span and Headway

	Weekday	Saturday	Sunday
Span of Service	5:30 a.m. – 8:30 a.m. 4:00 p.m. – 7:00 p.m.	-	-

Headways (min)	Weekday	Saturday	Sunday
AM peak	30	-	-
Midday	-	-	-
PM peak	30	-	-
Evening	-	-	-

Local-Route Summary

Figure 57 Existing and Proposed Service Frequencies

Route	Existing								Proposed							
	Early AM	AM Peak	Midday	PM Peak	Eve.	Night	Sat	Sun	Early AM	AM Peak	Midday	PM Peak	Eve.	Night	Sat	Sun
Rapid	15	15	15	15	15	-	-	-	15	15	15	15	30	60	60	60
Route 1	-	30	30	30	30	-	30	30	-	30	60	30	60	-	60	60
Route 2	-	60	-	60	60	-	-	-	-	-	-	-	-	-	-	-
Route 3	-	30	-	30	60	-	60	-	-	45	45	45	45	60	40-60	40-60
Route 8	-	60	60	60	60	-	50-60	40	-	30	60	30	60	-	60	60
Route 9	-	15-30	-	15	-	-	-	-	-	-	-	-	-	-	-	-
Route 10	30	30	30	30	30	40	16-48	40	30	15	15	15	30	60	30-60	30-60
Route 11	-	45	-	45	-	-	-	-	-	60	-	60	-	-	-	-
Route 12	-	30	60	30	60	60	60	120	-	-	-	-	-	-	-	-
Route 12X	-	30	-	30	-	-	-	-	-	-	-	-	-	-	-	-
Route 14	-	30	30	30	30	-	-	-	-	30	60	30	60	60	60	60
Route 15	60	30	30-60	30	30-60	60	60	60	60	30	30	30	60	60	60	60
Route 20X	-	45	-	45	-	-	-	-	-	-	-	-	-	-	-	-
Route 51	-	-	-	30	30	-	-	-	-	-	-	-	-	-	-	-
Route 53	-	25-75	-	60	-	-	-	-	-	25 - 75	-	60	-	-	-	-
Route 54	-	65 – 75	-	60	-	-	-	-	-	2 trips	-	3 trips	-	-	-	-
Route 70X/70XV	-	30	-	30	-	-	-	-	-	30	-	30	-	-	-	-
Route 580X	-	-	-	-	-	-	-	-	-	30	-	30	-	-	-	-

Figure 58 Existing and Proposed Service Spans

Route	Existing			Proposed		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Rapid	5:16 a.m. – 8:04 p.m.	-	-	5:15 a.m. – Midnight	5:15 a.m. – Midnight	5:15 a.m. – Midnight
Route 1	6:00 a.m. – 8:55 p.m.	8:01 a.m. – 9:25 p.m.	8:01 a.m. – 9:25 p.m.	6:00 a.m. – 9:00 p.m.	8:00 a.m. – 9:00 p.m.	8:00 a.m. – 9:00 p.m.
Route 2	6:30 a.m. – 9:20 a.m. 3:20 p.m. – 6:48 p.m.	-	-	-	-	-
Route 3	5:55 a.m. – 9:20 a.m. 3:30 p.n. – 8:50 p.m.	9:01 a.m. – 5:51 p.m.	-	6:00 a.m. – 1:00 a.m.	8:00 a.m. – 1:00 a.m.	8:00 a.m. – 1:00 a.m.
Route 8	6:15 a.m. – 8:32 p.m.	8:01 a.m. – 11:11 p.m.	9:01 a.m. – 2:18 p.m.	6:00 a.m. – 9:00 p.m.	8:00 a.m. – 9:00 p.m.	8:00 a.m. – 9:00 p.m.
Route 9	6:30 a.m. – 9:19 a.m. 3:30 p.m. – 6:19 p.m.	-	-	-	-	-
Route 10	4:12 a.m. – 1:44 a.m.	4:57 a.m. – 1:14 a.m.	5:17 a.m. – 1:14 a.m.	4:30 a.m. – 1:00 a.m.	5:30 a.m. – 1:00 a.m.	6:00 a.m. – 1:00 a.m .
Route 11	6:42 a.m. – 8:48 a.m. 4:12 p.m. – 6:18 p.m.	-	-	6:00 a.m. – 9:00 a.m. 4:00 p.m. – 7:00 p.m.	-	-
Route 12	5:58 a.m. – 10:42 p.m.	9:01 a.m. – 9:47 p.m.	9:02 a.m. – 8:47 p.m.	-	-	-
Route 12X	7:12 a.m. – 9:12 a.m. 3:54 p.m. – 7:15 p.m.	-	-	-	-	-
Route 14	6:42 a.m. – 8:06 p.m.	-	-	7:00 a.m. – 10:00 p.m.	8:00 a.m. – 10:00 p.m.	8:00 a.m. – 10:00 p.m.
Route 15	5:12 a.m. – 11:58 p.m.	6:02 a.m. – 11:48 p.m.	7:08 a.m. – 8:43 p.m.	5:00 a.m. – Midnight	6:00 a.m. – 10:00 p.m.	7:00 a.m. – 9:00 p.m.
Route 20X	6:15 a.m. – 9:54 a.m. 3:52 p.m. – 6:36 p.m.	-	-	-	-	-
Route 51	3:12 p.m. – 6:57 p.m.	-	-	-	-	-
Route 53	5:36 a.m. – 8:41 a.m. 3:55 p.m. – 7:16 p.m.	-	-	5:30 a.m. – 8:45 a.m. 4:00 p.m. – 7:15 p.m	-	-
Route 54	5:36 a.m. – 8:23 a.m. 3:47 p.m. – 6:19 p.m.	-	-	6:50 a.m. – 8:30 a.m. 3:45 p.m. – 6:30 p.m.	-	-
Route 70X/70XV	5:43 a.m. – 8:53 a.m. 4:00 p.m. – 7:10 p.m.	-	-	5:45 a.m. – 9:00 p.m. 4:00 p.m. – 7:00 p.m	-	-
Route 580X	-.	-	-	5:30 a.m. – 8:30 a.m. 4:00 p.m. – 7:00 p.m		

Figure 59 Existing and Proposed Revenue Hours and Peak Vehicles

Route	Existing						Proposed					
	Revenue Hours			Peak Vehicles			Revenue Hours			Peak Vehicles		
	Wkdy	Sat	Sun	Wkdy	Sat	Sun	Wkdy	Sat	Sun	Wkdy	Sat	Sun
Rapid	125	-	-	10	-	-	123	38	38	9	2	2
Route 1	15	13	13	1	1	1	9	8	8	0.7	0.6	0.6
Route 2	6	-	-	1	-	-						
Route 3	14	9	-	2	1	-	23	15	15	1	1	1
Route 8	26	13	5	2	1	1	27	18	18	2.3	1.4	1.4
Route 9	9	-	-	1	-	-	-	-	-	-	-	-
Route 10	82	111	70	5	9	4	102	48	47	7	3	3
Route 11	4	-	-	1	-	-	6	-	-	1	-	-
Route 12/12X	50	26	12	7	2	1	-	-	-	-	-	-
Route 14	13	-	-	1	-	-	40	28	28	4	2	2
Route 15	28	16	14	2	1	1	28	16	14	2	1	1
Route 20X	7	-	-	2	-	-	-	-	-	-	-	-
Route 51	4	-	-	1	-	-	-	-	-	-	-	-
Route 53	6	-	-	1	-	-	6	-	-	1	-	-
Route 54	4	-	-	1	-	-	4	-	-	1	-	-
Route 70X/70XV	16	-	-	5	-	-	16	-	-	4	-	-
Route 580X	-	-	-	2	-	-	12	-	-	2	-	-
Total	410	188	114	40	13	8	395	170	167	35	11	11

School Routes

Several changes to school routes are proposed. In Livermore, all three school routes (401, 402, and 403) are proposed for elimination, as students prefer to utilize the Rapid, Route 10, Route 15 and others that provide quality transportation to Livermore middle and high schools.

In Dublin, an additional route that will provide service to high school students traveling from east Dublin to Dublin High School is proposed. The exact routing is being developed with input from the Dublin School District.

No changes to school routes are planned for the Pleasanton area.

Wheels on Demand

A demonstration project is proposed to provide subsidized trips on taxi and Transportation Network Company (TNC) services to and from designated areas in Dublin. Most areas within the City of Dublin, north of Dublin Blvd, do not have the density of housing or employment to support Wheels fixed route service. However, large numbers of single occupancy trips are taken daily in Dublin to repeat locations for work and other activity centers. Under this program, users traveling to or from designated areas in Dublin, which are shown in Figure 56, would receive a subsidy towards their taxi or TNC trips.

The initial funding would be through a partnership of Wheels and Alameda County Transportation Commission. The funding would not include federal dollars. The demonstration project would be a 1-year duration, or until funding is exhausted, to evaluate the productivity and efficiencies of the program.

Paratransit

Wheels operates ADA paratransit service for people who cannot use the fixed route bus system in Livermore, Dublin, Pleasanton, and surrounding unincorporated areas of Alameda County. The service is available wherever and whenever fixed-route service is operating. As an exception, service is also provided to and from the San Ramon Medical Center and to the V.A. hospital in Livermore if one end of the trip is in Livermore, Dublin, or Pleasanton.

No significant changes to paratransit service are planned at this time. However, LAVTA staff is examining a variety of potential changes to the paratransit program to manage costs, which have increased significantly in recent years due to increased ridership. In the future, changes may be made to eligibility, trip negotiation, trip subscription allowances, and other components of the paratransit service.

OPERATIONS BUDGET

This section summarizes the operating budget for the SRTP period. Fixed-route and paratransit budgets are presented separately.

Fixed-Route Budget

Figure 60, Figure 61, and Figure 62 display the budgeted fixed-route expenses, operating characteristics, and revenues from FY 2016 through 2025. TDA 4.0 funds are assumed to balance the budget over the course of the SRTP period. Three-year retrospectives are shown in Tables 5-6 on the pages following the budget.

Figure 60 Fixed-Route Expense Budget for SRTP Period (FY 2016-2025)

Category	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Labor (b)	$1,208,506	$1,229,051	$1,249,944	$1,268,694	$1,286,455	$1,303,179	$1,322,727	$1,342,568	$1,364,049	$1,387,238
Fringe Benefits (c)	$648,575	$749,721	$762,466	$773,903	$784,738	$794,939	$806,863	$818,966	$832,070	$846,215
Services (e)	$1,033,335	$1,050,902	$1,068,767	$1,086,936	$1,105,414	$1,124,206	$1,143,318	$1,162,754	$1,182,521	$1,202,624
Fuel and Lube (d)	$1,541,300	$1,564,754	$1,603,996	$1,662,412	$1,715,543	$1,774,493	$1,837,654	$1,892,894	$1,949,194	$2,010,260
Utilities (f)	$260,880	$262,856	$265,850	$268,337	$270,167	$271,666	$274,714	$275,898	$278,974	$279,431
Insurance (e)	$527,048	$536,008	$545,120	$554,387	$563,812	$573,396	$583,144	$593,058	$603,140	$613,393
Purchased Transportation (a)	$8,855,346	$8,868,596	$9,316,030	$9,370,367	$9,631,801	$9,900,528	$10,176,753	$10,460,684	$10,752,537	$11,052,533
LAVTA Administration and Legal (b)	$492,349	$500,719	$509,231	$516,870	$524,106	$530,919	$538,883	$546,966	$555,718	$565,165
Total	**$14,567,339**	**$14,762,606**	**$15,321,406**	**$15,501,906**	**$15,882,035**	**$16,273,327**	**$16,684,056**	**$17,093,788**	**$17,518,202**	**$17,956,858**

Notes:

(a) Current contract escalators through end of option years- remaining years are calculated using the last year's escalator. FY17-18 includes $200,000 to account for potential startup costs associated with a new contractor

(b) Increase based on CPI projections from California DOT

(c) Assume 61% of labor costs based on analysis of prior benefit trends

(d) Based on projected increases in prices from Energy Information Administration

(e) Assumed to increase by 1.7% a year

(f) Based on projected increases for commercial electricity from Energy Information Administration

Figure 61 Fixed-Route Operating Characteristics

Category	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Revenue Hours	125,706	125,706	125,706	125,706	125,706	125,706	125,706	125,706	125,706	125,706
Deadhead hours	12,660	12,660	12,660	12,660	12,660	12,660	12,660	12,660	12,660	12,660
Ridership(a)	1,652,151	1,652,151	1,734,759	1,769,454	1,804,843	1,840,940	1,877,758	1,915,314	1,953,620	1,992,692
% Ridership Increase	0%	0%	5%	2%	2%	2%	2%	2%	2%	2%
Average Fare Per Passenger	$1.17	$1.18	$1.17	$1.17	$1.17	$1.17	$1.17	$1.17	$1.17	$1.16
Passenger per Revenue Hour	13.1	13.1	13.8	14.1	14.4	14.6	14.9	15.2	15.5	15.9
Farebox Recovery Ratio	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%
Cost per Hour	$115.88	$117.44	$121.88	$123.32	$126.34	$129.46	$132.72	$135.98	$139.36	$142.85

Notes:

(a) Ridership forecast to increase by 5% in FY17-18 due to Comprehensive Operational Analysis service changes, and then 2% per year thereafter

Figure 62 Fixed-Route Revenue Budget for SRTP Period (FY 2016-2025)

Category	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Passenger Fares (a)	$1,603,894	$1,603,894	$1,684,089	$1,717,770	$1,752,126	$1,787,168	$1,822,912	$1,859,370	$1,896,557	$1,934,489
Business Parks (b)	$141,504	$143,910	$146,356	$148,551	$150,631	$152,589	$154,878	$157,201	$159,717	$162,432
Special Contract Fares (b)	$195,001	$198,316	$201,687	$204,713	$207,579	$210,277	$213,431	$216,633	$220,099	$223,841
Interest (c)	$2,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Concessions (b)	$38,500	$39,155	$39,820	$40,417	$40,983	$41,516	$42,139	$42,771	$43,455	$44,194
Advertising (d)	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
STA (e)	$1,083,797	$1,280,646	$1,390,651	$1,510,086	$1,639,788	$1,780,630	$1,843,989	$1,909,602	$1,977,548	$2,047,914
STA Lifeline	$194,324	$0	$0	$0	$0	$0	$0	$0	$0	$0
BART Subsidy (f)	$622,455	$638,819	$655,614	$672,850	$690,540	$706,065	$721,939	$738,171	$754,767	$771,736
Measure B Express Bus (g)	$0	$500,000	$0	$0	$0	$0	$0	$0	$0	$0
Measure B and BB (h)	$1,515,343	$1,555,172	$1,596,066	$1,638,023	$1,681,088	$1,718,884	$1,757,535	$744,163	$760,896	$778,006
JARC and New Freedom/5310 (i)	$64,517	$0	$0	$0	$0	$0	$0	$0	$0	$0
RM2 (j)	$0	$580,836	$580,836	$580,836	$580,836	$580,836	$580,836	$580,836	$580,836	$580,836
TFCA (k)	$126,250	$138,875	$152,763	$168,039	$184,843	$203,327	$223,660	$246,026	$270,628	$297,691
FTA	$43,683	$884,200	$0	$0	$0	$0	$0	$0	$0	$0
TDA 4.0 Funds needed to balance budget	8,886,071	7,148,783	8,823,524	8,770,620	8,903,621	9,042,034	9,272,737	10,549,015	10,803,698	11,065,720
Total	**$14,567,339**	**$14,762,606**	**$15,321,406**	**$15,501,906**	**$15,882,035**	**$16,273,327**	**$16,684,056**	**$17,093,788**	**$17,518,202**	**$17,956,858**

Notes:
(a) Assumes no fare increase
(b) Increases based on CPI
(c) Interest calculation: Assume zero interest as analysis fees offset interest.
(d) Based on current contract, and assumes that bus wraps are no longer used
(e) Assumes STA program per MTC projections(plan Bay Area) with a one year budgeting lag
(f) BART's payments to LAVTA for providing feeder bus service to BART. Assumes contributions increase at the same rate as TDA 4.0
(g) Forecasts based on ACTC estimates of amounts available and historical receipts.
(h) Forecasts based on FY15 projections and escalated at the same rate as TDA. Measure B sunsets after FY 21-22.
(i) JARC, New Freedom, 5310 funds through a competitive grant process
(j) RM2 funds for BRT service reinstated in FY17
(k) Increases by 10% a year

Figure 63 Three-Year Retrospective of Fixed-Route Expenses

Category	ACTUAL FY 12-13	ACTUAL FY 13-14	ACTUAL FY 14-15	3-Year % Growth
Labor	$949,800	$1,069,649	$972,179	2.4%
Fringe Benefits	$564,112	$506,587	$443,442	-21.4%
Services	$673,883	$477,244	$680,447	1.0%
Purchased Transportation	$8,078,745	$8,272,858	$8,416,907	4.2%
Fuel, Parts, Supplies, and Other Operation Costs	$1,766,792	$1,981,054	$1,494,411	-15.4%
Insurance (a)	$73,613	$469,474	$417,526	467.2%
Administration and Legal	$226,415	$285,693	$308,161	36.1%
Total	**$12,333,360**	**$13,062,559**	**$12,733,073**	**3.2%**

Notes:

(a) Insurance expenses increased in FY 13-14 because LAVTA chose to exercise a large credit against the FY12-13 premium

Over the past three years, LAVTA's expenses increased in FY 2014, but then decreased in FY2015, leading to a modest 3.2% increase over the period. Reductions in the expense categories of fringe benefits, and fuels, parts, supplies, and other operation costs allowed LAVTA to reduce expenses in FY 2015 by $329,486 (from FY 2014). LAVTA will continue to work toward additional reductions in expenses and/or increasing revenue sources for the SRTP period to ensure the budget remains balanced.

Figure 64 Three-Year Retrospective of Fixed-Route Revenue

Category	ACTUAL FY 12-13	ACTUAL FY 13-14	ACTUAL FY 14-15	3-Year % Growth
Fares	$1,787,567	$1,723,635	$1,781,547	-0.3%
Special Contract Revenue (a)	$521,441	$286,085	$268,485	-48.5%
Advertising	$222,653	$245,295	$307,378	38.1%
Interest and Miscellaneous	$5,608	$58,918	$90,673	1,516.9%
TDA 4.0	$3,546,783	$3,504,695	$5,168,806	45.7%
STA	$1,944,252	$1,669,277	$1,802,747	-7.3%
Local Operating Assistance	$208,538	$36,347	$176,611	-15.3%
FTA	$1,897,680	$2,993,915	$579,080	-69.5%
Local Sales Tax - Measure B - Allocations	$793,899	$816,561	$851,519	7.3%
Local Sales Tax - Measure B - Grants	$741,551	$1,000,000	$1,000,000	34.9%
Local Sales Tax - Measure BB - Allocations	$0	$0	$125,391	100.0%
Bridge Tolls	$663,388	$727,831	$580,836	-12.4%
Total	**$12,333,360**	**$13,062,559**	**$12,733,073**	**3.2%**

Notes:

(a) Special Contract Revenue was higher in FY 12-13 than in other years because a developer obtained a one-time grant that was passed through to LAVTA

LAVTA has maintained appropriate revenue levels in the past several years, ensuring that expenses have been balanced. LAVTA will need to find solutions to attain additional revenue as sources diminish or become unavailable. From FY 2013 to FY 2015, certain revenue sources declined, including FTA funds, which were received due to the deferment of vehicle replacements. During those years, LAVTA had additional FTA funds from bus deferments that were used for operating expenses in order to increase TDA reserves. In order to balance the budget in the past three years, expenses were reduced, and LAVTA used revenue from advertising, interest and miscellaneous, TDA, and Measure B categories. LAVTA will continue to pursue revenue sources to maintain a balanced operational budget into the future.

Paratransit Budget

Figure 65, Figure 66, and Figure 67 display paratransit expenses, operating characteristics, and revenue from FY 2016 through 2025. Three-year retrospectives are shown in Figure 68 and Figure 69. TDA 4.0 funds are assumed to balance the budget throughout the SRTP period.

Figure 65 Paratransit Expense Budget for SRTP Period (FY 2016-2015)

Category	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Labor (a)	$85,374	$86,825	$88,301	$89,626	$90,881	$92,062	$93,443	$94,845	$96,362	$98,000
Fringe Benefits (b)	$37,981	$52,963	$53,864	$54,672	$55,437	$56,158	$57,000	$57,855	$58,781	$59,780
Services (d)	$44,250	$45,002	$45,767	$46,545	$47,337	$48,141	$48,960	$49,792	$50,639	$51,499
Utilities (c)	$3,420	$3,446	$3,485	$3,518	$3,542	$3,561	$3,601	$3,617	$3,657	$3,663
Insurance (d)	$9,115	$9,270	$9,428	$9,588	$9,751	$9,917	$10,085	$10,257	$10,431	$10,608
Purchased Transportation (e)	$1,838,033	$2,156,013	$2,309,090	$2,473,036	$2,648,621	$2,836,673	$3,038,077	$3,253,780	$3,484,799	$3,732,220
LAVTA Administration and Legal (a)	$26,936	$27,394	$27,860	$28,278	$28,673	$29,046	$29,482	$29,924	$30,403	$30,920
Total	**$2,045,109**	**$2,380,914**	**$2,537,795**	**$2,705,262**	**$2,884,241**	**$3,075,559**	**$3,280,648**	**$3,500,070**	**$3,735,071**	**$3,986,691**

Notes:

(a) Increase based on CPI projections from California DOT

(b) Assume 61% of labor costs based on analysis of prior benefit trends

(c) Based on projected increases in prices from Energy Information Administration

(d) Assumed to increase by 1.7% a year

(e) Costs are on a per-trip basis. FY15-16 trips totals are estimated based on existing trip trends. Trip totals for future years are assumed to increase by 15% in FY17, then 5% each year thereafter. Cost per trip is assumed to increase by 2% each year.

Figure 66 Paratransit Operating Characteristics

Category	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Revenue Hours	31,838	36,613	38,444	40,366	42,385	44,504	46,729	49,066	51,519	54,095
Passenger Trips (a)	56,542	65,023	68,274	71,688	75,273	79,036	82,988	87,137	91,494	96,069
Ridership	57,390	65,999	69,299	72,764	76,402	80,222	84,233	88,445	92,867	97,510
% Ridership Increase	27.6%	15.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Average Fare Per Passenger (b)	$3.15	$3.38	$3.60	$3.60	$3.60	$3.60	$3.60	$3.60	$3.60	$3.60
Passenger per Revenue Hour	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Farebox Recovery Ratio (W/ Special Contract)	10%	11%	11%	11%	11%	10%	10%	10%	10%	10%
Cost per Hour	$70.28	$72.38	$76.00	$78.28	$80.63	$84.66	$87.20	$89.82	$92.52	$95.29

Notes:

(a) FY15-16 trips totals are estimated based on existing trip trends. Trip totals for future years are assumed to increase by 15% in FY17, then 5% each year thereafter.

(b) A mid-year FY16-17 fare increase is assumed from $3.50 to $4.00

Figure 67 Paratransit Revenue Budget for SRTP Period (FY 2016-2015)

Category	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Passenger Fares (a)	$180,779	$222,745	$249,475	$261,949	$275,046	$288,798	$303,238	$318,400	$334,320	$351,036
Special Contract Fares	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600
TDA 4.5 (b)	$129,379	$123,457	$126,790	$130,214	$133,729	$136,805	$139,952	$143,171	$146,464	$149,832
STA Regional Paratransit (b)	$49,123	$46,875	$48,140	$49,440	$50,775	$51,943	$53,137	$54,359	$55,610	$56,889
Measure B and BB Paratransit (c)	$442,073	$453,692	$465,622	$477,863	$490,426	$501,452	$512,728	$319,154	$326,331	$333,669
FTA	$350,965	$340,965	$362,736	$373,649	$384,837	$396,414	$408,274	$420,532	$433,087	$446,148
TDA 4.0 Funds needed to balance budget	$859,191	$1,159,580	$1,251,431	$1,378,548	$1,515,828	$1,666,546	$1,829,719	$2,210,853	$2,405,660	$2,615,517
Total	**$2,045,109**	**$2,380,914**	**$2,537,795**	**$2,705,262**	**$2,884,241**	**$3,075,559**	**$3,280,648**	**$3,500,070**	**$3,735,071**	**$3,986,691**

Notes:

(a) A mid-year FY16-17 fare increase is assumed from $3.50 to $4.00

(b) Assumed continuation of STA program, revenue estimates from Plan Bay Area

(c) Forecasts based on FY15 projections and escalated at the same rate as TDA. Measure B sunsets after FY 21-22.

Figure 68 Three-Year Retrospective of Paratransit Expenses

Category	ACTUAL FY 12-13	ACTUAL FY 13-14	EST/ACT FY 14-15	3-Year % Growth
Labor	$70,676	$80,730	$82,332	16.5%
Fringe Benefits	$35,287	$30,062	$31,254	-11.4%
Services	$15,547	$32,440	$12,695	-18.3%
Purchased Transportation	$1,064,120	$1,194,535	$1,480,075	39.1%
Fuel, Parts, Supplies, and Other Operation Costs	$3,465	$3,579	$4,517	30.4%
Insurance	$0	$1,953	$2,152	100.0%
Administration and Legal	$16,162	$22,273	$22,129	36.9%
Total	**$1,205,257**	**$1,365,572**	**$1,635,154**	**35.7%**

Paratransit expenses have grown significantly over the past three years. Most of the categories of expenses increased significantly, contributing to a total growth of 35.7%. The only categories of expenses that were reduced were fringe benefits and services. At the current expense growth rate, the paratransit budget is not sustainable. This will be especially true with diminishing revenue sources and without any plans to make changes to services, fare structure, and/or ridership. Accordingly, staff is working on a variety of changes to the paratransit program to manage costs, including eligibility, trip negotiation, fares, and trip subscription allowances. Additionally, staff is expected to complete a comprehensive assessment of the Wheels Paratransit service delivery model assessment in FY17.

Figure 69 Three-Year Retrospective of Paratransit Revenue

Category	ACTUAL FY 12-13	ACTUAL FY 13-14	EST/ACT FY 14-15	3-Year % Growth
Fares	$147,025	$163,730	$174,870	18.9%
Special Contract Revenue	$26,792	$33,244	$28,951	8.1%
Advertising	$0	$0	$0	0.0%
Interest and Miscellaneous	$0	$0	$0	0.0%
TDA 4.0	$410,101	$519,139	$709,263	72.9%
TDA 4.5	$98,270	$110,519	$123,138	25.3%
STA	$66,997	$72,846	$74,130	10.6%
FTA	$304,235	$312,968	$315,862	3.8%
Local Sales Tax - Measure B - Allocations	$149,807	$153,126	$158,020	5.5%
Local Sales Tax - Measure B - Grants	$2,030	$0	$0	-100.0%
Local Sales Tax - Measure BB - Allocations	$0	$0	$50,920	100.0%
Total	**$1,205,257**	**$1,365,572**	**$1,635,154**	**35.7%**

Over the past three years, LAVTA has used increasing levels of TDA 4.0 fixed route funds to balance the budget, with three year growth of 72.9%. LAVTA will continue to pursue paratransit funding sources to ensure the budget is balanced throughout the SRTP period.

Summary

Projected expenses, revenues, and reserves for the SRTP are illustrated in Figure 70 and Figure 71. As shown below, expenses are greater than revenues from TDA 4.0 and other sources in each of the years, leading to declining reserves. Through FY22, reserves are sufficient to offset the difference between revenues and expenses, but starting in FY23, there is a deficit, and LAVTA would no longer be able to balance its budget. The deficit is shown to continue to increase through FY2025, reaching a total of $10 million.

LAVTA will pursue strategies to achieve a balanced budget. These strategies may include:

- Reduce expenses/costs (e.g. paratransit)
- Increase current revenue sources (e.g. fares, advertising, contract services)
- Pursue other revenue sources (e.g. new local taxes, grants, etc.)

Figure 70 Ten Year Total Revenues versus Expenses with Cumulative Reserve Balances

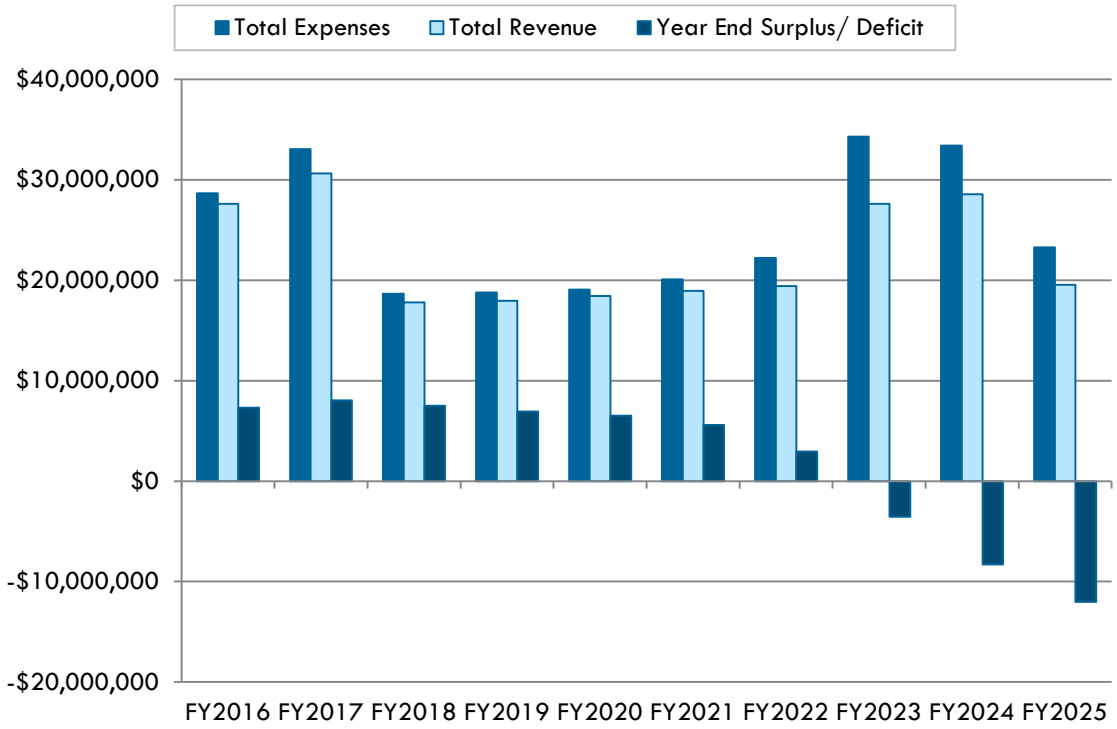


Figure 71 TDA 4.0 Reserve Balance

Category	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Prior Year TDA Carryover	$8,349,000	$10,490,754	$8,377,374	$7,764,143	$7,157,353	$6,736,800	$5,784,126	$3,133,048	-$3,464,087	-$8,307,522
TDA 4.0 Interest earned on reserves (Alameda Cty)	$250,470	$314,723	$251,321	$232,924	$214,721	$202,104	$173,524	$93,991	$0	$0
TDA 4.0 Revenue Forecast	$8,899,101	$9,304,213	$9,555,427	$9,813,423	$10,078,386	$10,310,189	$10,547,324	$10,789,911	$11,038,079	$11,291,956
TDA 4.0 Usage:										
Operations	$9,745,262	$8,308,363	$10,074,955	$10,149,168	$10,419,450	$10,708,580	$11,102,455	$12,759,869	$13,209,358	$13,681,237
Capital (excludes prior year allocations)	$0	$3,423,953	$345,024	$503,971	$294,209	$756,388	$2,269,470	$4,721,168	$2,672,157	$1,319,491
Reserve Balance	**$7,753,309**	**$8,377,374**	**$7,764,143**	**$7,157,353**	**$6,736,800**	**$5,784,126**	**$3,133,048**	**-$3,464,087**	**-$8,307,522**	**-$12,016,294**

7 CAPITAL IMPROVEMENT PROGRAM

This chapter provides a 3-year retrospective overview of LAVTA's capital expenses and revenues, as well as a ten-year budget that is based on historical data, policies, guidelines, and vehicle prices set by MTC. The largest expenses in capital within the next ten years are expected to come from revenue fleet replacement, followed by major components rehab. FTA Section 5307 and TDA Article 4.0 are two of the major revenue sources that LAVTA is dependent on in balancing the ten-year capital improvement program budget.

Expenses within LAVTA's capital improvement program include the replacement, maintenance, and repair of: revenue and non-revenue vehicles (though significantly less often than years before), non-vehicle items (including equipment, furniture, IT, security, etc.), and facilities (MOA, Atlantis, bus stops, etc.). The budget's expenses and revenue do not reflect those associated with the construction of the Atlantis Facility. This facility's construction has been on hold for an extended number of years, and it is unknown how and when significant amounts of revenue will be attained to complete the facility.

Assumptions for the ten-year capital improvement program include:

- Fiscal years where revenue vehicles are expected to be replaced are: 2016, 2017, 2023, and 2024.
- Fiscal years where non-revenue vehicles are expected to be replaced are: 2017, 2020, 2022, 2023, 2024, and 2025.

THREE-YEAR RETROSPECTIVE

Figure 72 shows a three-year retrospective of capital expenses. The largest total capital expense between FY 13 and FY 15 was from the construction of the Atlantis Facility. Costs for this project dropped significantly in the latter two years due to the lack of available funding and LAVTA's decision to put the construction on hold. Fewer capital expenses were required in the latter two years, and expenses were 93.7% lower in FY 2014-15 compared to FY 2012-13.

Figure 72 Three-Year Retrospective of Capital Expenses

Project	FY 12-13	FY 13-14	FY 14-15	3-Year Change
Atlantis Facility	$4,702,258	$92,798	$1,025	-100.0%
BRT	$600,641	$46,470	$44,736	-92.6%
Civic Center Driveway	$9,125	$0	$0	-100.0%
TOTAL SPECIALIZED	$5,312,024	$139,268	$45,761	-99.1%
Particulate Matter Retrofitting Program	$58,312	$0	$0	-100.0%
Bus Shelters and Stops	$19,808	$223,204	$119,372	502.6%
Radios	$577,573	$157,269	$0	-100.0%
Office and Facility Equipment	$50,097	$143,757	$165,029	229.4%
Non-Revenue Vehicles	$6,632	$35,657	$0	-100.0%
Shop Repairs and Replacements	$60,672	$71,642	$4,982	-91.8%
Rideo Bus Restoration	$114,234	$121,032	$0	-100.0%
Major Component Rehab	$1,211,058	$852,387	$0	-100.0%
Signage	$0	$18,742	$0	-100.0%
IT upgrades and replacement	$0	$0	$64,609	100.0%
Bus Replacement	$0	$0	$0	100.0%
Security Upgrades	$0	$0	$38,134	100.0%
511 integration	$0	$0	$28,844	100.0%
TOTAL ONGOING AND ROUTINE	$2,098,386	$1,623,690	$420,970	-79.9%
Total Capital Expenses	$7,410,410	$1,762,958	$466,731	-93.7%

Figure 73 below shows a three-year retrospective of capital revenues. Revenues during the past three years include funds from TDA, FTA, AB664, Proposition 1B, STA, STIP, and RM2.

Figure 73 Three-Year Retrospective of Capital Revenues

	FY 12-13	FY 13-14	FY 14-15	10-Year Growth Rate
TDA	$408,498	$821,649	$230,303	-43.6%
FTA	$3,991,864	$403,473	$86,710	-97.8%
AB 664	$70,195	$0	$0	-100.0%
Proposition 1B-PTMISEA	$1,242,373	$537,063	$111,868	-91.0%
STA	$9,125	$0	$0	-100.0%
STIP	$1,688,355	$0	$0	-100.0%
RM2	$0	$773	$37,850	4,796.5%
Total	$7,410,410	$1,762,958	$466,731	-93.7%

CAPITAL BUDGET

Figure 74 below presents the capital improvement program over the SRTP period. The total amount of funding needed for the capital improvement program over the SRTP period will be $63,315,949.

Figure 74 Capital Improvement Program for SRTP Period FY 2016-2025

EXPENSES											
Category	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	10 Year Total
Fixed-Route Vehicle Program	$14,320,000	$14,560,000	$0	$0	$0	$0	$0	$10,946,428	$11,571,337	$0	$51,397,765
# of Vehicles	*20*	*20*	*0*	*0*	*0*	*0*	*0*	*10*	*10*	*0*	60
Support Vehicle Replacement	$0	$380,000	$0	$0	$30,000	$0	$40,000	$211,750	$108,900	$139,150	$909,800
# of Vehicles	*0*	*8*	*0*	*0*	*1*	*0*	*1*	*4*	*2*	*2*	*18*
Major Components Rehab	$794,729	$286,499	$454,483	$109,581	$112,868	$374,006	$2,025,556	$2,086,322	$352,355	$362,925	$6,959,323
Miscellaneous Needs	$169,597	$379,853	$95,524	$430,333	$101,342	$354,382	$191,914	$360,739	$114,061	$454,416	$2,652,160
Facility	$301,000	$241,400	$249,500	$46,000	$50,000	$28,000	$12,000	$92,000	$14,000	$363,000	$1,396,900
Total Capital Expenses	$15,585,326	$15,847,751	$799,507	$585,914	$294,209	$756,388	$2,269,470	$13,697,239	$12,160,653	$1,319,491	$63,315,949
REVENUES											
FTA Section 5307	$11,742,400	$11,939,200	$0	$81,943	$0	$0	$0	$9,488,496	$0	$0	$33,252,039
PTMISEA	$301,000	$117,398	$454,483	$0	$0	$0	$0	$0	$0	$0	$872,881
Bridge Tolls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TDA Article 4.0	$3,541,926	$3,791,153	$345,024	$503,971	$294,209	$756,388	$2,269,470	$4,208,743	$12,160,653	$1,319,491	$29,191,029
Proposition 1B PTMISEA	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Capital Revenues	$15,585,326	$15,847,751	$799,507	$585,914	$294,209	$756,388	$2,269,470	$13,697,239	$12,160,653	$1,319,491	$63,315,949

Vehicle replacement program costs are based on MTC's price list as show in the next section

REVENUE VEHICLES

The existing LAVTA revenue fleet is shown below in Figure 75. The current fleet size is 66 vehicles. There are 49 vehicles used at maximum pullout, and the spare ratio is 35%. LAVTA has been actively reducing its fleet size to reduce its spare ratio. This process will be complete in 2016 with a fleet size of 60 and a spare ratio of 22%, assuming a peak pull of 49 vehicles. Vehicles that are removed from the fleet are typically sold. The vehicle replacement schedule is shown in Figure 78.

Figure 75 Current Revenue Fleet

Manufacturer	Year of Manufacture	VIN	Size	Seating Capacity	Wheelchair capacity	Mode of Power	Major Rehab	Year of Retire
New Flyer	3/18/1996	2FYD2LL06TU016307	40	33	2	Diesel	No	2016
New Flyer	3/18/1996	2FYD2LL01TU016313	40	33	2	Diesel	No	2016
Gillig	8/23/2000	15GCD2017Y1110533	40	43	2	Diesel	No	2016
Gillig	8/23/2000	15GCD2014Y1110537	40	43	2	Diesel	No	2016
Gillig	8/28/2002	15GGD271421073441	40	40	2	Diesel	No	2016
Gillig	8/28/2002	15GGD271621073442	40	40	2	Diesel	No	2016
Gillig	8/28/2002	15GGD271821073443	40	40	2	Diesel	No	2016
Gillig	8/28/2002	15GGD271X21073444	40	40	2	Diesel	No	2016
Gillig	8/28/2002	15GDD271521110872	40	39	2	Diesel	No	2016
Gillig	8/28/2002	15GDD271721110873	40	39	2	Diesel	No	2016
Gillig	8/28/2002	15GDD271921110874	40	39	2	Diesel	No	2016
Gillig	8/28/2002	15GDD271021110875	40	39	2	Diesel	No	2016
Gillig Hybrid	6/1/2009	15GGD301891078670	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	6/1/2009	15GGD301X91078671	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	6/1/2009	15GGD301191078672	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	6/1/2009	15GGD301391078673	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	6/1/2009	15GGD301591078674	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	6/1/2009	15GGD301791078675	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	6/1/2009	15GGD301991078676	40	39	2	Diesel Electric	No	2024
Gillig Hybrid	6/1/2009	15GGD301091078677	40	39	2	Diesel Electric	No	2024
Gillig Hybrid	6/1/2009	15GGD301291078678	40	39	2	Diesel Electric	No	2024
Gillig Hybrid	6/1/2009	15GGD301491078679	40	39	2	Diesel Electric	No	2024

Manufacturer	Year of Manufacture	VIN	Size	Seating Capacity	Wheelchair capacity	Mode of Power	Major Rehab	Year of Retire
Gillig Hybrid	6/1/2009	15GGD301091078680	40	39	2	Diesel Electric	No	2024
Gillig Hybrid	6/1/2009	15GGD301291078681	40	39	2	Diesel Electric	No	2024
Gillig	8/1/2003	15GGD201331073703	40	39	2	Diesel	No	2016
Gillig	8/1/2003	15GGD201531073704	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201731073705	40	39	2	Diesel	No	2016
Gillig	8/1/2003	15GGD201931073706	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201031073707	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201231073708	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201431073709	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201031073710	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201231073711	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201431073712	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201631073713	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201831073714	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201X31073715	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201131073716	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201531073717	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201731073718	40	39	2	Diesel	No	2016
Gillig	8/1/2003	15GGD201731073719	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201531073720	40	39	2	Diesel	No	2016
Gillig	8/1/2003	15GGD201531073721	40	39	2	Diesel	No	2016
Gillig	8/1/2003	15GGD201731073722	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201931073723	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201031073724	40	39	2	Diesel	No	2017
Gillig	8/1/2003	15GGD201231073725	40	39	2	Diesel	No	2016
Gillig	8/1/2003	15GGD201431073726	40	39	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181231090746	29	23	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181431090747	29	23	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181631090748	29	23	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181831090749	29	23	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181431090750	29	23	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181631090751	29	23	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181831090752	29	23	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181X31090753	29	23	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181131090754	29	23	2	Diesel	No	2017
Gillig	6/25/2003	15GGE181331090755	29	23	2	Diesel	No	2017

Manufacturer	Year of Manufacture	VIN	Size	Seating Capacity	Wheelchair capacity	Mode of Power	Major Rehab	Year of Retire
Gillig Hybrid	10/29/2007	15GGE191871091288	29	22	2	Diesel Electric	No	2023
Gillig Hybrid	10/29/2007	15GGE191X71091289	29	22	2	Diesel Electric	No	2023
Gillig Hybrid	6/1/2009	15GGE301491091784	29	22	2	Diesel Electric	No	2023
Gillig Hybrid	6/1/2009	15GGE301691091785	29	22	2	Diesel Electric	No	2023
Gillig Hybrid	9/20/2011	15GGE3019B1092287	29	22	2	Diesel Electric	No	2024
Gillig Hybrid	9/20/2011	15GGE3010B1092288	29	22	2	Diesel Electric	No	2024
Gillig Hybrid	9/20/2011	15GGE3012B1092289	29	22	2	Diesel Electric	No	2024
Gillig Hybrid	9/20/2011	15GGE3012B1092289	29	22	2	Diesel Electric	No	2024

Based on MTC vehicle price guidelines (see Figure 76), LAVTA will require $51,397,765 to replace 64 revenue vehicles as they reach the end of their life cycles over the ten-year period.

Figure 77 lists the breakdown of revenue vehicles to be purchased, the costs associated, and the revenue sources that will be used to purchase the vehicles for the SRTP period. Fleet replacement is expected to occur in FY 2016, 2017, 2023, and 2024. All planned LAVTA bus purchases are hybrid vehicles. However, LAVTA is looking at vehicles with alternative propulsion technologies, such as all-electric, for future vehicle purchases.

LAVTA will be evaluating the size of vehicles it uses as a part of the Comprehensive Operational Analysis to be completed in 2016. Vehicle sizes will be evaluated to determine the appropriate size for different service types. The fixed-route vehicle procurement program may change in the future if it is determined that a new size of vehicle should be added to the fleet, or if the fleet mix should be modified.

Figure 76 MTC Vehicle Price List

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
40' bus Hybrid										
Federal	$621,560	$632,778	$670,744	$710,989	$753,648	$798,867	$846,799	$897,607	$951,464	$1,008,551
Local	$136,440	$138,902	$147,237	$156,071	$165,435	$175,361	$185,883	$197,036	$208,858	$221,389
Total	$728,000	$771,680	$817,981	$867,060	$919,083	$974,228	$1,032,682	$1,094,643	$1,160,321	$1,229,941
30' bus Hybrid										
Federal	$595,320	$631,039	$668,902	$709,036	$751,578	$796,672	$844,473	$895,141	$948,850	$1,005,781
Local	$130,680	$138,521	$146,832	$155,642	$164,980	$174,879	$185,372	$196,494	$208,284	$220,781
Total	$726,000	$769,560	$815,734	$864,678	$916,558	$971,552	$1,029,845	$1,091,636	$1,157,134	$1,226,562

Figure 77 Fixed-Route Revenue Vehicle Procurement Program for SRTP Period

EXPENDITURES						
Purchased Vehicles	# of Vehicles	FY2016	FY2017	FY2023	FY2024	10 Year Total
40 ft standard hybrid coaches	16	$11,456,000	$0	$0	$0	$11,456,000
40 ft standard hybrid coaches	4	$2,864,000	$0	$0	$0	$2,864,000
40 ft commuter hybrid coaches	20	$0	$14,560,000	$0	$0	$14,560,000
40 ft standard hybrid coaches	10	$0	$0	$10,946,428	$0	$10,946,428
29 ft standard hybrid coaches	10	$0	$0	$0	$11,571,336	$11,571,336
TOTAL CAPITAL EXPENSES	60	$14,320,000	$14,560,000	$10,946,428	$11,571,336	$51,397,764
REVENUE SOURCES						
FTA Section 5307		$11,742,400	$11,939,200	$8,976,071	$9,488,496	$42,146,168
FTA Section 5309		$0	$0	$0	$0	$0
Other Federal Funds		$0	$0	$0	$0	$0
State/Regional Funds		$0	$0	$0	$0	$0
RM2		$0	$0	$0	$0	$0
TDA Article 4.0		$2,577,600	$2,620,800	$1,970,357	$2,082,841	$9,251,598
Proposition 1B PTMISEA		$0	$0	$0	$0	$0
TOTAL CAPITAL REVENUES		$14,320,000	$14,560,000	$10,946,428	$11,571,337	$51,397,765
Local Match Needed		$2,577,600	$2,620,800	$1,970,357	$2,082,841	$9,251,598

*FTA 5307 Funding and Bridge Toll assumed for replacement purchases. TDA additional local match may be required when purchasing replacements as shown in the table.
Years not listed between 2016 and 2025 do not have any plans for vehicle procurement

Figure 78 Summary of Fleet and Vehicle Replacement Schedule

In or Out of Service	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Length, Year & Manufacturer	2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
40' 1996 New Flyer	2	*5*	0	*2*																		
40' 2000 Gillig Phantom	2	*3*	0	*2*																		
40' 2002 Gillig Phantom	4		0	*4*																		
40' 2002 Gillig Low-Floor	4		0	*4*																		
29' 2003 Gillig Low-Floor	10		10		0	*10*																
40' 2003 Gillig Low-Floor	24		17	*7*	0	*17*																
29' 2007 Gillig Hybrid	2				2		2		2		2		2		2		0	*2*				
22' 2008 Cut-away	*0*	*6*	2																			
29' 2009 Gillig Hybrid	*2*				2		2		2		2		2		2		0	*2*				
40' 2009 Gillig Hybrid	12		2		12		12		12		12		12		12		6	*6*	0	*6*		
29' 2011 Gillig Hybrid	4		12		4		4		4		4		4		4		4		0	*4*		
40' 2016 Fixed Route Replacement			4		20		20		20		20		20		20		20		20		20	
29' 2017 Fixed Route Replacement			20		5		5		5		5		5		5		5		5		5	
40' 2017 Fixed Route Replacement					15		15		15		15		15		15		15		15		15	
29' 2023 Fixed Route Replacement																	5		5		5	
40' 2023 Fixed Route Replacement																	5		5		5	
29' 2024 Fixed Route Replacement																			5		5	
40' 2024 Fixed Route Replacement																			5		5	
Buses Retired	14		19		27		0		0		0		0		0		10		10		0	
Replacement buses purchased *a*	0		20		20		0		0		0		0		0		10		10		0	
FTA Reported Fleet Size	66		67		60		60		60		60		60		60		60		60		60	
Spare Ratio *b*	35%		37%		22%		22%		22%		22%		22%		22%		22%		22%		22%	

a Assumes no change to fleet size

b Spare ratio assumes a 49 bus pull out

NON-REVENUE VEHICLES

Existing non-revenue vehicle details are shown in Figure 79 below. There are a total of ten vehicles. Non-revenue vehicles have a variety of uses, including supervision, operator shift changes, marketing, and maintenance department use.

Figure 79 Current Non-Revenue Vehicles

Manufacturer	Year of Manufacture	Years Left in Service	Retirement Year	Replacement Year	Estimated Replacement Cost	Vehicle Type	Mode of Power
CHEV / ELDO	2002	1	2017	2017	$45,000	Minivan	Gasoline
CHRYSLER	2008	4	2020	2020	$30,000	Minivan	Gasoline
FORD	2003	1	2017	2017	$80,000	Service Truck	Diesel
CHRYSLER	2007	1	2017	2017	$25,000	Minivan	Gasoline
CHRYSLER	2007	1	2017	2017	$25,000	Minivan	Gasoline
CHEV / ELDO	2008	1	2017	2017	$45,000	Minivan	Gasoline
HONDA	2009	1	2017	2017	$45,000	Car	Gasoline
CHEVY	2008	1	2017	2017	$80,000	Service Truck	Diesel
DODGE	2014	6	2022	2022	$40,000	Truck	Diesel
TOYOTA	2005	1	2017	2017	$35,000	Car	Gasoline

These vehicles will be replaced as they reach the end of their life cycles. Figure 80 lists the breakdown of non-revenue vehicles to be purchased, the costs associated, and the revenue sources that will be used to purchase the vehicles over the SRTP period. Non-revenue vehicles are expected to be replaced in FY 2017, 2020, 2022, 2023, 2024, and 2025. The total cost for non-revenue vehicle replacements will be $909,800. This plan may change in the future as the use of non-revenue vehicles by the fixed-route operations contractor is reevaluated.

Figure 80 Non-Revenue Vehicle Procurement Program for SRTP Period

EXPENDITURES							
Existing Service (Non-Revenue) Vehicles	FY2017	FY2020	FY2022	FY2023	FY2024	FY2025	10 Year Total
2015 Dodge Ram	$0	$0	$40,000	$0	$0	$0	$40,000
2002 Low Floor Activan (6402)	$45,000	$0	$0	$54,450	$0	$0	$99,450
2003 Ford F550 Truck (6403)	$80,000	$0	$0	$96,800	$0	$0	$176,800
2007 Chrysler Town & Country (6404) (a)	$25,000	$0	$0	$30,250	$0	$0	$55,250
2007 Chrysler Town & Country (6405) (a)	$25,000	$0	$0	$30,250	$0	$0	$55,250
2008 Chevy Uplander (6406)	$45,000	$0	$0	$0	$54,450	$0	$99,450
2007 Honda Civic Hybrid (6407) (a)	$45,000	$0	$0	$0	$54,450	$0	$99,450
2008 Chevy Truck (6408)	$80,000	$0	$0	$0	$0	$96,800	$176,800
Marketing Town and Country	$0	$30,000	$0	$0	$0	$0	$30,000
2005 Prius Hybrid (6420)	$35,000	$0	$0	$0	$0	$42,350	$77,350
TOTAL VEHICLE EXPENSES	$380,000	$30,000	$40,000	$211,750	$108,900	$139,150	$909,800
# of vehicles	8	1	1	4	2	2	18
REVENUE SOURCES							
PTMISEA	$0	$0	$0	$0	$0	$0	$0
TDA Article 4.0	$12,800	$30,000	$40,000	$211,750	$108,900	$139,150	$542,600
Proposition 1B PTMISEA	$0	$0	$0	$0	$0	$0	$0
FTA (exchange for bus deferral)	$367,200	$0	$0	$0	$0	$0	$367,200
TOTAL CAPITAL REVENUES	$380,000	$30,000	$40,000	$211,750	$108,900	$139,150	$909,800

FACILITIES & NON-VEHICLES

Figure 81 shows facility costs over the SRTP period. Maintenance facility expenses are expected to be most significant between FY 2016 and 2018, as well as in FY 2025. Funding sources are expected to be limited to PTMISEA and TDA Article 4.0. Maintenance facility costs include any equipment, tree maintenance at owned facilities, and maintenance of bus stops.

Other miscellaneous categories not categorized as revenue vehicles, non-revenue vehicles, or maintenance are shown in Figure 82 and Figure 83 on the following pages.

Figure 81 Facility Costs for SRTP Period

EXPENSES	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	10-Year Total
Maintenance Facility	$301,000	$241,400	$249,500	$46,000	$50,000	$28,000	$12,000	$92,000	$14,000	$363,000	$1,396,900
REVENUES											
FTA Section 5307	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FTA Section 5309	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other Federal Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
PTMISEA	$301,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$301,000
RM2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TDA Article 4.0	$0	$241,400	$249,500	$46,000	$50,000	$28,000	$12,000	$92,000	$14,000	$363,000	$1,095,900
Sale of Existing Facility	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL CAPITAL REVENUES	$301,000	$241,400	$249,500	$46,000	$50,000	$28,000	$12,000	$92,000	$14,000	$363,000	$1,396,900

Budget does not include the purchase of additional land or sale of existing facility

Figure 82 Miscellaneous Capital Improvement Program for SRTP Period

Facilities Needs	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	10-Year Total
Miscellaneous Facility/ Office Equipment	$90,041	$129,853	$95,524	$98,390	$101,342	$104,382	$107,513	$110,739	$114,061	$117,483	$727,045
Other Facility Needs	$66,856	$20,000	$62,855	$62,920	$85,684	$88,255	$57,681	$39,709	$61,194	$63,029	$444,251
Computers	$13,911	$14,329	$14,758	$15,201	$15,657	$16,127	$16,611	$17,109	$17,622	$18,151	$106,595
Servers, Server Software	$9,274	$95,524	$0	$20,268	$0	$0	$33,222	$34,218	$35,245	$36,302	$158,288
Windows and Office Upgrade	$0	$0	$17,911	$0	$0	$0	$0	$19,702	$0	$0	$17,911
Bus Stop Improvements	$0	$250,000	$0	$250,000	$0	$250,000	$0	$250,000	$0	$250,000	$750,000
TOTAL FACILITY NEEDS	$90,041	$379,853	$95,524	$348,390	$101,342	$354,382	$107,513	$360,739	$114,061	$367,483	$1,477,045

Vehicle Needs	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	10 Year Total
Trapeze Upgrade	$79,556	$0	$0	$81,943	$0	$0	$84,401	$0	$0	$86,933	$332,833
TOTAL VEHICLE NEEDS	$79,556	$0	$0	$81,943	$0	$0	$84,401	$0	$0	$86,933	$332,833

TOTAL MISCELLANEOUS NEEDS	$169,597	$379,853	$95,524	$430,333	$101,342	$354,382	$191,914	$360,739	$114,061	$454,416	$1,809,878
REVENUES	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	10 –Year Total
FTA Section 5307	$79,556	$0	$0	$81,943	$0	$0	$0	$0	$0	$0	$251,540
PTMISEA	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Bridge Tolls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TDA Article 4.0	$90,041	$379,853	$95,524	$348,390	$101,342	$354,382	$191,914	$360,739	$114,061	$454,416	$1,558,338
Proposition 1B PTMISEA	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Funding Not Secured	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL CAPITAL REVENUES	$169,597	$379,853	$95,524	$430,333	$101,342	$354,382	$191,914	$360,739	$114,061	$454,416	$1,809,878

Figure 83 Major Components Rehab Plan for SRTP Period

Major Components										
Category	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Transmissions	$182,783	$95,524	$98,390	$101,342	$104,382	$107,513	$110,739	$114,061	$117,483	$121,007
Quantity	*8*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*
Batteries for Hybrids	$604,406	$183,204	$47,175			$257,747	$212,384	$218,755	$225,318	$232,077
Quantity	*14*	*4*	*1*	*0*	*0*	*5*	*4*	*4*	*4*	*4*
Engine, transmission for Service Vehicles	*$7,535*	*$7,761*	*$7,994*	*$8,234*	*$8,481*	*$8,735*	*$8,998*	*$9,267*	*$9,545*	*$9,832*
Quantity	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
TOTAL MAJOR COMPONENTS	$794,729	$286,499	$454,483	$109,581	$112,868	$374,006	$2,025,556	$2,086,322	$352,355	$362,925
Revenues										
FTA Section 5307	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
PTMISEA	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
RM2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TDA Article 4.0	$794,729	$169,101	$0	$109,581	$112,868	$374,006	$2,025,556	$2,086,322	$352,355	$362,925
Proposition 1B PTMISEA		$117,398	$454,483	$0	$0	$0	$0	$0	$0	$0
TOTAL CAPITAL REVENUES	$794,729	$286,499	$454,483	$109,581	$112,868	$374,006	$2,025,556	$2,086,322	$352,355	$362,925