

STAFF REPORT

SUBJECT: Short Range Transit Plan 2022-2027

FROM: Tony McCaulay, Director of Planning & Marketing

DATE: June 6, 2022

Action

The Projects and Services Committee recommends that the Board approve the 2022-2027 Short Range Transit Plan (SRTP).

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 Short Range Transit Plan (SRTP).

Discussion

In 2019, the Board approved the award of a contract with Nelson\Nygaard Consulting Associates, Inc., for the development of LAVTA's Short Range and Long Range Transit Plans (SRTP and LRTP). The SRTP has a 5-year horizon (2022-2027) while the LRTP has a 20-year horizon (2022-2047). Work on the SRTP began in the fourth quarter of 2019.

The analyses in this report rely on 2019 data, the most recent full year data is available. Traditionally after an Existing Conditions Report is produced, public outreach takes place. This is when community members share their attitudes, behaviors, and priorities for transit. The COVID-19 pandemic has changed everything.

The impacts of COVID-19 are not yet fully understood, and no transit system can know what the long-term implications of the pandemic will be on public transit in general. All of the changes brought about by the pandemic portend that it may take years to regain ridership to pre-COVID-19 levels.

This report will serve as a baseline for pre-pandemic conditions, but with so much still in flux, there will be components of the Short-Range Transit Plan process that will require new

data and tracking of new travel trends and attitudes. The next step in this planning process is the development of the Long Range Transit Plan. A key component of the LRTP will be the solicitation of input from the LAVTA Board of Directors in the early stages of plan development to gain insight into the Board's vision for the future of transit in the Tri-Valley.

Recommendation

Approve the 2022-2027 Short Range Transit Plan and forward to the Metropolitan Transportation Commission.

Attachments:

1. Short Range Transit Plan, 2022-2027
2. Resolution 22-2022

Approved: _____



Short Range Transit Plan

FY 2022-2027

**Livermore Amador Valley
Transit Authority**

May 2022

Table of Contents

	Page
Executive Summary	i
A Note About Covid-19	i
Key Findings and Opportunities	ii
1 Introduction	1
Project Background	1
What is an SRTP and LRTP?	1
Limitations of this Report Due to Covid-19	2
How is this Report Organized?	3
2 LAVTA History and Structure	5
Agency History	5
Governance	7
Organizational Structure	8
Existing Facilities	10
3 Transit Demand Analysis	15
Key Points	17
Demographics	18
Population and Employment	21
Demographic Trends	29
Major Activity Centers	35
Transit Propensity Index	37
4 Fixed-Route Service Evaluation	40
Key Points	41
Overview of System	42
Fares Structure and Policies	61
Fleet Information	68
5 Paratransit Service Evaluation	69
Key Points	69
Overview of System	70
Operating Performance	73
6 Service Standards Evaluation	74
Mission, Vision, Values, Goals, and Strategies	74
Performance Standards	78
On-Time Performance	89
7 Operations Plan & Budget	91
Operations Plan	91
Temporary Service Reductions	93
Service Restoration	94

Future Service Restoration.....	95
Operations Budget.....	97
8 Capital Improvement Program	110
Capital Budget	110
Revenue Vehicles.....	112
Non-Revenue Vehicles	120
Facilities & Non-Vehicles	124

Table of Figures

	Page
Figure 1 LAVTA Organization Flow Chart	9
Figure 2 Description of Park-and-Ride Lots in the LAVTA Service Area	12
Figure 3 Demographic Details.....	18
Figure 4 Land Use and Transit Demand	22
Figure 5 Population Density.....	23
Figure 6 Selected Large Tri-Valley Employers	24
Figure 7 Employment Density	25
Figure 8 Composite Transit Demand	27
Figure 9 Population/Employment Density Matrix	28
Figure 10 Change in Demographic Indicators	29
Figure 11 Density of Zero Vehicle Households.....	30
Figure 12 Density of People with Low Incomes	31
Figure 13 Density of Seniors (Age 65+)	32
Figure 14 Density of People with Disabilities	33
Figure 15 Density of People Who Identify as a Race/Ethnicity Other than White	34
Figure 16 Tri-Valley Activity Centers	36
Figure 17 Transit Propensity Index.....	39
Figure 18 LAVTA System Map	44
Figure 19 Connecting Transit Service in the LAVTA Service Area.....	45
Figure 20 LAVTA Average Daily Weekday Boardings by Stop (2019)	46
Figure 21 2020 (Pre-COVID) Frequency and Span of Service by Route (Non- School Routes)	47
Figure 22 FY2019 Annual Revenue Hours, Boardings, Boardings per Revenue Hour, and On-Time Performance by Route	49
Figure 23 FY2019 Annual Revenue Hours by Route	50
Figure 24 FY2019 Annual Boardings by Route	51

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Figure 25	FY2019 Average Boardings per Revenue Hour by Route	51
Figure 26	School Tripper Route Descriptions.....	59
Figure 27	FY2019 School Route Annual Boardings.....	60
Figure 28	School Route Boardings per Trip	61
Figure 29	Single Ride Fares	62
Figure 30	Pass Products Summary	63
Figure 31	Paper Passes – Monthly Unlimited Ride Passes.....	64
Figure 32	Clipper Card	66
Figure 33	LAVTA's Fixed-Route Revenue Vehicle Fleet	68
Figure 34	Wheels Dial-A-Ride Paratransit Service Area.....	71
Figure 35	Wheels Dial-A-Ride Paratransit Fares	73
Figure 37	Paratransit Operating Characteristics.....	73
Figure 38	Goals and Strategies.....	76
Figure 39	Systemwide Service Standards and Results.....	79
Figure 40	Annual Ridership	80
Figure 41	Annual Passengers per Revenue Hour	80
Figure 42	Annual Passengers per Revenue Mile	81
Figure 43	Farebox Recovery Ratio	81
Figure 44	Change in Operating Cost per Hour	82
Figure 45	Route-Level Service Standards and Results.....	83
Figure 46	Rapid Routes Results	84
Figure 47	Local Routes Results	84
Figure 48	Express Routes Results	85
Figure 49	School Tripper Routes Results	85
Figure 50	Paratransit Service Standards and Results	86
Figure 51	Paratransit Valid Complaints per 1,000 Passengers.....	87
Figure 52	Paratransit On-Time Performance.....	87
Figure 53	Phone Calls Answered within 60 Seconds	88
Figure 54	Preventable Accidents per 100,000 Miles.....	88
Figure 55	On-Time Performance by Route	89
Figure 56	Route Network in 2019	92
Figure 57	Weekday Revenue Hours by Route During Pandemic Related Service Changes	95
Figure 58	Service Resumption Priorities.....	96
Figure 59	Fixed-Route Expense Budget for SRTP Period (FY 2022-2027)	98
Figure 60	Fixed-Route Operating Characteristics.....	99
Figure 61	Fixed-Route Revenue Budget for SRTP Period (FY 2022-2027)	100
Figure 62	Three-Year Retrospective of Fixed-Route Expenses	101
Figure 63	Three-Year Retrospective of Fixed-Route Revenue.....	102
Figure 64	Paratransit Expense Budget for SRTP Period (FY 2022-2027)	103

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Figure 65	Paratransit Operating Characteristics	104
Figure 66	Paratransit Revenue Budget for SRTP Period (FY 2022-2027)	105
Figure 67	Three-Year Retrospective of Paratransit Expenses	106
Figure 68	Three-Year Retrospective of Paratransit Revenue.....	107
Figure 69	Total Revenues versus Expenses with Cumulative Reserve Balances	108
Figure 70	TDA 4.0 Reserve Balance	109
Figure 71	Capital Improvement Program for SRTP Period FY 2022-2031	111
Figure 72	Current Revenue Fleet.....	112
Figure 73	MTC Vehicle Price List	115
Figure 74	SAV Revenue Vehicle Procurement Program for SRTP Period	115
Figure 75	Summary of Additional Components for Bus Purchases	116
Figure 76	Planned Fixed-Route Revenue Vehicle Procurement Program for SRTP Period	117
Figure 77	Summary of Fleet and Vehicle Replacement Schedule	118
Figure 78	Current Non-Revenue Vehicles.....	120
Figure 79	Non-Revenue Vehicle Procurement Program for SRTP Period	122
Figure 80	Facility Costs for SRTP Period	125
Figure 81	Miscellaneous Capital Improvement Program for SRTP Period	126
Figure 82	Major Components Rehab Plan for SRTP Period.....	128

EXECUTIVE SUMMARY

This Short-Range Transit Plan (SRTP) is a five-year roadmap for LAVTA. Spanning the time period from 2022 to 2027, it identifies strengths, challenges, and opportunities associated with service today, and uses this information to establish strategies over the next five years. A Long-Range Transit Plan (LRTP) is a longer-term, twenty-year roadmap for LAVTA, covering the span of 2027 to 2047.

This effort can enhance transit in the Tri-Valley area by helping LAVTA to:

- Create a more seamless experience for transit riders
- Enhance bus routes, schedules, and frequencies
- Fine-tune internal workflows, staffing, and operations
- Take steps toward better regional integration
- Define a plan for future capital investments, including technology and infrastructure improvements

A NOTE ABOUT COVID-19

The analyses in this report rely on 2019 data, the most recent full year data that is available. The impacts of COVID-19 are not yet fully understood, and no transit system can know what the long-term implications of the pandemic will be on public transit in general. The changes in travel patterns and behaviors brought on by the pandemic portend that it may take years to regain ridership to pre-COVID-19 levels.

This report will serve as a baseline for pre-pandemic conditions, but with so much still in flux, there will be components of the Short-Range Transit Plan process that will require new data and tracking of new travel trends and attitudes, particularly as services that have been temporarily suspended are evaluated for resumption.

KEY FINDINGS AND OPPORTUNITIES

This section synthesizes findings from this report and highlights opportunities.

Staffing

LAVTA is able to provide quality service because of its employees. The agency operates with a very small administrative staff and typically conducts recruitments open to internal and external candidates. LAVTA currently has multiple key vacant positions that need to be filled.

Facilities

Fleet

The California Air Regulations Board regulations will require LAVTA's fleet to become fully emissions-free by 2040. As LAVTA continues to grow, plans for vehicle replacements, public utility needs, maintenance and storage requirements, and infrastructure need to be identified and implemented.

Bus Yards

As LAVTA ridership grows, the Atlantis facility will need to be fully built out and activated. Scheduling, maintenance and staffing plans will also need to be adopted. The implications of zero-emissions vehicles on the bus yards will also need to be assessed.

Fares

Try Transit Promotion

LAVTA offers a "Try Transit to School" promotion every fall providing unlimited free rides on all regularly scheduled Wheels and Rapid bus routes for a two-week period near the start of the school year, including weekends. The purpose of the promotion is to introduce middle school and high school students to LAVTA's bus services and see how efficient and easy it is to ride transit to and from school. The program also offers parents a safe, convenient and eco-friendly alternative for school transportation. The free rides are not limited to school trips. Students can also use this opportunity to ride transit to hang out with friends or for work, shopping and other activities.

Transit Demand

Land use and travel patterns change over time. Major activity centers that are beyond the limit of a five-minute (one-quarter mile) walk to the nearest stop on

the fixed-route system should be analyzed for potential service. The following are each more than one mile from the nearest stop:

- Lucky Supermarkets shopping center at 1951 Holmes Street in Livermore
- William Mendenhall Middle School

Affordable housing communities more than a five-minute walk from the nearest stop, include:

- Arroyo Commons, 1140 Mocho Street, Livermore
- The Springs, 7100 San Ramon Road, Dublin
- Arbor Vista, 1300 South Livermore Avenue, Livermore

Underserved areas for consideration of future service:

- High density areas: Livermore, south of Stanley Boulevard and in Pleasanton, south of Valley Avenue.
- Major employers on large, limited-access campuses without service: U.S. Army Camp Parks.

Data Needs

Access to Existing Data

In June 2020, the Go Tri-Valley program began service. This partnership with Lyft and Uber will be critical for LAVTA to collect origin and destination data of riders by time of day and day of week to understand travel patterns. LAVTA should compare transit trip availability against the Lyft and Uber data to see if the service is a complement to the bus system or if it is taking riders away.

New Data

Big data from smartphones that measure where people start and end their trips would help LAVTA track demand among non-transit riders. Used every three to five years, it would be possible to track trends that could help ensure LAVTA is serving areas of high demand.

Additionally, it is now possible to use data from Transit app for free to analyze the origins and destinations of transit riders. This could be a great tool to understand current rider patterns.

Service Levels

Many routes have not met productivity standards for their service group. Notably, none of the three Express Routes met the standard of 15 boardings per trip. Similarly, five of the nine local routes did not meet the standard of 10 boardings per revenue hour.

Temporary Service Changes

In response to shifts in demand for transit and staffing shortages related to the Covid-19 Pandemic, particularly decreased demand for regional commute services as remote work has increased, some services have been temporarily suspended or reduced. Demand for service should continue to be monitored throughout the pandemic recovery to determine the appropriate time for service restoration. Returning to pre-pandemic service levels, as informed by observable changes in travel demand and as allowed by staffing availability should continue to be LAVTA's top service planning priority. No additional service changes are recommended as a part of this SRTP.

1 Introduction

PROJECT BACKGROUND

The Livermore Amador Valley Transit Authority (LAVTA) has engaged the services of Nelson\Nygaard to develop a Short-Range Transit Plan (SRTP) and a Long-Range Transit Plan (LRTP). This effort can enhance transit in the Tri-Valley area by helping LAVTA to:

- Create a more seamless experience for transit riders
- Enhance bus routes, schedules, and frequencies
- Fine-tune internal workflows, staffing, and operations
- Take steps toward better regional integration
- Define a plan for future capital investments, including technology and infrastructure improvements

This chapter explains what an SRTP and LRTP are and how this report is organized. It also presents a summary of key findings and opportunities from this report, as well as next steps in the SRTP/LRTP process.

WHAT IS AN SRTP AND LRTP?

A Short-Range Transit Plan (SRTP) is a five-year roadmap for LAVTA. Spanning the time period from 2022 to 2027, it identifies strengths, challenges, and opportunities associated with service today, and uses this information to establish strategies over the next five years. A Long-Range Transit Plan (LRTP) is a longer-term, twenty-year roadmap for LAVTA, covering the span of 2027 to 2047.

Underpinning this effort to develop an SRTP and LRTP is a series of community engagement activities. These will help to ensure that the plan balances our shared community priorities.

LIMITATIONS OF THIS REPORT DUE TO COVID-19

The analyses in this report rely on 2019 data, the most recent full year data is available. Traditionally after an Existing Conditions Report is produced, public outreach takes place. This is when community members share their attitudes, behaviors, and priorities for transit. The COVID-19 pandemic has changed everything.

The impacts of COVID-19 are not yet fully understood, and no transit system can know what the long-term implications of the pandemic will be on public transit in general.

During the pandemic, transit agencies around the world have restricted occupancies on vehicles, waived fares, and discouraged ridership except when necessary. While most agencies have reintroduced fares, ridership is still below pre-pandemic levels and existing funding sources are not generating income at levels they used to. This decrease in funding could not come at a worse time as transit operators face a perfect storm: staffing issues making it difficult to operate daily service, increased operations costs for cleaning and purchase of personal protective equipment, and a less productive service brought on by capacity restrictions. All these changes portend that it may take years to regain ridership to pre-COVID-19 levels.

This report will serve as a baseline for pre-pandemic conditions, but with so much still in flux, there will be components of the Short-Range Transit Plan process that will require new data and tracking of new travel trends and attitudes.

This report was delayed due to priorities shifting to COVID-19 response. One project that moved forward despite the pandemic conditions, was the expansion of the GoDublin program to a fully implemented Go Tri-Valley program in June 2020. This program provides a 50% subsidy (up to \$5) on any shared Uber or Lyft trip in the Tri-Valley area. This program is not included in this report because it happened after the analyses for the report concluded, and any data at this stage would be skewed due to COVID-19 and because program is new. Going forward, data collection for origins and destinations, ridership trends, and financial information will be necessary for LAVTA.

Temporary route and schedule adjustments were made to better align service with demand, including a reduction in commuter services and school tripper services (which have since been restored as schools reopened and demand returned). As demand for service and changes in travel patterns continue to be

monitored carefully, services may begin to be restored as demand warrants prior to making any major service changes.

HOW IS THIS REPORT ORGANIZED?

Following this section, chapters two through eight, as well as Appendix A, focus on different aspects of the LAVTA system (Figure 1).

Figure 1 Report Structure

Chapter	Title	What questions does the chapter answer?
2	LAVTA History and Structure	<ul style="list-style-type: none"> How is LAVTA organized? How has the agency changed since its inception? What facilities does LAVTA have and what expansion plans are on the table?
3	Transit Demand Analysis	<ul style="list-style-type: none"> What conditions create demand for transit? Where is transit demand located? Are there gaps or redundancies?
4	Fixed Route System Evaluation	<ul style="list-style-type: none"> When and where does the system currently run? What fare products are available? What patterns does ridership reveal? How has the system performed against its service standards? How has the system performed against its service standards?
5	Paratransit Services Analysis	<ul style="list-style-type: none"> How does on-demand Dial-A-Ride work? What fare products are available? What patterns does ridership reveal? How has the system performed against its service standards?
6	Service Standards Evaluation	<ul style="list-style-type: none"> What are LAVTA's Mission, Vision, Values, Goals, and Strategies? How is system route level performance measured? How do individual routes and the system perform in relation to performance reassures?
7	Operations Plan & Budget	<ul style="list-style-type: none"> What temporary service changes were implemented due to the Covid-19 Pandemic and when should service be restored? How much service can be provided in the future based on forecasted revenues?

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Chapter	Title	What questions does the chapter answer?
8	Capital Improvement Program	<ul style="list-style-type: none">▪ What capital improvements can LAVTA make in the future?▪ How much revenue is available in any given year to make these purchases and improvements?
A	Route Profiles (Appendix)	<ul style="list-style-type: none">▪ When does each route have high ridership? Low ridership?▪ How often are buses on time?▪ How productive is each route?

2 LAVTA HISTORY AND STRUCTURE

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 base for all of LAVTA's operations, providing all maintenance and dispatch. The LAVTA 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 LAVTA 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.

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 2014, Medical Transportation Management (MTM) assumed paratransit services after the contract with ALC expired.

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

In 2016, LAVTA completed a comprehensive operations analysis (COA) of the entire system, implementing numerous route changes and the elimination of a few routes.

In January 2017, LAVTA launched the Go Dublin! pilot program that was aimed at providing transit to low-density suburban areas of Dublin that saw the removal of fixed route service by LAVTA through the COA. Through this rideshare program, LAVTA partners with Lyft, Uber, and DeSoto Cab and subsidizes fares for riders who take trips within Dublin city limits. Each qualifying trip receives a 50% discount (up to \$5). Originally just planned for six months, the program was extended and then expanded in June 2020 to include the entire Tri-Valley area.

In November 2020, LAVTA introduced shared autonomous vehicle (SAV) service for a limited time. The service is provided first- and last-mile connections to/from the East Dublin/Pleasanton BART Station. The vehicle operated in mixed traffic and its initial route was just under one mile and included two stops and one traffic light.

The LAVTA Wheels bus system includes a network of 29 routes serving the Dublin, Pleasanton, and Livermore area, including two Rapid routes and 15 school-focused routes. Paratransit service, branded as Dial-A-Ride, are also provided.

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:

- Karla Brown, (Board Chair) Mayor, City of Pleasanton
- David Haubert, (Vice Chair) Supervisor, First District, Alameda County
- Gina Bonanno, Vice Mayor, City of Livermore
- Brittni Kiick, Councilmember, City of Livermore
- Kathy Narum, Councilmember, City of Pleasanton
- Jean Josey, Vice Mayor, City of Dublin
- Melissa Hernandez, Mayor, 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 and Vice Chair positions rotate between the three cities and the County.

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:

- Brittni Kiick (Chair)
- Kathy Narum (Vice Chair)
- Melissa Hernandez

The current members of the Projects and Services Committee are

- Jean Josey (Chair)

- Gina Bonanno (Vice Chair)
- David Haubert
- Karla Brown

ORGANIZATIONAL STRUCTURE

Organizational Hierarchy

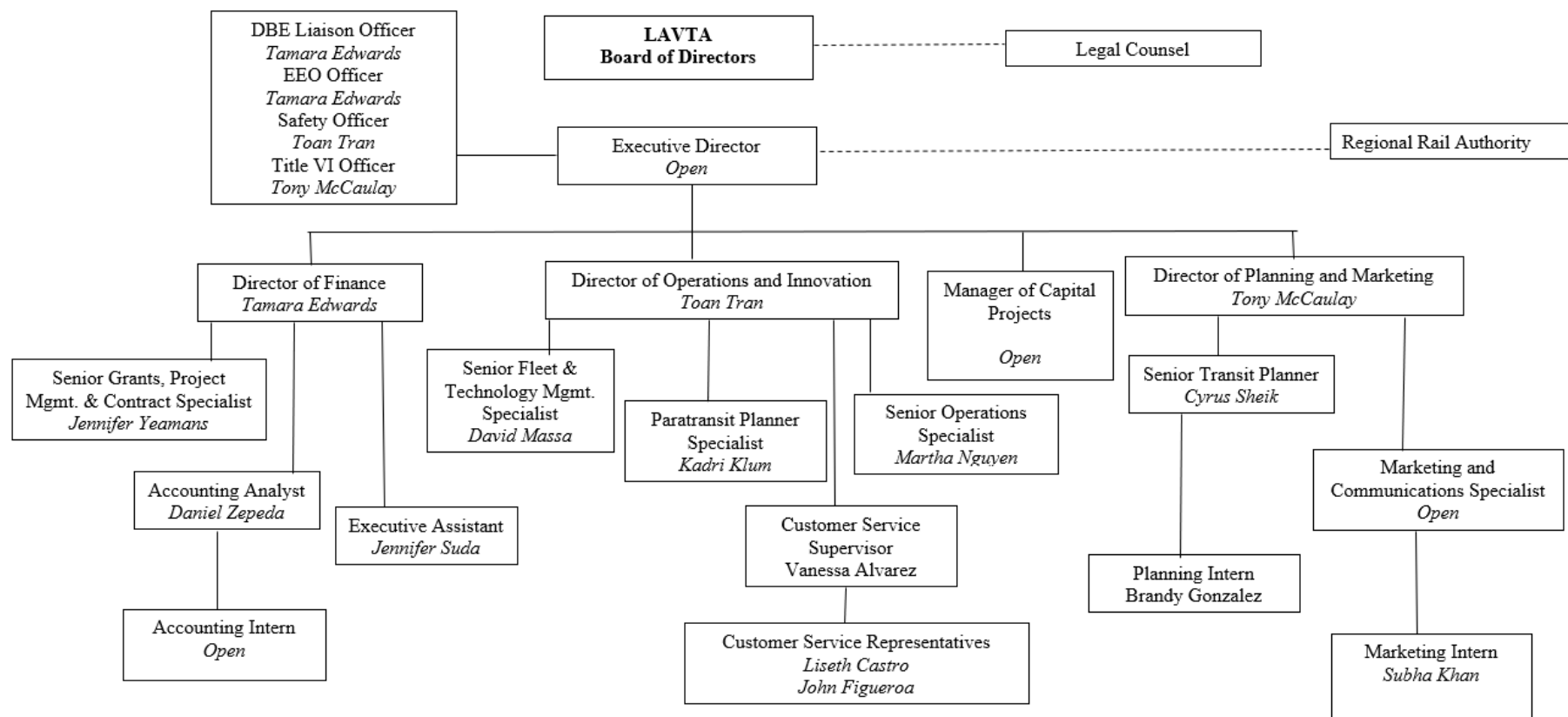
LAVTA's seven-member Board of Directors governs the activities of the LAVTA staff. The Agency is headed by an Executive Director, who oversees planning, communications, finance, administration, and Agency contracts for transit and paratransit services. An organizational flow chart is shown in Figure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

Transit and Paratransit Service Contracts

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

Transdev's paratransit contract began on April 1, 2021 and is scheduled to expire on June 30, 2022. A joint RFP with Central Contra Costa Transit Authority (CCCTA) was issued in January 2022 with the new contract expected to start on July 1, 2022. The contract includes a four-year based term and one-year option term.

Figure 1 LAVTA Organization Flow Chart



EXISTING FACILITIES

LAVTA owns two facilities, one on Rutan Court and the other on Atlantis Court, but primarily operates out of the Rutan Court facility.

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 Municipal Airport. The facility is well situated within the overall Wheels service area and is near the I-580/Isabel Avenue interchange and Stanley Boulevard. The facility is currently occupied by LAVTA and MV staff.

A second property on Atlantis Court, also near the airport, provides overflow parking for fixed route buses, overnight parking for DAR vehicles, and offices for DAR dispatchers. The site includes a paved parking lot, fencing, lighting, offices, and a bus fueling and washing station. LAVTA is currently developing the bridging documents and 60 percent design plan sets in preparation for a potential design/build solicitation. The total construction cost is estimated at \$35 million.

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 also held here. 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, contingency fleet vehicles are stored at the Atlantis location. As of the February 2020 signup, no vehicles were dispatched directly to or from the Atlantis facility, but given the capacity constraints of the Rutan facility, any notable increase in peak vehicle pull could require that some vehicles be staged from Atlantis.

The Rutan MOA is equipped to handle buses up to 40 feet long. The Atlantis facility could be configured to handle articulated coaches that are 60 feet long.

Park-and-Ride Lots

There are five park-and-ride locations within the LAVTA 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 LAVTA 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 2 summarizes these locations and their respective car parking capacities.

Figure 2 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 Ave 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 bus routes. However, many of the park-and-rides are currently used by carpoolers or private shuttle buses and not LAVTA bus passengers.

In 2015, the Alameda County Transportation Commission, in partnership with the Tri-Valley cities and LAVTA, launched a comprehensive Tri-Valley Integrated Park and Ride Study. The study, which was adopted in 2017, ultimately recommended multiple measures for the Tri-Valley area, which included:

- A high-frequency shuttle (15 minutes) between the Airway Park and Ride Lot and the Dublin/Pleasanton BART Station during peak hours as a pilot project
- Construction of a new park and ride lot at Bernal Ave/I-680
- Construction of a new parking garage at the Dublin/Pleasanton BART Station
- Facility enhancements like lighting, security cameras, bicycle parking facilities and wayfinding signage at all park and rides in the area
- Intelligent Transportation System (ITS) enhancements like transit signal priority, real-time vehicle arrival/departure information, and real-time parking occupancy information

Transit Stops and Stations

Transit Stops

LAVTA serves over 1,000 bus stops in its service area. Approximately 40% of these stops are for mainline routes and the remaining 60% are for school trippers. 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 primarily a red-and-white stencil marking on the curb. This is not ideal, as it can be difficult for riders to locate these stops. Highly-patronized stops in backbone service corridors typically feature seating, shelters, and full signage including route numbers, schedules, and vicinity maps. Approximately 70 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 lines, at select locations in the Hacienda Business Park area, and also at the Livermore Transit Center and E. Dublin/Pleasanton BART station.

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 investment. 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 sited so that it is safe for passengers to wait for, board, or get off a bus, but there may not be a crosswalk available nearby.

The agency provides cleaning and maintenance of its owned bus stop facilities. Some stops are maintained by 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 2018 and included updating an amenities and attributes database.

GPS-satellite based surveys to geocode the bus stop locations are entered into the Automatic Vehicle Location (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. 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 2017, the Southern Pacific's historic train depot in downtown Livermore was relocated to the downtown Transit Center property to serve as LAVTA's Transit Center operations building. LAVTA's existing Transit Center building was demolished and a new foundation for the historic building was constructed and building renovation began. LAVTA's Transit Center staff moved into the newly renovated depot building in August 2018.

BART Stations

The Dublin/Pleasanton Bay Area Rapid Transit (BART) station was opened in May 1997 and is owned and operated by BART. 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 recent housing construction, a mix of structured and open parking spaces provided close to 3,000 parking spaces at this station exclusively for use by train patrons.

The West Dublin/Pleasanton BART station, opened in February 2011, provides a total of six bus bays 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 LAVTA 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 provides bike racks at a few of its Rapid-branded bus stops and at the Livermore Transit Center. LAVTA passengers may also use the bike lockers provided at BART and ACE stations, including the ACE bike lockers located at the Livermore Transit Center.

3 Transit Demand Analysis

Transit is about getting from A to B. But what are the “A”s and “B”s, and why are they important?

This chapter focuses on demand for transit trips, and specifically the origins and destinations that affect this demand. In terms of origins – the “A”s – we focus on demographics that tend to correlate with increased transit use. In terms of destinations – the “B”s – we identify employment and other locations, such as major retail, that tend to attract transit trips.

The underlying demand for transit is driven by a number of factors. For resident-based travel, the following four factors are particularly important and are the major focus of this market analysis:

- **Population and Employment Density:** In places where larger numbers of people live and/or work in close proximity, transit demand is higher.
- **Socioeconomic Characteristics:** Different people have different “propensities” to use transit, with differences related to socio-economic characteristics. For example, people who live in households with one or more cars are less likely to use transit than those without any access to a car.
- **Major Activity Centers:** Major activity centers are places that attract many people and may generate demand for transit service. These include major employers, medical facilities, colleges and universities, and shopping centers.

These factors are the primary drivers of transit demand and, as such, provide strong indications of underlying transit demand. However, it should also be noted that other factors also influence transit demand, including:

- **Urban Form/Land Use:** While directly related to the population and employment densities of an area, the urban form or land use in an area should ideally go beyond providing density. Providing a diversity of uses at street-level, good connectivity of the multimodal network, major destinations along reasonably direct corridors, and comfortable and safe spaces for people all can influence transit demand.

- **Pedestrian Environment:** Nearly all transit riders are also pedestrians, and thus, walking environments strongly impact ridership. In general, people will walk one-quarter of a mile to access transit. However, in comfortable pedestrian environments, many transit riders will walk longer distances; in uncomfortable environments, many will walk less.

It's all about density

All demographic variables are described in terms of *density per acre*, because higher concentrations of people benefit transit in two ways: (1) density increases the likelihood of transit use, and (2) transit is able to serve dense areas much more efficiently than lower density areas.

Data sources and geographic units

Data used in this report is based on US Census 2018 American Community Survey (ACS) 5-Year Estimates for most variables and is presented at the block group level. The one exception is employment, which is based on Longitudinal Employer-Household Dynamics (LEHD) data from 2017, and collected at the block level but summarized at the block group level.

How this chapter is organized

Following the summary of key points, this chapter is organized into four sections:

- **Demographics.** This presents densities of population, employment, zero-vehicle households, low-income households, older adults, people with disabilities, and people identifying as a race/ethnicity other than white.
- **Demographic trends.** This section outlines recent demographic changes in the Tri-Valley area.
- **Major activity centers.** Major activity centers are important in understanding what the “B”s are in transit demand: where are transit riders mostly likely trying to go?
- **Transit propensity.** Transit propensity combines several demographic characteristics to identify locations that have a higher combined likelihood – or “propensity” – of transit usage.

KEY POINTS

- LAVTA serves higher-density areas well. However, the service provided may not necessarily connect to all destinations riders may want to go to. There are some gaps in service coverage in three key areas: Livermore, south of Stanley Boulevard and in Pleasanton, north of Valley Avenue. Steep topography, barriers created by freeways, and irregular arterial roadway connectivity makes providing efficient fixed-route service to some of these areas challenging.
- LAVTA serves nearly all major activity centers within a five-minute walk (one-quarter mile). Exceptions include the Lucky Supermarkets shopping center at 1951 Holmes Street in Livermore, William Mendenhall Middle School, and several areas in west Dublin east of San Ramon Blvd and north of Amador Valley Blvd. Each are more than one mile from the nearest stop.
- LAVTA cannot serve the interior of limited-access campuses, including the Lawrence Livermore and Sandia National Laboratories and U.S. Army Camp Parks.
- Three affordable housing communities are located more than a five-minute walk from the nearest stop, including the following:
 - Arroyo Commons, 1140 Mocho Street, Livermore
 - The Springs, 7100 San Ramon Road, Dublin
 - Arbor Vista, 1300 South Livermore Avenue, Livermore
- The overall population grew by 9% between 2013 and 2018.
- The number of older adults and residents who identify as a race/ethnicity other than white grew 25% and 23%, respectively, during that same time period.
- Employment grew 15% from 2013 to 2018.

DEMOGRAPHICS

Figure 3 provides a summary of various demographic indicators in the Tri-Valley. For each indicator, the table lists the citywide total number of people, areas with higher densities, and potential gaps in transit service provision. Maps of each indicator are available on subsequent pages.

Figure 3 Demographic Details

Indicator	Total within LAVTA Service Area	High Density Areas	Potential Service Gaps
Population <small>Figure 5</small>	269,066 <small>Population, 2014-2018 ACS</small>	<ul style="list-style-type: none"> ▪ Downtown Livermore, between Portola Avenue and the ACE corridor ▪ Dublin between Central Parkway and I-580 ▪ Alamo Creek Villas, immediately west of Camp Parks on Dougherty Road 	<ul style="list-style-type: none"> ▪ Holmes Street corridor in Livermore

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Indicator	Total within LAVTA Service Area	High Density Areas	Potential Service Gaps
Employment <small>Figure 7</small>	151,957 <small>Employment, 2017 LEHD</small>	<ul style="list-style-type: none"> West Pleasanton, in and around the Stoneridge shopping center Central Pleasanton, between Las Positas Boulevard and I-580 Central Dublin, between Amador Valley Boulevard and I-580 Lawrence Livermore and Sandia National Laboratories Downtown Livermore, between 4th Street and the ACE corridor 	<ul style="list-style-type: none"> Lawrence Livermore and Sandia National Laboratories U.S. Army Camp Parks
Zero-vehicle households <small>Figure 11</small>	7,626 <small>People living in households without access to a vehicle, 2014-2018 ACS</small>	<ul style="list-style-type: none"> Alamo Creek Villas, immediately west of Camp Parks on Dougherty Road Central Livermore, within one mile of the Livermore ACE station 	<ul style="list-style-type: none"> No notable gaps
Low-income households <small>Figure 12</small>	42,472 <small>People living in households with incomes below \$50,000, 2014-2018 ACS</small>	<ul style="list-style-type: none"> Downtown Livermore, within one mile of the Livermore ACE station Vineyard Avenue corridor in Pleasanton Alamo Creek Villas, immediately west of Camp Parks on Dougherty Road 	<ul style="list-style-type: none"> No notable gaps

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Indicator	Total within LAVTA Service Area	High Density Areas	Potential Service Gaps
Older adults (65+) Figure 13	34,187 People aged 65+, 2014-2018 ACS	<ul style="list-style-type: none"> Central and South Livermore, south of Portola Avenue and west of Wente Street Central Pleasanton, south of Stoneridge Drive and west of Iron Horse Trail Alamo Creek Villas, immediately west of Camp Parks on Dougherty Road East Pleasanton, east of Santa Rita Road and between Stoneridge Drive and I-580 	<ul style="list-style-type: none"> South Livermore, south of 4th Street and Stanley Boulevard
People with disabilities Figure 14	8,033 People with a disability; 2014-2018 ACS	<ul style="list-style-type: none"> East Avenue corridor in Livermore Central Pleasanton, near the intersection of Hopyard Road & Stoneridge Drive 	<ul style="list-style-type: none"> South Livermore, south of 4th Street and Stanley Boulevard
People identifying as a race/ethnicity other than White Figure 15	136,733 People identifying as a race/ethnicity other than White; 2014-2018 ACS	<ul style="list-style-type: none"> Central Pleasanton, near the intersection of Las Positas Boulevard and Santa Rita Road Downtown Livermore, south of Portola Avenue Alamo Creek Villas, immediately west of Camp Parks on Dougherty Road 	<ul style="list-style-type: none"> South Livermore, south of 4th Street and Stanley Boulevard Ruby Hill gated community West Dublin

POPULATION AND EMPLOYMENT

For scheduled transit to be successful, it must be direct, frequent, easy to access, and available when people need it. For non-school routes, more than any other factors, population and employment density determines whether this is possible:

- Transit needs to serve sufficiently high volumes of travelers to be cost-effective, and the density of development in an area determines the overall size of the travel market. The reach of transit is generally limited to within one-quarter to one-half mile of the transit line or station; thus, the size of the travel market is directly related to the density of development in that area
- To attract travelers who have other options, such as automobiles, transit must be relatively frequent—at least every 30 minutes. Below that, transit can be expected to serve only those who do not or cannot drive
- Suggested transit service frequency in relation to population and employment densities is shown in Figure 4

Population-Based Demand

Demand for transit service is derived in part from having a population base to support that demand for transit service. The population density of a place can indicate what kind of transit service may be appropriate and how frequently it should operate; an area with higher population density can support more frequent transit service. Overall population densities are relatively low (below 10 residents per acre) in many areas of the Tri-Valley, and few areas are able to support high-frequency transit service, with headways of 15 minutes or less, based on population density alone. Population density is highest in the following areas, which may support transit service frequencies of 15 minutes or better:

- Downtown Livermore, within roughly one mile of the Livermore ACE station
- North Central Pleasanton, within roughly one mile north or south of Las Positas Boulevard
- Isolated multi-family residential communities of Alamo Creek Villas, just west of U.S. Army Camp Parks and Stoney Creek/Livermore Gardens, just west of Lawrence Livermore National Laboratory




























SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

In other areas of the Tri-Valley, current population densities are more likely to support transit service frequencies of between 15 and 60 minutes. However, some portions of the Tri-Valley have low population densities of fewer than 2 residents per acre, and these areas may not support fixed-route transit service based on population density alone. In addition to low population densities, these areas typically feature challenging topography, circuitous roadway networks, limited pedestrian facilities, or other features that make operating fixed-route transit service difficult. Such low-density areas unlikely to support fixed-route service include:

- Schaefer Ranch
- Hillside communities of Pleasanton west of Foothill Road
- Hagemann Ranch neighborhood of Livermore, between Jack London Boulevard and Stanley Boulevard, Isabel Avenue, and Murrieta Boulevard
- Other residential areas of Livermore generally south of Concannon Boulevard and east of Holmes Street

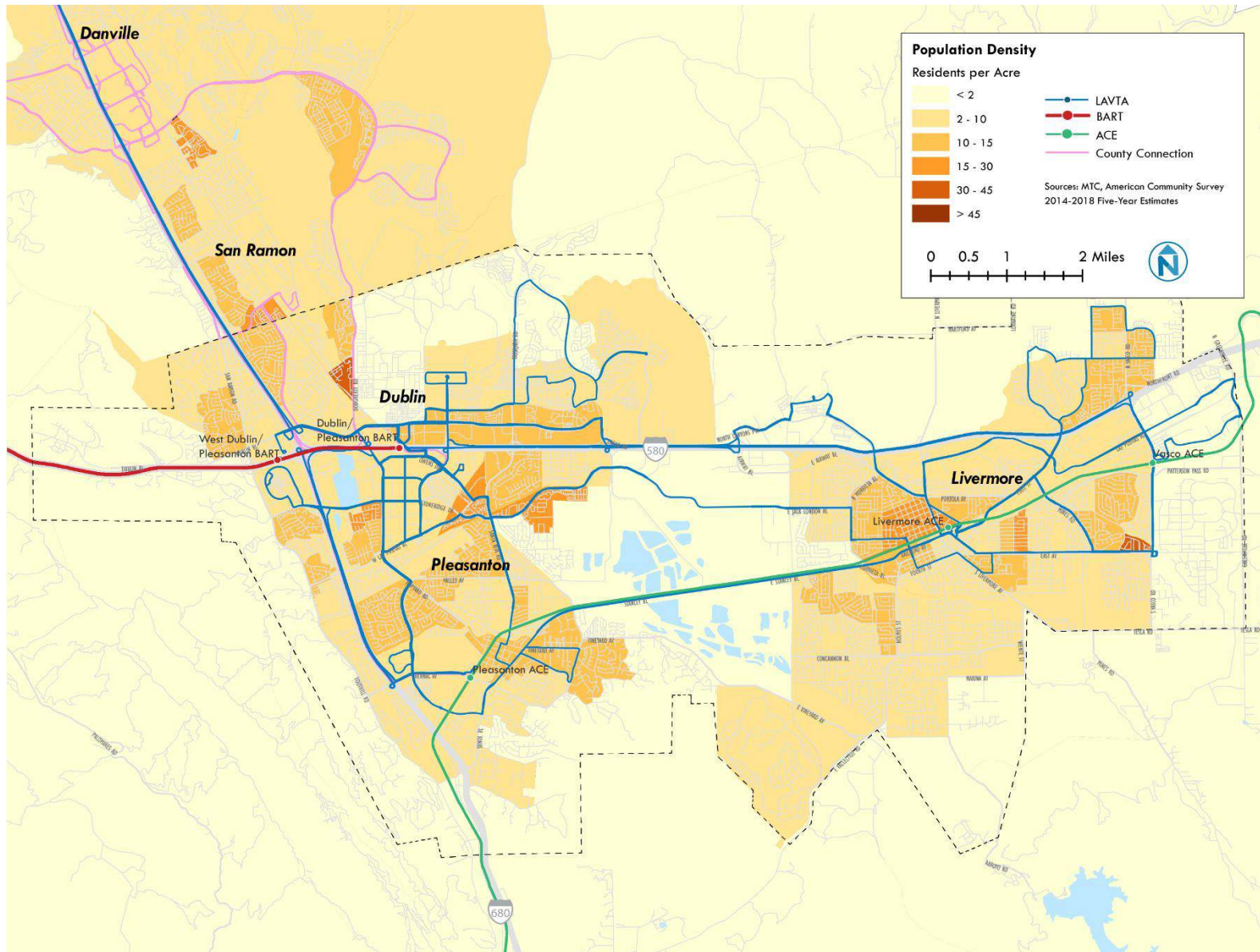
Figure 4 Land Use and Transit Demand

LAND USE			TRANSIT	
Land Use Type	Residents per Acre	Jobs per Acre	Appropriate Types of Transit	Frequency of Service
 Downtowns & High Density Corridors	>45	>25	 Light Rail  BRT  Rapid Bus  Local Bus	 10 mins or better
 Urban Mixed-Use	30-45	15-25	 BRT  Rapid Bus  Local Bus	 10-15 minutes
 Neighborhood & Suburban Mixed-Use	15-30	10-15	 Local Bus	 15-30 minutes
 Mixed Neighborhoods	10-15	5-10	 Local Bus  Micro-transit	 30-60 minutes
 Low Density	2-10	2-5	 Micro-transit  Rideshare  Volunteer Driver Pgm	 60 mins or less or On Demand
 Rural	<2	<2	 Rideshare  Volunteer Driver Pgm	 On Demand

Source: Thresholds based on research by Nelson\Nygaard.

SHORT RANGE TRANSIT PLAN FY 2022 – 2027
Livermore Amador Valley Transportation Authority

Figure 5 Population Density



Employment-Based Demand

The concentration of jobs is also an indication of the level of transit service that may be useful and productive. Like population density, the underlying demand for transit generally grows with an increase in employment density. In general, an area with two to five jobs per acre can support hourly transit service while an area with five to 10 jobs per acre can support service every thirty minutes. Understanding where there is a concentration of jobs and when people need to be commuting is important when thinking about transit service because in many places, transit services are largely supporting trips to and from work. The employment density map for the Tri-Valley is included in Figure 7.

Major employment centers of the Tri-Valley are generally distinct from the areas with highest population density identified in the preceding section. Some of the most significant employment centers in the LAVTA service area include:

- Lawrence Livermore and Sandia National Laboratories;
- Stoneridge Mall;
- Central Livermore, between 4th Street and the ACE corridor;
- Central Pleasanton, between Las Positas Boulevard and I-580;

Some of the largest employers associated with each of these areas are shown in Figure 6.

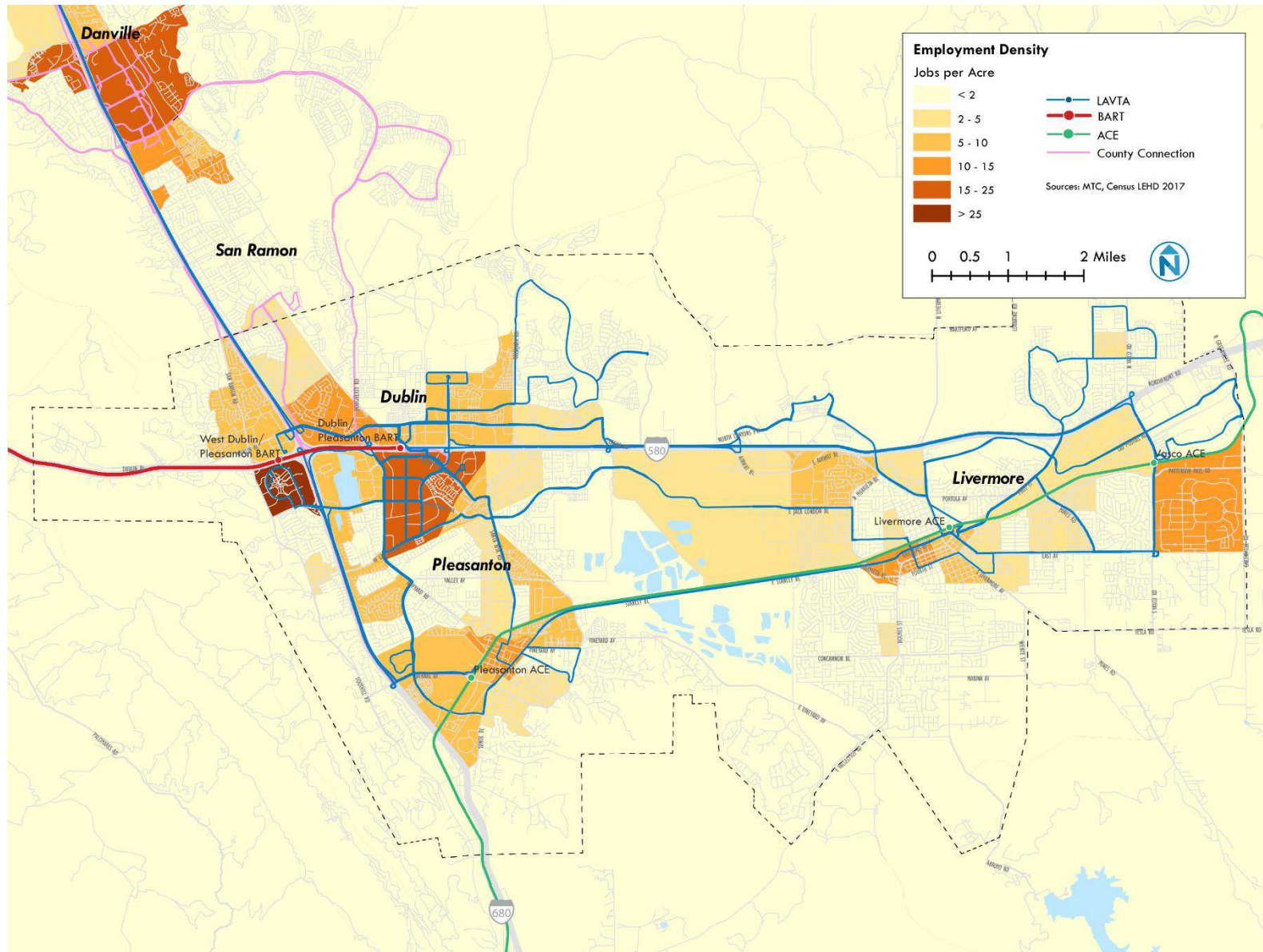
Figure 6 Selected Large Tri-Valley Employers

Employment Center	Largest Employers
Dublin	Alameda County's Santa Rita Jail and the Federal Correctional Institute (FCI), Ross Stores HQ
Stoneridge Mall	Safeway HQ, Workday, Macy's
Hacienda Business Park (Pleasanton)	Oracle, Kaiser Permanente, State Fund - Compensation Insurance, Stanford Healthcare ValleyCare, Clorox
Lawrence Livermore/Sandia National Laboratories	
Central Livermore	Stanford Healthcare ValleyCare

Sources: City of San Ramon; City of Dublin Comprehensive Annual Financial Report FY 2018, p. 208; City of Pleasanton; City of Livermore

SHORT RANGE TRANSIT PLAN FY 2022 – 2027
Livermore Amador Valley Transportation Authority

Figure 7 Employment Density



Composite Density of Population and Employment

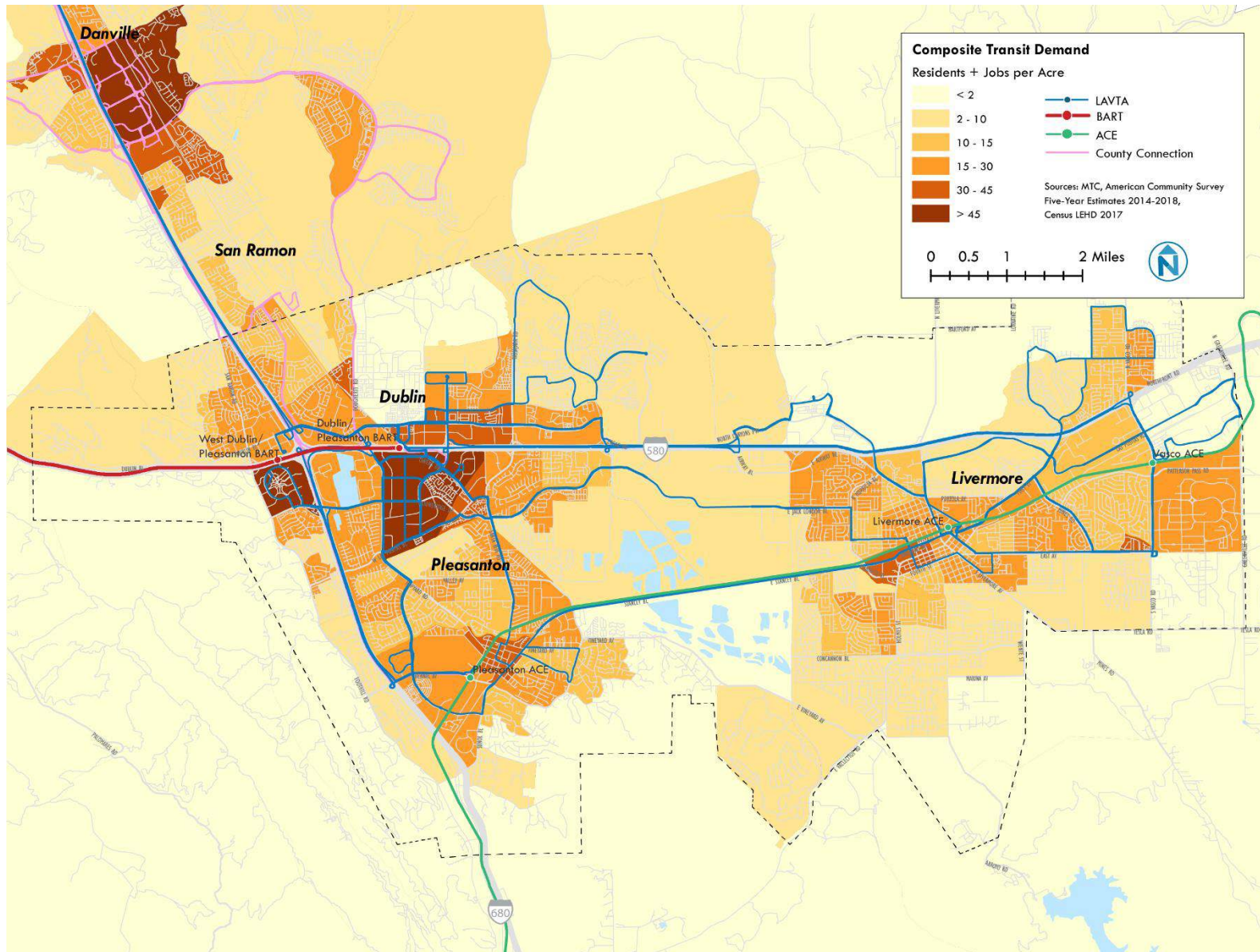
Combining the employment density and adjusted population density maps allows us to layer the potential demand for transit based on population, employment, and socioeconomic characteristics in one value and one map. The formula for calculating composite population/employment density is given by “composite density = [population] + (2 * [employment]),” because employment typically generates twice as much transit demand, per job, as every additional resident. This is because in most communities people are more likely to use transit for commuting than for other, non-commute trips. The composite transit demand based on population and employment, combined, is shown on Figure 8.

Composite Density based on Land Use Mix

Understanding the mix of population and employment density can highlight areas of mixed use versus single use. This is helpful in understanding whether transit demand in each area is derived more from residents or workers. Composite density based on land use mix is shown in Figure 9.

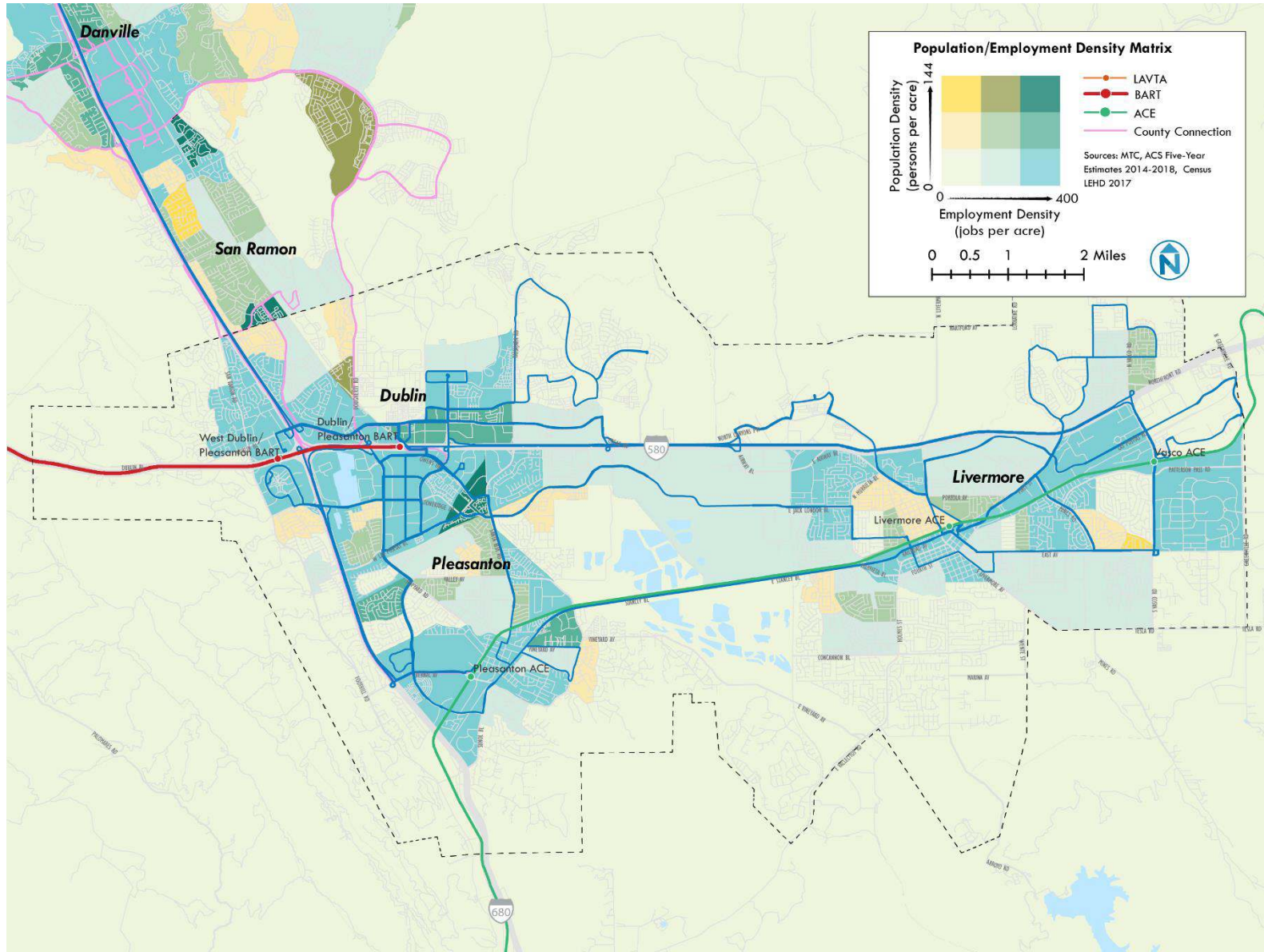
SHORT RANGE TRANSIT PLAN FY 2022 – 2027
Livermore Amador Valley Transportation Authority

Figure 8 Composite Transit Demand



SHORT RANGE TRANSIT PLAN FY 2022 – 2027 Livermore Amador Valley Transportation Authority

Figure 9 Population/Employment Density Matrix



DEMOGRAPHIC TRENDS

Trends in demographic indicators help to understand changes over time, and changes to anticipate in the future. Figure 10 lists each of the demographic indicators found within the LAVTA service zone, with values from 2013 and 2018. All indicators except low-income households and zero-vehicle households have increased over the five-year period.

The indicators that increased the most, and at rates higher than the growth in population, are: older adults (65+), people who identify as a race/ethnicity other than white, employment, and people with disabilities. Populations of low-income households and zero-vehicle households each declined slightly, likely the result of the Bay Area's affordable housing crisis pushing these communities to lower-cost regions as higher income households, also displaced by the housing crisis, continue to move further out.

Figure 10 Change in Demographic Indicators

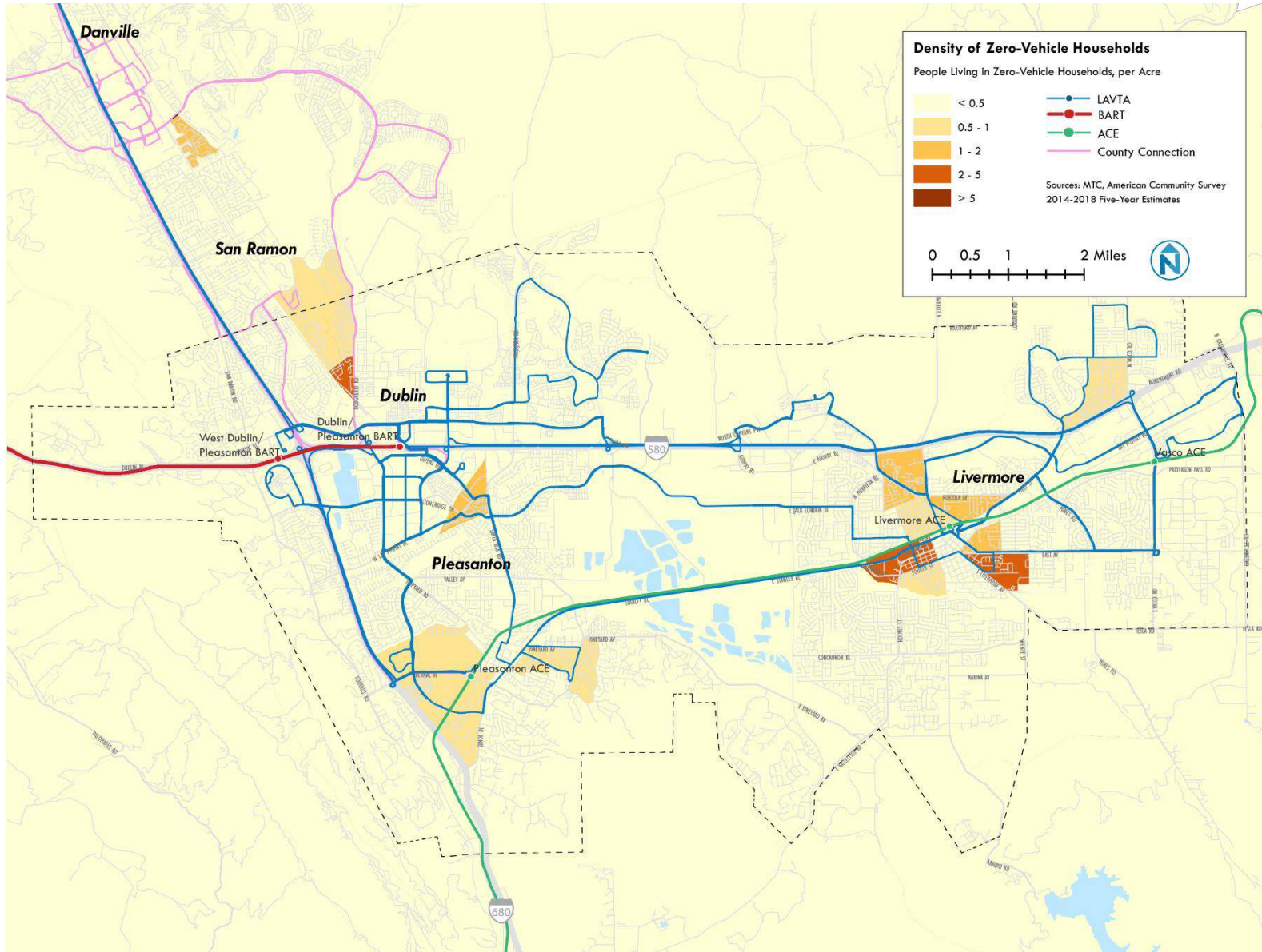
Indicator	2013	2018	Change	Percent Change	Average Annual Change
Population	245,608	269,066	23,458	9%	2%
Employment	129,402	151,957	22,555	15%	3%
Zero-vehicle households	7,696	7,626	(70)	-1%	0%
Low-income households	44,599	42,472	(2,127)	-5%	-1%
Older adults (65+)	25,687	34,187	8,500	25%	5%
People with disabilities	6,702	8,033	1,331	17%	3%
People identifying as a race/ethnicity other than White	105,268	136,733	31,465	23%	4%

Note: [A] Employment for 2018 is based on 2017 values. No data from 2018 or 2019 are available.

Source: 2009-13 and 2014-18 ACS 5-Year Estimates; 2017 LEHD

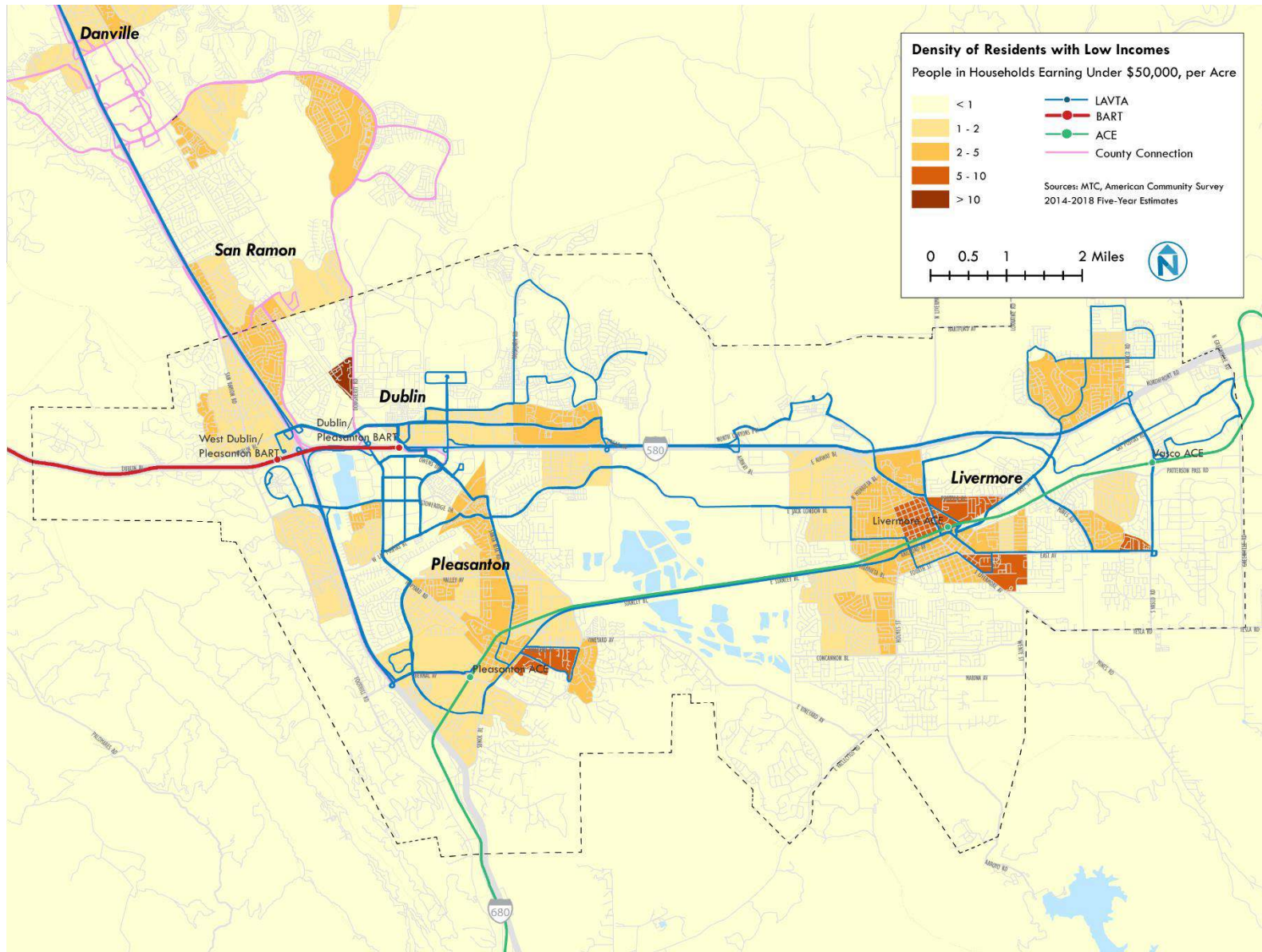
SHORT RANGE TRANSIT PLAN FY 2022 – 2027
Livermore Amador Valley Transportation Authority

Figure 11 Density of Zero Vehicle Households



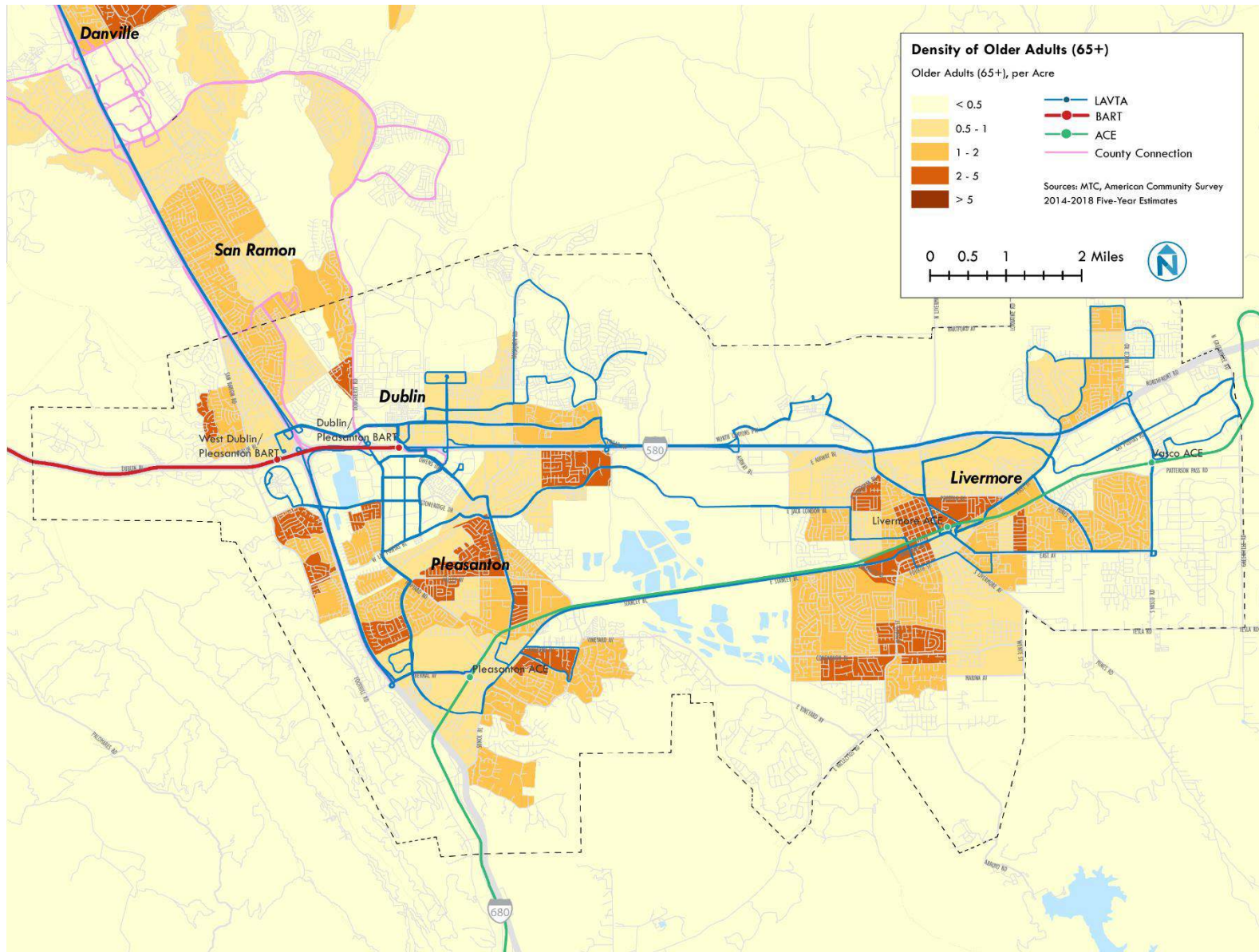
SHORT RANGE TRANSIT PLAN FY 2022 – 2027 Livermore Amador Valley Transportation Authority

Figure 12 Density of People with Low Incomes



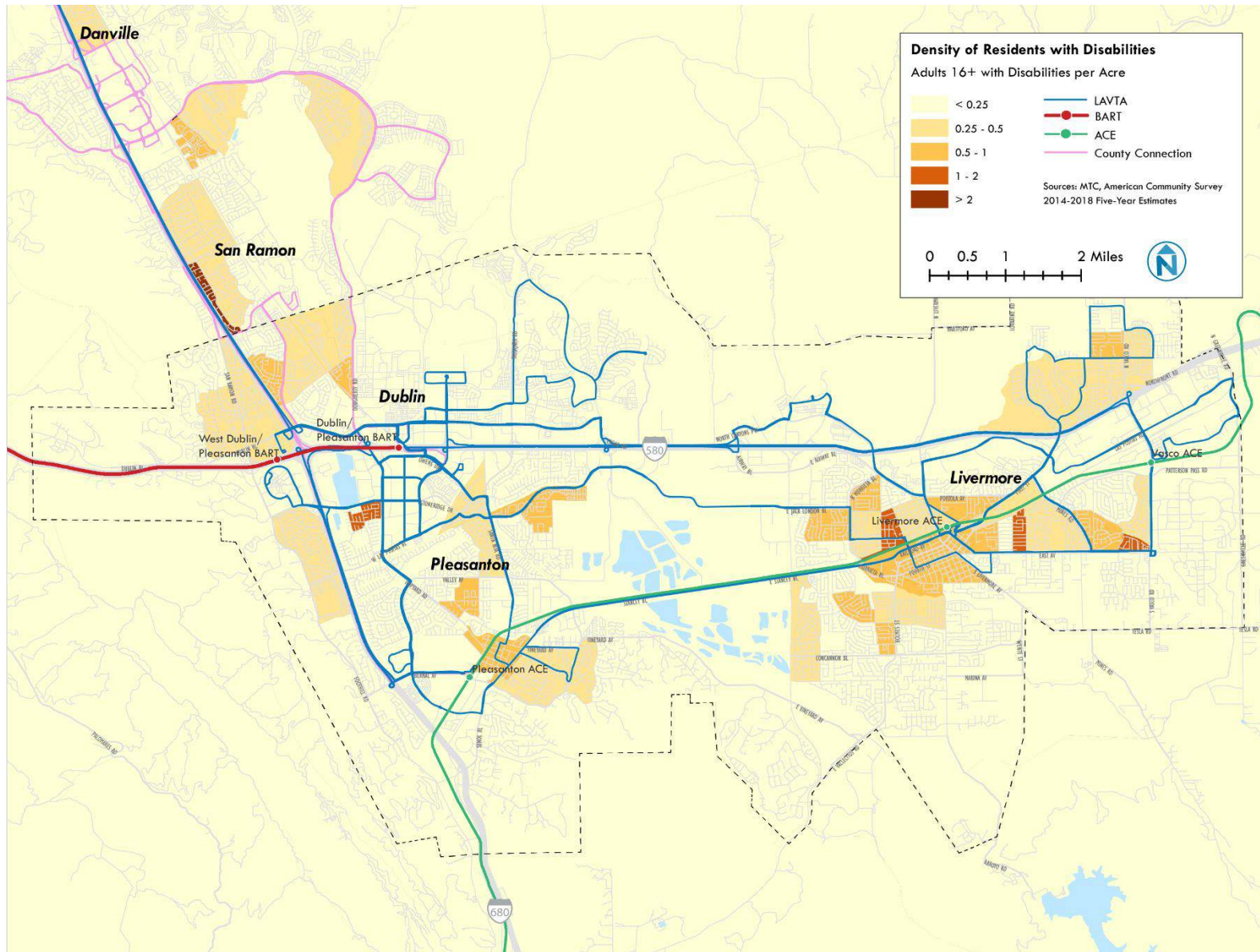
SHORT RANGE TRANSIT PLAN FY 2022 – 2027
Livermore Amador Valley Transportation Authority

Figure 13 Density of Seniors (Age 65+)



SHORT RANGE TRANSIT PLAN FY 2022 – 2027 Livermore Amador Valley Transportation Authority

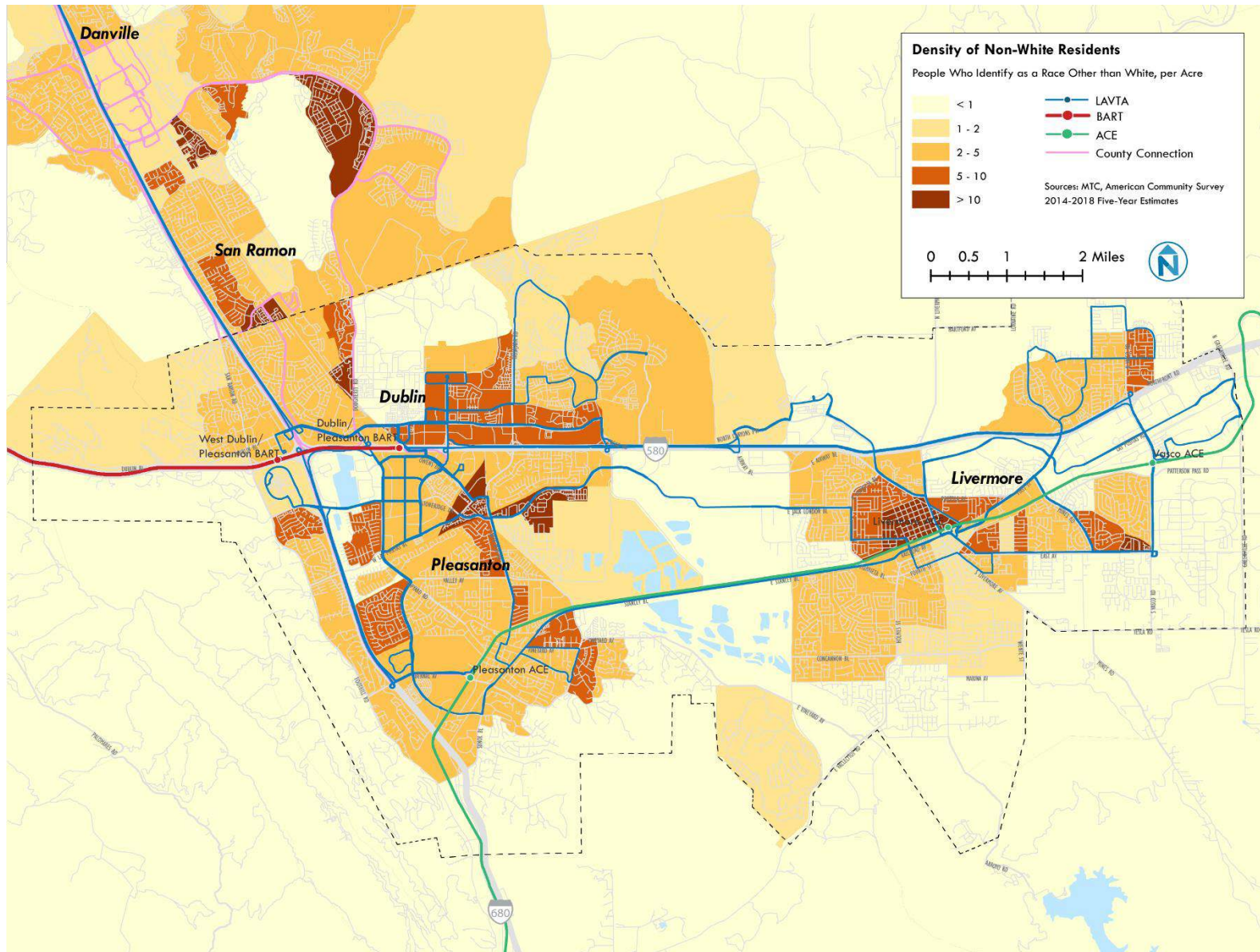
Figure 14 Density of People with Disabilities



SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Figure 15 Density of People Who Identify as a Race/Ethnicity Other than White



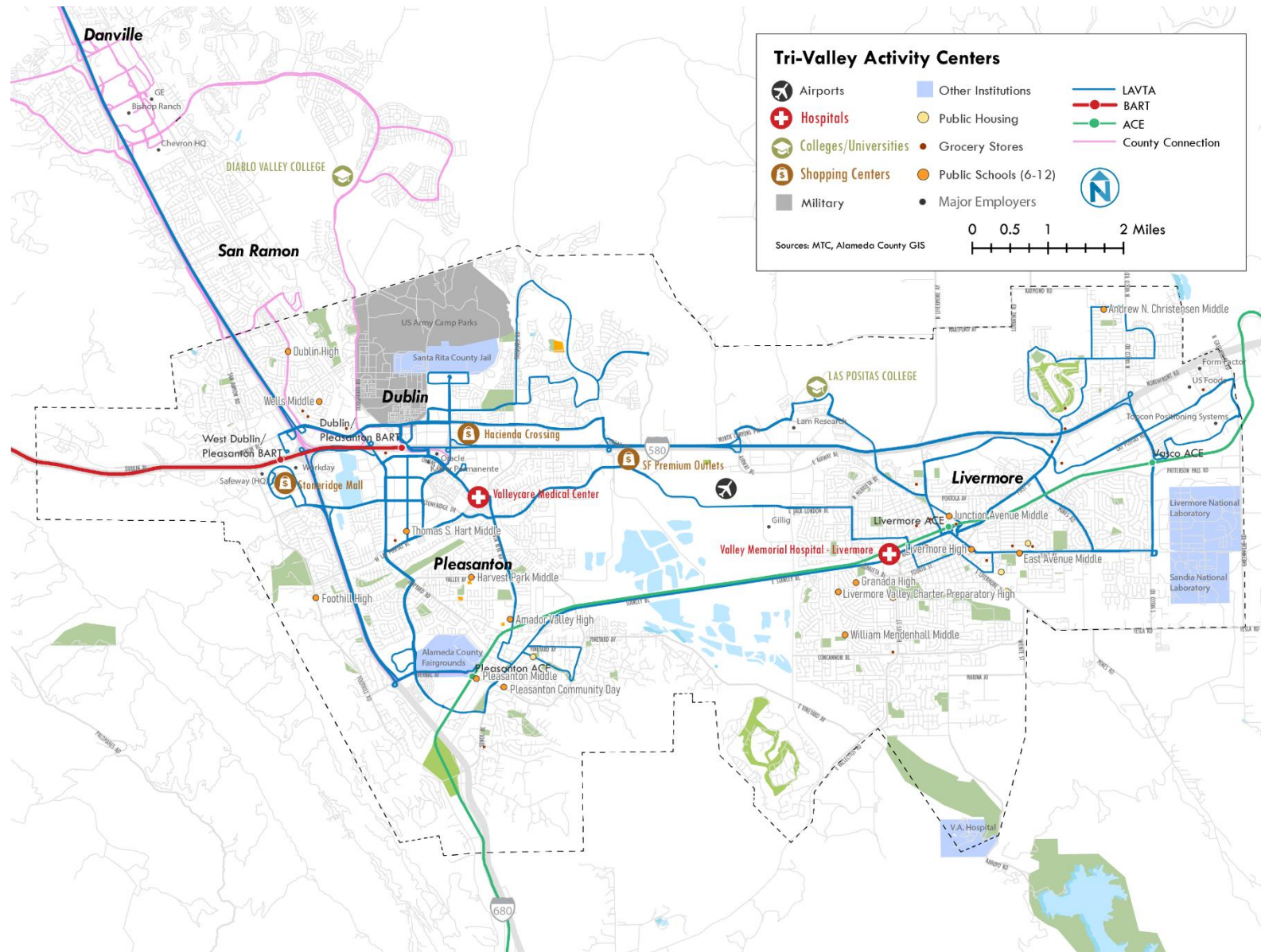
MAJOR ACTIVITY CENTERS

Transit serves as a means for people to access job sites, commercial centers, medical facilities, schools, recreational sites, and to meet with friends or family. These destinations are distributed throughout the Tri-Valley area, yet some individual destinations have high levels of demand and tend to be near some of the busiest transit stops in the region.

Some of these major destinations include educational facilities like Las Positas College, Foothill High School, Amador Valley High School, Dublin High School, Granada High School, and Livermore High School. Other popular activity centers are commercial and shopping centers like Stoneridge Mall, Hacienda Crossings, or San Francisco Premium Outlets. Major employers like Kaiser Permanente, Safeway Headquarters, or Oracle generate significant transit demand. The Dublin/Pleasanton and West Dublin/Pleasanton BART stations are also popular destinations. LAVTA serves all of these major activity centers (see Figure 16).

SHORT RANGE TRANSIT PLAN FY 2022 – 2027 Livermore Amador Valley Transportation Authority

Figure 16 Tri-Valley Activity Centers



TRANSIT PROPENSITY INDEX

The combination of the demographic variables presented previously indicate locations where transit demand is expected to be highest. When just identifying where there is population dense enough to support transit use, it is possible to overlook areas with perhaps lower population density, but a higher likelihood of using transit, and focus on areas that may have greater population density but people living there who are less likely to use transit.

Certain factors may play a more dominant role in an individual's decision to use transit, though the variables are all weighted equally in this analysis for simplicity.¹ Transit propensity in LAVTA's service zone was evaluated by the density of people with the following attributes:

- **Vehicle Ownership:** People living in households without a vehicle, either by choice or due to limited resources, are more likely to use transit than those with access to a car.
- **Household Income:** Owning and operating a car is expensive. People living in households with low incomes, earning less than \$50,000 per year, are more likely to use **local bus service** more regularly than other groups due to limited access to a vehicle, and they may rely on transit as their primary mode of transportation.
- **Race and Ethnicity:** Residents who identify as a race/ethnicity other than white generally have higher rates of transit use, and the provision of effective transit service to minority populations is also particularly important to the Federal Transit Administration and is a requirement under Title VI of the Civil Rights Act of 1964.
- **Age:** Older adults (ages 65+) often become increasingly transit-dependent as they age. Many older adults cannot drive for legal or health-related reasons, or because they are living on fixed incomes in their retirement.

¹ Another approach for estimating transit propensity was considered but ultimately rejected. This approach adjusts for the propensity of different demographics groups to use transit by using "transit propensity factors." Transit propensity factors indicate how much more or less likely specific groups of people are to use transit for commuting compared to the overall population in the study area. According to the American Community Survey, Alameda County's transit mode share among commute trips is about 15%, and Contra Costa County's transit mode share is about 10%. However, this Census dataset consolidates all "transit", including BART and commuter rail, and ignores the commonly observed demographic differences between rail and bus ridership. Using county-level transit propensity factors, the demographic groups with the highest transit propensity – defined as all forms of public transit, including BART and commuter rail – include people in white-collar occupations and people living in households earning more than \$75,000. These characteristics reflect BART's higher share of total transit commutes in the East Bay, and are less reflective of smaller, locally-oriented bus systems like LAVTA.

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

- **Disability Status:** People with disabilities² may be more likely to rely upon public transit and paratransit services to get around, particularly if the nature of their disability prevents them from driving.

Figure 17 shows the areas with highest transit propensity/demand. The figure also shows transit demand outside of LAVTA's service area, such as San Ramon and Danville, to compare transit demand with neighboring municipalities. The figure indicates the areas with the highest transit demand are:

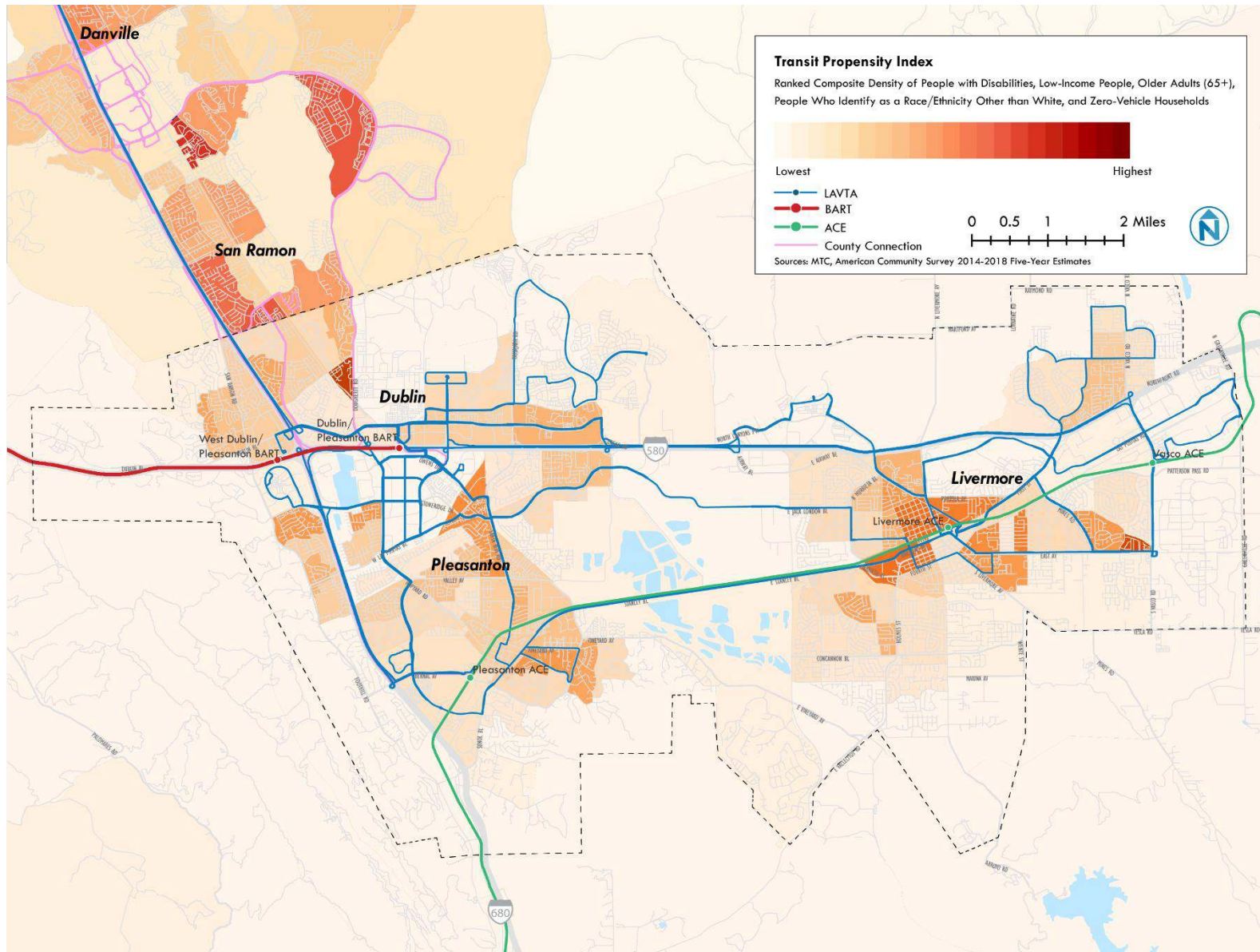
- In Livermore, within roughly one mile of the Livermore Transit station;
- The East Avenue corridor in Livermore;
- The Vineyard Avenue corridor
- The multi-family apartment communities in central Pleasanton, near the intersection of Las Positas Boulevard and Santa Rita Road.

These areas are all served by transit. One notable area with moderate levels of transit demand but no transit access is in Livermore south of 4th Street.

² This analysis analyzes disability status among the population ages 20 to 64, per the universe defined by the American Community Survey's Table B23024.

SHORT RANGE TRANSIT PLAN FY 2022 – 2027
Livermore Amador Valley Transportation Authority

Figure 17 Transit Propensity Index



4 FIXED-ROUTE SERVICE EVALUATION

This chapter takes a deep dive into LAVTA's fixed-route service. How does it operate and how is it used?

Fixed-route service operates on consistent schedules and alignments. This chapter is organized into four sections:

- **Overview of System:** Provides a basic overview of the LAVTA fixed route system, including its routes and fare structure/programs.
- **Fleet Information:** Provides a fleet roster of LAVTA fixed route vehicles and upcoming fleet replacement plans.
- **Service Standards Evaluation:** Presents the service standards adopted by LAVTA and then evaluates them against five to ten years of historical data. Standards are broken into systemwide and route-level standards and encompass a variety of metrics including ridership, productivity, and cost.
- **On-Time Performance:** While not a service standard, on-time performance was also evaluated to assess the extent to which LAVTA vehicles stay on schedule.

KEY POINTS

Topic	Key Points
Systemwide Standards	<ul style="list-style-type: none"> ▪ Systemwide Ridership: Ridership had been gradually declining prior to FY2017 but increased in both FY2018 and FY2019. Because of the impact of the pandemic, ridership dropped in both FY2020 and FY2021. Standard: Increase from prior year Achieved in FY 2019: Yes ▪ Passengers per Revenue Hour: Had been declining over the last ten years but appears to have stabilized. Standard: At least 15 passengers per revenue hour Achieved in FY 2019: No ▪ Passengers per Revenue Mile: Has been declining over the last ten years but appears to have stabilized. Standard: At least 1 passenger per revenue mile Achieved in FY 2019: No ▪ Farebox Recovery Ratio: Has hovered between 15 to 20% in the last five years. Standard: At least 20% Achieved in FY 2019: No ▪ Change in Operating Cost per Hour: Between 2015 and 2018, operating costs rose less than 5% above the Bay Area CPI. In 2019, costs increased more than 5% of the CPI. Standard: Less than 5% above the Bay Area CPI Achieved in FY 2019: Yes
Route Standards	<ul style="list-style-type: none"> ▪ Routes are organized into one of four categories: Rapid, Local, Express, and School Tripper. ▪ Rapid and Local route productivity is measured by boardings per revenue hour. Standard: 15 boardings per revenue hour for Rapid routes, 10 boardings per hour on Local routes,. - Rapid: The two Rapid routes <u>did not meet</u> the standard. - Local: Five of the nine routes <u>met</u> the standard. ▪ Express and School Tripper route productivity is measured by boardings per trip. Standard: 15 boardings per trip. - Express: All three routes <u>did not meet</u> the standard. - School Tripper: 11 of 15 routes <u>met</u> the standard ▪ About half of LAVTA's routes (15 of 29) met their respective standard.

Topic	Key Points
On-Time Performance	<ul style="list-style-type: none"> There is no systemwide on-time performance standard On-time performance among most routes are within the 80 to 90 percent range.

OVERVIEW OF SYSTEM

LAVTA's 29 fixed routes can be divided into four main categories, as follows:

Rapid: Routes 10R and 30R, branded as Rapid Routes by LAVTA, are the system's two rapid routes. Rapid routes operate between the municipalities in the service area. Rapid routes generally operate all day with regular frequencies, usually every 15 minutes, and have a relatively long service span.

Local: Routes 1, 2, 3, 8, 11, 14, 15, 53, and 54. Local routes serve smaller geographic areas with about half of the routes operating during peak hours only and the other half operating all day. Local routes are designed to "feed" rapid routes, intercity express bus services, and BART and ACE trains. They often cover shorter distances and have longer headways (30 to 60 minutes).

Express: Routes 20X, 70X, and 580X. Express service operates at 30 to 60-minute headways during peak periods, focusing on linking people in cities or neighborhoods to a specific employment area or a major transit hub. Route 20X and 580X provide peak-hour service from East Dublin/Pleasanton BART to locations in Livermore. Route 70X provides peak hours-only service connecting East Dublin/Pleasanton BART to Pleasant Hill BART and Walnut Creek BART.

School Trippers: Routes 501, 502, 503, 504, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, and 611. School trippers operate Monday through Friday and are intended to help area students get to and from school. Service is always open to the general public.

Fixed-Route Services

Figure 18 shows LAVTA's routes, while Figure 19 shows the transit network with connecting agency routes. Service is strongly oriented towards providing connections to BART service, with focal points at the East and West Dublin/Pleasanton BART 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. County Connection also serves the

LAVTA service area in Dublin and Pleasanton, while LAVTA Route 70X serves Walnut Creek BART and Pleasant Hill BART in Contra Costa County.

Figure 20 illustrates the average 2019 weekday boarding activity at every fixed-route stop in the LAVTA bus system. Service frequencies and spans for each route are shown in Figure 21. Eight routes operate on Saturdays, and six on Sundays.

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
- Metropolitan Transportation Commission
- Bay Area Air Quality Management District
- Caltrans
- CalOES
- Federal Transit Administration

Figure 18 LAVTA System Map

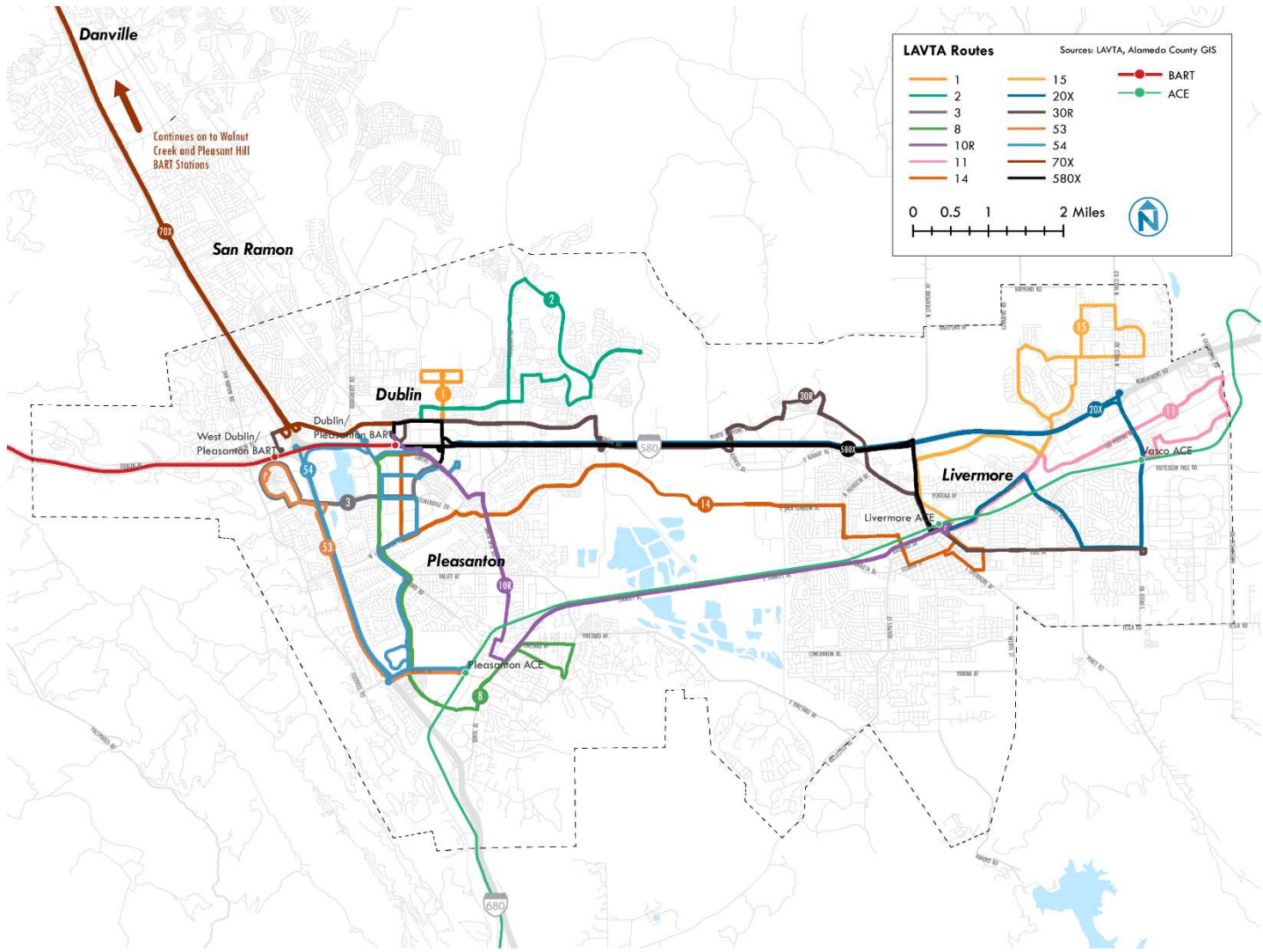


Figure 19 Connecting Transit Service in the LAVTA Service Area

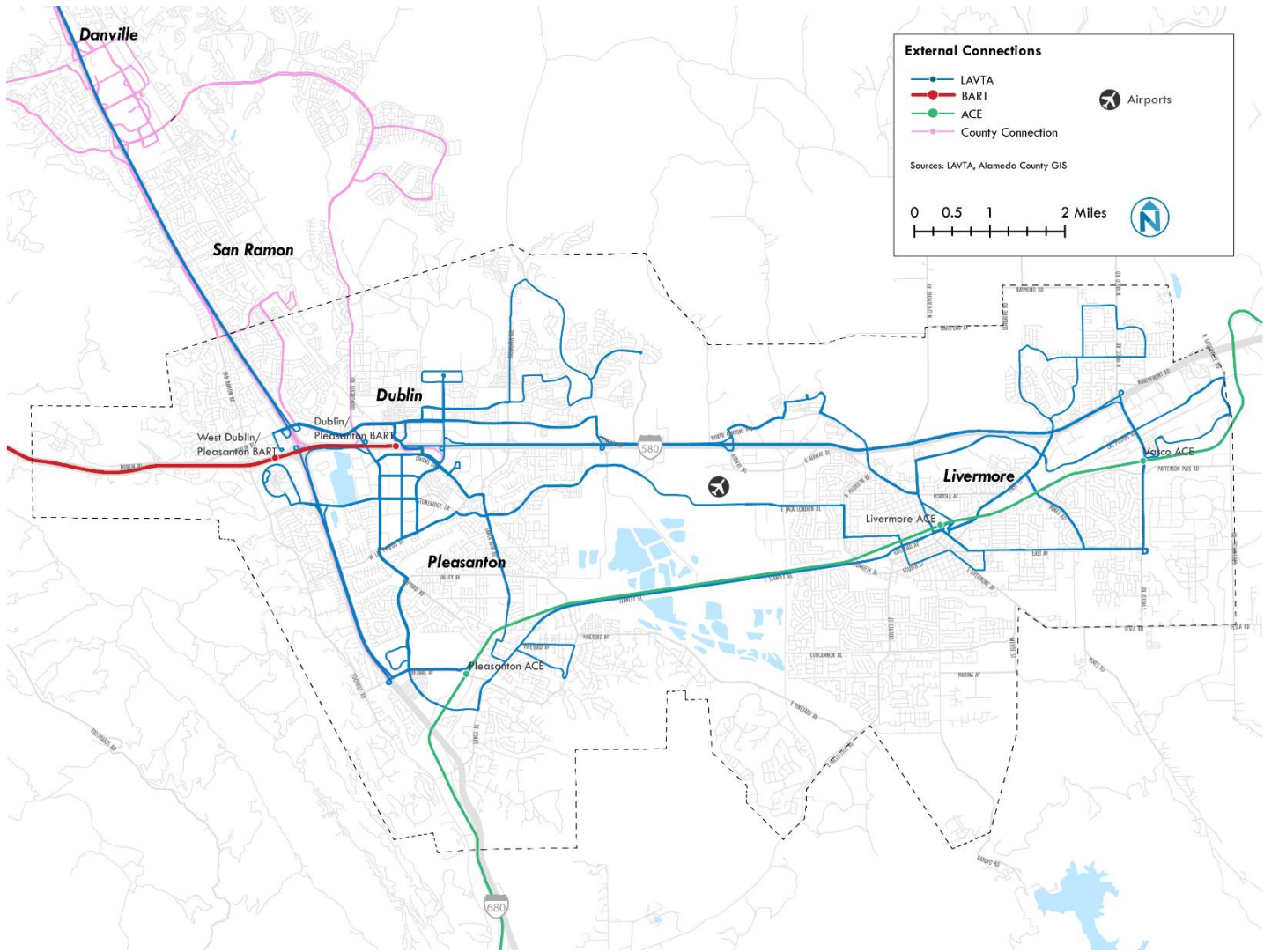
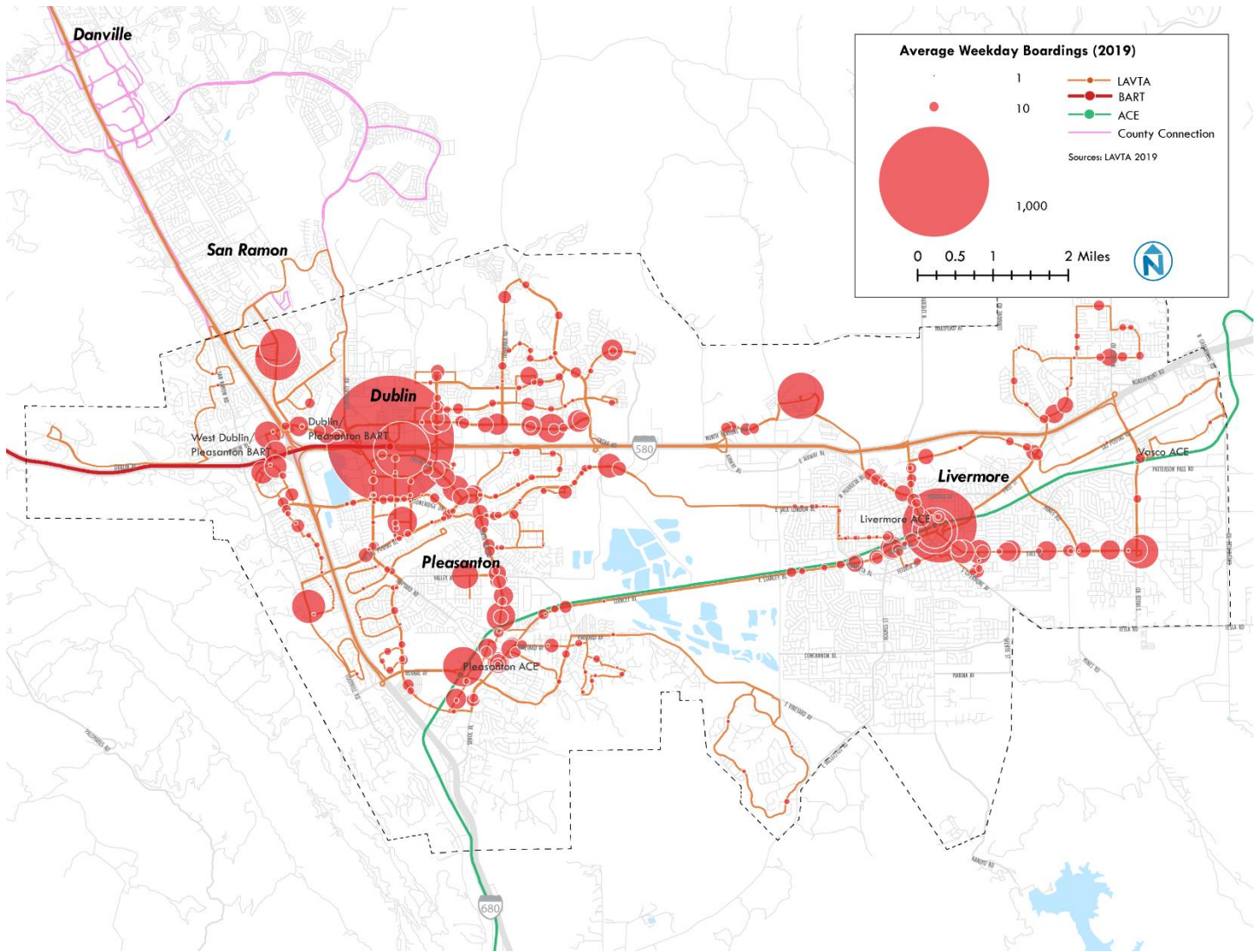


Figure 20 LAVTA Average Daily Weekday Boardings by Stop (2019)



SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Figure 21 2020 (Pre-COVID) Frequency and Span of Service by Route (Non-School Routes)

Route	Frequency of Service						Span of Service			
	Early AM	AM	Midday	PM	Evening	Saturday	Sunday	Weekday	Saturday	Sunday
Rapid Routes										
Rapid 10R	15	15	15	15	30-60	30 (most of the day), 40-60 mins (early morning/late evening)	30 (most of the day), 40-60 mins (early morning/late evening)	4:31 AM – 1:38 AM	5:23 AM – 1:38 AM	5:23 AM – 1:38 AM
Rapid 30R	15-30	15	15	15	30-60	60	60	5:00 AM – 12:45 AM	5:09 AM – 12:42 AM	5:09 AM – 12:42 AM
Local Routes										
Route 1	-	30	30	30	30	60	60	6:03 AM – 8:50 PM	7:40 AM – 8:54 PM	7:40 AM – 8:54 PM
Route 2	-	60	-	60	-	-	-	6:33 AM – 9:16 AM 3:21 PM – 6:51 PM	-	-
Route 3	-	30	30	30	60	40	40	6:18 AM – 12:53 AM	8:22 AM – 12:53 AM	8:22 AM – 12:53 AM
Route 8	-	30	30	30	60	60	60	6:03 AM – 8:52 PM	8:02 AM – 8:50 PM	8:02 AM – 8:50 PM
Route 11	-	60	-	60	-	-	-	6:08 AM – 8:54 AM 4:08 PM – 6:54 PM	-	-
Route 14	-	30-45	45-60	30-45	45-60	60	60	6:21 AM – 10:02 PM	7:51 AM – 9:43 PM	7:51 AM – 9:43 PM
Route 15	30	30	30	30	30-60	60	60	5:08 AM – 11:31 PM	5:49 AM – 9:32 PM	5:49 AM – 9:32 PM
Route 53	-	30-75	-	60	-	75	-	5:36 AM – 8:39 AM 3:57 PM – 7:18 PM	8:41 AM – 10:09 AM 4:10 PM – 5:41 PM	-
Route 54	-	60	-	60	-	-	-	6:51 AM – 8:20 AM 3:48 PM – 6:17 PM	-	-
Express Routes										
Route 20X	-	60	-	60	-	-	-	7:33 AM – 9:09 AM 4:41 PM – 6:20 PM	-	-
Route 70X	-	30	-	30	-	-	-	5:43 AM – 8:51 AM 4:03 PM – 7:13 PM	-	-
Route 580X	-	30	-	30	-	-	-	5:57 AM – 8:26 AM 4:29 PM – 7:28 PM	-	-

System-Level Comparison

In order to analyze the productivity of routes, LAVTA's 2016 - 2025 Short Range Transit Plan (SRTTP) 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:

- **Rapid:** Routes 10R and 30R
- **Express:** Routes 20X, 70X, and 580X
- **Local:** Routes 1, 2, 3, 8, 11, 14, 15, 53, and 54
- **School:** 501, 502, 503, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611

Rapid routes operate between municipalities in the service area and generally operate all day with service every 15 minutes during most of the day. 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. Local 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, but are also the most productive routes in the LAVTA system in terms of boardings per revenue hour.

Figure 22 FY2019 Annual Revenue Hours, Boardings, Boardings per Revenue Hour, and On-Time Performance by Route

Route	Annual Boardings	Annual Revenue Hours	Annual Boardings per Revenue Hour	On-Time Performance
1	26,172	4,277	6.1	91.6%
2	16,531	1,604	10.3	86.5%
3	39,858	6,608	6.0	82.6%
8	52,974	8,066	6.6	86.1%
10R	409,363	30,198	13.6	81.2%
11	7,872	1,378	5.7	91.8%
14	108,571	11,631	9.3	85.3%
15	116,425	9,963	11.7	87.7%
20X	8,677	714	12.2	84.3%
30R	505,755	38,032	13.3	85.0%
53	34,209	1,619	21.1	82.0%
54	19,514	996	19.6	63.3%
70X	30,940	3,366	9.2	60.9%
580X	14,646	1,967	7.4	95.2%
501	62,255	1,022	60.9	50.0%
502	24,882	510	48.7	55.8%
503	7,541	345	21.8	68.0%
504	28,437	519	54.8	52.8%
601	4,766	209	22.8	57.2%
602	19,715	468	42.2	53.9%
603	9,405	90	105.1	85.6%
604	27,792	483	57.5	51.0%
605	19,540	344	56.8	55.6%
606	11,560	185	62.5	80.1%
607	3,855	122	31.5	62.7%
608	19,634	158	124.2	82.9%

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

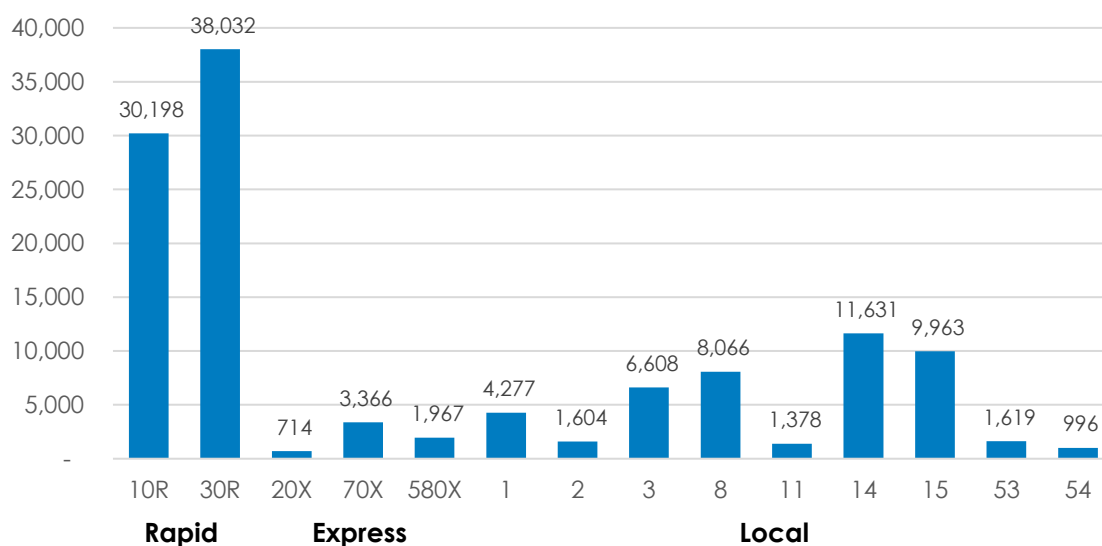
Livermore Amador Valley Transportation Authority

Route	Annual Boardings	Annual Revenue Hours	Annual Boardings per Revenue Hour	On-Time Performance
609	3,590	137	26.2	58.8%
610	10,937	110	99.1	72.6%
611	12,151	309	39.4	67.1%

The following charts illustrate levels of service, ridership, and productivity by route and route category. Figure 23 shows the annual revenue hours by route, and Figure 24 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 25 illustrates this measure by category.

Figure 23 FY2019 Annual Revenue Hours by Route



SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Figure 24 FY2019 Annual Boardings by Route

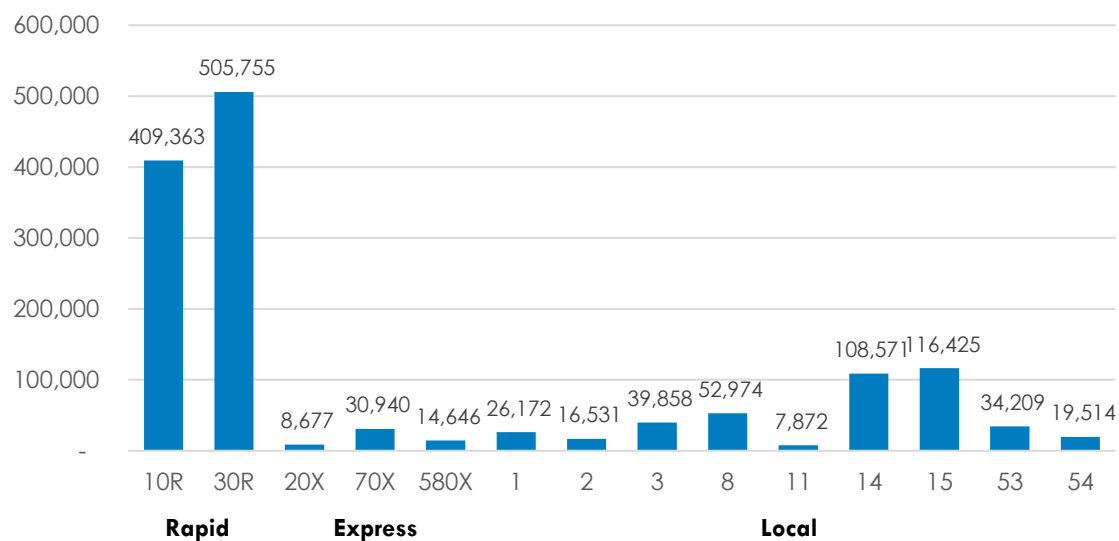
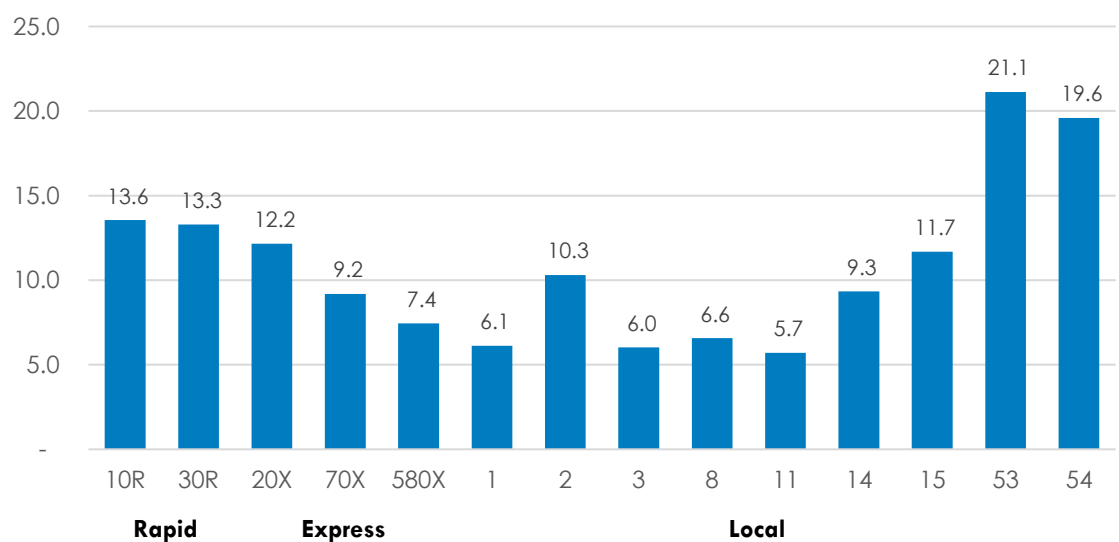


Figure 25 FY2019 Average Boardings per Revenue Hour by Route



Route by Route Evaluation

This section describes performance on a route-by-route basis for Local, Express, and Rapid 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. All information below is from pre-COVID levels of operation.

Route 1 – Gleason/Hacienda

Route 1 is a local route operating between the East Dublin/Pleasanton BART station, the East County Hall of Justice, and Santa Rita Jail. The route operates along Dublin Blvd, Hacienda Dr, and operates a counterclockwise terminal loop along Madigan Rd, Broder Blvd, Arnold Rd, and Gleason Dr. The route provides service every 30 minutes between 6:00 a.m. and 8:00 p.m. on weekdays and between 7:00 a.m. and 8:00 p.m. on weekends.

Productivity on Route 1 is 5.9 boardings per revenue hour, which is well below the performance standard of 10 boardings per revenue hour. However, productivity on Route 1 is higher on Saturdays and Sundays, 8.3 and 7.0 boardings per revenue hour, respectively. Ridership is highest in the morning with an average of 37 boardings per day between 8:00 a.m. and 9:00 a.m.

Route 1 has above average on-time performance, with 87% of trips arriving on time to scheduled time points.

Route 2 – East Dublin

Route 2 is a local connector providing hourly service during peak times on weekdays only between the East Dublin/Pleasanton BART station, Hacienda Crossings, Dublin Ranch, Silvera Ranch, Positano, and Central Pkwy. From the BART station, Route 2 operates along Dublin Blvd, Arnold Rd, and Central Pkwy before completing a one-way clockwise loop along Tassajara Rd, Fallon Rd, Positano Pkwy, Central Pkwy, Lockhart St, Gleason Dr, Grafton St, Kohnen Way, and Brannigan St.

Productivity on Route 2 is 10.3 boardings per revenue hour, increasing over previous years. Hourly service only during peak periods decreases the attractiveness of this route and is only useful for typical work commutes. Improvements to service frequency and off-peak service may further improve

ridership and productivity on the route. The majority of daily ridership on this route occurs on trips that serve the start and dismissal times at Fallon Middle School. Other trips carry very few passengers.

Route 2 has above average on-time performance systemwide, with 86% of trips arriving on time to scheduled time points.

Route 3 – Stoneridge

Route 3 provides all day service in Pleasanton between the East Dublin/Pleasanton BART and the Stoneridge Mall. Route 3 provides service in Hacienda, as well as to the residential and medical buildings in the Stoneridge Mall area. Route 3 operates along Owens Dr, Hacienda Dr, and Johnson Drive before serving Stoneridge Mall. Ridership on Route 3 is highest during weekday afternoons, averaging 31 passengers between 1:00 p.m. and 2:00 p.m. and 20-30 passengers between 3:00 p.m. and 6:00 p.m.

Route 3 has low productivity at 6.9 boardings per revenue hour and below average on-time performance, with 79% of trips arriving on time to scheduled time points, 20% late, and 1% of trips arriving early. Productivity may be low on this route due because it provides a connection between an employment hub at Stoneridge Mall with the East Dublin/Pleasanton BART station, effectively requiring a transfer for the majority of riders to complete their trip. Reliability improvements to reduce late trips should be explored to further improve this route, though on-time performance appears to be improving.

Route 8 – Hopyard

Route 8 operates as a bi-directional route between BART and South Pleasanton along Hopyard and Valley, providing a connection to downtown Pleasanton. Route 8 provides service to the Pleasanton Senior Center, downtown Pleasanton, Kottinger Park, and Vineyard. Route 8 operates every 30 minutes during peak periods and every 60 minutes midday and on weekends.

Route 8 operates along Owens Dr, Hopyard Rd, Valley Ave, and Sunol Blvd before operating a clockwise terminal loop around Vineyard Ave, Bernal Ave, and Kottinger Dr.

Route 8 averages 7.0 boardings per revenue hour, making it a below average productivity route. Ridership fluctuates throughout the morning peak period and is highest during the afternoon peak period, averaging 45 boardings between 4:00 p.m. and 5:00 p.m.

Route 8 is an average on-time performance route, with 85% of trips arriving on-time, 14% late, and 3% early. Additionally, layover times at the midpoint of the route (Bernal & Palomino) vary throughout the day between no layover and five minutes. This was done to optimize inbound connections at the BART hub, but may make it confusing for passengers waiting on the bus for service to the rest of the loop. There may be opportunities to layover at the end of the line instead of mid-alignment to reduce confusion.

Route 11 – ACE/Vasco

Route 11 is a weekday peak period only, bi-directional route operating between the Livermore Transit Center and the Vasco Rd ACE Station, serving the industrial area in between. In the morning, the route connects to two ACE trains at Vasco Rd and another ACE train at the Transit Center. In the afternoon, it connects with three ACE trains at Vasco Rd. The route operates along First St, Las Positas Rd, Greenville Rd, National Dr, Brisa St, and Vasco Rd. Route 11 provides hourly service on weekdays only between 6:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 7:00 p.m.

Route 11 is a low productivity route, averaging 5.7 boardings per revenue hour. Productivity is highest in the first trip of the morning, averaging 10 passengers. The route has high on-time performance, averaging 90% of trips on-time, 6% of trips late, and 3% of trips early.

Due to changes in demand for transit related to the Covid-19 Pandemic, service on Route 11 has been suspended since April 2020.

Route 14 – Pleasanton – Livermore

Route 14 operates 7 days per week and provides connections between Livermore, Pleasanton, and the Dublin/Pleasanton BART station. Route 14 also provides service to the Livermore Transit Center, the Livermore Civic Center complex, central Livermore/Olivina, Jack London, San Francisco Premium Outlets, Stoneridge Creek senior living community, and Hacienda. The route operates along Owens Dr, Willow Rd, Las Positas Blvd, Stoneridge Dr, Jack London Blvd, Murrieta Blvd, Olivina Ave, P St, Fourth St, Livermore Ave, Pacific Ave, Dolores St, East Ave, and Maple St.

Route 14 is a slightly below average productivity route, averaging 9.7 boardings per revenue hour and 350 boardings per weekday. Ridership fluctuates throughout the day and is highest between 4:00 p.m. and 5:00 p.m. averaging 73

boardings. Among local routes, Route 14 has the second highest average weekday ridership and the highest average Saturday and Sunday ridership, due in part to the crosstown connectivity it provides between Pleasanton and Livermore. The route is also an above average on-time performance route, with 87% of trips on-time, 9% late, and 4% early.

Route 15 – Springtown

Route 15 is a local route providing service to the Livermore Transit Center, Walmart, Kaiser Medical Offices, Plaza 580, Junction Ave K-8, and Christensen Middle School in Livermore. The route operates along Junction Ave, Livermore Ave, Las Positas Rd, and First St, before operating a terminal loop in a figure-eight pattern along, Bluebell Dr, Heather Ln, Broadmoor St, Dalton Ave, Vasco Rd, Garaventa Ranch Rd, Herman Ave, Scenic Ave, Bluebell Dr, Galloway St, and Springtown Blvd.

Route 15 is an above average productivity route, averaging 12.1 boardings per revenue hour and 395 boardings per weekday. Route 15 has the highest average weekday ridership among local routes and the second highest Saturday and Sunday ridership.

The route is a slightly above average on-time performance route, averaging 85% of trips on-time, 13% late, and 2% early.

Route 53 – ACE – W BART

Route 53 is a local route that operates in Pleasanton, connecting the ACE Pleasanton Station with the Stoneridge Mall and West Dublin/Pleasanton BART Station. The route operates along Bernal Ave, I-680, and Stoneridge Dr. Route 53 operates 8 trips per weekday from 5:30 a.m. to 8:30 a.m. and from 4:00 p.m. to 7:30 p.m. as well as 4 trips per Saturday between 8:30 a.m. and 10:00 a.m. and between 4:00 p.m. and 6:00 p.m.

Route 53 averages 21.1 boardings per revenue hour, making it the highest productivity local route in the system. This route was designed for ACE connections and will hold as necessary to accommodate late ACE trains.

Operating along I-680 reduces travel times and provides faster, more convenient service with fewer stops along the route's alignment. However, variable traffic congestion along the freeway throughout the day make impact service reliability, contributing to the route's below average on-time performance, with 76% of trips

on-time, 23% late, and 1% early. The majority of late trips are attributable to late ACE train arrivals.

Route 54 – ACE – Hacienda – W BART

Route 54 is a local route that operates in Pleasanton and connects the ACE Pleasanton Station with the East Dublin/Pleasanton BART Station. The route operates with different alignments in the morning and the afternoon. In the morning, Route 54 operates along Bernal Ave, Valley Rd, Koll Center Pkwy, and Hopyard Rd, deviates out of direction onto Las Positas Blvd, Hacienda Dr, and Stoneridge Dr, returns to Hopyard Rd, Gibraltar Dr, and Hacienda Dr. The route deviates again to serve Rosewood commons along Owens Dr and Rosewood Dr before continue on Owens Dr to the East Dublin/Pleasanton BART station. Route 54 then operates along I-580, I-680, and Bernal Ave to serve the Pleasanton ACE Station. In the afternoon, this pattern is reversed, providing direct service from the Pleasanton ACE station to the East Dublin/Pleasanton BART station via Bernal Ave, I-680, and I-580 before providing local connections in the southbound direction.

Route 54 has the second highest productivity of all local routes, averaging 19.6 boardings per revenue hour and 78 boardings per weekday. The route operates five trips per weekday and has the highest ridership on the first trip in the morning, averaging 27 passengers.

Despite the high productivity, the route suffers from low on-time performance with only 67% of trips on-time and 33% of trips late. This route was designed for ACE connections and will hold as necessary to accommodate late ACE trains. The majority of late trips are attributable to late ACE train arrivals.

Route 20X – Vasco

Route 20X is an express route that operates two trips in the morning and two trips in the evening serving the East Dublin/Pleasanton BART Station, Lawrence Livermore National Laboratory (LLNL) and the Livermore Transit Center. The route operates along Owens Dr, Hacienda Dr, I-580, Vasco Rd, East Ave, Mines Rd, and First St. The route provides direct express service between BART and major employers in Livermore, including connectivity to the ACE train and direct service to the east side of Livermore.

Route 20X averages 35 passengers per day and 9 passengers per trip. Ridership is relatively evenly split throughout the four daily trips. This productivity is

relatively low for express like service and is below the established performance standard of 15 passengers per trip. There is also no bi-directional service provided on the route, only one-way peak period service, which may limit the potential usefulness of the route.

Due to changes in demand for transit related to the Covid-19 Pandemic, service on Route 20X has been temporarily suspended.

Route 70X – Pleasant Hill

Route 70X is an express route that operates six trips in the morning and six trips in the evening between the East Dublin/Pleasanton BART Station, the Walnut Creek BART Station, and the Pleasant Hill BART Station. The route operates along DeMarcus Blvd, Dublin Blvd, I-680, Ygnacio Valley Rd, Civic Dr, Oak Rd, Treat Blvd, and Main St. The route averages 10 passengers per trip and 124 passengers per day, making it the highest productivity express route in the system, but still performs below the 15 passengers per trip performance standard for express routes.

Ridership is highest in the afternoon, with an average of 13 passengers on the 3:56 p.m. trip and 24 passengers on the 5:10 p.m. trip. The route also has low on-time performance, averaging 49% of trips on-time, 43% of trips late, and 8% of trips early. Variable levels of traffic congestion on I-680 may be contributing to these reliability and on-time performance issues.

Due to changes in demand for transit related to the Covid-19 Pandemic, service on Route 70X has been temporarily suspended.

Route 580X – 580 Pleasanton BART

Route 580X is an express route that operates eight trips in the morning and eight trips in the evening serving the East Dublin/Pleasanton BART Station and the Livermore Transit Center. The route operates along Owens Dr, Hacienda Dr, I-580, Livermore Dr, and First St. The route averages 4 passengers per trip and 59 passengers per weekday, making it the lowest ridership and productivity express route in the system. Ridership fluctuates throughout the day, averaging between 2 and 9 boardings per trip. Ridership may be lower because this route doesn't have a local catchment area and riders are typically have to make a transfer at some point in their journey.

Route 580X is a high on-time performance route, with 95% of trips on-time and 5% of trips late.

Due to changes in demand for transit related to the Covid-19 Pandemic, service on Route 580X has been temporarily suspended.

Route 10R – Pleasanton – Livermore

Route 10R is a high frequency rapid route that connects Pleasanton to Livermore, serving the East Dublin/Pleasanton BART Station and the Livermore Transit Center. The route operates along Owens Dr, Las Positas Blvd, Santa Rita Rd, St John St, Peters Ave, Rose Ave, First St, Stanley Blvd, and Railroad Ave. Route 10R typically operates every 15 minutes in the peak period and every 15-60 minutes in the off-peak period between 4:30 a.m. and 1:30 a.m. on weekdays, but is currently operating a reduced frequency schedule due to shifts in demand and operator availability related to the Covid-19 Pandemic.

The route averages 13.7 boardings per revenue hour and 1,390 boardings per weekday. Route 10R is an above average productivity route and has the second highest ridership of any route in the system. Additionally, Saturday ridership is almost as productive as weekday service, indicating potential latent demand for more frequent service.

The route has slightly below average on-time performance, with 81% of trips on-time, 17% late, and 2% early.

Route 30R – Dublin – Livermore via Las Positas College

Route 30R is a high frequency rapid route that provides service to the East and West Dublin/Pleasanton BART Stations, Las Positas College, the Livermore Transit Center, Livermore High School, East Avenue Middle School, and Sandia National Laboratories. The route operates along Golden Gate Dr, Dublin Blvd, DeMarcus Blvd, Iron Horse Pkwy, Dublin Blvd, Fallon Rd, I-580, Airway Blvd, Canyons Pkwy, Collier Canyon Rd, Campus Hill Dr, Portola Ave, Livermore Ave, Railroad Ave, Maple St, East Ave, and Vasco Rd.

Route 30R typically operates every 15 minutes in the peak period and every 15-60 minutes in the off-peak period between 5:00 a.m. and 12:45 a.m. on weekdays, but is currently operating a reduced frequency schedule due to shifts in demand and operator availability related to the Covid-19 Pandemic. The route averages 13.9 boardings per revenue hour and 1,841 boardings per weekday, making it an above average ridership route and the highest ridership route in the system. Similar to Route 10R, Saturday ridership is almost as productive as

weekday service, indicating potential latent demand for more frequent service on weekends.

The route is above average in terms of on-time performance, averaging 87% of trips on-time, 12% of trips late, and 1% of trips early.

School Trippers

LAVTA also operates supplemental services to schools as part of its fixed-route system. Services geared toward schools are considered “trippers,” because they are needed for such short spans of the day, and often require buses pull out from the bus yard, operate one or two trips, and then return to the yard.

School trippers are open to the general public but provide specific coverage and capacity to serve middle and high school students at times that correspond with school hours and days.

Figure 26 below shows the school trippers and the schools they serve.

Figure 26 School Tripper Route Descriptions

City	Route Number	Route Description	Schools Served
Dublin	501 A/B/C	Positano Hill to Dublin High School	Dublin High School
	502	Emerald Glen to Dublin High School	Dublin High School, Wells Middle School
	503	Schaefer Ranch to Wells Middle School	Dublin High School, Wells Middle School
	504	Dublin Ranch to Dublin High School	Dublin High School
Pleasanton	601	Ruby Hill to Pleasanton Middle School	Pleasanton Middle School
	602	Del Prado Park to Foothill High School	Pleasanton Middle School, Foothill High School
	603	Muirwood Park to Hart Middle School	Hart Middle School
	604	Fairlands to Foothill High School	Foothill High School

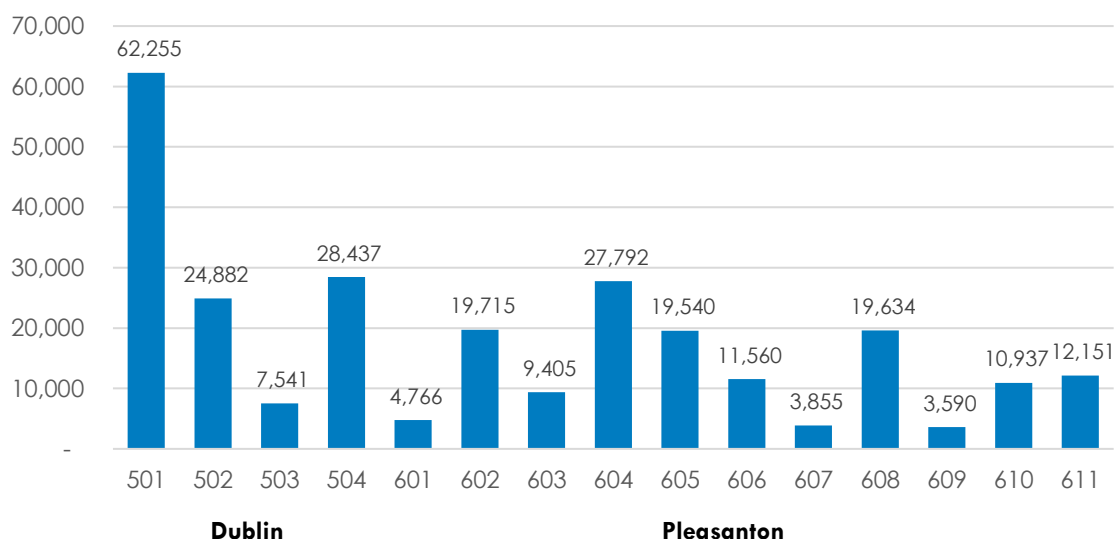
SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

City	Route Number	Route Description	Schools Served
	605	Fairlands to Amador Valley High School	Amador Valley High School
	606	Vintage Hills to Pleasanton Middle School	Pleasanton Middle School
	607	Laguna Oaks to Hart Middle School	Foothill High School, Hart Middle School
	608	Amaral Park 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 Amador Valley High School	Amador Valley High School

The following charts illustrate levels of ridership and productivity by school route and city. Figure 27 illustrates the annual ridership by route.

Figure 27 FY2019 School Route Annual Boardings

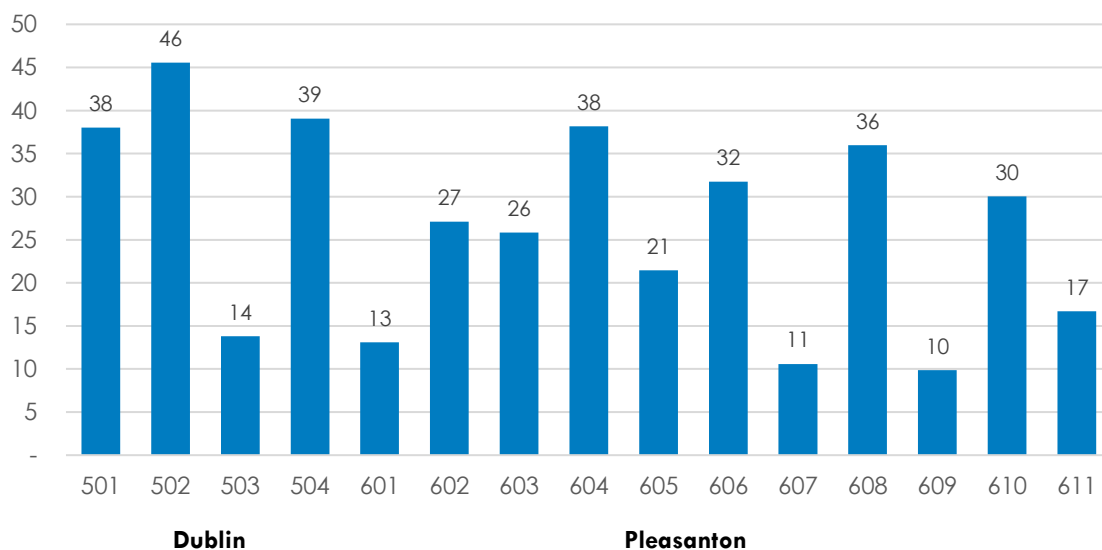


Boardings per trip is the most appropriate measure of service productivity for school routes, as the number of trips is limited and a trip should have a sufficient number of riders to justify operating it. Figure 28 illustrates this measure by city.

In Dublin, Routes 501, 502, and 504 carry students from East Dublin to Dublin High School. Due to high demand on these routes, additional vehicles have been added to provide sufficient capacity. Routes 501, 502, and 504 in Dublin have high productivity, at least 38 boardings per trip.

Seven of the eleven Pleasanton school trippers average at least 17 boardings per trip or higher. Several trips, including afternoons on Routes 602, 604, 605, and 608 require more than one vehicle to accommodate passenger loads.

Figure 28 School Route Boardings per Trip



FARES STRUCTURE AND POLICIES

Fare Categories

There are five main categories for Wheels fare products: adult, youth, children, senior citizens and 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 & Children

While LAVTA lists a youth fare for youth between the ages of 6 and 18 as part of the overall fare structure, the cash fare is the same as the fare for adults and

does not require additional identification beyond valid payment. There is a reduced fare for using a Youth Clipper card, which requires an application verifying eligibility. 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 (available only to persons with disabilities). Individuals must apply to a central office for review. If eligible and application is approved, participants receive an RTC photo ID card within 21 days. The Bay Area Partnership Transit Coordination Committee (PTCC) administers the program.
- Senior Clipper Card

Fare Products

Single Rides

Single-ride fares vary depending on if cash or a Clipper card is used. Figure 29 summarizes single ride fares for fixed-route service. It should be noted that the only fare product that provides a discount when using a Clipper Card is the Youth fare, which was enacted in January 2019.

Figure 29 Single Ride Fares

Single Ride Products	Cash Fare	Clipper Fare
Adults	\$2.00	\$2.00
Youths between ages 6 and 18	\$2.00	\$1.60
Senior Citizens age 65 and over	\$1.00	\$1.00
Disabled Persons or Americans with Disabilities Act (ADA) Certified persons (with RTC Card)	\$1.00	\$1.00

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Single Ride Products	Cash Fare	Clipper Fare
Children under age 6 when accompanied by a fare paying passenger	FREE	FREE
Eligible employees and family members/dependents with applicable ID	FREE	FREE

Source: LAVTA (2020)

Transfers

On January 1, 2019, LAVTA implemented a new transfer policy. The new transfer policy:

- Eliminated issuance of paper transfers with cash fare payment
- Eliminated acceptance of paper transfers from other agencies
- Required use of a Clipper Card to obtain a single, free transfer within 120 minutes of fare payment
- Allowed for a fare credit on LAVTA buses when transferring from BART using a Clipper Card (\$1.00 credit for adults, \$0.80 credit for youth, and \$0.50 credit for seniors/RTC cardholders)
- Allowed ACE passengers to present a valid ticket to allow free transfers to/from LAVTA buses

Passes

LAVTA offers several transit pass options including monthly and daily pass products. Figure 30 summarizes current paper pass products as well as pass products available with the integration of Clipper. Figure 31 provides additional details on the current paper pass offerings.

Effective January 1, 2019, the following changes to passes took effect:

- An increase in the senior and disabled monthly pass from \$18 to \$22
- New cash day pass for regular and senior/disabled

Figure 30 Pass Products Summary

Pass Products		Fare
Paper Passes	Regular Monthly Pass (or East Bay Value Pass) (Regular Monthly (Calendar) Unlimited Rides Pass)	\$60.00

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Pass Products		Fare
	Senior Monthly Pass (Senior Citizens Monthly (Calendar) Unlimited Rides Pass)	\$22.00
	Disabled Monthly Pass (Disabled Persons Monthly (Calendar) Unlimited Rides Pass)	\$22.00
	Day Pass Regular	\$3.75
	Day Pass Senior/Disabled	\$1.75
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	\$22.00
	Disabled Persons Monthly (Rolling 31 Day) Unlimited Rides Pass	\$22.00
	Day Pass Accumulator Regular	\$3.75
	Day Pass Accumulator Senior/Disabled	\$1.75

Source: LAVTA (2020)

Figure 31 Paper Passes – Monthly Unlimited Ride Passes

East Bay Monthly Pass	Senior Monthly Pass	Disabled Monthly Pass
<ul style="list-style-type: none"> ▪ \$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 	<ul style="list-style-type: none"> ▪ \$22 ▪ 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 	<ul style="list-style-type: none"> ▪ \$22 ▪ 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

Source: LAVTA (2020)

Annual Unlimited Ride Pass

LAVTA offers complementary annual passes that allow for free rides to eligible employees and family members. This include LAVTA and its operating

contractor, MV Transportation. Eligible riders show the driver a picture identification card and annual sticker showing eligibility. Picture IDs are issued upon date of hire for the current fiscal year. Annual stickers are issued to each employee and eligible dependents on July 1st at the beginning of each fiscal year. 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.³

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.

Board Members and their dependents are also eligible for an ID. Additionally, members of the Tri-Valley Accessible Advisory Committee (TAAC) receive a pass.

Clipper Card Implementation

Supporting more than two dozen unique transit agencies in the Bay 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 in 2015 accounts for the most significant fare change in recent history. Most notably, LAVTA introduced the day pass accumulator, a new fare media that is only available through the use of the Clipper card. At time of implementation, LAVTA did not have a day pass, unlike its peers WestCat and Tri Delta.

³ 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."

The Clipper Day Pass Accumulator acts as an unlimited day pass, where 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. More than 50% of Wheels riders now use Clipper for their fare payment.

Figure 32 Clipper Card



Fare Programs and Promotions

ECO Pass⁴

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

⁴ Details about the Hacienda Business Park and ECO Pass program eligibility available online: <http://www.hacienda.org/form/details/wheels%20eco%20pass>; accessed February 25, 2020.

Established in 1989 and funded by Hacienda, the ECO Pass represents a longstanding public-private partnership. Hacienda subsidizes the service based on the number of revenue hours serving the Hacienda Business Park.

Las Positas College Student Transit Pass Program⁵

In November 2017, the students of Las Positas College approved the Student Mobility Initiative to provide an ongoing funding source for the Las Positas Student Transit Pass Program. In 2018, both the LAVTA Board and the Board of Trustees of the Chabot-Las Positas Community College District approved entering into a Memorandum of Understanding (MOU) to implement the program.

Under the terms of the Student Mobility Initiative, full time students pay \$9.00 per term and part time students pay \$8.00 per term as part of their student fees.

Under the terms of the current MOU, Las Positas collects and remits those fees to LAVTA within 60 days following the start of each term. It is anticipated that the fee will generate approximately \$175,000 per year but is dependent on full and part time enrollment.

Class Pass Program⁶

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

Try Transit to School Promotion⁷

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 most recent “Try Transit to School” promotion ran from August 19 to September 1 in 2019 (including weekends) and allowed students to ride Wheels to and from school and other destinations for free.

⁵ Details about the Las Positas College Student Transit Pass Program are available here: <https://www.wheelsbus.com/las-positas-college-student-transit-pass-program/>; accessed April 13, 2022

⁶ 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.”

⁷ Try Transit to School Promotion information available online: <https://www.wheelsbus.com/wp-content/uploads/2019/08/Try-Transit-to-School-Flyer-2019-web.pdf>; accessed March 16, 2020.

FLEET INFORMATION

The LAVTA fleet consists of a mixed fleet of 40-foot, 35-foot, and 29-foot diesel and hybrid fixed-route buses. As shown in Figure 33, there are currently 60 fixed-route standard buses in the active fleet. LAVTA also has six buses in its contingency fleet.

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 expecting to receive delivery of 16 hybrid buses in FY 2023 to replace the 2007 and 2009 buses shown in Figure 33. LAVTA is planning to seek funding in 2023 for a bus purchase in 2024 for up to 12 buses. This purchase would replace the four buses that comprise the 2011 fleet and possibly include additional buses to expand the LAVTA fleet. Additional bus purchases to replace the existing fleet are planned in 2028 (20 buses) and 2029 (20 buses).

Figure 33 LAVTA's Fixed-Route Revenue Vehicle Fleet

Year	Manufacturer	Fuel	Type of Vehicle	Number in Fleet	Seated Capacity
2007	Gillig	Hybrid (diesel/ electric)	29-ft bus	2	22
2009	Gillig	Hybrid (diesel/ electric)	40-ft bus	14	39
2011	Gillig	Hybrid (diesel/ electric)	29-ft bus	4	22
2016	Gillig	Hybrid (diesel/ electric)	35-ft bus	10	28
			40-ft bus	4	34
			40-ft bus	6	37
2017	Gillig	Hybrid (diesel/ electric)	40-ft bus	11	34
			29-ft bus	9	22

5 PARATRANSIT SERVICE EVALUATION

Wheels Dial-A-Ride is a demand-response service provided by LAVTA. It provides trips for people who are unable to use the fixed-route system, and for other individuals who meet eligibility requirements.

This chapter is organized into three sections:

- **Overview of the System:** Provides a basic overview of the LAVTA paratransit system, including its eligibility criteria, service area coverage, service availability, and fare structure.
- **Service Standards:** Presents the service standards adopted by LAVTA and then evaluates them against four years of historical data. Standards encompass four metrics centering around the customer experience and safety.
- **Operating Performance:** Covers the operational aspects of paratransit service, including ridership, service provided, and operating cost.

KEY POINTS

Topic	Key Points
Service Standards	<ul style="list-style-type: none">▪ Valid Complaints per 1,000 Passengers: Has been trending upward in the last five years but 2019 saw the complaint rate dip slightly. Standard: Less than 1 complaint per 1,000 passengers Achieved in FY 2019: No▪ On-Time Performance: Had been steady until 2018 when it dipped. Standard: 95% on-time Achieved in FY 2019: No▪ Phone Calls Answered within 60 Seconds: Has generally been steady since 2015 Standard: 95% or more of calls are answered within 60 seconds Achieved in FY 2019: No

Topic	Key Points
	<ul style="list-style-type: none"> ▪ Preventable Accidents per 100,000 Miles: 2015 data was below the standard but all years since have met standard and held steady Standard: Less than 1 preventable accident per 100,000 miles Achieved in FY 2019: Yes
Operating Performance	<ul style="list-style-type: none"> ▪ Total trips have decreased annually since FY 2016. ▪ Revenue hours have increased. ▪ Operating costs per trip have increased. ▪ Passenger trips per revenue hour have decreased.

OVERVIEW OF SYSTEM

Complementary door-to-door ADA paratransit service in the Tri-Valley area is provided by Wheels Dial-A-Ride service. It is open to those who cannot use LAVTA's fixed-route transit service. It operates as an on-demand service within a designated service area and provides service at the same times as LAVTA's fixed-route service. 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. The V.A. Hospital is south of the Livermore city limits and outside of the LAVTA service area.

In February, 2021 LAVTA Board authorized the Executive Director to enter into MOU with Central Contra Costa Transit Authority (CCCTA) to establish a 12-month pilot program for sharing one paratransit contractor. The pilot program commenced on April 1, 2021 with Transdev as the operator. On January 10, 2022 LAVTA Board approved the release of a joint RFP for a four-year contract with one option year. The winning contractor will start service on July 1, 2022.

In addition to the provision of ADA paratransit service, LAVTA operates the Wheels Para-Taxi program. This program is a premium, same day service available to ADA paratransit registrants that provides a subsidy for using taxis and Transportation Network Companies (TNCs) such as Uber and Lyft.

The various aspects of the system are described in further detail in their respective subsection.

Eligibility

Dial-A-Ride users must have a disability or health-related condition that prevents them from using regular fixed-route service.

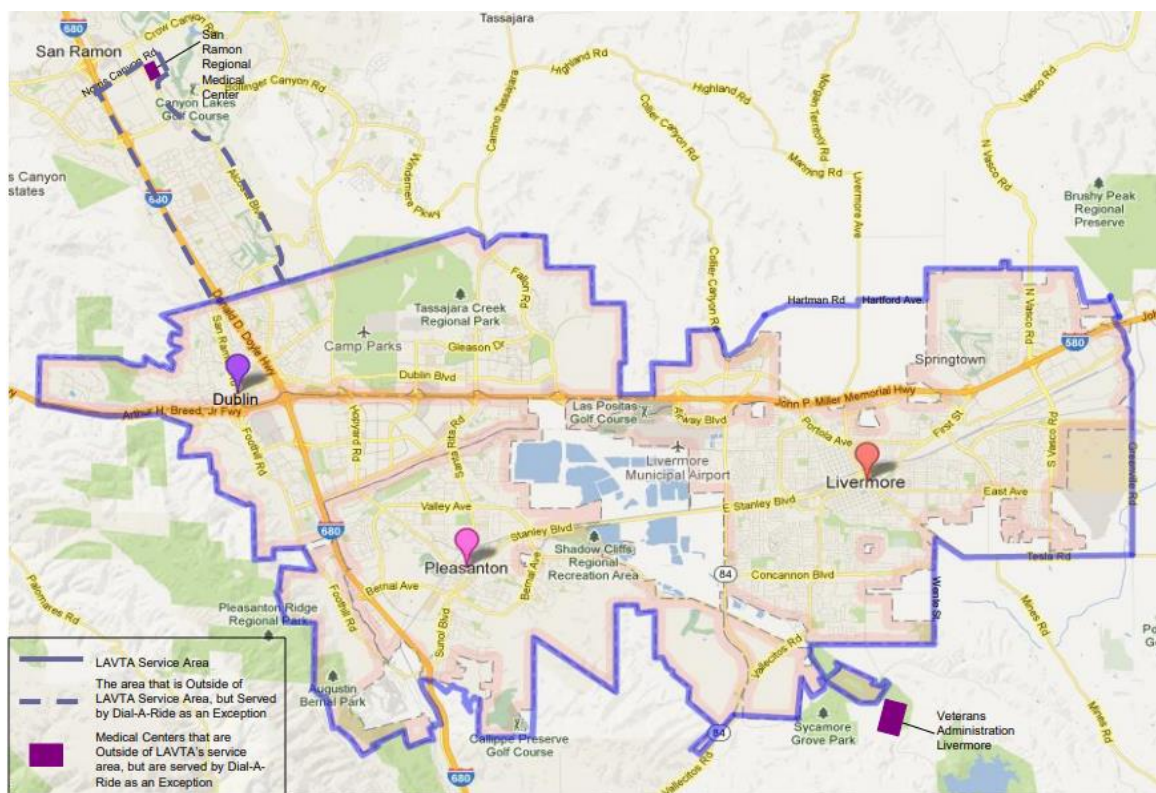
Potential riders must apply to LAVTA before they can be certified to use Dial-A-Ride service. The application process requires a doctor's verification and may require an in-person assessment. Depending on the outcome of the assessment, potential riders may be conditionally certified.

Applications are processed within 21 days of receipt and applicants are broadly assessed against whether they can independently use the fixed-route transit service. If applicants disagree with a denial of paratransit eligibility, they may submit written appeals within 60 days of the decision.

Service Area

LAVTA's Dial-A-Ride ADA paratransit services exceed the minimum Federal Transit Administration requirements by providing service beyond three-quarters of a mile of fixed-routes. Riders can also request service to two locations outside the Wheels service area: San Ramon Regional Medical Center and the V.A. Hospital in Livermore, as shown in Figure 34.

Figure 34 Wheels Dial-A-Ride Paratransit Service Area



Source: LAVTA

Service Availability

Wheels Dial-A-Ride service area includes the cities of Livermore, Dublin and Pleasanton. As an exception, service is also provided to/from the San Ramon Medical Center given that one end of the trip is in Livermore, Dublin or Pleasanton.

Wheels Dial-A-Ride operates during the same days and hours as the Wheels fixed route service:

- Weekdays: From 4:30am to 1:30am the next morning
- Saturdays and Sundays: From 5am to 1:30am the next morning

Reservations are taken seven days a week from 8:30 AM to 5:00 PM. Rides must be scheduled by phone at least the day before the trip is needed by 5:00 PM. Reservations can be made up to one-week in advance.

Passengers are given a 30-minute pick-up window that starts at the scheduled pick-up time. As an example, a 3:00 PM pick-up time results in a pick-up window from 3:00 PM to 3:30 PM. For repeat 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.

Fare Structure

Fares for Dial-A-Ride paratransit are shown in Figure 35. Fares were increased from \$3.50 to \$3.75 on January 1, 2019. Interagency transfers from County Connection LINK or East Bay Paratransit are free (riders are not charged for the transfer). Riders are charged for outbound trips involving a transfer to East Bay Paratransit, but not to County Connection.

For the Wheels Para-Taxi program, riders receive an 85% subsidy of the total taxi trip (fare plus up to 15% tip), up to \$20 per trip, and up to \$200 per month. This subsidy can be used for traditional taxi services or Transportation Network Companies (e.g., Uber, Lyft).

Figure 35 Wheels Dial-A-Ride Paratransit Fares

Wheels Dial-A-Ride Paratransit	Fare
Cash fare	\$3.75
Companions accompanying passenger	\$3.75
Dial-A-Ride 10 tickets	\$37.50
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 (2020)

Operating Performance

This section summarizes the operating performance for LAVTA's paratransit service. The operating data from the last four fiscal years (Figure 36) shows ridership declining and operating costs also falling. Passenger trips per hour have declined significantly between FY 2016 and FY 2019.

Figure 36 Paratransit Operating Characteristics

	FY 2016	FY 2017	FY 2018	FY 2019
Total Dial-A-Ride Trips	54,975	50,433	48,872	46,123
Total Dial-A-Ride Passengers (includes PCAs and Companions)	58,798	54,121	50,967	48,141
Revenue Hours	29,859	29,474	32,471	38,684
Total Hours	32,221	30,512	36,320	39,915
Total Fare Revenue	\$196,223	\$180,063	\$168,648	\$162,931
Total Operating Costs	\$1,976,967	\$1,856,394	\$1,860,251	\$1,818,430
Operating Costs per Trip	\$35.96	\$36.81	\$38.06	\$39.43
Passenger Trips per Revenue Hour	1.84	1.71	1.51	1.19

Source: 2015 to 2019 Comprehensive Annual Financial Reports

6 SERVICE STANDARDS EVALUATION

This section summarizes the existing board adopted mission, vision, values, goals, and strategies for LAVTA. It also summarizes the results from the service standards evaluation. The fixed route service standards are broken up into systemwide standards and route-level standards, each of which are presented in their own separate sections. Collectively, this section analyzes the LAVTA fixed route network on several different metrics, including ridership, productivity, and efficiency.

The results of this evaluation, along with the on-time performance data presented in the next section, are included in individual route profiles, which can be found in Appendix A.

MISSION, VISION, VALUES, GOALS, AND STRATEGIES

In 2012, the Board of Directors for the Livermore Amador Valley Transit Authority 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. There are no recommended changes to LAVTA’s mission, vision, values, goals, or strategies included in this SRTP. However, each of these may be evaluated for potential updates in the forthcoming LRTP.

Mission

The Mission of the Livermore Amador Valley Transit Authority 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.

Figure 37 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
	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

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Goals	Strategies	
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

Goals	Strategies	
	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
	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.

Systemwide Standards

This subsection presents the systemwide service standards and corresponding results. The first half of this subsection focuses on the systemwide performance standards, while the second half of the subsection focuses on systemwide quality of service standards.

Systemwide Performance Standards

The service standards and results are summarized in Figure 38, with charts showing historical trends immediately following the table. As shown in the table, using the most recent year of pre-pandemic data, LAVTA has met only one out of the five service standards.

Figure 38 Systemwide Service Standards and Results

Category/Measure	Systemwide Service Standards	Figure to Reference	Results for FY 2019	Trend
Ridership	Increase from prior year	Figure 39	MET	Ridership was trending downward prior to FY2017, then increased in both FY 2018 and FY2019
Passengers per Revenue Hour	At least 15.0	Figure 40	NOT MET	The system last met the standard in 2011.
Passengers per Revenue Mile	At least 1.0	Figure 41	NOT MET	The system last met the standard in 2011.
Farebox Recovery Ratio	At least 20%	Figure 42	NOT MET	The system has not met the 20% farebox recovery ratio in the last five years.
Change in Operating Cost per Hour	Growth less than five percentage points above change in Bay Area CPI	Figure 43	NOT MET	The trend had been positive from FY2015 to FY2018 with a large increase in FY 2019.

Figure 39 Annual Ridership

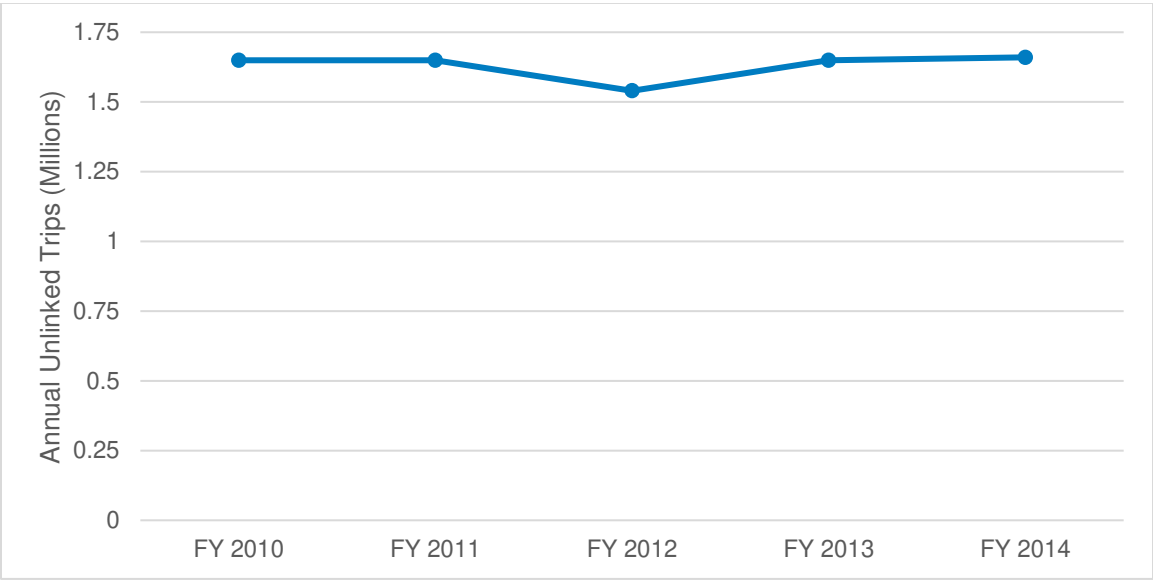


Figure 40 Annual Passengers per Revenue Hour

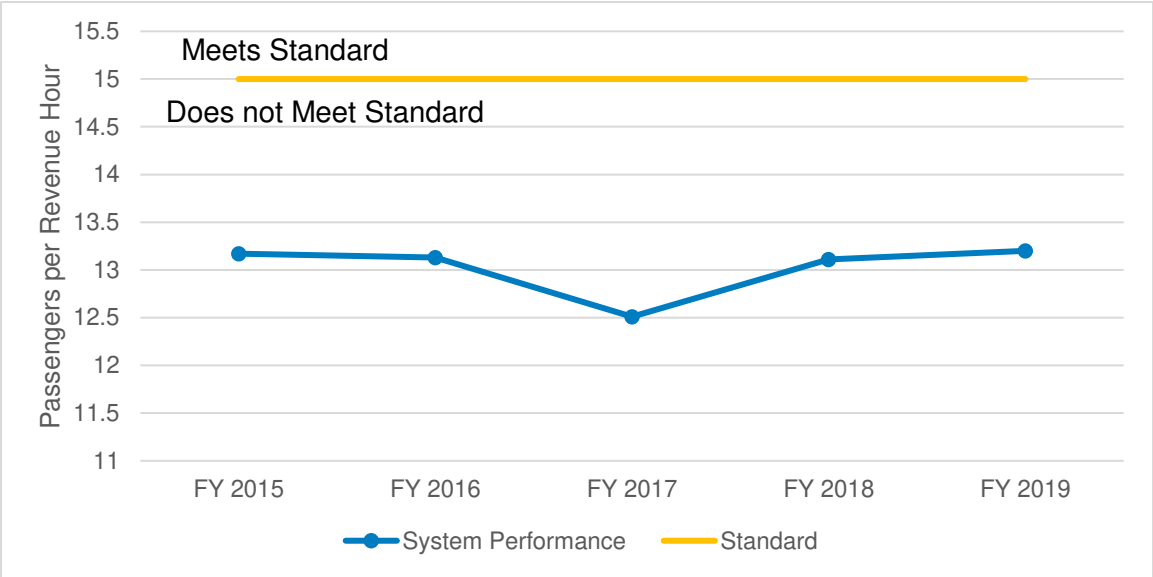


Figure 41 Annual Passengers per Revenue Mile

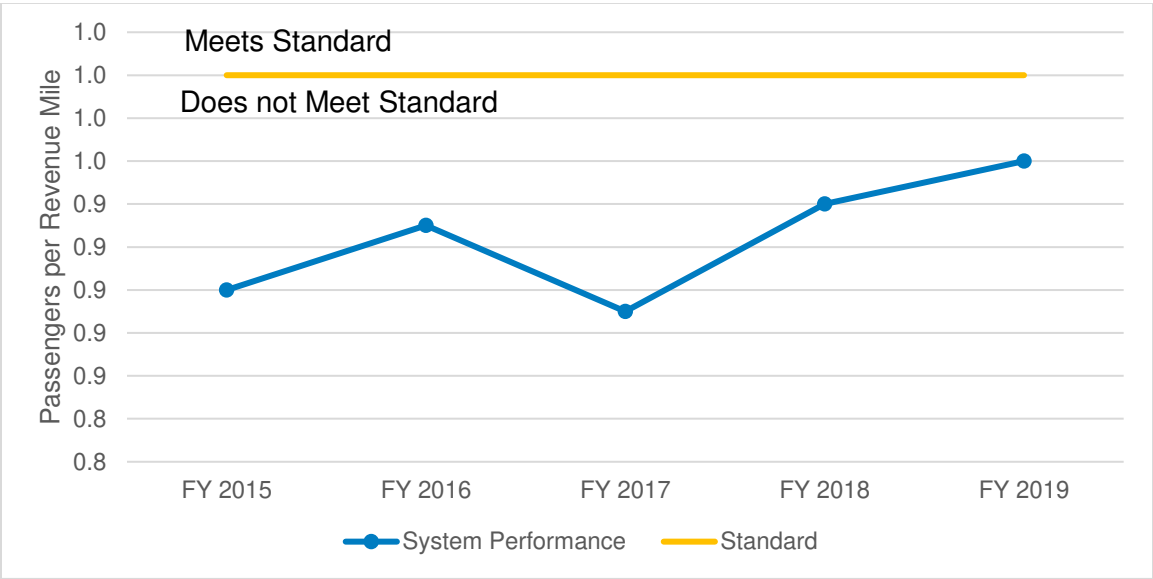


Figure 42 Farebox Recovery Ratio

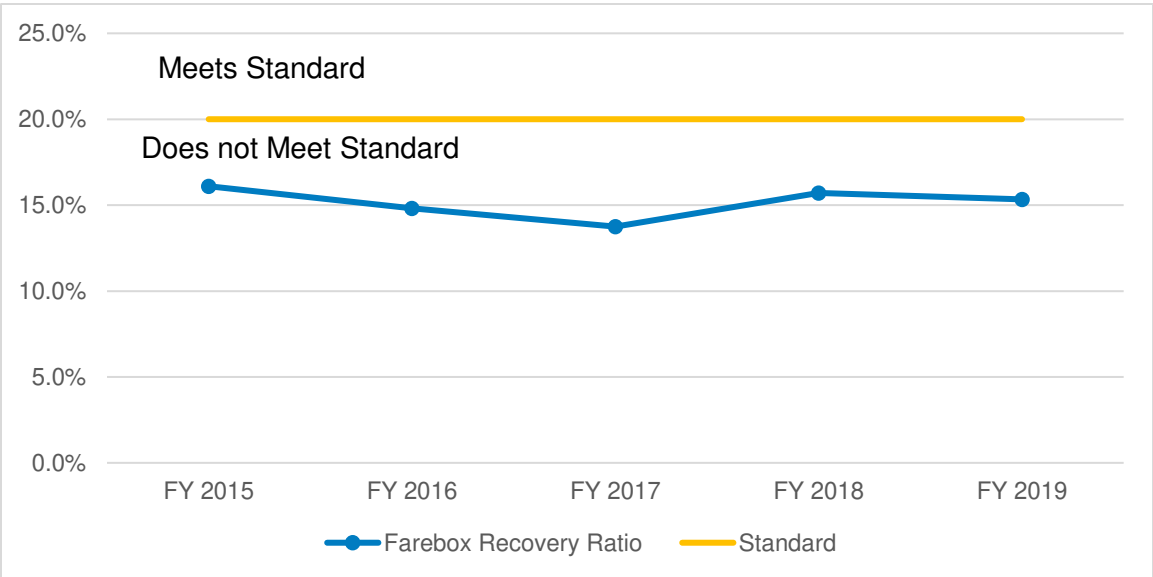
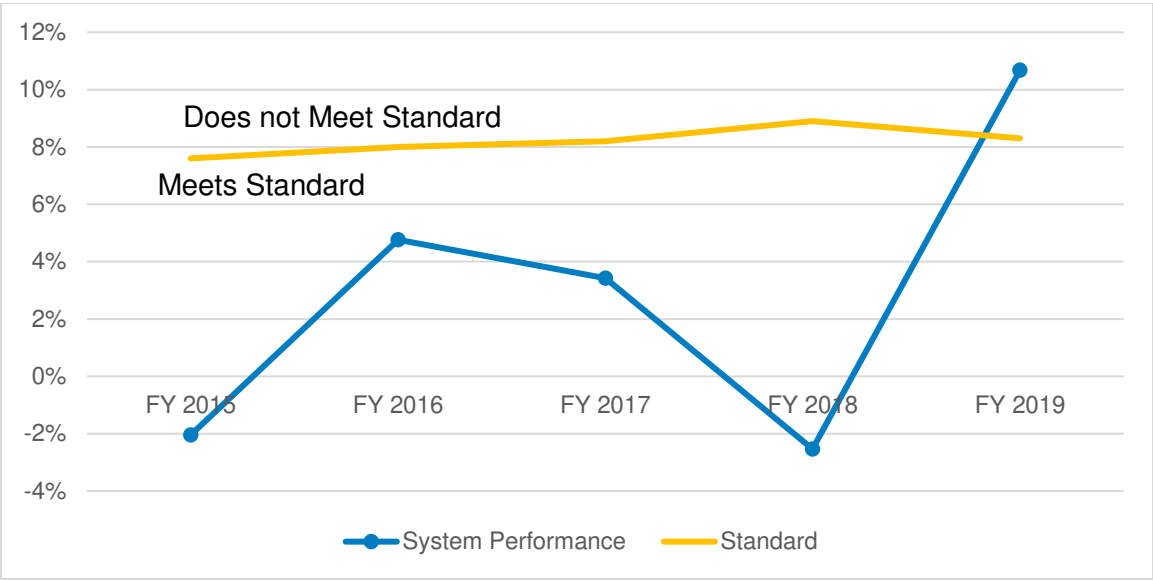


Figure 43 Change in Operating Cost per Hour



Route-Level Standards

This subsection presents the route-level service standards and corresponding results.

Service Standards and Results

The route-level standards differ depending on the classification of the route. Infrequent routes, comprised of routes falling in the Express and School Tripper categories, were evaluated using boardings per trip, while the more frequent routes were evaluated using boardings per hour.

The fixed-route service standards and results are summarized in Figure 44, with charts showing historical trends immediately following the table. As shown in the table, using the most recent year of data, about half of LAVTA's routes (14 of 29) did not meet the standard.

It is recommended that routes that do not meet the service standards be evaluated further to identify possible improvements or elimination.

Figure 44 Route-Level Service Standards and Results

Category	Route-Level Service Standard	Figure to Reference	Results
Rapid	Greater than 15 boardings per revenue hour	Figure 45	Both Rapid routes fell slightly below the standard
Local	Greater than 10 boardings per revenue hour	Figure 46	Four of the nine local routes met the standard
Express	Greater than 15 boardings per trip	Figure 47	All three express routes fell below the standard
School Tripper	Greater than 15 boardings per trip	Figure 48	The majority (11 of 15) of the school tripper routes met or exceeded the standard

Figure 45 Rapid Routes Results

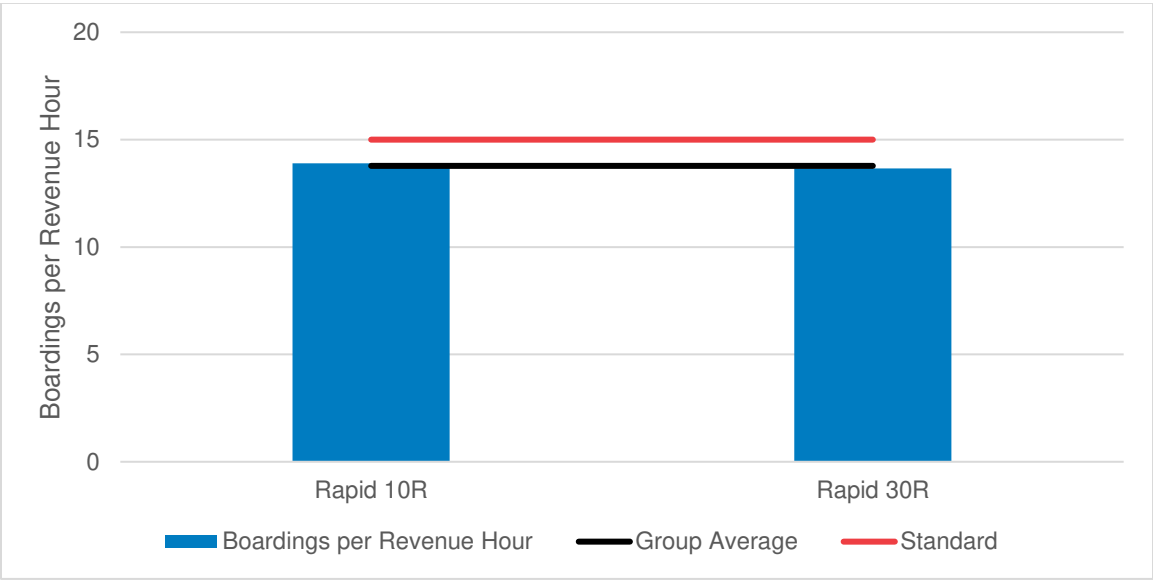


Figure 46 Local Routes Results

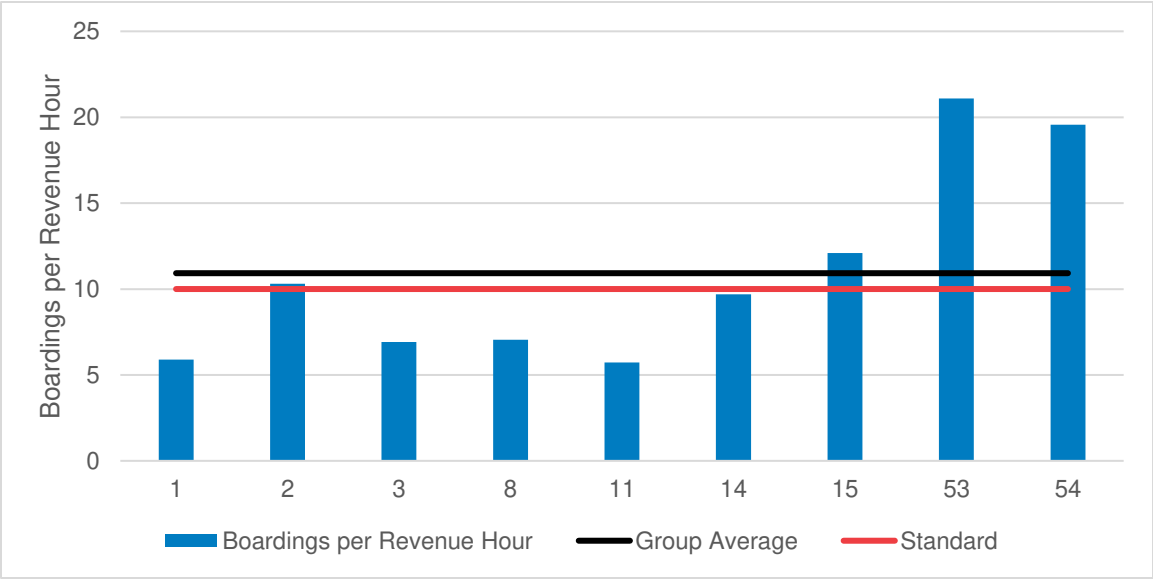


Figure 47 Express Routes Results

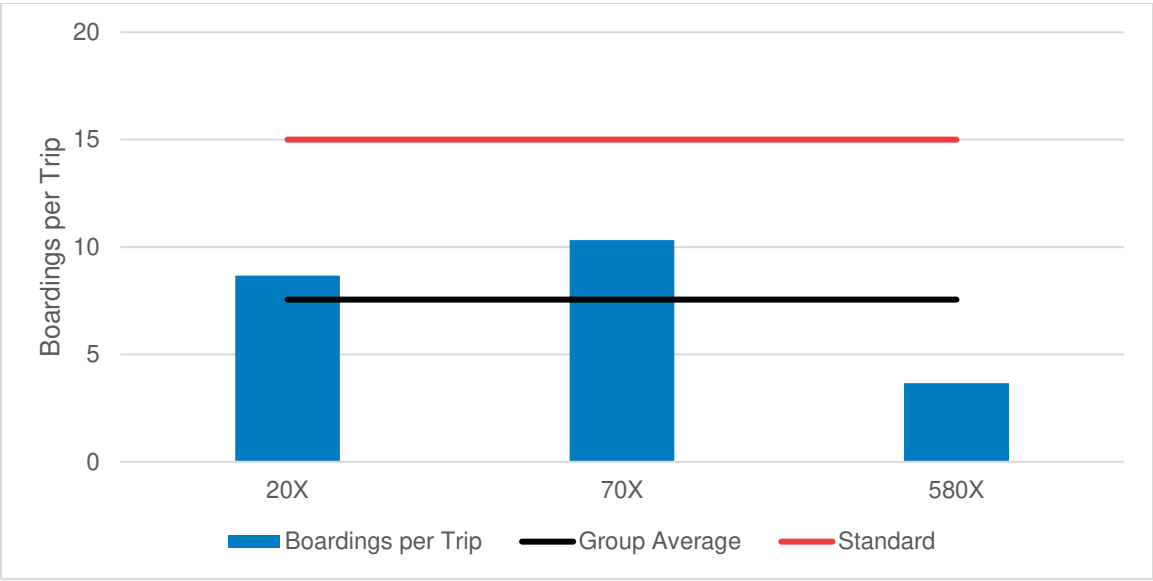
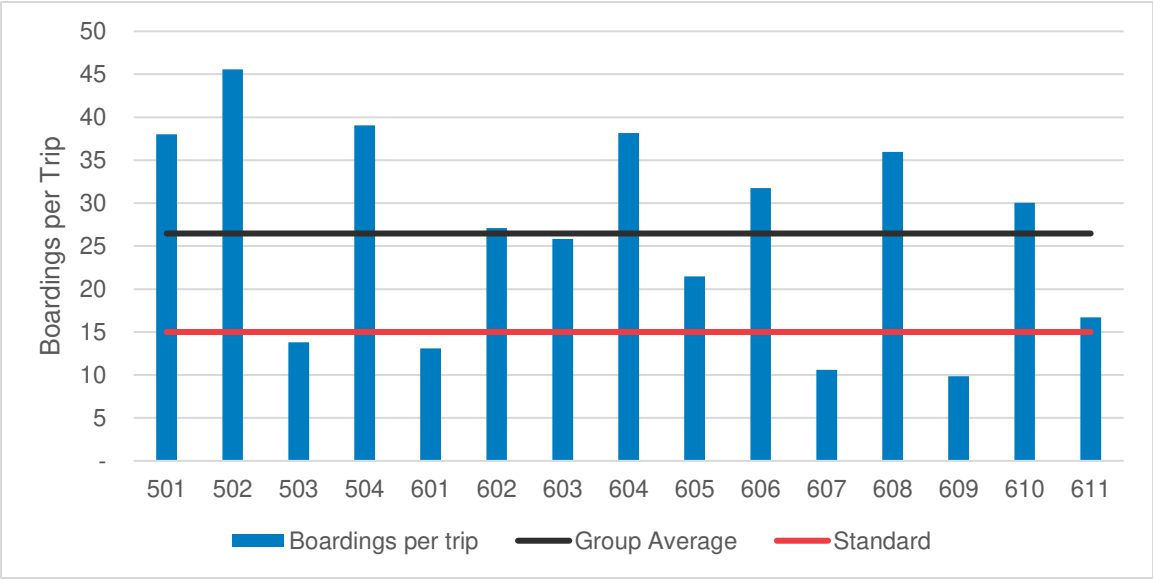


Figure 48 School Tripper Routes Results



Paratransit Standards

This section summarizes the results from the service standards evaluation. The paratransit service standards and results are summarized in Figure 49, with charts showing historical trends immediately following the table. For FY2019, the paratransit service has met two of the four metrics.

Figure 49 Paratransit Service Standards and Results

Measure	Service Standard	Figure to Reference	Results for FY 2019	Trend
Valid Complaints per 1,000 Passengers	Less than 1.0	Figure 50	MET	Trending upward in the last five years but 2019 saw the complaint rate dip
On-Time Performance	Greater than 95%	Figure 51	NOT MET	On-time performance had been good up until 2018, when it fell below the standard
Phone Calls Answered within 60 seconds	Greater than 95% of the time	Figure 52	NOT MET	For the last five years, this metric has not been met
Preventable Accidents per 100,000 Miles	Less than 1.0	Figure 53	MET	For the last four years, this metric has met the standard, down from a high in 2015

Figure 50 Paratransit Valid Complaints per 1,000 Passengers

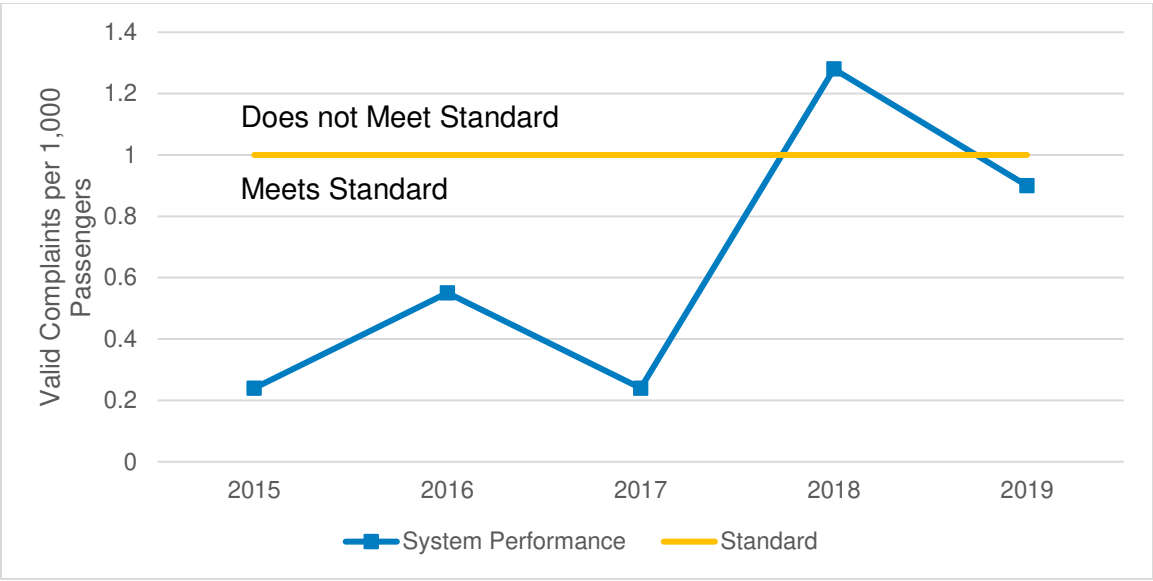


Figure 51 Paratransit On-Time Performance

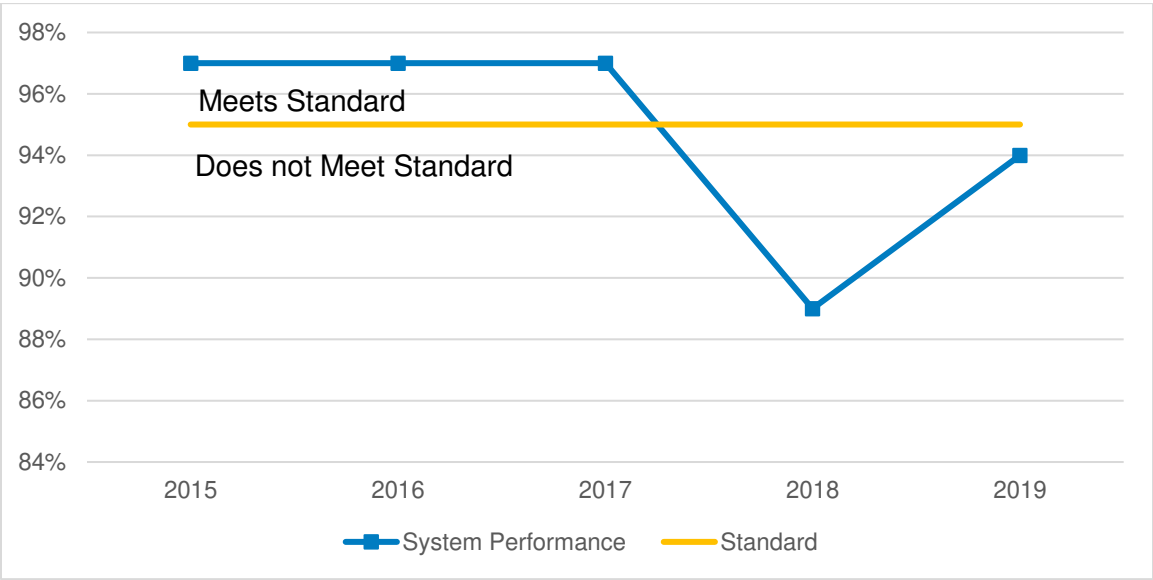


Figure 52 Phone Calls Answered within 60 Seconds

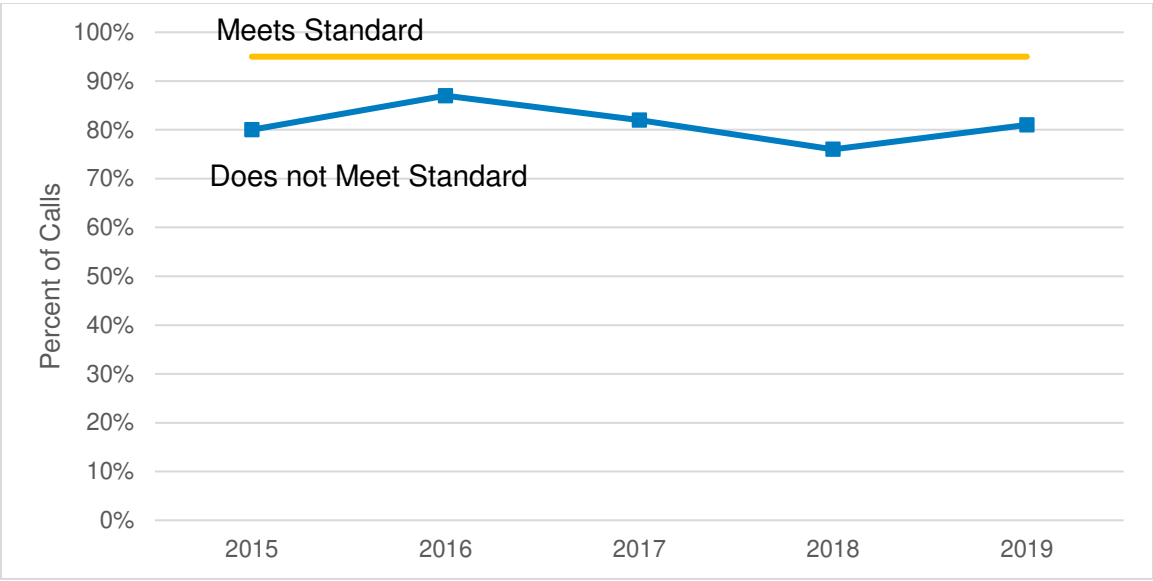
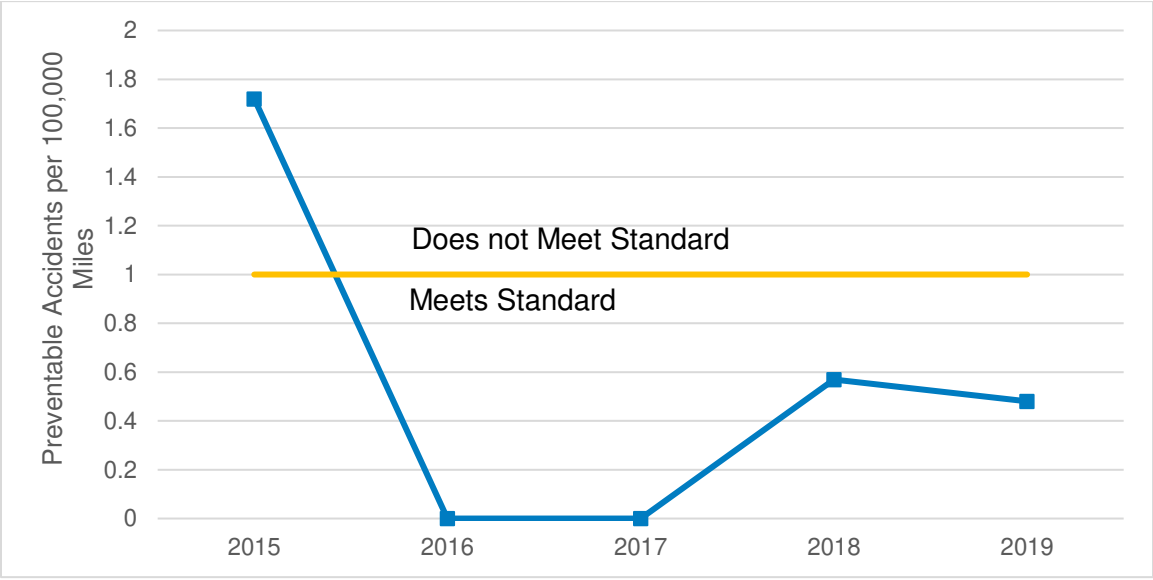


Figure 53 Preventable Accidents per 100,000 Miles



ON-TIME PERFORMANCE

On-time performance is a metric that helps gauge how dependable a service is to its users and is analyzed here at the route level. LAVTA does not have a systemwide standard for on-time performance. The results, summarized in this section, are broken up into the same four categories of routes used in the service standards evaluation. These results are also included in the individual route profiles, which can be found in Appendix A.

The results, shown in Figure 54, show that as a category, the rapid routes have the most reliable service. For the purpose of this analysis, on-time is defined as any departure from a timepoint between one minute early and five minutes late. School trippers likely have lower on-time performance because of heavy ridership loads, vehicular traffic in the vicinity of the schools served and because on morning trips drivers are instructed to continue to the school after passing their final timepoint. As a result, school trippers have a higher percentage of early arrivals than other services.

Figure 54 On-Time Performance by Route

Service Category	Route	Percent of Trips Early	Percent of Trips Late	Percent of Trips On-Time	Group On-Time Average
Rapid Routes	Rapid 10R	2%	17%	81%	84%
	Rapid 30R	1%	12%	87%	
Local	1	0%	13%	87%	82%
	2	1%	12%	86%	
	3	1%	20%	79%	
	8	3%	14%	83%	
	11	4%	6%	90%	
	14	4%	9%	87%	
	15	2%	13%	85%	
	53	1%	23%	76%	
	54	0%	33%	67%	
Express	20X	0%	14%	86%	77%
	70X	7%	43%	49%	
	580X	0%	5%	95%	
School Tripper	501 A/B/C	29%	19%	51%	67%
	502	10%	31%	60%	
	503	4%	30%	67%	
	504	14%	27%	59%	
	601	9%	26%	64%	

SHORT RANGE TRANSIT PLAN FY 2022 – 2027

Livermore Amador Valley Transportation Authority

Service Category	Route	Percent of Trips Early	Percent of Trips Late	Percent of Trips On-Time	Group On-Time Average
	602	13%	25%	62%	
	603	10%	10%	80%	
	604	21%	17%	62%	
	605	20%	23%	57%	
	606	5%	20%	75%	
	607	20%	14%	66%	
	608	4%	13%	83%	
	609	8%	23%	68%	
	610	12%	18%	70%	
	611	7%	12%	81%	

7 OPERATIONS PLAN & BUDGET

OPERATIONS PLAN

Introduction

The primary goal of the LAVTA SRTTP is to improve transit service in the Tri-Valley area. Convenient and cost-effective transit service requires an appropriate balance of coverage, frequency, and service span.

The COVID-19 pandemic introduced multiple challenges for LAVTA. Transit demand dropped precipitously, as work commutes for many workers ceased. In addition, operator shortages become acute, making it difficult to operate service.

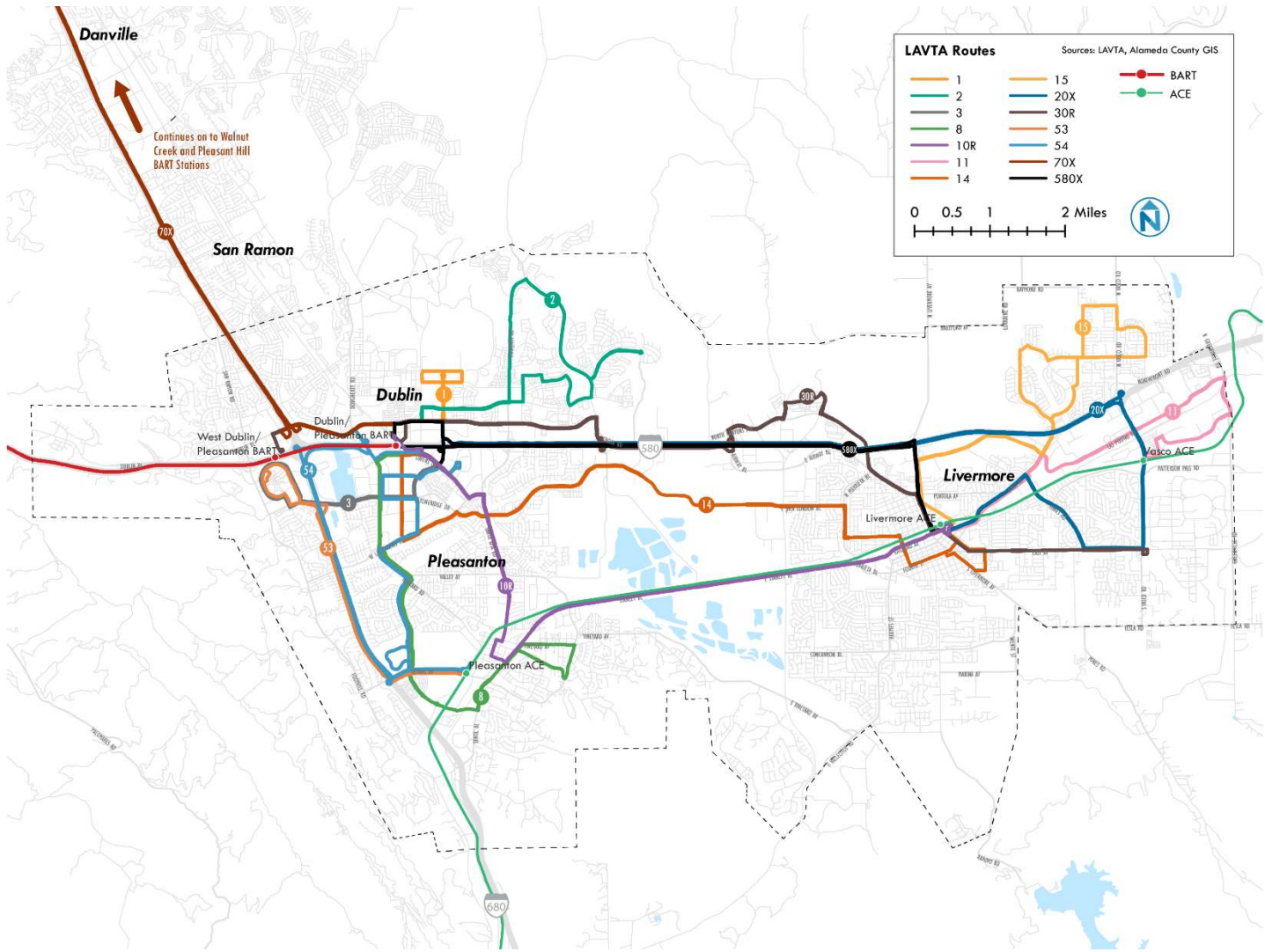
Key factors for consideration regarding temporary service reductions and reinstatement include:

- **Route Performance** – Some routes were underperforming before the Covid-19 pandemic. As travel patterns continue to shift throughout the pandemic recovery, it may be necessary to evaluate how or if underperforming services should be reimplemented.
- **Operator Shortage** – Operator shortages across the country are impacting the level of service that can be provided and can limit the availability to match demand or projected demand. Services may need to be prioritized for reimplementation based on the agency's ability to operate service with limited staff availability.

During the pandemic, LAVTA has reduced services as a result of smaller ridership demand. At the time of publication, it has been determined that the best path forward is to recommend operating the current level of service, with measures in place to trigger when a route that is currently suspended during COVID should be reinstated.

A map of the 2019 service network is shown on the following page, and route-by-route changes are described in the following section.

Figure 55 Route Network in 2019



TEMPORARY SERVICE REDUCTIONS

Impacts from the Covid-19 pandemic have been significant for transit agencies across the country. Between the rise of remote work and decreased demand for commute-oriented services, shift to remote learning for schools, increasing importance of serving essential workers during the midday and on weekends, and an ongoing operator shortage, temporary service reductions have been a common approach for many agencies, including LAVTA.

On March 16, 2020, the Alameda County Public Health Department announced that as of the following day all residents were to shelter at home limiting activity, travel, and business functions to only the most essential needs. In anticipation of declining resources, ridership, and this public health mandate, LAVTA staff developed a five-level service reduction process to provide passengers with an easy way to find out what services were still available.

Service Level 1 was implemented on March 17, 2020. All regular service was still operational, except school routes since in classroom instruction was halted effective March 16. Ridership on remaining LAVTA fixed routes dropped dramatically following the shelter at home order, from a high of 7,404 passengers on March 2 to a low of 786 on March 26.

Service Level 1: Regular service, no disruptions

- All Wheels and Rapid buses operating on regular schedules
- Dial-a-Ride Paratransit, Para-taxi and GoDublin still available
- Supplemental school routes discontinued until school resumes

Because of the nearly 90 percent ridership loss, Service Level 2 was implemented on Monday March 30, 2020. Additional cuts were implemented on Monday April 6, as LAVTA began operating at Service Level 3, which included discontinued service on three express routes as well as the Routes 2 and 11, all of which were either performing poorly prior to the pandemic or served areas where alternate service was available. The remaining routes were reduced to a weekend level of service and service after 11 pm was discontinued.

Service Level 2: Frequency reductions on Rapid Routes, other reductions

- Rapid Routes 10R and 30R will operate on a 30-minute frequency during hours when 15-minute frequency was previously offered
- Routes 20X and 580X will not operate due to extremely low ridership; alternate service available using Route 30R
- Route 2 will not operate due to extremely low ridership; alternate service available using LAVTA's GoDublin program
- Routes 53 and 54 continue to operate subject to continuation of ACE service
- Dial-a-Ride Paratransit, Para-taxi and GoDublin still available

Service Level 3: Weekend service schedules except for Rapid routes

- Rapid Routes 10R and 30R will continue to operate at the Service Level 2 frequencies
- Routes 1, 3, 8, 14 and 15 will operate on weekend schedules
- Routes 53 and 54 continue to operate subject to continuation of ACE service
- Route 2, 11, 20X, 70X and 580X will not operate
- All service after 11pm discontinued
- Dial-a-Ride Paratransit, Para-taxi and GoDublin still available

SERVICE RESTORATION

In March 2021, area school districts started to resume in classroom instruction. As a result, LAVTA restored school services concurrently with the resumption of classes. The next phase of service restoration was done in conjunction with the State of California announcing plans to fully reopen the economy in June 2021. Effective Monday June 14, weekday service was reinstated to pre-COVID levels from approximately 6:00-9:00 am and 3:00-6:00 pm on Routes 1, 3, 8, 10R, 14, and 30R. Route 15 returned to full weekday pre-COVID service levels. Service continued to end at 11 pm. The service resumptions were possible because drivers were available during the summer when school services were not operating.

LAVTA intended to continue hiring drivers so that when school services started back in August 2021, there would be sufficient drivers for the restored regular route service and the school services. Like many agencies across the country, LAVTA continued to experience staffing issues and was unable to sufficiently hire enough drivers to achieve this goal. As a result, LAVTA reduced peak hour service on the Rapid Routes 10R and 30R from every 15 minutes back to every 30 minutes, resulting in all regular services having the same 30-minute frequency during weekday peak hours. This represents present service levels. Figure 56 below compares the weekday revenue service hours for each regular route at three points in time: pre-COVID; the pandemic low point; and the current service level.

Figure 56 Weekday Revenue Hours by Route During Pandemic Related Service Changes

Route	Weekday Revenue Hours – Pre-Covid	Weekday Revenue Hours – Pandemic Low	Weekday Revenue Hours - Current
1	14.78	5.13	9.82
2	6.23	0	1.17
3	19.52	13.87	17.77
8	26.62	12.80	26.67
10R	100.27	53.43	49.90
11	5.53	0	0
14	36.12	22.60	31.37
15	32.65	15.80	30.87
30R	135.27	77.90	77.95
20X	2.87	0	0
70X	13.52	0	0
580X	8.00	0	0

FUTURE SERVICE RESTORATION

With extra service hours that will become available at the end of the current school year, LAVTA staff anticipates bringing back approximately one-third of the pre-COVID service on the Route 70X serving the East Dublin/Pleasanton, Walnut Creek and Pleasant Hill BART Stations and both trips on the Route 20X service

between the East Dublin/Pleasanton BART Station and LLNL via Vasco Road. Several requests have been received regarding the resumption of these routes. Additionally, during the summer, LAVTA runs service to Dublin High School summer school and the Alameda County Fair.

Bringing back 15-minute peak hour service to the two RAPID routes is the next priority since these routes serve both BART Stations, the Livermore ACE Station, Las Positas College, employment centers, medical facilities, and multiple middle and high schools. These, and any additional service restorations to move service back to pre-COVID levels, will be predicated on the successful recruitment of additional operators.

Because the ongoing, nationwide operator shortage is the key factor limiting service restoration, the order in which services are restored must be prioritized in order to make the most effective use of limited resources. Figure 57 prioritizes services which have yet to be fully restored following the initial pandemic related service reductions. While this attempts to prioritize restoring existing services, future studies included in the forthcoming Long Range Transit Plan may explore the future of transit services for LAVTA and may result in additional service changes to better reflect the post-pandemic demand for transit in the region.

Figure 57 Service Resumption Priorities

Priority	Route	Service Restoration
1	10R and 30R	Reimplement 15-minute service in the peak period.
2	20X and 70X	Restore express service in conjunction with the return of the commuter market and as operator availability allows.
3	Remaining Local, Rapid, and Express Services	Restore remaining Local, Rapid, and Express services to pre-pandemic service levels as resources and operator availability allow.

OPERATIONS BUDGET

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

Fixed-Route Budget

Figure 58, Figure 59, and Figure 60 display the budgeted fixed-route expenses, operating characteristics, and revenues from FY 2022 through 2027. TDA 4.0 funds are assumed to balance the budget over the course of the SRTP period. Three-year retrospectives are shown in Figure 61 and Figure 62 on the pages following the budget.

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 58 Fixed-Route Expense Budget for SRTP Period (FY 2022-2027)

Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Labor (b)	\$1,603,751	\$1,726,695	\$1,813,030	\$1,903,681	\$1,998,865	\$2,098,809
Fringe Benefits (c)	\$1,133,024	\$1,413,343	\$1,484,010	\$1,558,211	\$1,636,121	\$1,717,927
Services (d)	\$1,198,631	\$1,007,618	\$1,037,847	\$1,068,982	\$1,101,051	\$1,134,083
Fuel and Lube	\$887,067	\$2,164,000	\$2,380,400	\$2,618,440	\$2,880,284	\$3,168,312
Utilities (e)	\$359,220	\$365,442	\$383,714	\$402,900	\$423,045	\$444,197
Insurance	\$430,425	\$643,654	\$675,837	\$709,629	\$745,110	\$782,365
Purchased Transportation (a)	\$9,040,669	\$11,207,472	\$12,552,369	\$12,866,178	\$13,187,832	\$13,517,528
LAVTA Administration and Legal (b)	\$440,563	\$1,356,165	\$462,591	\$1,423,973	\$485,721	\$1,495,172
Total	\$15,093,349	\$19,884,389	\$20,789,797	\$22,551,993	\$22,458,030	\$24,358,394

Notes:

- (a) Current contract escalators through end of option years- remaining years are calculated using the last year's escalator
- (b) Based on current and historical trends
- (c) Based on analysis of prior benefit trends
- (d) Assumed to increase by 3% a year after FY21-22
- (e) Assumed to increase by 5% a year after FY21-22

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 59 Fixed-Route Operating Characteristics

Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Revenue Hours	91,031	107,146	125,706	125,706	125,706	125,706
Deadhead hours	9,855	9,643	11,314	11,314	11,314	11,314
Ridership (a)	829,376	995,251	1,194,301	1,313,732	1,445,105	1,589,615
% Ridership Increase	97%	20%	20%	10%	10%	10%
Average Fare Per Passenger	\$1.41	\$1.47	\$1.39	\$1.36	\$1.34	\$1.31
Passenger per Revenue Hour	9.11	9.29	9.50	10.45	11.50	12.65
Farebox Recovery Ratio	8%	7%	8%	8%	9%	9%
Cost per Hour	\$165.80	\$185.58	\$165.38	\$179.40	\$178.66	\$193.77

Notes:

(a) Ridership forecast to increase by 20% in FY23 due to COVID recovery and return of the workforce, 10% each year after

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 60 Fixed-Route Revenue Budget for SRTP Period (FY 2022-2027)

Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Passenger Fares (a)	\$660,457	\$935,909	\$1,123,091	\$1,235,400	\$1,358,940	\$1,494,834
Business Parks (b)	\$206,224	\$212,410	\$218,783	\$225,346	\$232,106	\$239,070
Special Contract Fares (b)	\$304,180	\$313,305	\$322,704	\$332,385	\$342,357	\$352,628
Interest (c)	\$166,748	\$184,190	\$187,874	\$191,631	\$195,464	\$199,373
Concessions (b)	\$25,814	\$26,588	\$27,386	\$28,208	\$29,054	\$29,925
Advertising (d)	\$90,000	\$180,000	\$185,400	\$190,962	\$196,691	\$202,592
STA (e)	\$1,552,923	\$1,845,644	\$1,901,013	\$1,958,044	\$2,016,785	\$2,077,289
STA Lifeline	\$0	\$0	\$0	\$0	\$0	\$0
BART Subsidy (e)	\$661,131	\$300,792	\$0	\$0	\$0	\$0
Measure B Express Bus (f)	\$0	\$0	\$0	\$0	\$0	\$0
Measure B and BB (g)	\$1,591,187	\$1,603,800	\$1,651,914	\$1,701,471	\$1,752,516	\$1,805,091
JARC and New Freedom/5310	\$0	\$0	\$0	\$0	\$0	\$0
RM2	\$409,489	\$409,489	\$409,489	\$409,489	\$409,489	\$409,489
TFCA	\$245,000	\$245,000	\$252,350	\$259,921	\$267,718	\$275,750
FTA	\$1,636,697	\$5,730,074	\$4,355,371	\$0	\$0	\$0
TDA 4.0 Funds needed to balance budget	7,543,500	7,897,188	10,154,423	16,019,137	15,656,910	17,272,354
Total Revenues	\$15,093,349	\$19,884,389	\$20,789,797	\$22,551,993	\$22,458,030	\$24,358,394
Total Expenditures	\$15,093,349	\$19,884,389	\$20,789,797	\$22,551,993	\$22,458,030	\$24,358,394
Difference	\$0	\$0	\$0	\$0	\$0	\$0

Notes:

- (a) Assumes no fare increase
- (b) Increases based on CPI
- (c) Based on trends
- (d) Based on current contract
- (e) BART's payments to LAVTA for providing feeder bus service to BART. BART intends to discontinue this.
- (f) Forecasts based on ACTC estimates of amounts available and historical receipts.
- (g) Forecasts based on FY23 projections and escalated at CPI

Figure 61 Three-Year Retrospective of Fixed-Route Expenses

Category	ACTUAL FY 16-17	ACTUAL FY 17-18	ACTUAL FY 18-19	3-Year % Growth
Labor	\$1,252,115	\$1,138,090	\$1,245,013	-0.6%
Fringe Benefits	\$568,893	\$528,672	\$815,235	43.3%
Services	\$1,024,471	\$825,589	\$950,334	-7.2%
Purchased Transportation	\$8,714,347	\$9,021,116	\$10,101,677	15.9%
Fuel, Parts, Supplies, and Other Operation Costs	\$2,086,934	\$6,519,351	\$2,141,637	2.6%
Total	\$13,646,760	\$18,032,818	\$15,253,896	11.8%

Over the three most recent pre-pandemic years, many of LAVTA's expense categories increased, leading to an 11.8% increase over the three-year period. Reductions in the expense categories of services were not enough to offset significant increases in fringe benefits, purchased transportation, and fuels, parts, supplies, and other operation costs. LAVTA will continue to work toward additional reductions in expenses and/or increasing revenue sources for the S RTP period to ensure the budget remains balanced.

Figure 62 Three-Year Retrospective of Fixed-Route Revenue

	ACTUAL	ACTUAL	ACTUAL	3-Year
Category	FY 16-17	FY 17-18	FY 18-19	% Growth
Fare Revenue	\$1,876,618	\$2,141,469	\$2,340,243	19.8%
Auxiliary, Non-Transportation, and Other Revenue	\$336,887	\$156,751	\$365,846	7.9%
General Operating Assistance	\$718,336	\$580,836	\$580,836	-23.7%
Local Transportation Fund	\$6,868,132	\$7,144,536	\$5,713,380	-20.2%
Local Sales Tax	\$1,592,428	\$1,721,957	\$1,866,950	14.7%
State Transit Assistance	\$1,663,237	\$1,357,662	\$3,760,282	55.8%
FTA Section 5307	\$591,122	\$540,583	\$463,360	-27.6%
Total	\$13,646,760	\$13,643,794	\$15,090,897	9.6%

LAVTA has maintained appropriate revenue levels in the past several pre-pandemic 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 2017 to FY 2019, certain revenue sources declined, including FTA funds, auxiliary, non-transportation, and other revenue, and general operating assistance funds.

Paratransit Budget

Figure 63, Figure 64, and Figure 65 display paratransit expenses, operating characteristics, and revenue from FY 2016 through 2025. Three-year retrospectives are shown in Figure 66 and Figure 67.

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 63 Paratransit Expense Budget for SRTP Period (FY 2022-2027)

Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Labor (a)	\$100,958	\$185,930	\$195,227	\$204,988	\$215,237	\$225,999
Fringe Benefits (b)	\$38,727	\$58,095	\$61,000	\$64,050	\$67,252	\$70,615
Services (d)	\$25,773	\$43,109	\$45,264	\$47,528	\$49,904	\$52,399
Utilities (c)	\$7,596	\$7,957	\$8,196	\$8,442	\$8,695	\$8,956
Insurance (d)	\$6,391	\$6,502	\$6,567	\$6,633	\$6,699	\$6,766
Purchased Transportation (e)	\$1,067,529	\$3,231,200	\$3,360,448	\$3,494,866	\$3,634,661	\$3,780,047
LAVTA Administration and Legal (a)	\$19,500	\$45,039	\$30,403	\$31,315	\$32,255	\$33,222
Total	\$1,266,473	\$3,577,832	\$3,707,104	\$3,857,821	\$4,014,702	\$4,178,004

Notes:

- (a) Increase based on current trends
- (b) Increase based on current trends
- (c) Increased 3% after FY21-22
- (d) Increase based on current trends
- (e) Increase based on new contract and increases in trips

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 64 Paratransit Operating Characteristics

Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Revenue Hours	14,384	21,575	25,890	28,479	31,327	34,460
Passenger Trips (a)	82,988	87,137	91,494	96,069	100,872	105,916
Ridership	23,558	35,336	42,403	46,644	51,308	56,439
% Ridership Increase	36.50%	33.33%	16.67%	9.09%	9.09%	9.09%
Average Fare Per Passenger	\$3.24	\$2.61	\$4.22	\$4.17	\$4.13	\$4.09
Passenger per Revenue Hour	1.6	1.6	1.6	1.6	1.6	1.6
Farebox Recovery Ratio (W/ Special Contract)	6%	3%	5%	5%	5%	6%
Cost per Hour	\$88.05	\$165.83	\$143.19	\$135.46	\$128.16	\$121.24

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 65 Paratransit Revenue Budget for SRTP Period (FY 2022-2027)

Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Passenger Fares	\$52,644	\$62,655	\$148,411	\$163,252	\$179,578	\$197,535
Special Contract Fares	\$23,696	\$29,600	\$30,488	\$31,403	\$32,345	\$33,315
TDA 4.5	\$159,119	\$296,348	\$305,238	\$314,396	\$323,827	\$333,542
Measure B and BB Paratransit	\$600,020	\$1,019,168	\$1,049,743	\$1,081,235	\$1,113,672	\$1,147,083
FTA		\$422,316	\$434,985	\$448,035	\$461,476	\$475,320
TDA 4.0 Funds	\$424,602	\$1,747,745	\$1,738,238	\$1,819,500	\$1,903,804	\$1,991,208
Funding Not Secured	-	-	-	-	-	-
Total Revenues	\$1,260,081	\$3,577,832	\$3,707,104	\$3,857,821	\$4,014,702	\$4,178,004
Total Expenditures	\$1,266,473	\$3,577,832	\$3,707,104	\$3,857,821	\$4,014,702	\$4,178,004
Difference	(\$6,392)	\$0	\$0	\$0	\$0	\$0

Figure 66 Three-Year Retrospective of Paratransit Expenses

Category	ACTUAL FY 16-17	ACTUAL FY 17-18	ACTUAL FY 18-19	3-Year % Growth
Labor	\$104,784	\$106,112	\$133,458	27.4%
Fringe Benefits	\$28,686	\$36,325	\$37,318	30.1%
Services	\$94,088	\$77,178	\$55,452	-41.1%
Purchased Transportation	\$1,617,401	\$1,631,607	\$1,579,648	-2.3%
Fuel, Parts, Supplies, and Other Operation Costs	\$11,435	\$12,140	\$12,554	9.8%
Total	\$1,856,394	\$1,863,362	\$1,818,430	-2.0%

Paratransit expenses have decreased over the three most recent pre-pandemic years. Labor and fringe benefits expenses increased significantly, but were offset by reductions in services and purchased transportation costs, contributing to a total decrease in expenses of 2.0%.

Figure 67 Three-Year Retrospective of Paratransit Revenue

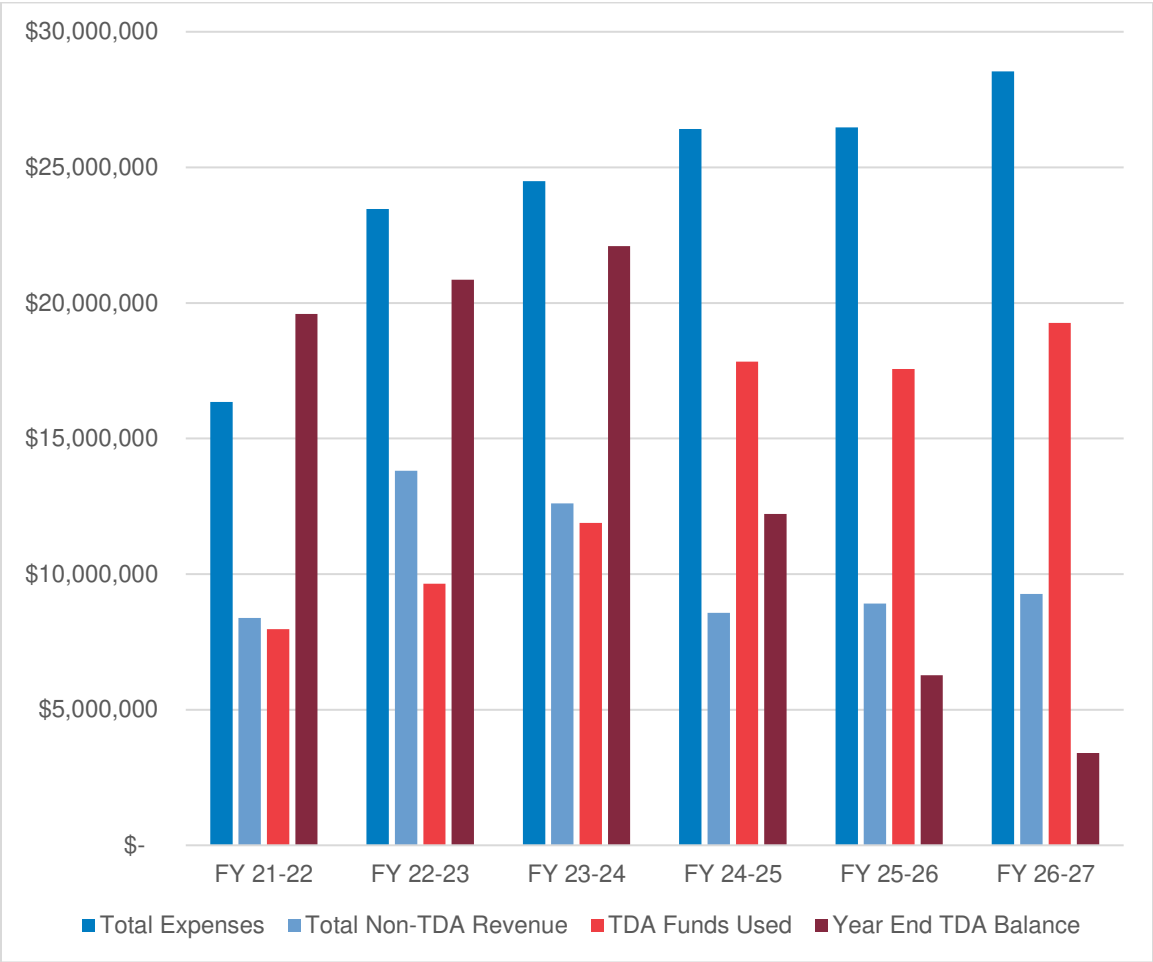
	ACTUAL	ACTUAL	ACTUAL	3-Year
Category	FY 16-17	FY 17-18	FY 18-19	% Growth
Fare Revenue	\$224,023	\$217,184	\$195,367	-12.8%
Local Transportation Fund	\$784,276	\$727,417	\$620,301	-20.9%
Local Sales Tax	\$462,914	\$509,291	\$572,180	23.6%
State Transit Assistance	\$34,738	\$56,773	\$23,813	-31.4%
Federal Operating Assistance	\$350,443	\$349,586	\$406,769	16.1%
Total	\$1,856,394	\$1,860,251	\$1,818,430	-2.0%

Summary

Projected expenses, revenues, and reserves for the SRTP are illustrated in Figure 68 and Figure 69. As shown below, expenses are projected to be greater than revenues from TDA 4.0 and other sources in each of the years, leading to declining reserves after FY 23-24 Funding provided through the CARES Act allowed LAVTA to replenish reserves during 2020 and 2021. Reserves are projected to be sufficient to offset the difference between revenues and expenses through the horizon of this SRTP. However, as reserves begin to decline, LAVTA should 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 68 Total Revenues versus Expenses with Cumulative Reserve Balances



SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 69 TDA 4.0 Reserve Balance

Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Prior Year TDA Carryover	\$4,950,887	\$12,871,606	\$14,468,380	\$9,703,701	\$8,821,799	\$1,869,358
TDA 4.0 Interest earned on reserves (Alameda Cty)	\$194,569	\$104,123	\$109,329	\$114,796	\$120,535	\$126,562
TDA 4.0 Revenue Forecast	\$10,823,468	\$12,938,264	\$13,611,054	\$14,155,496	\$14,721,716	\$15,310,584
Due to LTF	\$16,277,964	\$11,277,964	\$12,277,964	\$8,277,964	\$6,277,964	\$6,277,964
TDA 4.0 Usage:						
Operations	\$7,968,102	\$9,644,933	\$11,892,661	\$17,838,637	\$17,560,714	\$19,263,562
Capital (excludes prior year allocations)	\$4,686,907	\$6,691,351	\$6,477,606	\$2,193,021	\$6,107,416	\$923,327
Reserve Balance	\$19,591,879	\$20,855,673	\$22,096,460	\$12,220,298	\$6,273,884	\$3,397,579

8 CAPITAL IMPROVEMENT PROGRAM

This chapter provides a ten-year budget for fiscal years 2022-2031 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 the design and construction of the Atlantis facility, revenue fleet purchases, followed by major components rehab. FTA Sections 5307, and 5339, 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 (Rutan, Atlantis, bus stops, etc.).

Assumptions for the ten-year capital improvement program include:

- Fiscal years where revenue vehicles are expected to be procured are: 2022, 2023, 2028 and 2029 although with funding delays the vehicles will be received on a year lag.
- Fiscal years where non-revenue vehicles are expected to be procured are: 2023, 2024, 2025, 2028 and 2029.
- Costs for many facility and major component capital needs for each increase CIP year are based on an inflation rate of 3%.

CAPITAL BUDGET

Figure 70 below presents the capital improvement program over the ten-year period. The total amount of funding needed for the capital improvement program over the period will be \$175,851,877.

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 70 Capital Improvement Program for SRTP Period FY 2022-2031

Expenses	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
Fixed Route Vehicle Program	\$13,552,000	\$15,168,000	\$0	\$0	\$0	\$0	\$29,800,243	\$30,992,253	\$0	\$0	\$89,512,496
# of Vehicles	16	12	0	0	0	0	20	20	0	0	68
Support Vehicle Replacement	\$0	\$50,000	\$85,000	\$217,583	\$0	\$0	\$265,500	\$629,200	\$0	\$0	\$1,247,283
# of Vehicles	0	1	2	3	0	0	3	6	0	0	15
SAV Vehicle Project	\$0	\$0	\$3,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000,000
Components for Bus Purchases	\$917,296	\$722,184	\$0	\$0	\$0	\$0	\$1,261,282	\$1,318,613	\$0	\$0	\$4,219,375
Major Components	\$850,265	\$952,204	\$980,770	\$640,415	\$659,627	\$679,416	\$761,292	\$784,131	\$707,839	\$626,265	\$7,642,224
Miscellaneous Needs	\$741,766	\$6,524,759	\$1,262,409	\$361,024	\$333,389	\$130,911	\$138,448	\$226,002	\$135,572	\$209,159	\$10,063,437
Facility	\$1,241,900	\$34,365,500	\$18,258,263	\$426,000	\$5,114,400	\$113,000	\$125,400	\$123,000	\$293,600	\$106,000	\$60,167,063
Total Capital Expenses	\$17,303,227	\$57,782,647	\$23,586,442	\$1,645,021	\$6,107,416	\$923,327	\$32,352,165	\$34,073,198	\$1,137,011	\$941,424	\$175,851,877

Revenues	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
FTA	\$11,781,437	\$17,664,327	\$218,545	\$0	\$0	\$0	\$24,849,220	\$25,848,693	\$0	\$0	\$80,362,222
RM2	\$0	\$250,000	\$2,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,750,000
Other Local Funds	\$51,500	\$2,654,968	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,206,468
TDA Article 4.0	\$4,770,290	\$6,691,351	\$6,477,606	\$2,193,021	\$6,107,416	\$923,327	\$7,502,945	\$8,224,505	\$1,137,011	\$941,424	\$44,420,896
Funding Not Secured	\$700,000	\$30,522,000	\$13,890,290	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,112,290
Total Capital Revenues	\$17,303,227	\$57,782,647	\$23,586,442	\$1,645,021	\$6,107,416	\$923,327	\$32,352,165	\$34,073,198	\$1,137,011	\$941,424	\$175,851,877

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 71. The current fleet size is 66 vehicles (including six 2003 buses in LAVTA's contingency fleet).

There were 54 vehicles used at maximum pullout just prior to the pandemic, and the spare ratio at that time was 21%, including the contingency fleet. In 2018 LAVTA retired and sold all but six of the buses purchased in 2003. Those six were put in the "contingency fleet" and brought back out and put in the active fleet to accommodate the unprecedented ridership growth LAVTA was experiencing in late 2019 and early 2020. Vehicles that are removed from the fleet are typically sold. The vehicle replacement schedule is shown in Figure 76.

Figure 71 Current Revenue Fleet

Manufacturer	Year of Manufacture	VIN	Size	Seating Capacity	Wheelchair capacity	Mode of Power	Major Rehab	Year of Retire
Gillig Hybrid	2009	15GGD301891078670	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	2009	15GGD301X91078671	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	2009	15GGD301191078672	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	2009	15GGD301391078673	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	2009	15GGD301591078674	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	2009	15GGD301791078675	40	39	2	Diesel Electric	No	2023
Gillig Hybrid	2009	15GGD301991078676	40	39	2	Diesel Electric	No	2024
Gillig Hybrid	2009	15GGD301091078677	40	39	2	Diesel Electric	No	2024
Gillig Hybrid	2009	15GGD301291078678	40	39	2	Diesel Electric	No	2024
Gillig Hybrid	2009	15GGD301491078679	40	39	2	Diesel Electric	No	2024
Gillig Hybrid	2009	15GGD301091078680	40	39	2	Diesel Electric	No	2024
Gillig Hybrid	2009	15GGD301291078681	40	39	2	Diesel Electric	No	2024
Gillig	2003	15GGD201531073704	40	39	2	Diesel	No	2023
Gillig	2003	15GGD201431073712	40	39	2	Diesel	No	2023
Gillig	2003	15GGD201631073713	40	39	2	Diesel	No	2023
Gillig	2003	15GGD201831073714	40	39	2	Diesel	No	2023
Gillig	2003	15GGD201531073717	40	39	2	Diesel	No	2023
Gillig	2003	15GGD201031073724	40	39	2	Diesel	No	2023
Gillig Hybrid	2007	15GGE191871091288	29	22	2	Diesel Electric	No	2023
Gillig Hybrid	2007	15GGE191X71091289	29	22	2	Diesel Electric	No	2023
Gillig Hybrid	2009	15GGE301491091784	29	22	2	Diesel Electric	No	2023
Gillig Hybrid	2009	15GGE301691091785	29	22	2	Diesel Electric	No	2023
Gillig Hybrid	2011	15GGE3019B1092287	29	22	2	Diesel Electric	No	2024
Gillig Hybrid	2011	15GGE3010B1092288	29	22	2	Diesel Electric	No	2024

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Manufacturer	Year of Manufacture	VIN	Size	Seating Capacity	Wheelchair capacity	Mode of Power	Major Rehab	Year of Retire
Gillig Hybrid	2011	15GGE3012B1092289	29	22	2	Diesel Electric	No	2024
Gillig Hybrid	2011	15GGE3012B1092289	29	22	2	Diesel Electric	No	2024
Gillig BAE Hybrid	2016	15GGB301XG1187554	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGB3011G1187555	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGB3013G1187556	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGB3015G1187557	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGB3017G1187558	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGB3019G1187559	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGB3015G1187560	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGB3017G1187561	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGB3019G1187562	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGB3010G1187563	35	28	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD301XG1187564	40	34	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD3011G1187565	40	34	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD3013G1187566	40	34	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD3015G1187567	40	34	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD3017G1187568	40	37	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD3019G1187569	40	37	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD3015G1187570	40	37	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD3017G1187571	40	37	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD3019G1187572	40	37	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2016	15GGD3010G1187573	40	37	2	Diesel Electric	No	2029
Gillig BAE Hybrid	2017	15GGD3019H3189358	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD3010H3189359	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD3017H3189360	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD3019H3189361	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD3010H3189362	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD3012H3189363	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD3014H3189364	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD3016H3189365	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD3018H3189366	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD301XH3189367	40	34	2	Diesel Electric	No	2030
Gillig BAE Hybrid	2017	15GGD3011H3189368	40	35	2	Diesel Electric	No	2030
Gillig Hybrid	2017	15GGE3015H3093305	29	22	2	Diesel Electric	No	2030
Gillig Hybrid	2017	15GGE3017H3093306	29	22	2	Diesel Electric	No	2030
Gillig Hybrid	2017	15GGE3019H3093307	29	22	2	Diesel Electric	No	2030
Gillig Hybrid	2017	15GGE3010H3093308	29	22	2	Diesel Electric	No	2030

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Manufacturer	Year of Manufacture	VIN	Size	Seating Capacity	Wheelchair capacity	Mode of Power	Major Rehab	Year of Retire
Gillig Hybrid	2017	15GGE3012H3093309	29	22	2	Diesel Electric	No	2030
Gillig Hybrid	2017	15GGE3010H3093311	29	22	2	Diesel Electric	No	2030
Gillig Hybrid	2017	15GGE3012H3093312	29	22	2	Diesel Electric	No	2030
Gillig Hybrid	2017	15GGE3014H3093313	29	22	2	Diesel Electric	No	2030
Gillig Hybrid	2017	15GGE3019H3093310	29	22	2	Diesel Electric	No	2030

Based on MTC vehicle price guidelines (see Figure 72), LAVTA will require \$89,512,500 to replace 68 revenue vehicles over the ten-year period. These vehicles will be replaced, because they will be at the end of their life cycles. In 2011, LAVTA was experiencing a ridership decline and 12 vehicles were retired, but only 4 were replaced. LAVTA took a “full life deferral” credit. However, in 2023 LAVTA is eligible to replace those vehicles and, plans to purchase the additional 8 vehicles.

Additionally, to accommodate capacity issues on trippers, LAVTA will be replacing the 29’ vehicles with 40’ vehicles. LAVTA is eligible to replace some paratransit “cutaway” vehicles, but with the current paratransit service delivery model these vehicles are not needed because the contractor provides the vehicles. Therefore, the seating capacity of these “deferred” vehicles are added to the seating capacity of the 29’ vehicles to allow for the purchase of 40’ vehicles.

Figure 75 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 ten-year period. Fleet replacement is expected to occur in FY 2022, 2023, 2028 and 2029 with buses in service in FY 2023, 2024, 2028 and 2029. Sixteen of the sixty-eight planned purchases are diesel-electric hybrid vehicles. The remaining four will be Hydrogen Powered-Zero Emission Buses.

Figure 74 lists the additional components needed for the revenue vehicles. These are the Automatic Vehicle Locator (AVL) system, the fareboxes, and the radios.

In addition to the regular Fixed Route Fleet LAVTA is looking to establish a fleet of Shared Autonomous Vehicles to provide “last mile” service. Figure 73 shows the expenses and revenues for these purchases.

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 72 MTC Vehicle Price List

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
40' bus Hybrid										
Federal	\$677,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Local	\$169,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$847,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40' bus Fuel Cell										
Federal	\$992,800	\$1,011,200	\$1,030,400	\$1,049,600	\$1,102,080	\$1,146,163	\$1,192,010	\$1,239,690	\$1,289,278	\$1,340,849
Local	\$248,200	\$252,800	\$257,600	\$262,400	\$275,520	\$286,541	\$298,002	\$309,923	\$322,319	\$335,212
Total	\$1,241,000	\$1,264,000	\$1,288,000	\$1,312,000	\$1,377,600	\$1,432,704	\$1,490,012	\$1,549,613	\$1,611,597	\$1,676,061

Notes: LAVTA is increasing its fleet size due to increased ridership.

LAVTA took a full life deferral on 8 vehicles in 2011 which will be replaced in the 2023 purchase.

Only purchased 4 replacement vehicles in 2011.

Deferred replacement of 8 of the 12 vehicles in 2011 for the full 12 years. All 12 will be replaced in FY 2023.

Figure 73 SAV Revenue Vehicle Procurement Program for SRTP Period

Expenditures	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
Vehicles	\$0	\$0	\$3,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000,000
Total Capital Expenses	\$0	\$0	\$3,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000,000

Revenues	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
FTA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TDA	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000
RM2	\$0	\$0	\$2,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500,000
Total Capital Revenues	\$0	\$0	\$3,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000,000

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 74 Summary of Additional Components for Bus Purchases

Components for Bus Purchases	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
AVL	\$522,240	\$415,536	\$0	\$0	\$0	\$0	\$718,080	\$750,720	\$0	\$0	\$2,406,576
Fareboxes	\$332,016	\$256,488	\$0	\$0	\$0	\$0	\$456,522	\$477,273	\$0	\$0	\$1,522,299
Radios	\$63,040	\$50,160	\$0	\$0	\$0	\$0	\$86,680	\$90,620	\$0	\$0	\$290,500
Total Bus Purchase Components	\$917,296	\$722,184	\$0	\$0	\$0	\$0	\$1,261,282	\$1,318,613	\$0	\$0	\$4,219,375
# of vehicles	16	12	0	0	0	0	20	20	0	0	68

Revenues	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
FTA	\$733,837	\$577,747	\$0	\$0	\$0	\$0	\$1,009,026	\$1,054,890	\$0	\$0	\$3,375,500
Other local funding	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TDA Article 4.0	\$183,459	\$144,437	\$0	\$0	\$0	\$0	\$252,256	\$263,723	\$0	\$0	\$843,875
Funding Not Secured	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Revenues	\$917,296	\$722,184	\$0	\$0	\$0	\$0	\$1,261,282	\$1,318,613	\$0	\$0	\$4,219,375

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 75 Planned Fixed-Route Revenue Vehicle Procurement Program for SRTP Period

Expenditures	Replacement Vehicles	# of Vehicles	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
2007 Gillig Coaches (29 ft)	40 ft standard hybrid coaches	2	\$1,694,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,694,000
2009 Gillig Rapid Coaches (29 & 40 ft)	40 ft standard hybrid coaches	14	\$11,858,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,858,000
2011 Gillig Hybrid Coaches (29')	40 ft standard Zero Emission coaches	4	\$0	\$5,056,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,056,000
2011 Gillig Hybrid Coaches previously deferred	40 ft standard Zero Emission coaches	8	\$0	\$10,112,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,112,000
2016 Gillig Rapid Coaches (35 & 40 ft)	40 ft standard Zero Emission coaches	20	\$0	\$0	\$0	\$0	\$0	\$0	\$29,800,243	\$0	\$0	\$0	\$29,800,243
2017 Gillig Rapid Coaches (29 & 40 ft)	40 ft standard Zero Emission coaches	20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,992,253	\$0	\$0	\$30,992,253
Total Capital Expenses		68	\$13,552,000	\$15,168,000	\$0	\$0	\$0	\$0	\$29,800,243	\$30,992,253	\$0	\$0	\$89,512,496
# of vehicles			16 40'	12 40'					20 40'	20 40'			

Revenues			FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
FTA Section 5307/5339			\$10,841,600	\$12,134,400	\$0	\$0	\$0	\$0	\$23,840,195	\$24,793,802	\$0	\$0	\$71,609,997
TDA Article 4.0			\$2,710,400	\$2,088,624	\$0	\$0	\$0	\$0	\$5,960,049	\$6,198,451	\$0	\$0	\$16,957,523
LCTOP			\$0	\$944,976	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$944,976
Funding Not Secured			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Revenues			\$13,552,000	\$15,168,000	\$0	\$0	\$0	\$0	\$29,800,243	\$30,992,253	\$0	\$0	\$89,512,496
Additional Local Match Needed			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Notes: 5307 and 5339 Funding assumed for replacement purchases. TDA additional local match may be required when purchasing replacements as shown in table. Fleet needs subject to change based on future service plan.

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 76 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
Year & Manufacturer	2022		2023		2024		2025		2026		2027		2028		2029		2030		2031	
40' 2003 Gillig Low-Floor	0	6																		
29' 2007 Gillig Hybrid	0	1																		
29' 2009 Gillig Hybrid	0	2																		
40' 2009 Gillig Hybrid	6	6	6		6		0	6												
29' 2011 Gillig Hybrid	4		4		4		0	4												
35' 2016 Fixed Route Replacement	10		10		10		10		10		10			10						
40' 2016 Fixed Route Replacement	10		10		10		10		10		10			10						
29' 2017 Fixed Route Replacement	5		5		5		5		5		5		5		0	5				
40' 2017 Fixed Route Replacement	15		15		15		15		15		15		15		0	15				
40' 2022 Fixed Route Replacement	16		16		16		16		16		16		16		16		16		16	
40' 2025 Fixed Route Replacement <i>b</i>							12		12		12		12		12		12		12	
40' 2028 Fixed Route Replacement <i>b</i>													20		20		20		20	
40' 2029 Fixed Route Replacement <i>b</i>															20		20		20	
40' 2034 Fixed Route Replacement <i>b</i>																				

SHORT RANGE TRANSIT PLAN FY 2022 - 2027
 Livermore Amador Valley Transportation Authority

40' 2037 Fixed Route Replacement <i>b</i>																			
Buses Retired	15	0	0	10	0	0	20	20	0	0									
Replacement buses purchased	16	0	0	12	0	0	20	20	0	0									
FTA Reported Fleet Size	66	66	66	68	68	68	68	68	68	68									
Spare Ratio <i>a</i>	22%	22%	22%	21%	21%	21%	21%	21%	21%	21%									

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 77 below. There are currently a total of fourteen vehicles, although an additional one is scheduled to be purchased in FY 2025. Non-revenue vehicles have a variety of uses, including supervision, operator shift changes, marketing, maintenance department use, and other uses.

Figure 77 Current Non-Revenue Vehicles

Make	Model	Year	Estimated Replacement Year	Estimated Replacement Cost	Vehicle Type	Mode of Power
Chrysler	Town and Country	2008	2025	\$35,000	Mini Van	Gas
Ford	F 550	2003	2023*	\$50,000	Truck	Diesel
Chevrolet	3500 HD	2008	2024*	\$50,000	Truck	Diesel
Dodge	Ram 150	2015	2025	\$100,000	Truck	Diesel
Toyota	Prius	2005	2024	\$35,000	Car	Gas
Ford	Fusion Hybrid	2018	2028	\$88,500	Car	Gas
Ford	Fusion Hybrid	2018	2028	\$88,500	Car	Gas
Ford	Fusion Hybrid	2018	2028	\$88,500	Car	Gas
Ford	Transit 150	2019	2029	\$90,750	Van w/wheel chair ramp	Gas
Ford	Transit 150	2019	2029	\$90,750	Van w/wheel chair ramp	Gas
Ford	Transit Connect	2019	2029	\$90,750	Van	Gas
Ford	Transit Connect	2019	2029	\$90,750	Van	Gas

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Make	Model	Year	Estimated Replacement Year	Estimated Replacement Cost	Vehicle Type	Mode of Power
Ford	F 550	2019	2029	\$133,100	Truck	Diesel
Ford	F 350	2019	2029	\$133,100	Truck	Diesel

*Previously replaced but kept in the fleet for other uses

These vehicles will be replaced as needed. Figure 78 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 CIP period. Non-revenue vehicles are expected to be replaced in FY 2023, 2024, 2025, 2028, 2029. The total cost for non-revenue vehicle replacements will be \$1,247,283.

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 78 Non-Revenue Vehicle Procurement Program for SRTP Period

Expenditures	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
2015 Dodge Ram	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000
2018 Ford Fusion Hybrid	\$0	\$0	\$0	\$0	\$0	\$0	\$88,500	\$0	\$0	\$0	\$88,500
2018 Ford Fusion Hybrid	\$0	\$0	\$0	\$0	\$0	\$0	\$88,500	\$0	\$0	\$0	\$88,500
2018 Ford Fusion Hybrid	\$0	\$0	\$0	\$0	\$0	\$0	\$88,500	\$0	\$0	\$0	\$88,500
2019 Transit 150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,750	\$0	\$0	\$90,750
2019 Transit 150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,750	\$0	\$0	\$90,750
2019 Transit Connect	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,750	\$0	\$0	\$90,750
2019 Transit Connect	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,750	\$0	\$0	\$90,750
2019 Ford 550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$133,100	\$0	\$0	\$133,100
2019 Ford 350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$133,100	\$0	\$0	\$133,100
2003 Ford F 550	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000
2008 3500 HD	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000
Additional vehicle for increase service	\$0	\$0	\$0	\$82,583	\$0	\$0	\$0	\$0	\$0	\$0	\$82,583
2008 Town and Country	\$0	\$0	\$0	\$35,000	\$0	\$0	\$0	\$0	\$0	\$0	\$35,000
2005 Prius Hybrid (6420)	\$0	\$0	\$35,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$35,000
Total Vehicle Expenses	\$0	\$50,000	\$85,000	\$217,583	\$0	\$0	\$265,500	\$629,200	\$0	\$0	\$1,247,283
# of vehicles	0	1	2	3	0	0	3	6	0	0	15

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Expenditures	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
TDA Article 4.0	\$0	\$50,000	\$85,000	\$217,583	\$0	\$0	\$265,500	\$629,200	\$0	\$0	\$1,247,283
Funding Not Secured	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Revenues	\$0	\$50,000	\$85,000	\$217,583	\$0	\$0	\$265,500	\$629,200	\$0	\$0	\$1,247,283

FACILITIES & NON-VEHICLES

Figure 79 shows facility costs over the CIP period. Maintenance facility expenses are expected to be most significant in FY 2025. Funding sources are expected to be limited to PTMISEA, TDA Article 4.0 and FTA. Maintenance facility costs include any equipment, and tree maintenance at owned facilities.

Other miscellaneous categories not categorized as revenue vehicles, non-revenue vehicles, or maintenance are shown in Figure 80 and Figure 81 on the following pages.

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 79 Facility Costs for SRTP Period

Facility	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
Administration, Operations	\$100,000	\$375,000	\$100,000	\$355,000	\$100,000	\$100,000	\$100,000	\$100,000	\$279,200	\$100,000	\$1,709,200
Maintenance Facility	\$141,900	\$235,500	\$237,400	\$65,000	\$5,014,400	\$8,000	\$19,400	\$23,000	\$9,400	\$0	\$5,754,000
Transit Center	\$0	\$570,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$570,000
Atlantis	\$1,000,000	\$33,185,000	\$17,920,863	\$6,000	\$0	\$5,000	\$6,000	\$0	\$5,000	\$6,000	\$52,133,863
Total Facility	\$1,241,900	\$34,365,500	\$18,258,263	\$426,000	\$5,114,400	\$113,000	\$125,400	\$123,000	\$293,600	\$106,000	\$60,167,063

Revenues	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
FTA	\$0	\$440,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$440,000
PTMISEA	\$0	\$94,102	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$94,102
Bridge Tolls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TDA Article 4.0	\$541,900	\$3,309,398	\$4,367,973	\$426,000	\$5,114,400	\$113,000	\$125,400	\$123,000	\$293,600	\$106,000	\$14,520,671
Other local funding	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Funding Not Secured	\$700,000	\$30,522,000	\$13,890,290	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,112,290
Total Capital Revenues	\$1,241,900	\$34,365,500	\$18,258,263	\$426,000	\$5,114,400	\$113,000	\$125,400	\$123,000	\$293,600	\$106,000	\$60,167,063

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

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 80 Miscellaneous Capital Improvement Program for SRTP Period

Facilities Needs	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
Miscellaneous Facility/Office Equipment	\$6,000	\$3,000	\$10,000	\$5,000	\$6,000	\$3,000	\$10,000	\$5,000	\$6,000	\$3,000	\$57,000
Other Facility Needs	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$100,000
Mobility Hubs (2)	\$0	\$1,550,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,550,000
SAV Mobility Hubs	\$0	\$1,275,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,275,000
Traffic Signal Communications (3)	\$0	\$225,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$225,000
Bike/Scooter Program	\$0	\$0	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250,000
Computers	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	\$19,572	\$20,159	\$177,117
Servers, Server Software	\$75,000	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$105,000
Windows and Office Upgrade	\$0	\$0	\$10,000	\$0	\$0	\$0	\$0	\$12,000	\$0	\$0	\$22,000
Server Operating System Upgrade	\$15,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000
Exchange Server Migration	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$30,000
VM Host upgrade	\$0	\$40,000	\$0	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0	\$90,000
SAN Replacement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76,000	\$76,000
Atlantis Network upgrade	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
Switch, router, network upgrades	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000
SQL Software Upgrade	\$0	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000
Secure facility access	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000
Shelter upgrades (HBP)	\$0	\$0	\$0	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$200,000
SAV Street improvements	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bus Stop Improvements	\$425,000	\$2,000,000	\$600,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$3,725,000
Total Facility Needs	\$546,450	\$5,318,914	\$1,046,391	\$131,883	\$333,389	\$130,911	\$138,448	\$226,002	\$135,572	\$209,159	\$8,217,117

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Vehicle Needs	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
Trapeze Upgrade	\$195,316	\$1,205,845	\$216,018	\$229,141	\$0	\$0	\$0	\$0	\$0	\$0	\$1,846,320
Total Vehicle Needs	\$195,316	\$1,205,845	\$216,018	\$229,141	\$0	\$0	\$0	\$0	\$0	\$0	\$1,846,320

Total Miscellaneous Needs	\$741,766	\$6,524,759	\$1,262,409	\$361,024	\$333,389	\$130,911	\$138,448	\$226,002	\$135,572	\$209,159	\$10,063,437
----------------------------------	------------------	--------------------	--------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	---------------------

Revenues	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
FTA	\$0	\$4,300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,300,000
Other Local Funds	\$0	\$1,562,845	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,062,845
RM2	\$0	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250,000
TDA Article 4.0	\$741,766	\$411,914	\$762,409	\$361,024	\$333,389	\$130,911	\$138,448	\$226,002	\$135,572	\$209,159	\$3,450,592
Funding Not Secured	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Revenues	\$741,766	\$6,524,759	\$1,262,409	\$361,024	\$333,389	\$130,911	\$138,448	\$226,002	\$135,572	\$209,159	\$10,063,437

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Figure 81 Major Components Rehab Plan for SRTP Period

Engines	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
2009 Gillig BRT Coaches Engine Repower per CARB	\$157,590	\$157,590	\$162,318	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$477,498
Battery Refresh (2009 40' Fleet [8] done in conjunction with above repower)	\$185,400	\$190,962	\$196,691	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$573,053
2016 Mid-life rebuild	\$78,795	\$81,159	\$83,594	\$86,101	\$88,684	\$91,345	\$94,085	\$96,908	\$0	\$0	\$700,672
2017 Mid-life rebuild	\$0	\$81,159	\$83,594	\$86,101	\$88,684	\$91,345	\$94,085	\$96,908	\$99,815	\$0	\$721,692
2022 Mid-Life rebuild	\$0	\$0	\$0	\$0	\$0	\$0	\$61,494	\$63,339	\$65,239	\$67,196	\$257,267
Total Engines Expenses	\$421,785	\$510,870	\$526,196	\$172,203	\$177,369	\$182,690	\$249,664	\$257,154	\$165,054	\$67,196	\$2,730,181

Other Major Components	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
Transmissions - Allison	\$92,700	\$95,481	\$98,345	\$101,296	\$104,335	\$107,465	\$110,689	\$114,009	\$117,430	\$120,952	\$1,062,702
Quantity	2	2	2	2	2	2	2	2	2	2	20
Transmissions - BAE	\$51,500	\$53,045	\$54,636	\$56,275	\$57,964	\$59,703	\$61,494	\$63,339	\$65,239	\$67,196	\$590,390
Quantity	2	2	2	2	2	2	2	2	2	2	20
Batteries for Hybrids - Allison	\$92,700	\$95,481	\$98,345	\$101,296	\$104,335	\$107,465	\$110,689	\$114,009	\$117,430	\$120,952	\$1,062,702
Quantity	2	2	2	2	2	2	2	2	2	2	20
Batteries for Hybrids - BAE	\$164,800	\$169,744	\$174,836	\$180,081	\$185,484	\$191,048	\$196,780	\$202,683	\$208,764	\$215,027	\$1,889,247

SHORT RANGE TRANSIT PLAN FY 2022 - 2027

Livermore Amador Valley Transportation Authority

Other Major Components	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
Quantity	2	2	2	2	2	2	2	2	2	2	20
Engine, transmission for Service Vehicles - Cars	\$16,480	\$16,974	\$17,484	\$18,008	\$18,548	\$19,105	\$19,678	\$20,268	\$20,876	\$21,503	\$188,925
Quantity	2	2	2	2	2	2	2	2	2	2	20
Engine, transmission for Service Vehicles - Trucks	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593	\$11,941	\$12,299	\$12,668	\$13,048	\$13,439	\$118,078
Quantity	1	1	1	1	1	1	1	1	1	1	10
Total Other Expenses	\$428,480	\$441,334	\$454,573	\$468,212	\$482,258	\$496,726	\$511,628	\$526,976	\$542,786	\$559,069	\$4,912,043
Total Major Components	\$850,265	\$952,204	\$980,770	\$640,415	\$659,627	\$679,416	\$761,292	\$784,131	\$707,839	\$626,265	\$7,642,224

Revenues	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	10 Year Total
FTA	\$206,000	\$212,180	\$218,545	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$636,725
SGR	\$51,500	\$53,045	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$104,545
Bridge Tolls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TDA Article 4.0	\$592,765	\$686,979	\$762,225	\$640,415	\$659,627	\$679,416	\$761,292	\$784,131	\$707,839	\$626,265	\$6,900,954
Funding Not Secured	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Revenues	\$850,265	\$952,204	\$980,770	\$640,415	\$659,627	\$679,416	\$761,292	\$784,131	\$707,839	\$626,265	\$7,642,224

RESOLUTION 22-2022

**A RESOLUTION OF THE LIVERMORE AMADOR VALLEY TRANSIT
AUTHORITY ADOPTING THE FY 2022-2027 SHORT RANGE TRANSIT PLAN**

WHEREAS, the Metropolitan Transportation Commission (MTC) requires transit operators in the nine-county region including LAVTA to complete a short range transit plan (SRTP) in compliance with MTC guidelines and financial projections; and

WHEREAS, LAVTA staff and our consultant Nelson\Nygaard have completed a short range transit plan; and

WHEREAS, the LAVTA Board must approve the plan before the plan can be finalized and provided to MTC.

NOW, THEREFORE, BE IT RESOLVED by the Board of the Livermore Amador Valley Transit Authority that the FY 2022- 2027 LAVTA SRTP is adopted and may be delivered in its final format to MTC.

PASSED AND ADOPTED this 6th day of June 2022.

Karla Brown, Chair

ATTEST:

Tamara Edwards, Interim Executive
Director

Approved as to form:

Michael Conneran, Legal Counsel