



Roseville Short Range Transit Plan 2018-2025 FINAL

Prepared for the



PLACER COUNTY
TRANSPORTATION
PLANNING AGENCY

**Placer County Transportation
Planning Agency**



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Prepared for the

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August 10, 2018

Executive Summary

2018-2025 Roseville Transit Short Range Transit Plan

Prepared by LSC Transportation Consultants, Inc.

This document presents a seven-year Short-Range Transit Plan (SRTP) developed for the City of Roseville’s transit program. An SRTP is intended to provide a detailed business plan to guide improvements to the transit organization. An SRTP is also important to state and Federal funding partners so they can ensure that funds for improvements are consistent with a comprehensive overall strategy that has been developed through a public process. It includes a review of demographics and transit needs, a series of surveys and ridership counts conducted for all Roseville Transit services, a review of the effectiveness and efficiency of existing services, a review of similar systems, analysis of a wide range of options, and the results of public input processes. The resulting SRTP provides operational, capital and institutional plans, including an implementation plan. This SRTP plan has been prepared jointly with the development of parallel SRTPs for Placer County Transit, Auburn Transit and the Western Placer Consolidated Transit Service Agency.

SURVEYS AND DATA COLLECTION

This SRTP study included surveys of all routes and runs, which yielded a total of 654 completed surveys, detailing passenger ridership characteristics, trip patterns, and opinions. Data was also collected on all Roseville Transit local fixed routes and commuter service runs, including boarding data and on-time performance data.

EXISTING DEMOGRAPHICS

The population of Roseville, per the 2015 US Census estimates is 126,327. Persons living in **households without vehicles** total 2,134, or 5 percent of the total population. **Youth** (persons 10 to 17 years of age) total 14,295, or 11 percent of total population. **Elderly** persons over age 60 total 24,910 (20 percent). There are a total of 3,979 persons living in households below the federal **poverty** level (9 percent of total population). Persons who indicate they have a **disability** total 4,830, or 4 percent of total population.

OVERVIEW OF ROSEVILLE TRANSIT

Roseville Transit is a service provided through the City of Roseville, providing fixed route services, general public Dial-A-Ride service and Americans with Disabilities Act paratransit throughout the city, as well as a commuter service to downtown Sacramento and “Game Day Express” service to Sacramento Kings games. Management, marketing and planning are provided by City employees, while service operations and vehicle maintenance is provided by a private contractor. The City Council is the decision making body, with input from the Transportation Committee.

The fixed-route service consists of up to 10 buses at a time operating a total of 11 bus routes on weekdays and 5 on Saturdays. Service is generally provided from 6:00 AM to as late as 10:00 PM

on weekdays and 8:00 AM to 5:00 PM on Saturdays. Ridership in Fiscal Year (FY) 2016/17 was 191,900 boardings per year, which is a 34 percent reduction from the ridership in FY 2008/09. The fixed route service is not currently achieving goals regarding ridership productivity and cost effectiveness. A peer comparison indicates that ridership per vehicle-hour is 24 percent lower than the peer average while costs per vehicle-hour are 13 percent higher. The annual average ridership per capita is higher than two of the peer systems, but lower than the other three.

The Dial-A-Ride program provides curb-to-curb public transit and ADA paratransit service throughout the City. Service encompasses all of the hours of local fixed route service. Up to five vehicles are in operation at peak times. Ridership in FY 2016/17 was 28,408 passengers, reflecting a 20 percent reduction from FY 2008/09. Ridership productivity and cost effectiveness goals are not currently being met. While costs per vehicle-hour are 17 percent above the peer average, ridership per vehicle-hour is 14 percent above the peer average and the cost per passenger-trip is 5 percent below the peer average.

The Commuter Service consists of ten AM runs to downtown Sacramento and ten PM runs returning to Roseville. Three runs in each peak period also offer “reverse commuter” service in the opposite direction. FY 2016/17 ridership was 139,084, which was a 30 percent increase over the FY 2008/09 boardings. While the cost per vehicle-hour on the Commuter Service does not attain the goal, the ridership productivity and the cost effectiveness achieves goals. The commuter service costs per vehicle-hour are 21 percent below the peer average, while the passenger-trips per vehicle-hour are 23 percent higher and the cost per passenger is 43 percent lower.

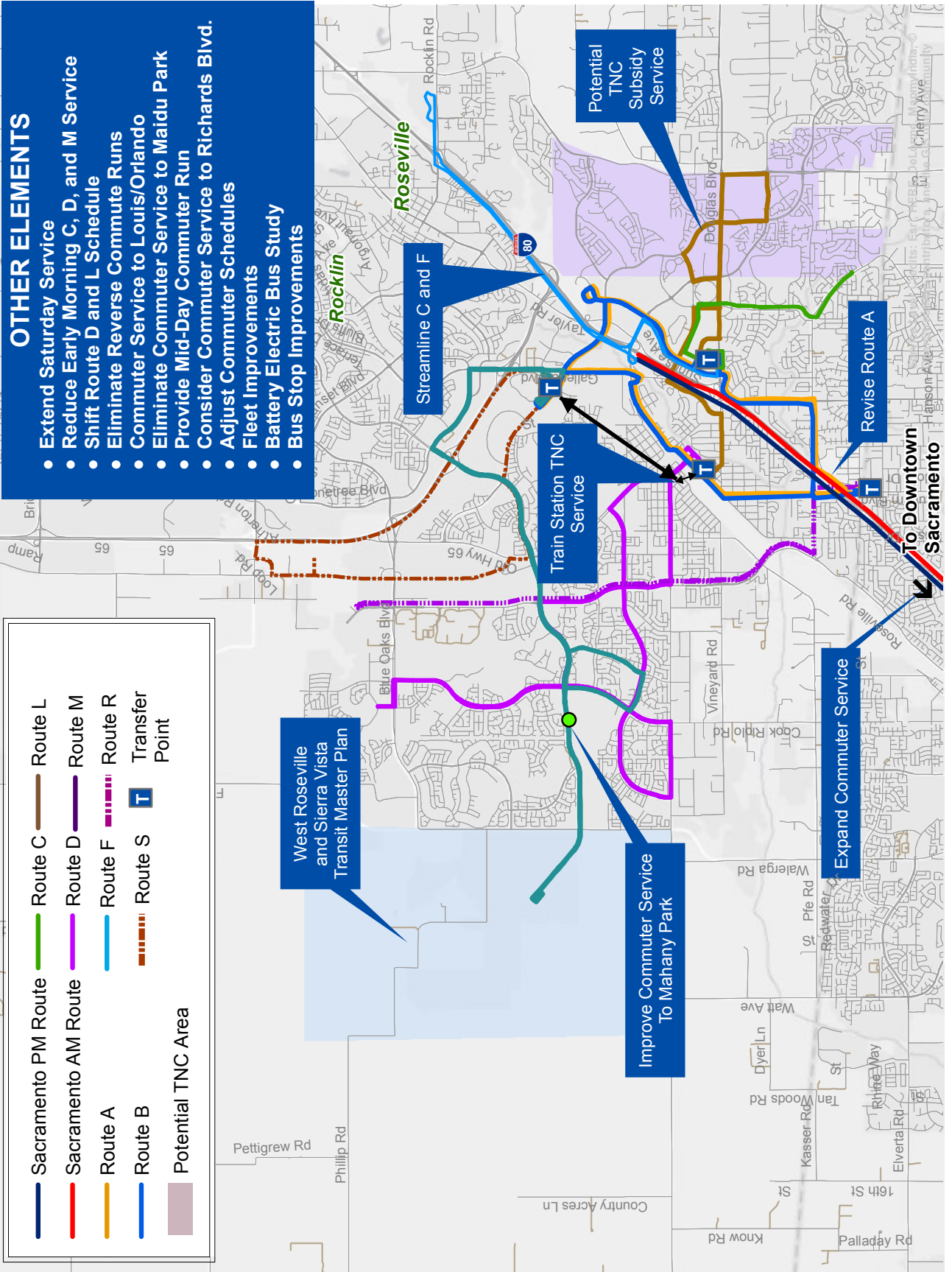
SHORT RANGE TRANSIT PLAN ELEMENTS

Service Plan

The service plan is developed in particular to help attain the first goal of the transit program -- "*Sustainably operate an efficient and effective system through maximizing service and minimizing cost impacts*". In particular, it addresses the objectives under this goal. It *minimizes operating cost* where appropriate by eliminating or modifying unproductive services. In addition, it *increases transit passengers and revenue* by providing new services where ridership demand can attain performance standards. The plan will also help attain the second goal – *Provide safe, reliable and high quality transportation* – specifically by reducing wait times between buses and improving on-time performance. An extensive analysis of potential service alternatives based on public and staff input identified the following recommended plan elements (see Figure E-1):

- Revise Route C/G/F/E or Replace With Transportation Network Company Service – The provision of a discount for Transportation Network Company (TNC) service in southeast Roseville (along with revisions to Route L and C/G/F/E) should be pursued. If deemed feasible, this strategy should be implemented and could be a demonstration project for larger TNC service in Roseville. If not feasible, Route C/G/F/E should be realigned to an hourly route connecting South Cirby Way with Sierra College (along with a minor realignment of Route L).

Figure E-1
Roseville Transit Short Range Transit Plan



- OTHER ELEMENTS**
- Extend Saturday Service
 - Reduce Early Morning C, D, and M Service
 - Shift Route D and L Schedule
 - Eliminate Reverse Commute Runs
 - Commuter Service to Louis/Orlando
 - Eliminate Commuter Service to Maidu Park
 - Provide Mid-Day Commuter Run
 - Consider Commuter Service to Richards Blvd.
 - Adjust Commuter Schedules
 - Fleet Improvements
 - Battery Electric Bus Study
 - Bus Stop Improvements

- Extend the Saturday Span Of Service Until 6 PM – One additional hour of service should be added to Routes A, B, D, L and M.
- Reduce Early Morning Weekday Service – The initial runs on Routes C, D, G and M should be eliminated, starting service around 7:30 AM.
- Shift Route D and Route L 3 to 5 Minutes Earlier – This will improve connections with Route A and B at the Civic Center transfer point.
- Shift Route A onto Orlando Way between Cirby/Orlando and the Louis/Orlando Transit Center – This will improve on-time performance with only a minor impact on existing passengers boarding on Cirby Way. It will require changes to the median on Orlando near the Transit Center.
- Provide TNC Subsidy for Trips Between the Roseville Train Station and Nearby Transit Hubs – This is the most effective means of connecting train passengers to local transit.
- Expand Commuter Service by Two AM and Two PM Runs per Day – This will address current capacity constraints, increase ridership and allow for a broader range of service times.
- Eliminate the Reverse Commute Service – This has proven very ineffective in generating ridership, with no real potential for being cost effective.
- Increase PM Service to Mahany Park – By extending existing routes, service can be substantially improved at low additional cost.
- Consolidate Commuter Stops in Southeast Roseville – This will better serve more riders, reduce travel times and reduce costs.
- Serve New Roseville Stops as Demand Warrants – No additional commuter stops are currently needed in Roseville, but future demand will warrant new stops in the future.
- Provide a Mid-Day Commuter Run – A single mid-day round trip would improve the overall usefulness of the commuter service at a modest cost, and would be popular with the ridership.
- Investigate Service to the Richards Boulevard Area North of Downtown – This growing employment center could be served at a small increase in cost and impact on existing riders, but will require a detailed evaluation of potential demand. Service to other employment centers in Sacramento would be costly and ineffective.
- Improvements to On-Time Performance – An additional 10 minute should be added to schedules to more realistically reflect actual travel times. Buses should be reallocated to avoid

the impacts of delays on some runs on later runs. Travel times on the Capital City Freeway should be monitored to identify if routes should be shifted to I-5.

Overall, this service plan will increase ridership by 44,700 annual boardings per year, or 12.5 percent. A 3 percent increase (5,700 per year) is forecast for the local fixed routes and a 28 percent increase (39,000 per year) for the commuter service.

Capital Plan

- Bus Purchases – 3 commuter buses will be needed for service expansion. A total of 11 commuter buses, 9 fixed route buses and 11 DAR vehicles will also be needed by 2026 for replacements.
- Regional Battery Electric Bus Readiness Study – Roseville should participate in a study regarding Battery Electric Bus vehicle and charging options.
- Passenger Facility Improvements – New shelter locations are identified, along with improvements to the Sierra Gardens transfer center and the Taylor Road park-and-ride.

Financial Plan

The overall impact of this plan will be to increase operating costs by \$79,400 per year (or 1.4 percent). The overall impact of the plan on the need for operating subsidy funding is a decrease of \$93,200 (or 2.3 percent). The **local fixed routes** operating costs will be reduced overall by \$31,700 per year (0.9 percent), resulting in a \$43,600 overall decrease in operating subsidy requirements (1.6 percent). The **commuter service** will have a total increase in operating costs of \$111,100 per year, or 13.3 percent. Operating subsidy requirements will be decreased by \$49,600 (29 percent).

Depending on propulsion technology and other vehicle attributes, the total costs for vehicle purchases over the next seven years will be on the order of \$15 Million to \$18 Million.

Roseville should participate in a Regional Day Pass program with PCT and Auburn Transit, should participate in an investigation of a Sierra College Student Pass program, and should continue to promote use of the Connect Card.

Institutional/Marketing Plan

- Minor improvements to published schedules.
- Increased social media-based target marketing
- Joint Roseville/PCT commuter service marketing
- Prepare focused transit master plan for West Roseville and Sierra Vista plan areas, as specific land use and street network plans are defined

Summary

Overall, this SRTP increases ridership 12.5 percent, decreases operating subsidy requirements by 2.3 percent, addresses warranted capital improvements, and helps the Roseville Transit program to achieve its mission statement and goals.

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The City of Roseville Short-Range Transit Plan (SRTP) was prepared to assess transit and related transportation issues in Roseville and the surrounding region and provide a “road map” for improvements to the public transit program over the upcoming seven years. The intent of this study is to evaluate the specific needs for transit services, as well as to develop plans for improvements and service revisions. This was accomplished through the review of existing demographic and transit conditions and evaluation of operations, as well as through public outreach via onboard surveys, online community surveys, and community-based meetings. A wide range of alternatives are evaluated. The ultimate goal of the study is to provide a comprehensive strategy of short-range service, capital, and institutional improvements, with a supporting financial and implementation plan.



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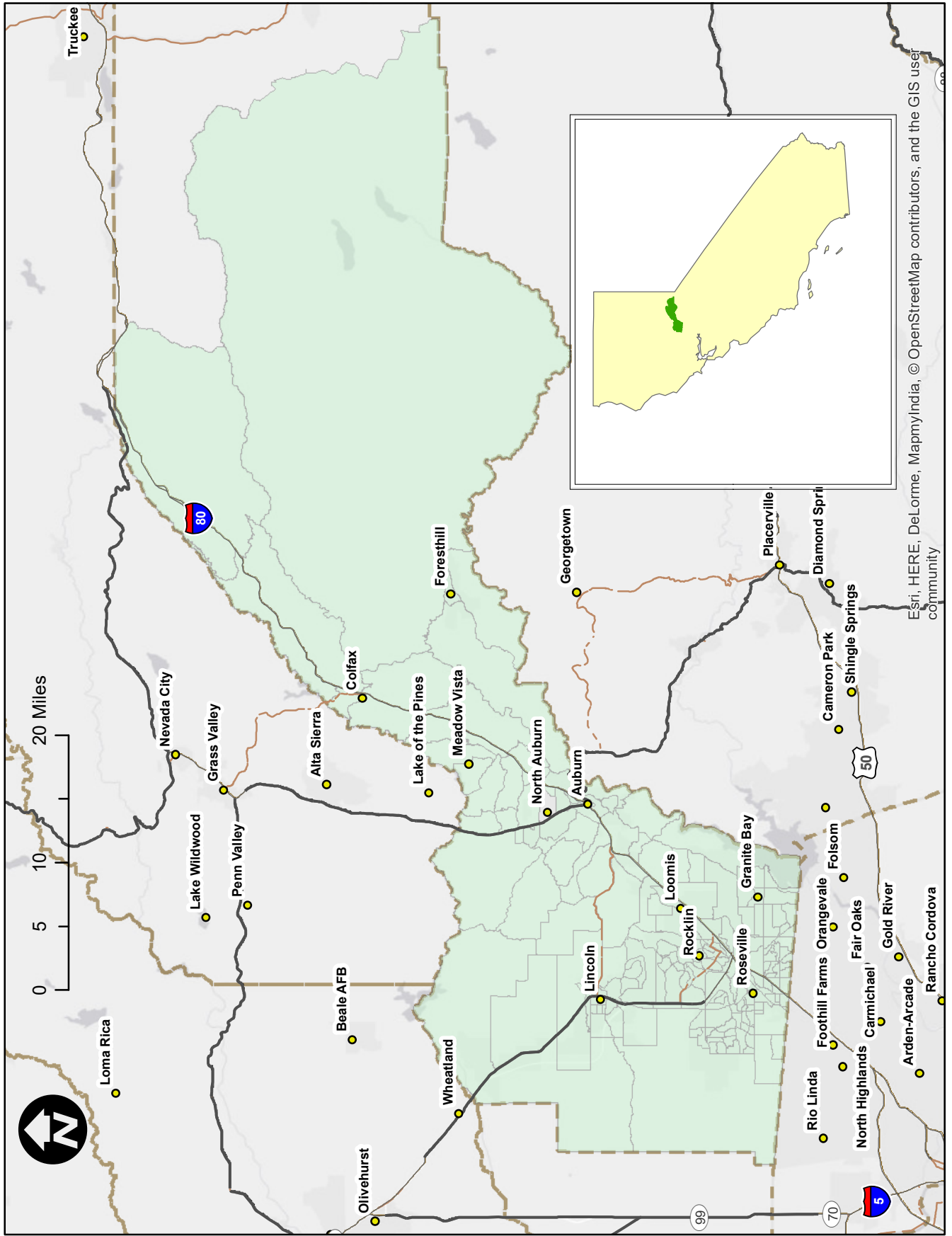
Public transportation is a vital service to many residents of western Placer County. Transit services provide mobility to resident, including access to important medical, recreational, social, educational and economic services and opportunities. In addition to being important to the quality of life of residents in the region, public transit services assist in the functioning of educational programs, public and private employers, and social service programs throughout the region.

SETTING

The Placer County Transportation Planning Agency (PCTPA) is responsible for allocation of transportation funds to public transit operators outside of the Lake Tahoe Basin or Western Placer County. Figure 1 displays a map of the total study area. Four separate transit operators fall under the jurisdiction of the PCTPA: Auburn Transit, Placer County Transit (PCT), Roseville Transit and the Western Placer Consolidated Transportation Services Agency (WPCTSA):

- The Public Works Department of the City of Auburn provides two deviated fixed routes generally within the incorporated areas of Auburn, Monday through Saturday.
- Placer County Transit (PCT) is the regional transit operator for Western Placer County serving communities not served by the two municipal transit operators. PCT is managed by the Placer County Department of Public Works and provides a variety of services throughout the community such as commuter runs to Sacramento, Dial-A-Ride and fixed routes between communities. Under agreements with the City of Rocklin and the City of Lincoln, City of Loomis and City of Colfax, Placer County Transit operates service in these cities.

**Figure 1
Western Placer County Site and Location**



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

- Roseville Transit provides 11 local fixed routes, 10 commuter routes to Sacramento, with connections to Placer County Transit and Sacramento Regional Transit (SacRT) transit services. Roseville Transit also provides demand response service available to the general public within the city limits of Roseville, along with origin-to-destination paratransit service. In 2017 Roseville Transit also began operation of the Game Day Express providing service between Roseville and the Golden One Arena for Kings basketball home games. On behalf of and with support from the Western Placer Consolidated Transportation Services Agency (WPCTSA) the City of Roseville operates the following regional programs: the South Placer Transit Information Center, Transit Ambassador Program, and mobility program. Roseville Transit is managed by the City of Roseville Public Works Department, using a contractor to provide management and operations of Roseville Transit and the South Placer Transit Information Center.

- The WPCTSA presently sponsors several programs that provide transportation or facilitate the use of public transit services. Services are administered by various agencies and draw upon a variety of funding sources (public and private) including funds allocated through Article 4.5 of the Transportation Development Act (TDA), community transit services. WPCTSA programs such as Non-Emergency Medical Transportation (Health Express) and volunteer driver program (MyRides) are designed to provide transportation for Western Placer County residents only if a trip cannot be served on regular public transit services. WPCTSA programs are administered by PCTPA staff and the PCTPA Board Members serve as WPCTSA Board Members. Overall, there are many individual mobility needs that are not easily met, particularly demand-responsive services for persons unable to make use of fixed-route services between Placer County jurisdictions or to/from regional destinations in nearby Sacramento County. This is particularly important to seniors and persons with disabilities that would find transfers between services to be a difficult if not insurmountable barrier to completing their trip. The WPCTSA is key in addressing these needs.

This document represents the Short Range Transit Plan for Roseville Transit for 2018 to 2025. Transit plans for the other Western Placer County transit operators have been prepared under separate cover.

PUBLIC/STAKEHOLDER INPUT

Public/stakeholder outreach for all the Western Placer SRTP updates was conducted throughout the study with the assistance of AIM Consulting. The public and stakeholders were provided multiple opportunities to comments prior to and after the analysis of a large range of transit service, capital, institutional and financial alternatives. The Public Outreach Plan for the project is included as Appendix A. In summary, outreach included:

- On-line survey distributed concurrently with the Unmet Transit Needs Process
- On-board bus surveys

- Virtual Community Workshop (on-line interactive survey) available prior to the development of alternatives
- April Public Workshop as part of PCTPA Board meeting to present potential alternatives
- April presentation at Roseville Transportation Commission to present potential alternatives
- May Public Workshop as part of PCTPA Board meeting to present alternatives analysis
- June Public Workshop as part of PCTPA Board meeting to present Draft Plans

In addition to public and stakeholder outreach, the Study Team conducted multiple conference calls and face to face meetings PCTPA and transit operator staff to refine alternatives and draft plans.

OVERVIEW

This plan reflects the realities of the role of public transit in Roseville:

- The community is relatively affluent, with high auto ownership rates. However, there are also many residents that face mobility challenges due to disabilities, age or the economics of auto ownership. There are also others that can afford autos, but can benefit from the cost savings provided by public transit. It is important that mobility be provided to those who can benefit from transit services.
- Much of Roseville has developed at a relatively low residential population density. While there is a vibrant historical downtown, the community is also served by a dispersed pattern of commercial, institutional and educational centers. The overall pattern is inherently difficult for public transit to serve at a high level of productivity or cost-effectiveness.
- Roseville is part of a broader and continuous developed area. Many residents, visitors and employees in Roseville travel beyond the city boundaries, particularly to the east south and southwest. Roseville’s transit services need to function as part of a regional network, either through direct services extending outside the city where effective or by providing convenient connections to other services.
- Like any public transit provider, the City of Roseville faces real limitations on the funding available for transit – particularly the ongoing funding needed for operations (driver wages, maintenance, fuel, etc.). Particularly for local fixed route and Dial-A-Ride services, transit ridership fares can only cover a small portion of the necessary operating costs. Public transit planning is therefore in large part a matter of allocating a finite amount of annual subsidy funding that can meet the goals of the transit program.

This plan has been developed to help attain the overall Mission Statement for Roseville Transit:
“We provide and continually enhance reliable, convenient and safe transportation options”

In particular, the SRTP will help attain the first goal of the Roseville Transit program, to "*Sustainably operate an efficient and effective system through maximizing service and minimizing cost impacts*". It addresses the objectives under this goal: (1) it *minimizes operating cost* where appropriate by eliminating or modifying unproductive services and (2) it *increases transit passengers and revenue* by providing new services where ridership demand can attain performance standards. The plan will also help attain the second goal – *Provide safe, reliable and high quality transportation* – specifically by reducing wait times between buses and improving on-time performance.

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LITERATURE REVIEW



To meet the goals of the study, it is essential that the regulatory and institutional context of the study effort be fully documented. This section reviews pertinent documents and previous transit planning studies for the transit operators.

Roseville Transit Planning Studies

2011 Roseville Short Range Transit Plan

The prior Short Range Transit Plan for Roseville Transit was completed in 2011 and accepted by the PCTPA Board. The plan identified two Alternative Plan Scenarios:

- Alternative A – This scenario included recommendations to optimize transit services within existing financial constraints.
- Alternative B – This scenario identified operational and capital improvements to provide enhanced transit services if allowed by increased funding opportunities.

Alternative A represented the financially-constrained scenario recommending the implementation of minor operational and administrative enhancements to maximize the effectiveness of service within existing resources and included the following recommendations:

- Adjust wait/transfer times.
- Extend hours of operation.
- Modify operating schedules.
- Enhance connections with Placer County Transit
- Introduce “new route” policy.
- Conduct Park & Ride Feasibility study.
- Conduct Transfer Point Locational study.
- Conduct Service Optimization study.
- Conduct annual Community Survey.
- Enhance Route G connection to PCT Taylor Road Shuttle extension.
- Increase farebox recovery ratio standard.

Alternative B incorporated the recommendations made in Alternative A plus additional capital/infrastructure and schedule improvements:

- Establish new stops along Route S.

- Increase off-peak hour frequencies on select routes.
- Reduce Route G and I runs during the late afternoon.
- Assume operation of Placer County Transit Dial-A-Ride services in Granite Bay.
- Expand service to new and existing developments.
- Consider Extending Service South Along the I-80 Corridor
- Include Louis Lane/Orlando Blvd stop as a West Roseville Shuttle stop.
- Modify Route M.
- Extend Route R.
- Introduce Western Roseville route.
- Enhance bus stop amenities and transfer points.

Roseville Transit Triennial Performance Audit FY 2012/13 to FY 2014/15

The most recent Triennial Performance Audit for Roseville Transit covered the years from Fiscal Year (FY) 2012-13 to FY 2014-15 and had the following recommendations:

- Recommendation 1: Ensure the timely completion and submittal of the annual State Controller Transit Operators Financial Transactions Reports.
- Recommendation 2: Ensure that Full-time Equivalent Employee hours are calculated properly.
- Recommendation 3 – Track and separate riders by passenger types for Dial-A-Ride (DAR) reports to determine if more riders could be encouraged to ride fixed route.

The audit also noted that operating cost per passenger increased by 13.5 percent during the audit period, with the majority of the increase occurring on the DAR. Similarly, passenger-trips per vehicle service hour increased significantly on commuter services, remained relatively flat on the local fixed routes and decreased on DAR.

Placer County Transit Planning Studies

2011 Placer County Transit Plan

The prior Short Range Transit Plan for Placer County Transit was completed in 2011 but was not adopted by the Placer County Board of Supervisors. The plan identified two Alternative Plan Scenarios: a status quo scenario with minor improvements (Alternative A) and scenario including additional operational and capital improvements to the existing transit network (Alternative B).

Alternative A included minor improvements to address community input:

- Develop a no-show and trip cancellation policy for dial-a-ride.
- Develop a College Transit Pass Program.

- Raise farebox recovery standard from 10 percent to 13.3 percent.
- Reduce number of time points published in transit schedule.
- Extend service hours on the Lincoln/Sierra College route.
- Seek grant funding to support service enhancements.

Alternative B added the following capital and schedule improvements to Alternative A:

- Convert Highway 49 Loop to on-call service.
- Reduce number of vehicles operating on Highway 49.
- Launch a “Foresthill deviated fixed-route” pilot program.
- Convert Rocklin DAR into a deviated fixed-route.
- Introduce commuter bus service along Highway 65 in Lincoln.
- Increase frequency on Auburn Light Rail service.
- Extend service hours on the Lincoln/Sierra College service.
- Extend Taylor Road Shuttle service to Sierra Gardens.
- Develop a route to/within Meadow Vista.
- Enhance Taylor Road Shuttle service by incorporating two round trips into the baseline schedule and formalizing the daily schedule.
- Develop a Highway 193 service

2011 Lincoln Short Range Transit Plan

Prior to 2015, the City of Lincoln operated transit service in the City. Therefore a separate SRTP was developed for Lincoln Transit, most recently in 2011. Recommendations were divided into a Reallocation and Growth Scenario. The Reallocation Scenario would add a fixed route with one route focusing on school trips and the other as a downtown circulator. Dial-A-Ride service was also recommended. The Growth Scenario went further to recommend two additional fixed routes along with an optional tripper to the Roseville Galleria.

Placer County Rural Transit Study, 2016

In 2016 PCTPA conducted a study regarding potential improvements in public transit services in rural western Placer County. The study reviewed the existing transit services, the needs for transit services in currently unserved and underserved rural areas, and assessed the feasibility of various strategies to expand services. One component of this study was to define performance standards specific to rural transit services and use these standards as performance measurement for alternatives.

The study recommended the following strategies to improving mobility for rural Placer County residents:

- Combined Sheridan/SR 193 Corridor Lifeline Service 1 Day per Week as a three year demonstration program with two round trips per day, one day per week.

- Foresthill lifeline service one day per week as a three year demonstration program.
- Shift the hours of the Alta/Colfax route to allow persons with a traditional work schedule to ride public transit to Auburn as well as provide rural residents requiring services in Auburn with a transit round trip option with a shorter layover time. The strategy would also add one mid-day round trip.
- Roseville Transit operates the Granite Bay DAR
- Conduct a more detailed service review of public transit in the greater Auburn area as there is service overlap between Auburn Transit and PCT.
- Expand PCT Vanpool Budget to Meet Rural Commuter Needs

These strategies as well as other alternatives considered will be revisited as part of this SRTP update.

Rocklin Community Transit Study 2014

PCTPA conducted a study regarding potential improvements in public transit services in Rocklin, California. Rocklin has grown in recent years and prior public input has indicated a need to serve more residential areas and some new commercial centers. The ultimate objective of this study was to determine if there was a need to modify existing transit services or to establish new routes or services to better serve Rocklin residents. Additionally, the most recent Short Range Transit Plan for Placer County recommended a more detailed study of transit needs in the City of Rocklin and therefore did not identify specific recommendations for new service.

The study reviewed a variety of ways to serve the large residential neighborhoods not currently served by the PCT Lincoln-Sierra College Route but found them to not be cost effective. The study recommended realigning the Lincoln – Sierra College Route along Granite Drive to serve the Rocklin Crossings and Commons shopping centers. In addition, it recommended that the Taylor Road Shuttle be revised to serve the Rocklin Crossings and Rocklin Commons shopping centers during the layover at Sierra College.

Transit Master Plan for South Placer County (2007)

In light of anticipated growth in the southern portion of Placer County, PCTPA conducted a transit master planning process in 2007. The principal objectives of the plan was to examine all aspects of transit service delivery and prepare a consistent, coordinated vision for Placer County transit operators over the long term (2030 – 2040). By the horizon year, the plan assumes that annual vehicle miles and hours for South Placer County transit operators will increase by 190 percent.

The plan offered the following service recommendations by transit mode:

Local Fixed Route

- Provide a base backbone system with 30 or 60 minute headways.
- Where justified, provide greater frequencies during peak periods (15 minute headways).
- Provide a limited number of “express” routes to link specific pairs or groups of activity centers with limited stops in between.

Regional Fixed Route

- Identify and “brand” specific routes as providing longer-distance trips between urban or community zones such as Lincoln-Roseville, Auburn-Roseville, Placer Vineyards-Roseville, and Citrus Heights-Roseville.
- Make limited “lifeline” service a priority: Foresthill, Meadow Vista, Sheridan, and Bickford Ranch.

Commuter Bus

- Continue with all existing routes. Look for a significant increase in Placer County Transit PCE service and Roseville Transit commuter services. Optimize both operations as required.
- Add routes as new development occurs at origins and destinations.
- Add or remove service in concert with changes in Capitol Corridor rail service.
- Consider adding limited commuter service to the Bickford Ranch area.

Bus Rapid Transit (BRT)

- Continue close coordination with major development projects and Sacramento Regional Transit BRT service planning. In particular, continue a dialog with RT on a Watt Avenue BRT system extension.
- Preserve right-of-way for stations, bypass lanes, transition lanes, and other needs. Continue to work with developers to set aside right-of-way for these needs.
- Implement proposed BRT routes in the following order: BRT-1, BRT-2, and BRT-3 (Refer to BRT Study below).

Paratransit

- Develop an administrative structure to support cross-jurisdictional trips. Address key issues such as fare collection/distribution and cost allocation.
- Consider consolidation of all paratransit under one provider, or with separate providers under one managing/coordinating entity. At a minimum, establish one fare card for all ADA travel.
- Expand the CTSA dial-a-ride voucher program to include non-emergency medical trips.
- Provide a senior discount.

- Identify areas with most intensive growth in senior populations, such as Rocklin. Identify key trip attractors in other jurisdictions such as the Galleria, Wal-Mart, and Kaiser.
- Set up “Ambassador” program for seniors to assist with trip planning (subsequently completed).
- Consider removing dial-a-ride service from the Roseville farebox recovery ratio calculation, especially with respect to ADA services.
- Conduct a paratransit needs study to guide design and provision of services targeted to each user group. Include consideration of developing an “accessibility database.”
- Coordinate near-term actions with ongoing dial-a-ride study results in areas such as service integration, addressing cross-jurisdictional problems, establishing ADA certification.

The plan also includes a variety of institutional recommendations to slowly integrate the different transit operators in South Placer County.

Bus Rapid Transit (BRT) Service Study for South Placer County (2008)

The concept of Bus Rapid Transit (BRT) is to combine the frequency and amenities of light rail with the greater flexibility of a bus in an effort to serve high demand corridors cost effectively. BRT services typically include traffic signal prioritization for buses, enhanced transit stations, off-vehicle fare collection and bus only lanes. PCTPA conducted a study of BRT services for the growing South Placer County region. The study recommends the following BRT routes travelling between Sacramento and Placer County:

- BRT 1 – Watt/I-80 Light Rail Station to future Placer Ranch development along I-80 with a transit center at the Galleria in Roseville and stations at Blue Oaks/I-80 and Blue Oaks and Foothill Blvd.
- BRT 2 – Watt/I-80 Light Rail Station to future Placer Ranch development along Watt Ave with transit centers at the proposed Sierra Vista and West Roseville Town Center and a station at the proposed Placer Vineyards Center
- BRT 3 – From the Sunrise Light Rail Station to Hazel Light Rail Station along Hazel Avenue to Sierra College Blvd and the Taylor Park and Ride

The implementation schedule of full BRT is beyond the SRTP’s 7 year horizon however, the BRT Study recommends implementation of BRT “light” from 2010 to 2025. The “light” concept calls for the purchase and use of new stylized buses with longer travel times, less frequency and limited capital improvements than the full BRT concept.

South Placer Regional Dial-A-Ride Study (2007)

The objective of the study was to provide additional guidance to PCTPA and its transit operators as how to cost-effectively meet the needs of residents requiring DAR services within available

resources. The study made four basic recommendations some of which have been implemented:

- Establish PCTPA leadership to guide the County’s operators towards an integrated, regional demand response program.
- Promote general public demand response policies that improve efficiencies and build capacity in South Placer County.
- Establish a CTSA for South Placer County that promotes specialized transportation options and addresses the needs of residents.
- Develop a coordinated information strategy for demand response services oriented to the information needs of consumers, agency personnel and transit operators in South Placer County.

Unmet Transit Needs Process

Background

California’s Transportation Development Act (TDA) legislates funding for transit purposes primarily, and for non-transit purposes under certain conditions. TDA funds are distributed through the Regional Transportation Planning Agencies (RTPA) (in this case PCTPA). An RTPA must assess its jurisdiction’s unmet transit needs prior to allocating any TDA funds for purposes not directly related to public transit or facilities used exclusively by pedestrians and bicyclists. Each year, PCTPA conducts a citizen participation process to receive public comment concerning transit needs within the RTPA jurisdiction and summarizes the comments into a Draft Unmet Transit Needs Report. The PCTPA Social Services Transportation Advisory Council (SSTAC) and the Technical Advisory Committee (TAC)¹ review the draft report and provide input. With recommendations from the SSTAC, at the end of the process the PCTPA Board makes a finding that:

- (a) There are no unmet transit needs; or
 - (b) There are no unmet transit needs which are reasonable to meet; or
 - (c) There are unmet transit needs, including those that are reasonable to meet.
- (Section 99401.5)

PCTPA has adopted the following definition of an unmet transit need:

An unmet transit need is an expressed or identified need, which is not currently being met through the existing system of public transportation services. Unmet transit needs are also those needs required to comply with the requirements of the Americans with Disabilities Act.

¹ The SSTAC is comprised of citizens that represent a cross-section of transit users, while the TAC is comprised of representatives of various jurisdictions and entities.

PCTPA has adopted the following definition of an unmet transit need which is reasonable to meet. Unmet transit needs may be found to be "reasonable to meet" if all of the following criteria prevail:

1. Service, which if implemented or funded, would result in the responsible service meeting the farebox recovery requirement specified in California Code of Regulations Sections 6633.2 and 6633.5, and Public Utilities Code 99268.2, 99268.3, 99268.4, and 99268.5.
2. Notwithstanding Criterion 1) above, an exemption to the required farebox recovery requirement is available to the claimant for extension of public transportation services, as defined by California Code of Regulations Section 6633.8, and Public Utilities Code 99268.8.
3. Service, which if implemented or funded, would not cause the responsible operator to incur expenditures in excess of the maximum amount of Local Transportation Funds, State Transit Assistance Funds, Federal Transit Administration Funds, and fare revenues and local support, as defined by Sections 6611.2 and 6611.3 of the California Administrative Code, which may be available to the claimant.
4. Community support exists for the public subsidy of transit services designed to address the unmet transit need, including but not limited to, support from community groups, community leaders, and community meetings reflecting a commitment to public transit.
5. The need should be in conformance with the goals included in the Regional Transportation Plan.
6. The need is consistent with the intent of the goals of the adopted Short Range Transit Plan, as amended, for the applicable jurisdiction.

FY 2016/17 Unmet Needs Process

During the FY 2016/17 Unmet Needs Process, PCTPA received 76 comments which pertained to western Placer County. Common topics brought up during the meetings included:

- Later service hours in Lincoln, Roseville, and on Placer County Transit.
- Sunday fixed route service in Lincoln, Roseville, and on Placer County Transit.
- Sunday dial-a-ride service in Lincoln, Rocklin, and on Placer County Transit.
- Challenges with scheduling dial-a-ride trips.

Specific to Roseville Transit, common requests were for:

- Expansion of local route services in West Roseville and to Santucci Justice Center.
- Longer weekday hours of operation.

- Increased service frequency on Routes A, B and R.
- Additional commuter service to Mahany Park and Saugstad Park.
- Later AM commuter runs, and earlier PM commuter runs.

PCTPA determined that there were no new unmet transit needs reasonable to meet for implementation in FY 2017/18. However, several comments warrant further study or monitoring and will be addressed in the alternatives analysis section of the SRTP updates:

- **Later Evening Weekday Service** - Comments pertaining to later evening weekday service has been voiced annually, but fixed route ridership has not reached prerecession levels, has declined on average one percent annually since FY 2011/12.
- **Challenges Scheduling Dial-a-Ride Trips** – Several comments identified challenges with scheduling dial-a-ride trips in Lincoln, Rocklin, and countywide. Passengers are allowed to schedule trips up to 14 days in advanced and are encouraged to allow sufficient time to accomplish their intended activities between drop off and pickup due to the shared ride nature of the service. As a result, passengers may encounter challenges with getting their preferred time slot, but call center operators can offer alternative travel time options. Dial-a-ride trips have increased five percent between FY 2014 and 2015 and trip denials totaled approximately 1.6 percent in FY 2015. Beginning FY 2016, PCT began providing contracted dial-a-ride service in Lincoln and the Health Express reservation process was modified to assign intracity trips to the local dial-a-ride and intercity trips only to Health Express, except for under certain circumstances. Given these changes, PCTPA recommends monitoring dial-a-ride trips, denials, or other potential issues.
- **Short Range Transit Plan Updates** – The Unmet Transit Needs report recommends that the SRTP updates should consider past unmet transit needs comments including but not limited to: later service hours, expanded weekend service, dial-a-ride scheduling and capacity, additional service options to Sacramento on the Health Express, and include a review of federal transit policy regulations and any changes resulting from amendments to the federal Americans with Disabilities Act (September 15, 2010).
- **On-board Passenger Surveys** – The Social Services Transportation Advisory Council recommended that the PCTPA and the Transit Operators Working Group pursue funding to conduct on-board passenger surveys in support of the short range transit plan updates. The surveys could provide valuable insight into the factors that influence passenger use and/or community perception given the downward trend of annual ridership statistics system wide. The surveys could seek data, such as but not limited to: demographics, destinations of choice, frequency of use, challenges with using the service, and the mode of choice (i.e., walk, bike, etc.) for pre and post-trip.

Prior common Unmet Need Meetings comments relevant to this study include:

- The PCT Highway 49 DAR area and Auburn Transit deviated fixed route service area do not encompass many residents who require transportation.
- Easier forms of fare payment, particularly for passes on PCT
- Service along the SR 193 corridor
- Service to the communities of Sheridan and Foresthill
- Commuter routes to the Stockton/Broadway corridor in Sacramento
- More service for Lincoln residents
- Additional Commuter Runs for Roseville Transit and PCT (earlier/later times)
- Additional Health Express service options to Sacramento.

POPULATION



Historical and Projected County-wide Population

Placer County was originally settled during the gold rush years and has become an increasingly attractive place to live as it is situated between employment opportunities in the greater Sacramento region and recreational activities in the Sierra Nevada foothills. As shown in Table 1, Placer County (including the portion east of the Sierra Crest which is not in this study area) has grown at a faster rate than that of California as a whole. From the period of 1970 to 2010, Placer County’s population increased by at least 40 percent every ten years whereas statewide population did not increase more than 26 percent during a ten year period. Going forward, the California Department of Finance predicts that the population of Placer County will grow at a rate of 1.2 to 1.4 percent annually or around 12 – 14 percent every ten years.

Table 1: Historical and Projected Population

Total Placer County

	Historic					Projected		
	1970	1980	1990	2000	2010	2020	2030	2040
Placer County	77,632	117,247	172,796	248,399	348,432	396,669	454,102	507,740
Annual Percent Growth Over Previous Period	--	5.1%	4.7%	4.4%	4.0%	1.4%	1.4%	1.2%
	--	51%	47%	44%	40%	14%	14%	12%
California Population	19,971,068	23,667,836	29,758,213	33,873,086	37,253,956	40,719,999	44,019,846	46,884,801
Annual Percent Growth Over Previous Period	--	1.9%	2.6%	1.4%	1.0%	0.9%	0.8%	0.7%
	--	19%	26%	14%	10%	9%	8%	7%

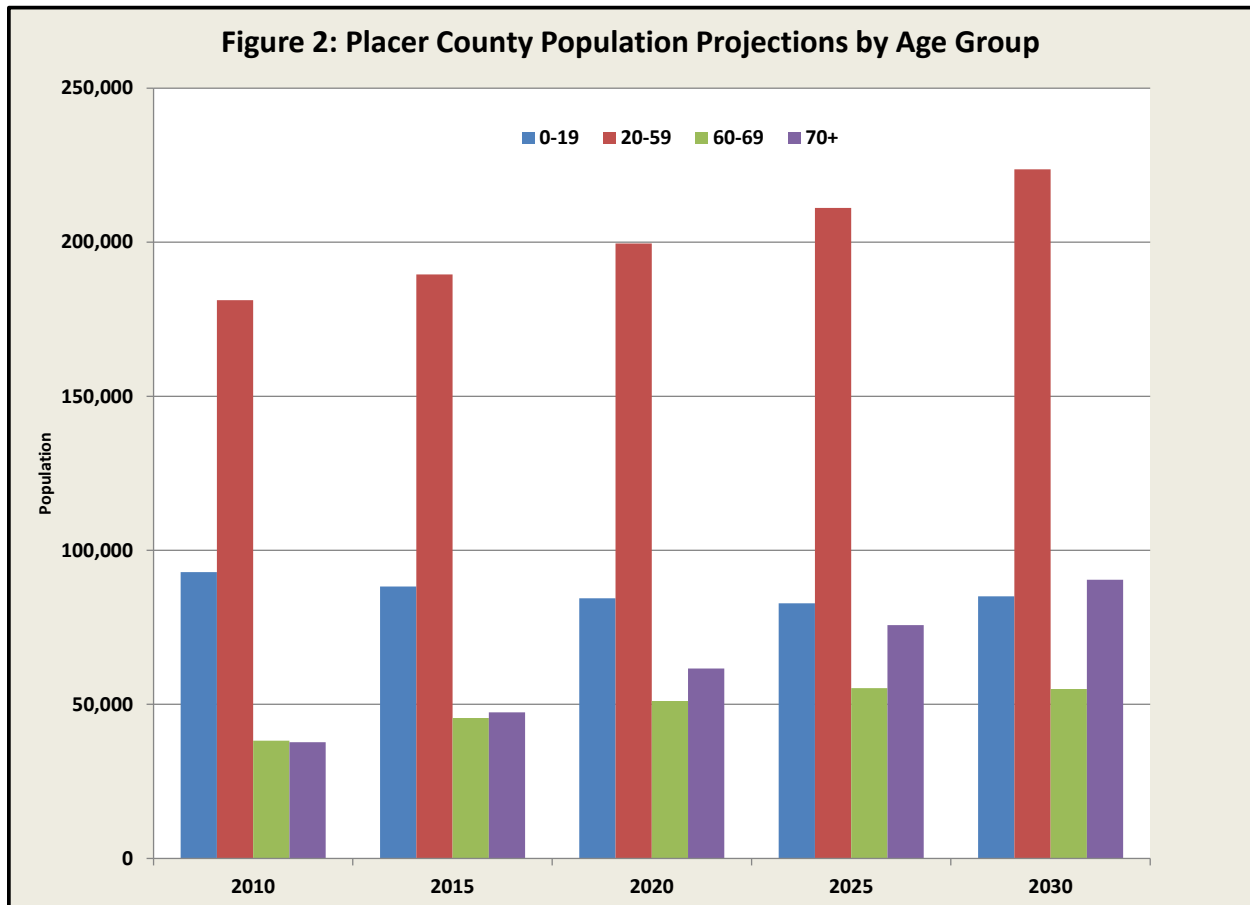
Source: California Department of Finance Demographic Research Unit

Of particular interest to public transit is the growth of the older adult population, as these residents become more likely to depend on public transit for mobility. Table 2 and Figure 2 demonstrates that the number of Placer County residents age 60 to 69 is projected to increase by 21.4 percent between 2015 and 2025, while the number of residents age 70 and older is projected to increase by a full 59.6 percent during the same time period. Extending the timeframe to 2030, the number of residents older than 70 could increase by 90.7 percent over existing levels. Put another way, the proportion of total population age 70 and above is expected to increase from today’s 13 percent to 20 percent by 2030.

Table 2: Placer County Population Projections by Age Group

Year	Population by Age Group			
	0-19	20-59	60-69	70+
2010	92,921	181,200	38,229	37,702
2015	88,236	189,539	45,534	47,429
2020	84,396	199,594	51,076	61,603
2025	82,786	211,095	55,281	75,696
2030	85,076	223,620	54,967	90,439
% Change 2015 to 2025	-6.2%	11.4%	21.4%	59.6%
% Change 2015 to 2030	-3.6%	18.0%	20.7%	90.7%

Source: CA Department of Finance (Estimated and Projected Population for CA counties)



Population Density

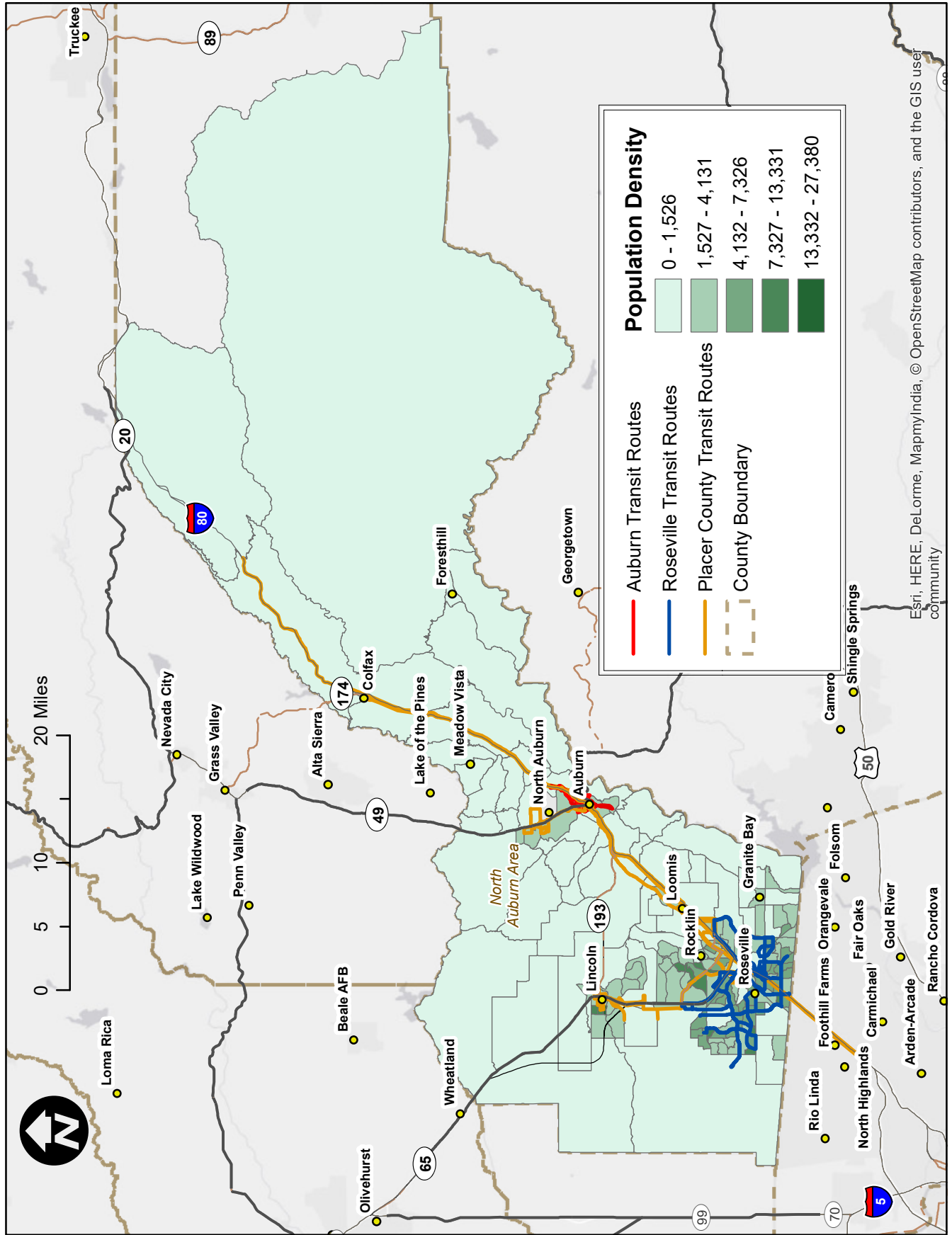
One of the greatest challenges facing public transit in auto-dominated California is how to serve communities and cities with dispersed populations. Buses travelling long distances to serve only a few residents is not cost effective; however these residents may depend on public transit for transportation to commercial and medical centers. Figure 3 illustrates population density for the study area at the block group level. As shown, population density ranges from less than one person per square mile as one travels east on I-80 to around 27,000 people per square mile in the City of Roseville.

Transit Dependent Population

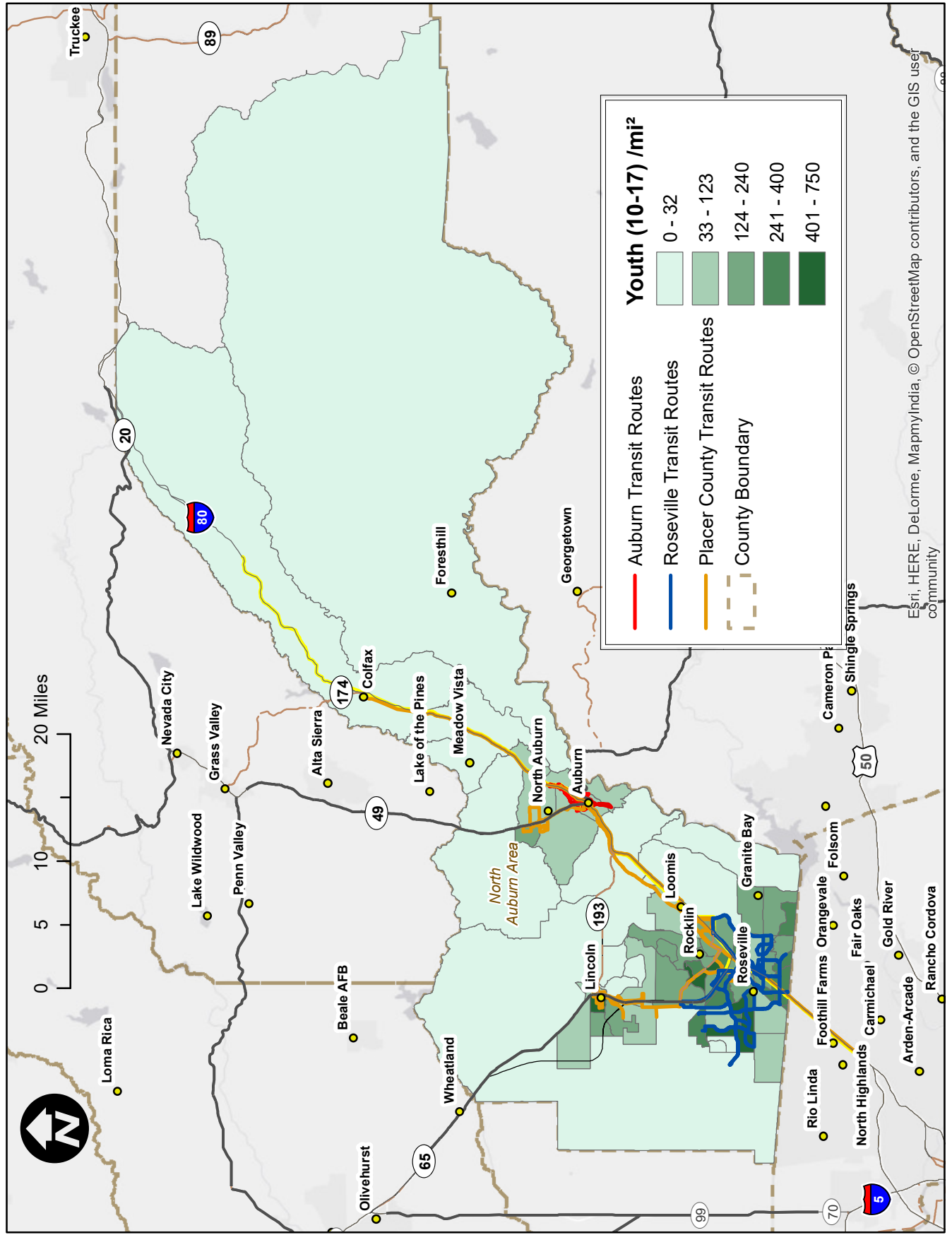
Nationwide, transit system ridership is drawn largely from various groups of persons who make up what is often referred to as the “transit dependent” population. This category includes youth, elderly persons, persons with disabilities, low income households, and members of households with no available vehicles. There is considerable overlap among these groups. Figures 4 through 13 present key demographic data for Roseville as well as for western Placer County (to provide a broader context). The figures illustrate where existing and potential public transit passengers live. Transit dependent data is presented in tabular format for each transit operator as part of Appendix B. A review of this data indicates the following:

- **Youth** – For purposes of this study, youth is defined as persons age 10 – 17 or those who are unlikely to drive yet able to ride the bus by themselves. Youth travelling to/from school contribute to public transit ridership, particular in the City of Lincoln. A total of 39,528 residents (11 percent) in the Western Placer County area fit into this category.
 - Figure 4 shows the density of the youth population for western Placer County area at the census tract level. As shown, higher concentrations of youth 400 or more per square mile are generally concentrated in areas served by public transit.
 - A more detailed view youth population density at the block group level in the Roseville Transit service area is shown in Figure 5. As shown areas, near Junction Blvd and Woodcreek Oaks Blvd have higher concentrations of youth (1,300 – 1,400 per square mile) and are relatively well served by transit.
- **Seniors** – Seniors (defined here as older adults age 60 and older) tend to become more dependent on public transit as they lose the ability to drive. Roughly 24 percent or 83,522 Western Placer County residents are considered seniors.
 - For the western county area (Figure 6), the largest concentrations of seniors are located in the North Auburn area and in the residential tracts of the City of Lincoln along Sun City and Del Webb Blvd (1,000 – 1,400 seniors per square mile). Some of these homes in

Figure 3
Total Population Density By Block Group Western Placer County



**Figure 4
Youth Population Density By Census Tract Placer County Transit Area**



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

Figure 5
Youth Population Density in the Roseville Area

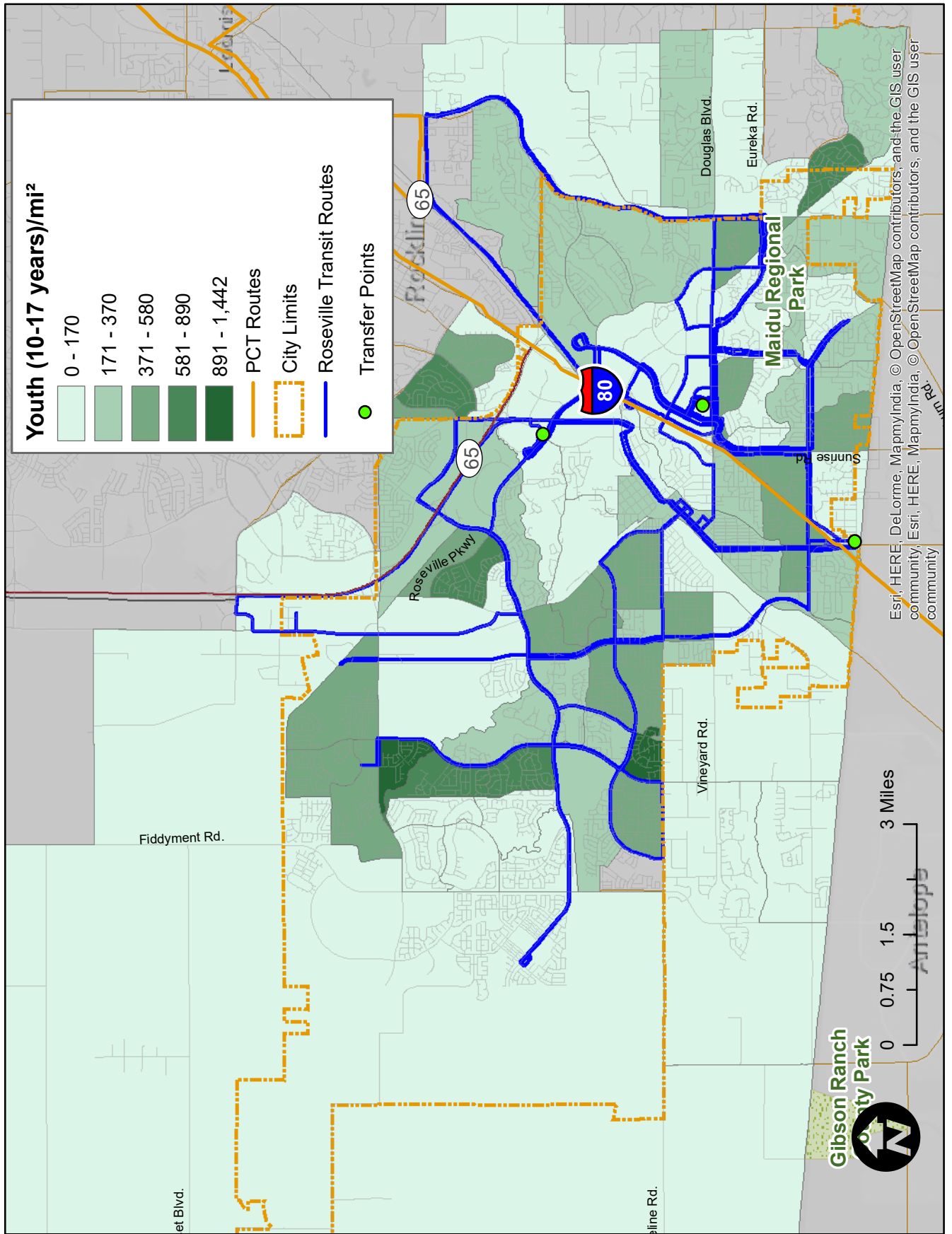
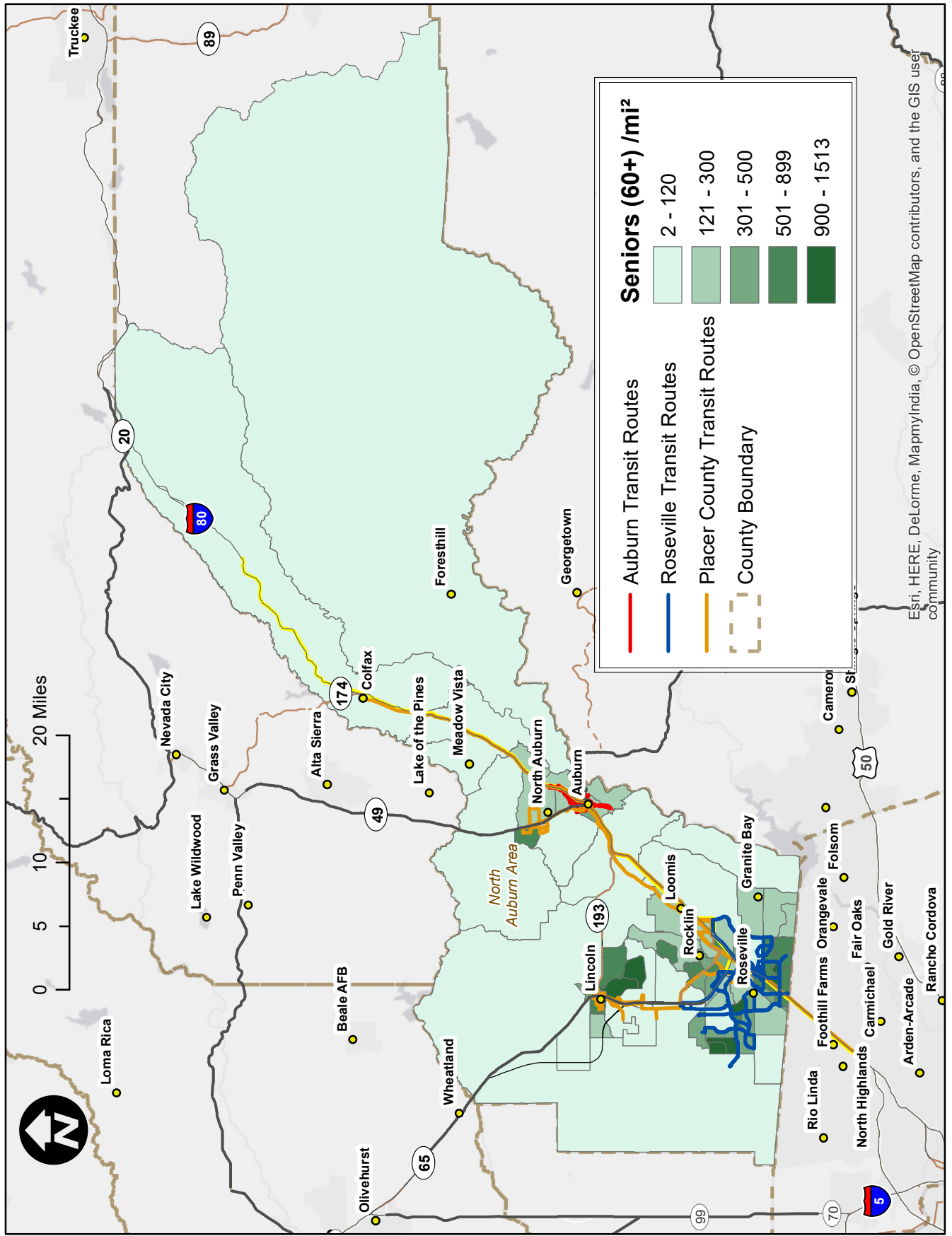


Figure 6
Senior Population Density By Census Tract Placer County Transit Area



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Figure 7
Senior Population Density in the Roseville Area

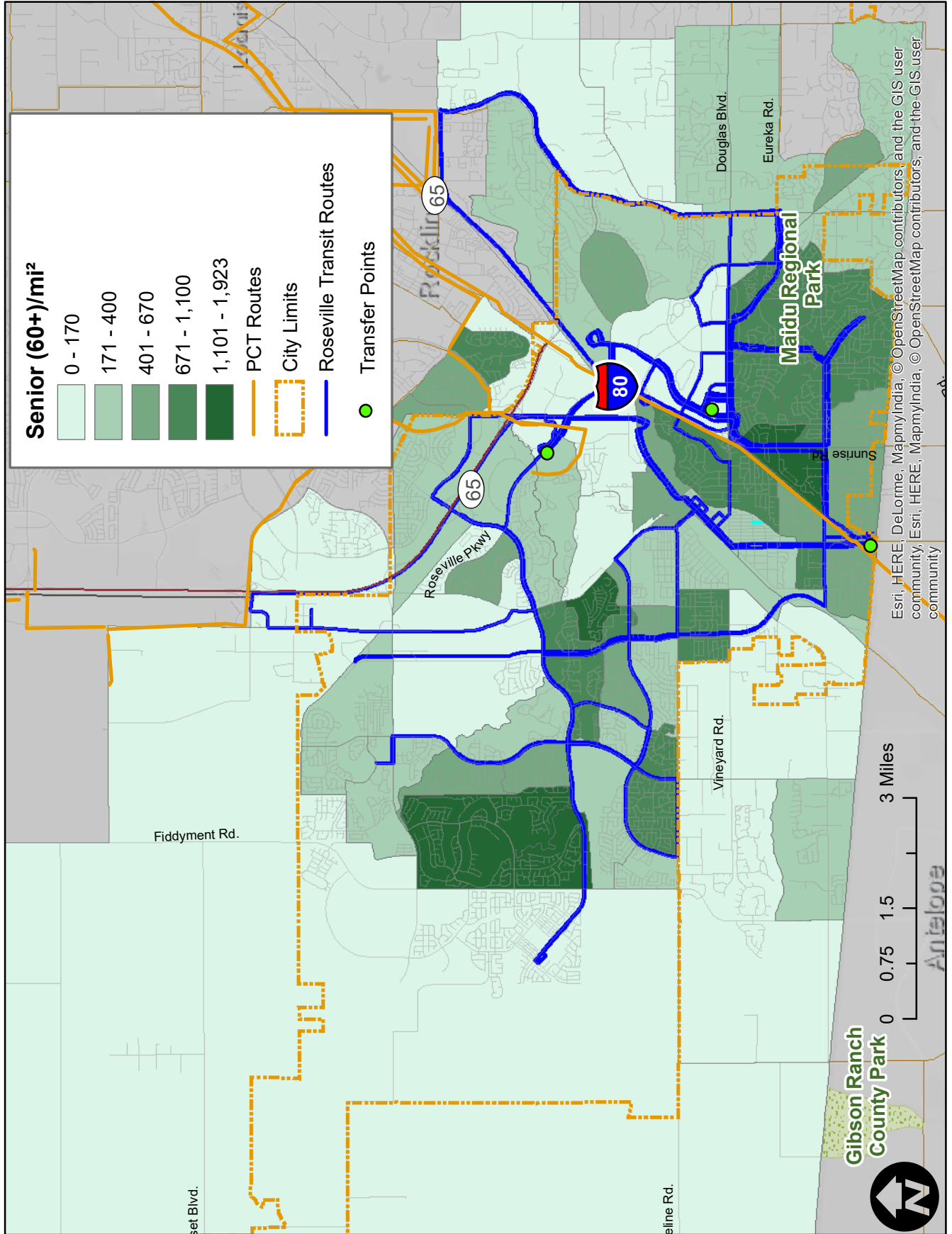
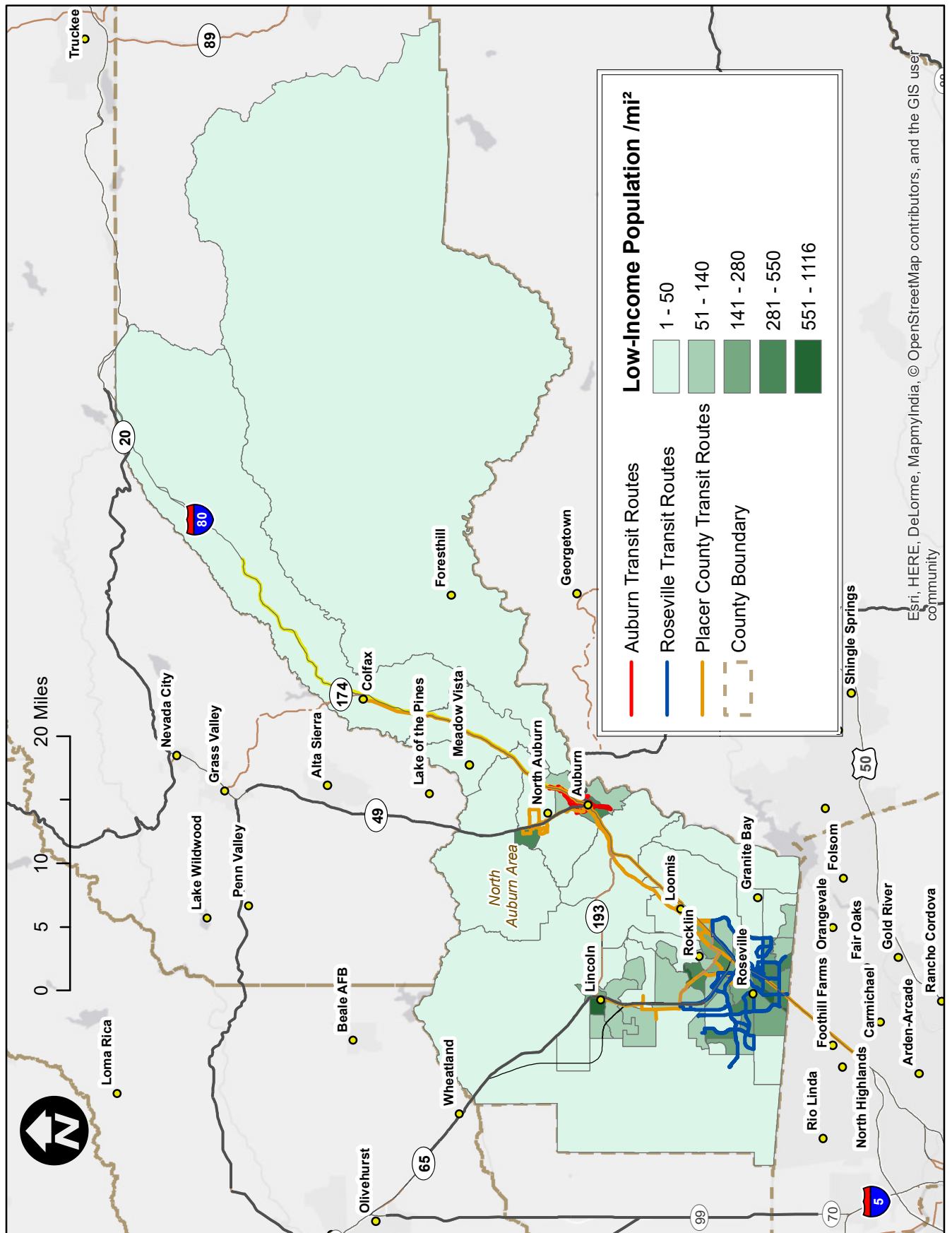


Figure 8
Low-Income Density By Census Tract Placer County Transit Area



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Figure 9
Low Income Household Density in the Roseville Area

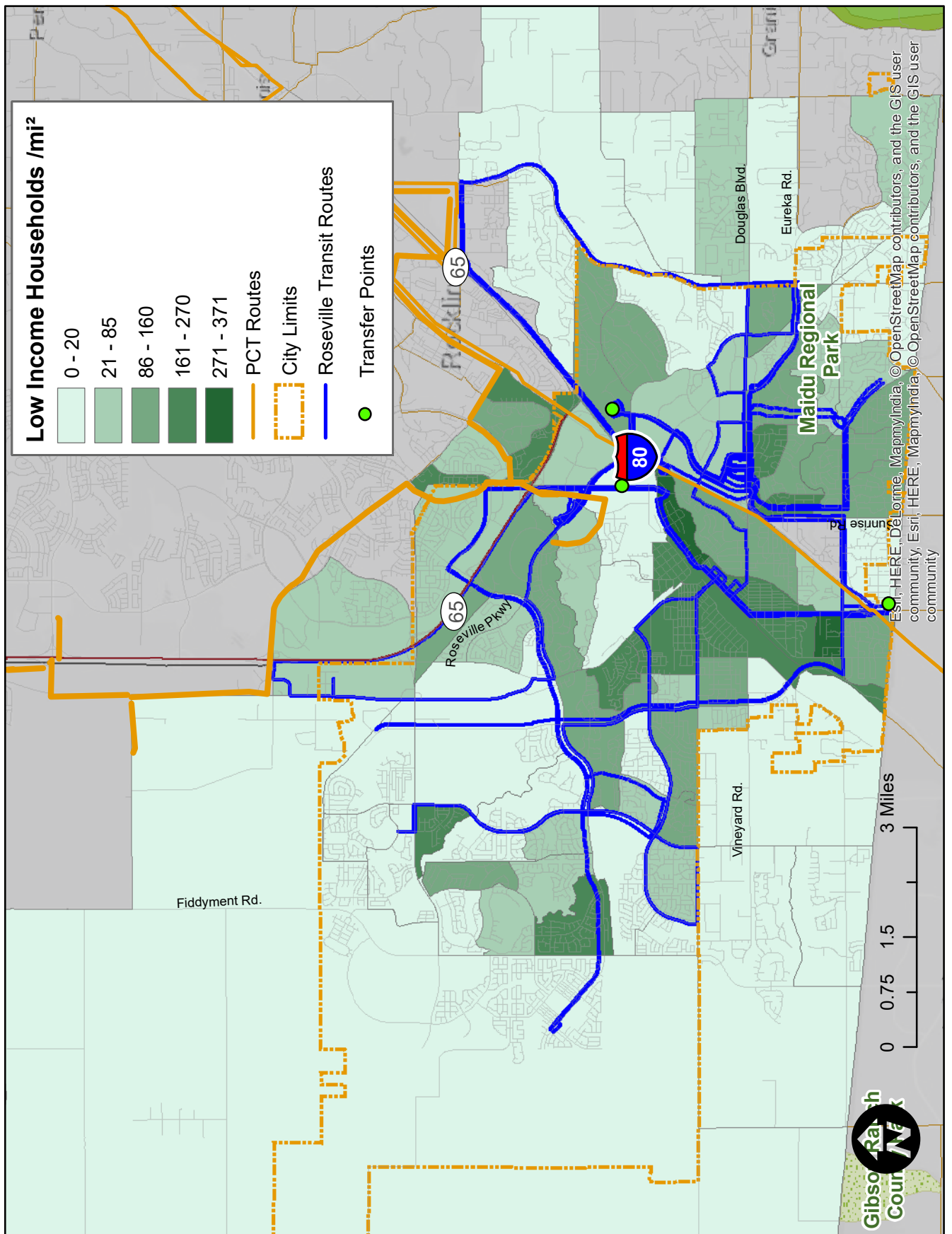


Figure 10
Population with a Disability Density By Census Tract Placer County Transit Area

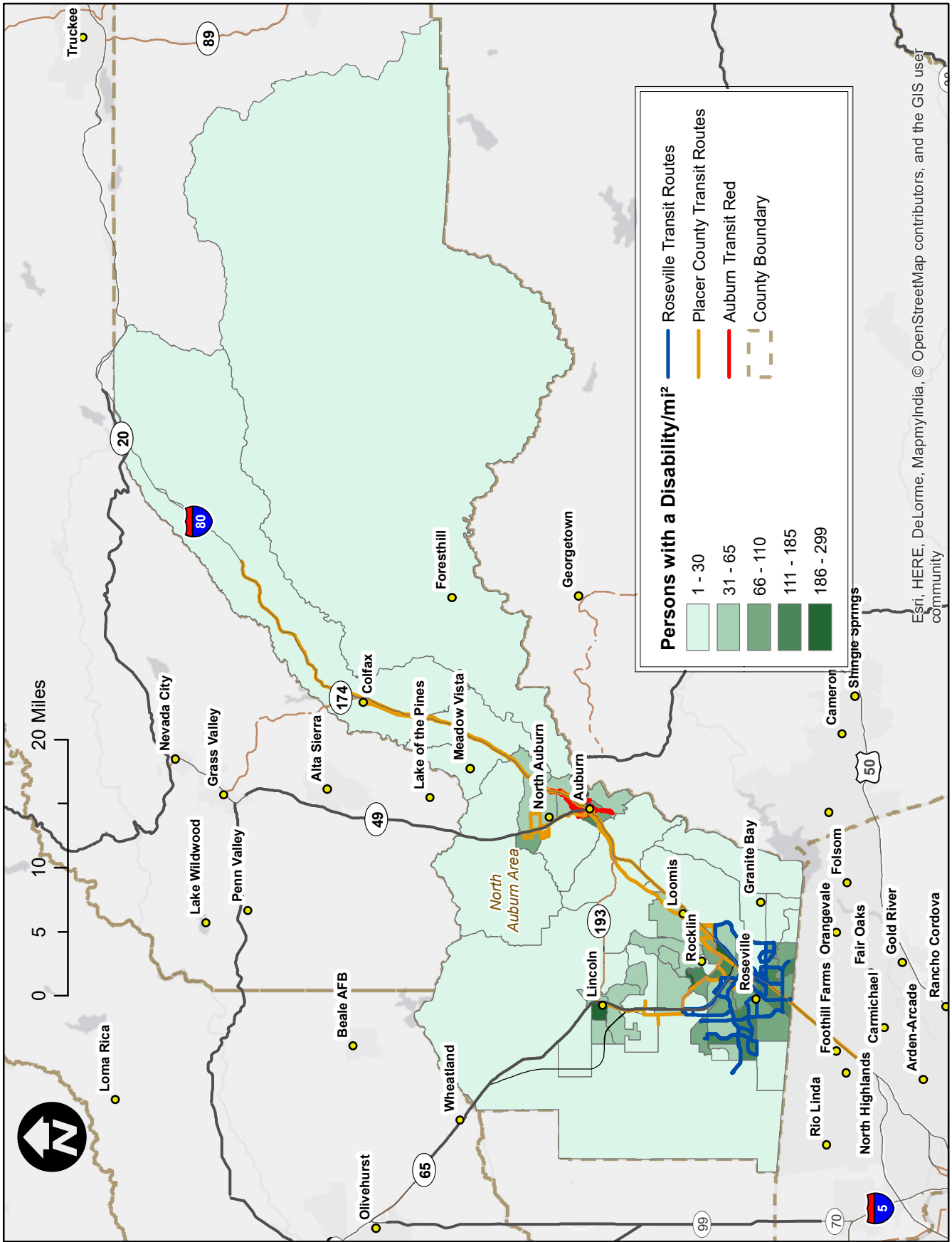


Figure 11
Population with a Disability Density in the Roseville Area

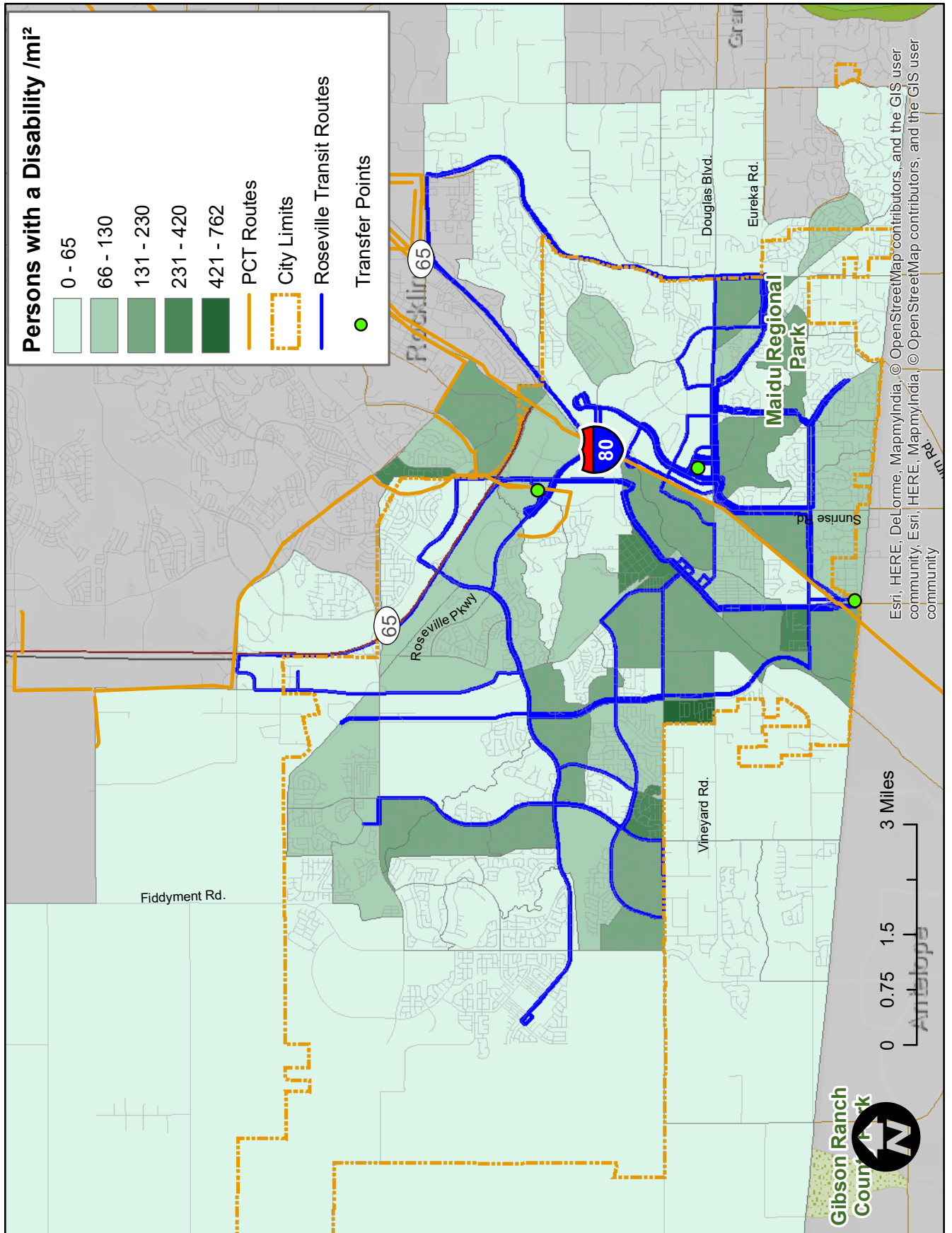
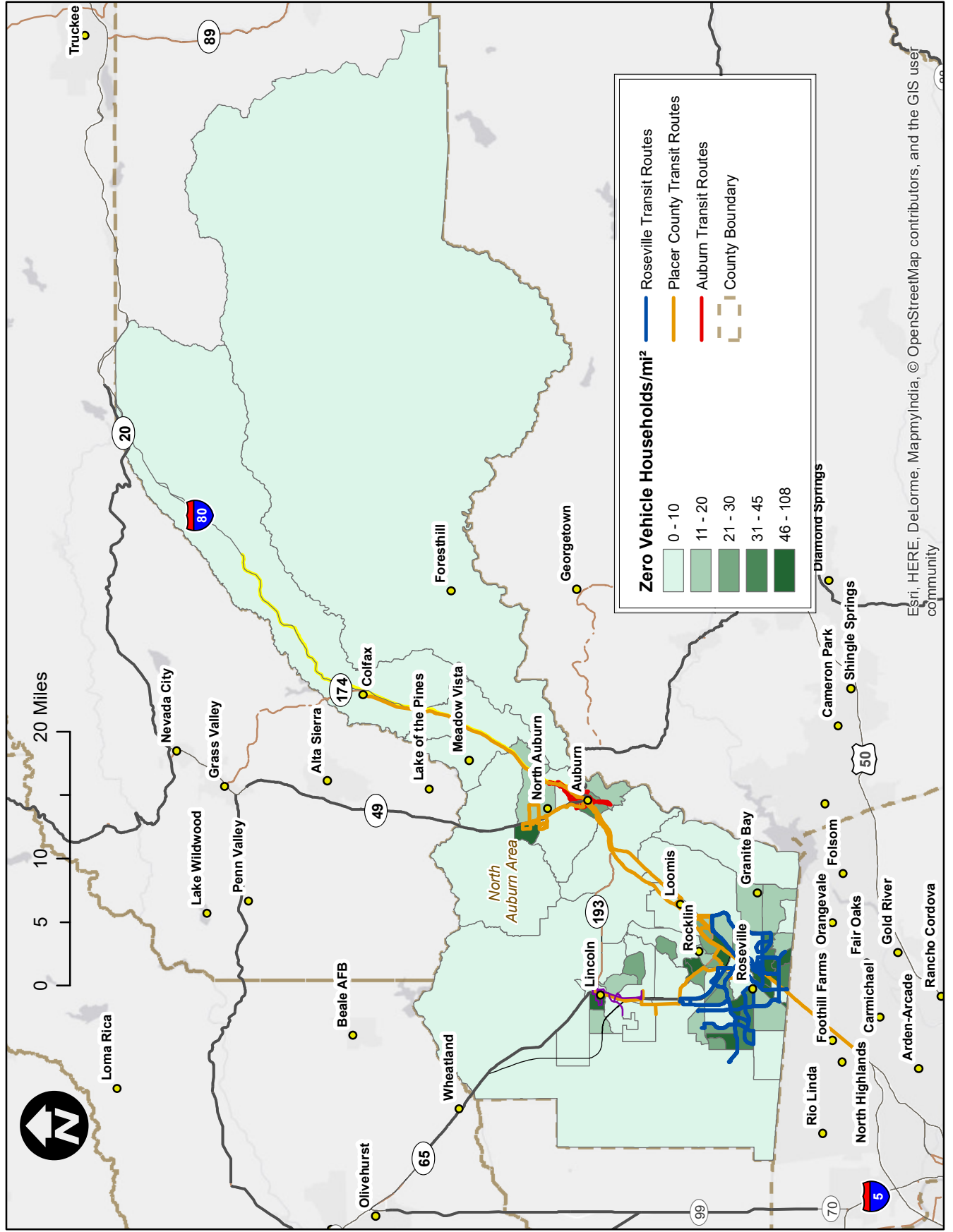
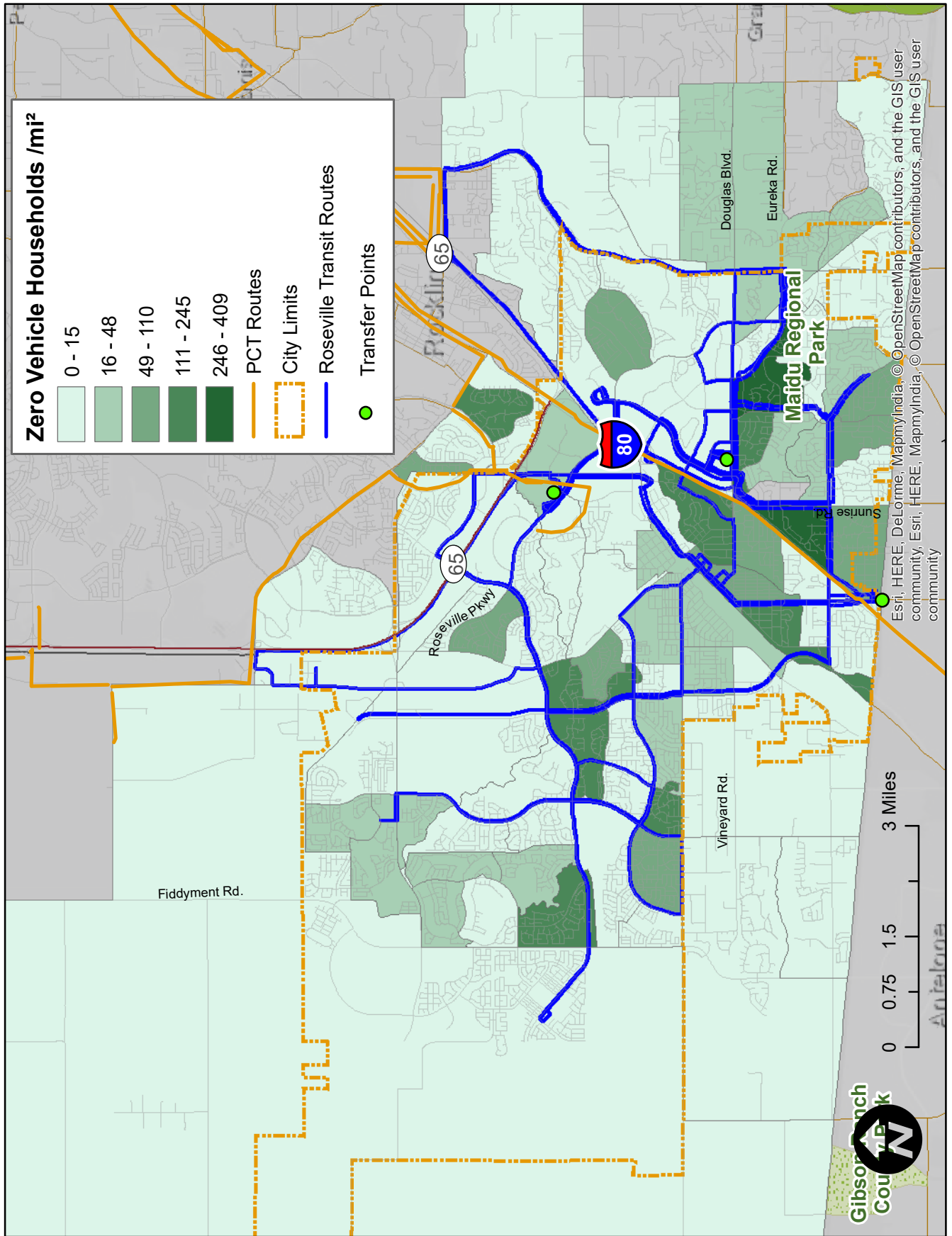


Figure 12
Zero Vehicle Household Density By Census Tract Placer County Transit Area



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Figure 13
Zero Vehicle Household Density in the Roseville Area



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services but some are over a one mile walk away. However, DAR does serve these areas directly.

- In Roseville (Figure 7) the greatest number of residents over age 60 per square mile are found in the block groups near the Sierra Pines Golf Course (1,500 to 1,900 per square mile).
- **Low Income Households** - According to the Census roughly 9 percent of study area households or 31,300 households were living below the poverty level in 2015. There is likely significant overlap between low income households and zero-vehicle households.
 - Figure 8 (data for the western county area by census tract) shows that central Lincoln has the greatest concentration of low income households in the study area with over 1,000 low income households per square mile followed by the commercial core area of Rocklin north of Sunset Avenue with 680 low income households per square mile.
 - Within the Roseville Transit service area (Figure 9) there are multiple block groups of 300 or more low income households per square mile: between Dry Creek and Cirby Way, near Eastwood Park and in the Enwood area south of Atlantic Ave.
- **Disabled** - Roughly five percent of the study area population age 20 to 64 (16,086 persons) has some type of disability.
 - For the broader area (Figure 10), the census tracts with the densest population of disabled residents are located in Rocklin (commercial core area north of Sunset and the area west of I-80 and south of Rocklin Road) and central Lincoln. In all these census tracts at least 200 disabled residents per square mile were recorded.
 - In the Roseville Transit service area (Figure 11), the block group which stands out as having the greatest concentration of disabled residents is located between Foothill Blvd, Riesling Drive and the City Limits (762 disabled residents per square mile).
- **Zero Vehicle Households** – Perhaps the greatest indicator of transit dependency is households with no vehicle available. The study area as a whole has 4,204 zero vehicle households. This represents three percent of the households in the study area according to the US Census American Community Survey.
 - The census tracts with the largest concentration of zero vehicle households in western Placer County are found in Roseville (Figure 12). West central Lincoln

and the commercial core area of Rocklin north of Sunset have close to 60 zero vehicle households per square mile. Both these area are fairly well served by public transit.

- In Roseville (Figure 13), the block group which includes the Terraces of Roseville retirement community has the greatest concentration of zero vehicle households (438), followed closely by the block group including Eastwood Park (373 zero vehicle households per square mile). Both of these areas are well served by public transit making it possible for residents to live in these areas without a vehicle.

Other Population Characteristics

Veteran Population

Another subset of transit dependent population is veterans. Veterans often need to travel longer distances to medical centers and clinics which are part of the Veterans Administration (VA). Veterans are potentially eligible for WPTCSA services if they are disabled or over age 60. The closest VA Medical Center for Western Placer County residents is in Mather, CA just outside Sacramento. VA Outpatient Clinics are located in McClellan, Mather and Auburn, CA. A Vet Center is located in nearby Citrus Heights. Table 3 shows the total veteran population for each transit operator service area according to the US Census. Tables B-4 – B-6 in Appendix B present the veteran population by census tract and block group for each region.

Table 3: Western Placer County Other Population Characteristics

Transit Service Area	Total Population	Total Households	Square Miles	Veteran		Hispanic or Latino, or Other Race, not White		Limited English Proficiency Households	
				#	%	#	%	#	%
Western Placer County	353,847	130,482	1,952	27,487	7.8%	103,046	29.1%	3,243	2.5%
Roseville Area	135,392	49,325	160	9,254	6.8%	45,695	33.8%	1,471	3.0%

Source: US Census American Community Survey, 2015 Estimates

- For Western Placer County as a whole, roughly 7.8 percent (27,487 people) of the population are veterans. As for census tracts with the greatest number of veterans: over 1,000 veterans live in the census tract that includes the Sun City Lincoln Homes active adult community. A relatively high number of veterans (around 900) reside in the census tracts which encompass the City of Colfax, Alta and Dutch Flat. Fixed route public transit services are limited to these communities.

- In the Roseville area, 9,254 veterans were recorded by the US Census. The block group with the greatest number of veterans is located West of Fiddymment Road (639 veterans)

Minority and Limited English Proficiency Population

An important part of the planning process is ensuring environmental justice. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Any planning process should not have a greater significant negative impact on minority populations. Additionally, the planning process should ensure meaningful involvement from these populations. The objective of a transit plan is to improve mobility for all community residents, including minority populations. To ensure that all segments of the population are considered in the transit planning process, Table 3 and Tables B4 – B6 in Appendix B identify population number for “Latino, Hispanic, Other Race Non-White” residents and households with limited English proficiency. This data is also helpful for identifying pockets where bilingual transit information and marketing is particularly important.

- Roughly 29 percent of the western Placer Study Area (103,046 people) is considered Hispanic, Latino or Other Race not-White. In the Roseville Area, the proportion is greater: 33.8 percent. There are 3,243 Limited English Proficiency (LEP) households in the study area (Western Placer County), which represents around 2 percent of total households. The study area census tract with the highest proportion of “Non-White” residents is located in central Lincoln west of Lincoln Blvd, where 57 percent of residents (4,511) fit into the Hispanic, Latino, Other Race Non-White category. This census tract also has the highest number of LEP households in the study area, 387 households or 16 percent. The large census tract west of Lincoln and Roseville also has a high proportion of “Non-White” residents (42 percent or 5,715 people). This area is not served by fixed route public transit.
- In Roseville, the block groups in Roseville Heights (1,313 or 64 percent) and Between Dry Creek, Vernon, Cirby and Riverside (697 or 59 percent) have the greatest proportion of “Non-White” residents. The block group west of Fiddymment Road (much of which is outside the City limits) has the greatest number of LEP households (160 or 4 percent).

EMPLOYMENT

Commute Patterns

Countywide

An analysis of commute patterns is important for public transit planning, particularly as both Roseville Transit and Placer County Transit operate successful commuter services into downtown Sacramento. The US Census Longitudinal Employer Household Dynamics (LEHD)

provides commute pattern data for 2015. As LEHD data tracks job locations by employer address, it is difficult to accurately track those who telecommute. For this reason, LEHD data can often show high numbers of employees travelling long distances to work. Nevertheless, the LEHD data is the best data available to review commute patterns.

Table 4 presents commute patterns for Placer County as a whole. As shown, the greatest number of employed Placer County residents work within the City of Roseville (22,193 or 16.1 percent). This is closely followed by the City of Sacramento (19,034 or 13.8 percent). Other Placer County communities with a significant amount of jobs for Placer County residents are Rocklin, North Auburn, Auburn, and Lincoln. For jobs located within Placer County, the greatest number of employees filling these jobs live in the City of Roseville (17,344 or 13 percent), followed by the City of Rocklin (9,440 or 7.1 percent). A significant number of Placer County employees commute from the City of Sacramento (6,858 or 5.1 percent) and an additional 6,255 employees (4.7 percent) commute from nearby Citrus Heights.

Roseville

Figure 14 graphically displays locations of employment for Roseville residents by census tract. This includes persons employed at all employers. The greatest number of Roseville residents (2,112 employees) work in the census tract which encompasses the Lead Hill area, Kaiser Permanente and the Sierra Gardens Roseville Transit Transfer Point within Roseville. The next largest pocket of employment locations for Roseville residents is downtown Sacramento centered around the Capital (1,546 employees). Other areas of note are the census tract including the Galleria Mall and the tract including Foothills Blvd north of Pleasant Grove.

Major Employers in Placer County

Data from the California Employment Development Department presented in Table 5 confirms that the majority of major employers in western Placer County are located in Roseville. Industries range from tech companies to health care. Placer County is a large employer and most offices are located in Auburn. The Thunder Valley Casino located in Lincoln is also a major employer for the area.

MAJOR ACTIVITY CENTERS

Figure 15 displays likely destinations for transit riders. These include schools, colleges, government services, medical facilities and large shopping centers. As shown, generally fixed route services serve most transit activity centers. A few senior apartment complexes are located off the fixed route but they are served by DAR.

PROPOSED LAND DEVELOPMENT PROJECTS

As shown in Table 1 above, Placer County has been growing at a rapid rate and is projected to continue to grow at 1.4 percent annually. There is vacant land available on the outskirts of each community and many large development projects have been approved or are under construction. Some of these developments could generate significant demand for new transit services. The following outlines proposed land use development projects by area that are expected to result in at least partial development over the coming seven years.

Table 4: Commute Patterns for Placer County Residents and Workers

Places Where Placer County Workers are Employed			Placer Where Placer County Workers Live		
	Count	Share		Count	Share
Roseville, CA	22,193	16.1%	Roseville, CA	17,344	13.0%
Sacramento, CA	19,034	13.8%	Rocklin, CA	9,440	7.1%
Rocklin, CA	7,902	5.7%	Sacramento, CA	6,858	5.1%
North Auburn CDP, CA	5,238	3.8%	Citrus Heights, CA	6,255	4.7%
Arden-Arcade CDP, CA	4,109	3.0%	Lincoln, CA	5,995	4.5%
Folsom, CA	3,985	2.9%	Antelope CDP, CA	3,056	2.3%
Rancho Cordova, CA	3,951	2.9%	Auburn, CA	2,840	2.1%
Auburn, CA	3,757	2.7%	Folsom, CA	2,647	2.0%
Lincoln, CA	2,828	2.1%	Granite Bay CDP, CA	2,630	2.0%
San Francisco, CA	2,525	1.8%	Carmichael CDP, CA	2,326	1.7%
Citrus Heights, CA	2,230	1.6%	North Auburn CDP, CA	2,296	1.7%
Carmichael CDP, CA	1,897	1.4%	Arden-Arcade CDP, CA	2,290	1.7%
Granite Bay CDP, CA	1,724	1.3%	Orangevale CDP, CA	1,996	1.5%
North Highlands CDP, CA	1,690	1.2%	Elk Grove, CA	1,822	1.4%
San Jose, CA	1,496	1.1%	North Highlands CDP, CA	1,761	1.3%
West Sacramento, CA	1,434	1.0%	Foothill Farms CDP, CA	1,760	1.3%
Loomis town, CA	1,412	1.0%	Rancho Cordova, CA	1,700	1.3%
Stockton, CA	1,047	0.8%	Truckee town, CA	1,557	1.2%
El Dorado Hills CDP, CA	884	0.6%	Fair Oaks CDP, CA	1,398	1.0%
Elk Grove, CA	881	0.6%	El Dorado Hills CDP, CA	1,326	1.0%
Oakland, CA	831	0.6%	Yuba City, CA	1,227	0.9%
Grass Valley, CA	773	0.6%	Loomis town, CA	1,059	0.8%
Yuba City, CA	745	0.5%	San Jose, CA	1,029	0.8%
Gold River CDP, CA	672	0.5%	Reno, NV	1,022	0.8%
Antelope CDP, CA	666	0.5%	Stockton, CA	782	0.6%
All Other Locations	43,752	31.8%	All Other Locations	50,944	38.2%
Total Employed Residents	137,656		Total Workers	133,360	

Source: US Census Longitudinal Household Employer Dynamics 2015 data

Figure 14
Where Roseville Residents Work

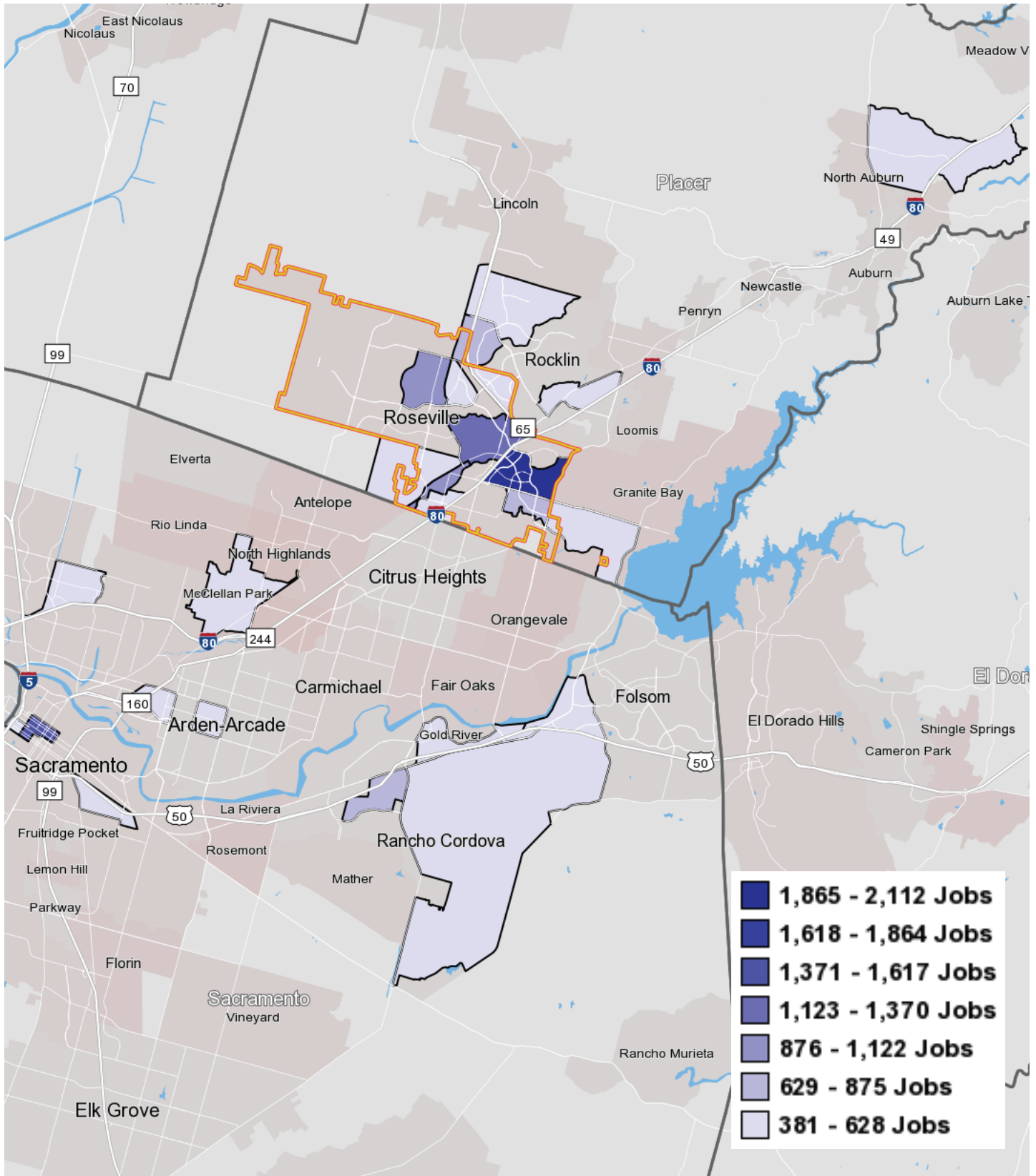


Table 5: Major Employers in Western Placer County

Employer	# of Employees	Location
AT&T	1,000 - 1,499	Lincoln Way, Auburn
Hewlett Packard	1,000 - 1,499	Foothills Blvd, Roseville
Placer County Government Services	1,000 - 1,499	B Street, Auburn
Pride Industries	1,000 - 1,499	Foothills Blvd, Roseville
Sutter Roseville Medical Center	1,000 - 1,499	Medical Plaza Dr, Roseville
Thunder Valley Casino	1,000 - 1,499	Athens Ave., Lincoln
Consolidated Communications	500 - 999	Industrial Ave, Roseville
Placer County Education	500 - 999	Nevada St., Auburn
Advantist Health	500-999	Creekside Ridge Dr., Roseville
Golfland Sunsplash	500-999	Taylor Rd, Roseville

Source: CA Employment Development Department

City of Roseville Projects

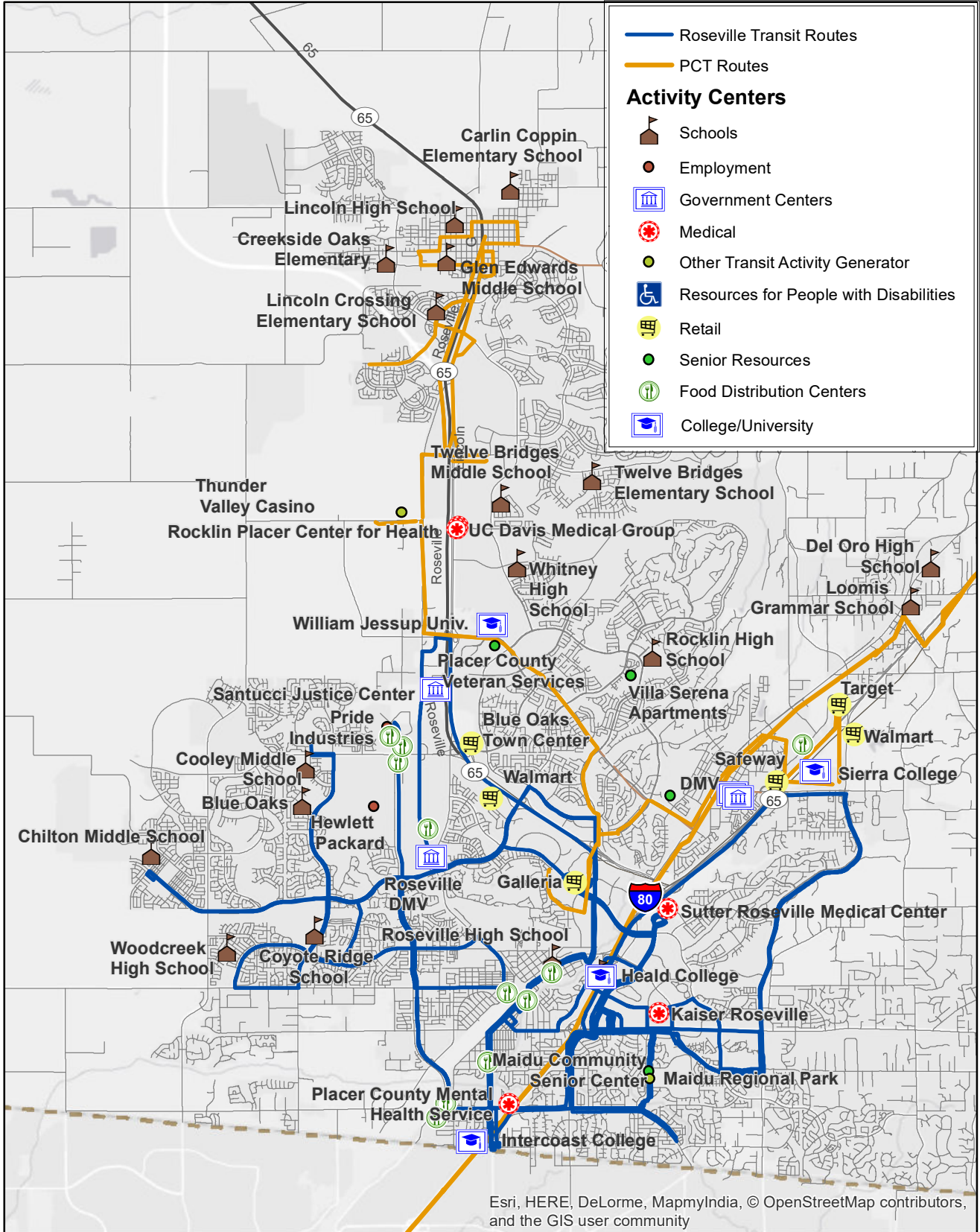
Amoruso Ranch is a 694 acre specific plan project located northwest of the current City limits, south of West Sunset Boulevard approximately 1.5 miles west of Fiddyment Road. The proposed project will result in the development of a mix of uses, including 337 acres of low, medium and high density residential land developed with 2,827 dwelling units. The land use plan also includes three commercial parcels totaling 51 acres, a 9.6-acre elementary school site, seven neighborhood parks, and a 3-acre fire station/public facilities site. Approximately 135 acres of the site will be set aside as open space preserve.

The **West Roseville Specific Plan** is the 3,162 acres area west of Fiddyment Road, generally north of Pleasant Grove Boulevard. The plan was adopted in February 2004 and the plan area was annexed into the City of Roseville from unincorporated Placer County. The adopted specific plan allows for 8,792 single and multi-family units, including approximately 704 age-restricted units, 57 acres of commercial, 109 acres of industrial, 255 acres of park, 705 acres of open space, and 108 acres of schools. At build-out the plan area is expected to accommodate approximately 22,332 residents and provide 3,726 jobs. The remainder of the plan area is expected to be constructed over the next five to ten years. Currently Roseville Transit serves only the Pleasant Grove Boulevard corridor of this plan area.

Campus Oaks Master Plan area is located east of Woodcreek Oaks Blvd and south of Blue Oaks Blvd. The approved project will include 948 new residential units with a mixture of high density, medium density and low density. Most of these units will be within one quarter mile of existing Roseville Transit Routes.



Figure 15
South Placer Activity Centers



Kaiser Riverside and Cirby Medical Office Building – There is a planned expansion of the existing medical office building located on Riverside Drive which will double the capacity of the existing building. The building is currently served by Roseville Transit.

Unincorporated Placer County

There are several major developments in unincorporated Placer County that could have impacts on the demand for or provision of transit service in Roseville:

- **Placer Vineyards:** The Placer Vineyards Specific Plan Area consists of approximately 5,230 acres of land located north of the city of Sacramento and southwest of the city of Roseville in an unincorporated area of Placer County. The Specific Plan Area is located at the southwest corner of Placer County and is bound by Base Line Road to the north, the Placer County / Sutter County line and Pleasant Grove Road to the west, the Placer County / Sacramento County line to the south, Dry Creek to the south and east, and an abandoned portion of Walerga Road to the east. At buildout, the specific plan area will increase the population of Placer County by 32,800 new people over the next 20 to 30 years. Currently Roseville Transit Routes D and M travel within one mile of the edge of the development and the closest connection to Placer County Transit would be at the Roseville Galleria. The Placer Vineyards Specific Plan requires the development to implement transit-related mitigation requirements. The Placer Vineyards Transit Master Plan outlined the following transit services to be implemented as development occurs:
 - Local route circulating around the Specific Plan area on hourly and half-hourly peak headways.
 - Commuter route via Watt Avenue to connect residents to Sac RT Light Rail
 - Inter-regional service that connects to the Roseville Galleria on hourly headways

At this time, it is unknown who will operate these transit services and if there will be sufficient demand to implement these services within the seven-year SRTP time frame. Regardless, Roseville Transit and Placer County Transit will need to connect to the new Placer Vineyards Inter-regional route at the Roseville Galleria in the future.

- **Riolo Vineyard:** The Riolo Vineyard Specific Plan Area is a 526-acre master planned community planned for 884 single family residential units and 10.5 acres of commercial located just south and east of Placer Vineyards. In 2017 as part of the Riolo Vineyard Specific Plan, a Transit Zone of Benefit was established by the Placer County Board of Supervisors. The Zone of Benefit includes the area bound by Watt Ave to the west, PFE Road to the south and Walerga Road to the east. As part of the program, future home owners in the development will be assessed a fee of \$46.46 per year in property tax to help fund the future transit service identified in the Placer Vineyards Transit Master Plan. This develop could also impact the need for revisions to Route D and/or commuter service.

- **Sunset Industrial Area/Placer Ranch:** The Sunset Industrial Area (SIA) is an 8,900-acre area in unincorporated western Placer County, located west of the Highway 65 corridor and situated between the Cities of Lincoln to the north, Rocklin to the east, and Roseville to the south. The Placer Ranch Specific Plan area lies within the SIA. The existing Thunder Valley Casino is located within the SIA planning area. The draft land use vision for the area is to include more modern planning concepts, such as an entertainment mixed-use district to bring in visitors and consumers from outside the region; a 400-acre innovation center district similar to a Google corporate campus; and an eco-industrial district to provide opportunities for energy alternatives, enhanced recovery of materials and solid waste related research and development. Development of the SIA area is likely beyond the time horizon of this SRTP as a Draft Environmental Impact Report (EIR) has not yet been prepared.

DEMOGRAPHIC OVERVIEW FINDINGS

The following presents a summary of findings from the demographics review:

- The population of Roseville (and western Placer as a whole) has the potential to expand significantly over the next 10 years, particularly older adults who may become transit dependent. Another result of population growth is an increase in traffic volumes on local roadways. This could make some public transit services (particularly commuter routes) more attractive.
- There are multiple large residential and commercial developments currently going through the planning process. Although many may not be built out during this plans time horizon, they should be considered in drafting the short range transit plans
- A significant number of Roseville and other western Placer area residents commute to Sacramento for work. The majority of these commuters work in the downtown area near the capital. This indicates that although commuter services to other Sacramento locations could be warranted, the majority of services should continue to serve the downtown area.
- Roseville has the most employment centers as well as major transit activity generators for western Placer County residents. This underscores the importance of maintaining and increasing good connections between Roseville Transit and Placer County Transit.

OVERALL SERVICE DESCRIPTION AND ORGANIZATION

Public transit has been operating in Roseville since 1970. A fixed route service was initially operated by Mountain Transportation Cooperative (MTC), which evolved into a demand responsive service in 1971. With the loss of federal funding in 1973, MTC was forced to shut down which in turn led to the City of Roseville contracting with the Sacramento Regional Transit District for commuter and fixed route service. Demand response service resumed in 1978 under contract. The service has since evolved into three service modes: local fixed route, commuter and Dial-A-Ride. The Dial-A-Ride and ADA paratransit services both operate within the jurisdictional boundaries of the City of Roseville during regular service hours and on Sundays.



In 2017 Roseville Transit also began operation of the Game Day Express providing service between Roseville and the Golden One Arena for Kings basketball home games. On behalf of and with support from the Western Placer Consolidated Transportation Services Agency (WPCTSA), the City of Roseville operates the following regional programs: the South Placer Transit Information Center, Transit Ambassador Program, and mobility program.

Roseville Transit is managed by the City of Roseville Public Works Department, using a contractor to provide management and operations of Roseville Transit and the South Placer Transit Information Center. Vendor responsibilities include providing drivers, dispatch, reservationists, direct oversight, and insurance as well as cleaning of all the bus shelters. City of Roseville Alternative Transportation Division staff manage the contract and City of Roseville Public Works staff maintain and supply fuel for the city-owned transit vehicle fleet. City staff also manage the contract with trainers for the mobility program, recruit and train transit ambassadors, staff outreach events, and provide a wide range of marketing materials, public information using social media and print materials.

LOCAL FIXED ROUTES

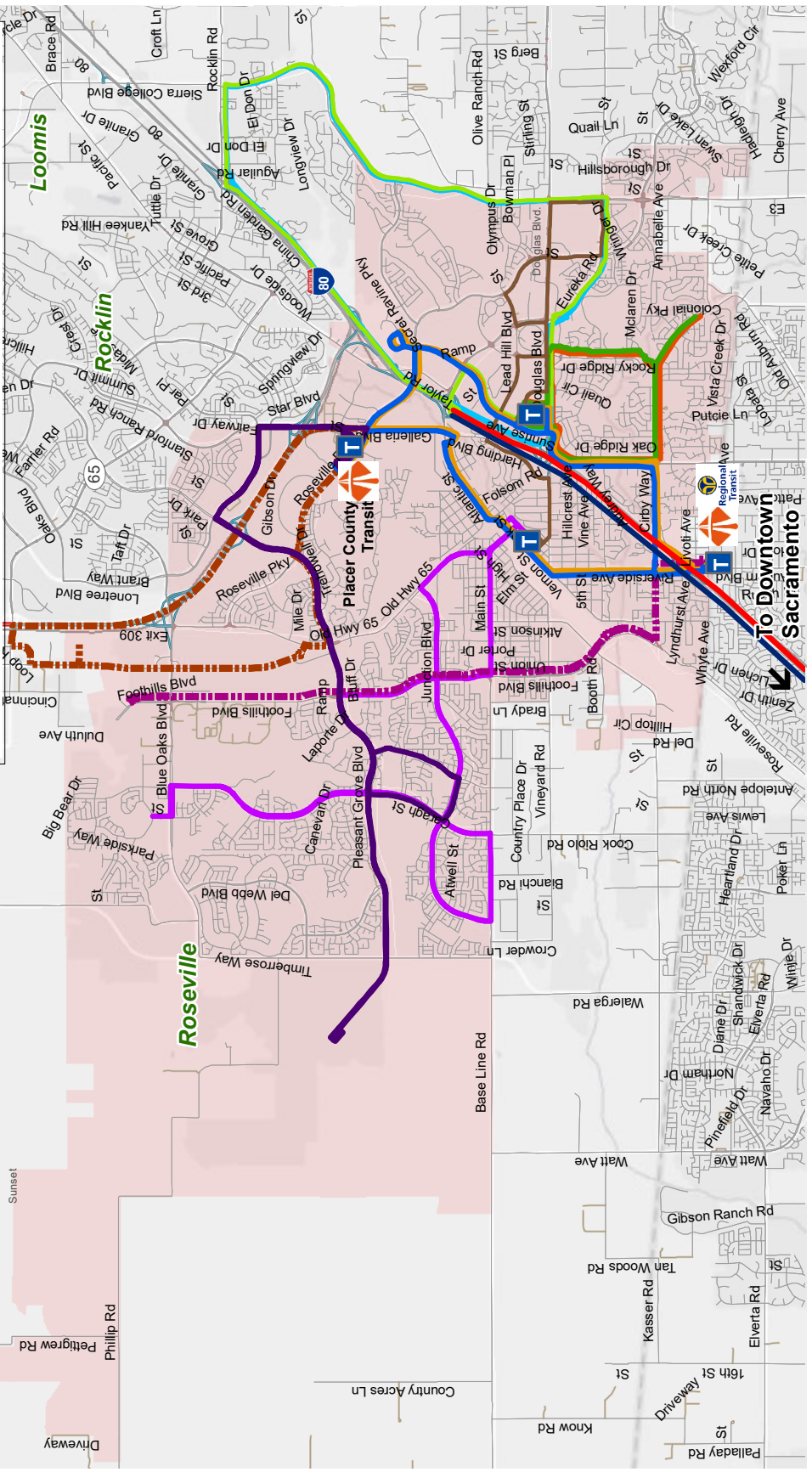
Roseville Transit operates 11 local fixed routes within the City of Roseville and connecting to other regional public transit services. The following services are provided, as shown in Figure 16 and summarized in Table 6:

Local Route A- Louis/Orlando, Civic Center, Galleria to Sierra Gardens -- Routes A and B operate as directional pairs on the same large loop. Service runs Monday through Friday every 30 minutes, beginning at 6:00 am to 6:30 pm, then hourly thereafter until 9:53 pm. On Saturdays, this service operates hourly in a clockwise direction from 8:00 am to



Figure 16 Roseville Transit Existing Transit Services

	Sacramento PM Route		Route C		Route G
	Sacramento AM Route		Route D		Route L
	Route A		Route E		Route M
	Route B		Route F		Route R
	Roseville DAR		Route S		Transfer Point



5:00 pm. There are four transfer points along this route, at Sierra Gardens, Louis/Orlando the Civic Center and the Galleria at Roseville shopping center, with connections to Placer County Transit, Sacramento Regional Transit, other local routes and Commuter Routes. Key destinations along this route include Sutter Roseville Medical Center, Sierra College, Johnson Pool, Roseville High School and the Galleria at Roseville Shopping Center.

Table 6: Existing Local Roseville Transit Service Plan

		Route										
		A	B	C	D	E	F	G	L	M	R	S
Service Frequency -- Minutes Between Buses												
Weekday	Start Time	6:00	6:10	6:30	5:42	7:53	7:39	6:53	6:25	5:57	7:30	
	6:00 AM	30	30	120	60				60			
	7:00 AM	30	30	120	60			120	60	60	2 Runs	2 Runs
	8:00 AM	30	30	120	60	120	120	120	60	60		
	9:00 AM	30	30	120	60	120	120	120	60	60		
	10:00 AM	30	30	120	60	120	120	120	60	60		
	11:00 AM	30	30	120	60	120	120	120	60	60		
	12:00 PM	30	30	120	60	120	120	120	60	60		4 Runs
	1:00 PM	30	30	120	60	120	120	120	60	60		
	2:00 PM	30	30	120	60	120	120	120	60	60		
	3:00 PM	30	30	120	60	120	120	120	60	60		
	4:00 PM	30	30	120	60	120	120	120	60	60	2 Runs	2 Runs
	5:00 PM	30	30	120	60	120	120	120	60	60		
	6:00 PM	30	30	120	60	120	120	120		60		
	7:00 PM	60	60							60		
	8:00 PM	60	60							60		
9:00 PM	60	60							60			
End Time	21:53	21:43	18:53	18:35	18:30	17:53	17:30	18:15	21:57	17:20		
Saturday	Start Time	8:00	8:07	--	7:42	--	--	--	8:25	7:57	--	--
	8:00 AM	60	60	--	60	--	--	--	60	60	--	--
	Saugstad PnR	60	60	--	60	--	--	--	60	60	--	--
	10:00 AM	60	60	--	60	--	--	--	60	60	--	--
	11:00 AM	60	60	--	60	--	--	--	60	60	--	--
	12:00 PM	60	60	--	60	--	--	--	60	60	--	--
	1:00 PM	60	60	--	60	--	--	--	60	60	--	--
	2:00 PM	60	60	--	60	--	--	--	60	60	--	--
	3:00 PM	60	60	--	60	--	--	--	60	60	--	--
	4:00 PM	60	60	--	60	--	--	--	60	60	--	--
End Time	17:00	16:50	--	16:35	--	--	--	17:02	16:57	--	--	
Cycle Length (Min)	60	60	23	53	37	23	37	50	60	45	50	
Number of Buses in Operation												Total
Weekday	2	2	0.19	1	0.31	0.19	0.31	1	1	1	1	10
Saturday	1	1	--	1	--	--	--	1	1	0	0	5

- Local Route B- Civic Center, Louis/Orlando, to Sierra Gardens and Galleria** -- This service operates along the same route as Local Route A, except in a counter-clockwise direction. Service is provided Monday through Friday every 30 minutes from 6:10 am to 6:40 pm and hourly thereafter until 9:43 pm. Saturday service operates hourly from 8:07 am to 4:50 pm. Transfer opportunities are the same as Route A.
- Local Route C- Rocky Ridge, Cirby, Sunrise to Sierra Gardens** -- Route C operates Monday through Friday every other hour from 6:30 am to 6:53 pm in a clockwise loop along South Cirby and then westbound on Cirby, north along Sunrise, south on Santa Clara, east on Douglas, then south on Rocky Ridge back to South Cirby. Destinations along this route include the Pepperwood Apartments, Oakmont High School, Safeway and Bel Air grocery stores, the Roseville Gateway site, several big box retail stores, Kaiser Permanente and Roseville Medical Center offices, Maidu School and Regional Park, and Country Villa Mobile Home Park. Passengers can transfer to Roseville Transit routes: A, B, E, F, G, L and Commuter. This route interlines² with Routes G, F, and E.
- Local Route D- Civic Center, Junction, Woodcreek Oaks, Blue Oaks to Foothills** -- This route operates service Monday through Friday every hour from 5:42am to 6:35pm, and on Saturdays from 7:42 am to 4:35pm. From the Civic Center Transfer Point, it serves a large area of northwest Roseville, focusing on service along Baseline Road/Main Street, Junction Boulevard, Woodcreek Oaks Boulevard, and Pleasant Grove Boulevard. Service is provided as far west as Baseline Road/Junction Boulevard and as far north as Diamond Creek Boulevard/Parkside Way. Other than the section north of Pleasant Grove Boulevard, service is provided only in one direction along each roadway. A transfer point at the Civic Center provides connections to local Routes A, B, L and the Commuter Route. Stops at Foothills Boulevard and Pleasant Grove Boulevard offer connections to Route M and Route R. Destinations served along this route include Kaseberg School, the Brickyard shopping area (Bel Air and Rite Aid), Coyote Ridge School, Woodcreek High School, Mahany Park, Raley's, Quail Glen School, Silverado School, Foothill Junction shopping area (Save Mart and CVS), and the County Fairgrounds. After Route D concludes on weekdays, Route M provides deviated service on request to areas along Woodcreek Oaks, Junction and Country Club.
- Local Route E- Sierra Gardens to Sierra College Campus, Eureka and Douglas** -- Route E operates in a clockwise loop Monday through Friday every other hour from 7:53 am to 6:30 pm. This route does not operate on weekends. The Sierra Gardens Transfer Point provides a connection to local routes A, B, C, F, G, L, and the Commuter service. This route follows I-80 to Rocklin Road eastbound, then south on Sierra College Boulevard to Renaissance Creek Shopping Center. The route then heads west on Eureka and Douglas, and then circles around the Sierra Gardens transfer point. Major destinations along this route include Sierra College and Kaiser Roseville Medical Center, plus Deer Valley

² "Interlining" is the practice of scheduling an individual vehicle to operate different routes in succession.

Apartments and several grocery and retail shopping centers. This route interlines with Routes C, G, and F.

- **Local Route F- Sierra Gardens, Sunrise, Cirby and Rocky Ridge** -- Route F provides service Monday through Friday every other hour from 7:30 am to 5:53 pm. This route does not operate on weekends. Route F operates as the complement to Route C with service in the counter-clockwise direction starting at South Cirby, north on Rocky Ridge, west on Douglas, a loop north onto North Sunrise then south on Santa Clara, looping west to Sierra College Gateway Campus and south on Sunrise, east on Cirby and South Cirby as far as County Villa Mobile Home Park, then returning north on Rocky Ridge to Douglas Boulevard and west to the Sierra Garden Transfer Point. At Sierra Gardens, connections are available to local routes A, B, C, E, G, L and the Commuter Service. Like Route C, this route serves Kaiser Permanente Medical Center, Sierra College Gateway Campus, Oakmont High School, Maidu School and Regional Park and Rocky Ridge Town Center.
- **Local Route G- Sierra Gardens, Douglas, Eureka, and Sierra College Campus** -- Route G operates as the complement to Route E, travelling in the counter-clockwise direction serving Sierra College, the Sierra Gardens transfer point, Kaiser Roseville Medical Center, Deer Valley Apartments and Renaissance Creek Shopping Center. This route operates every other hour from 6:35 am to 5:30pm, Monday through Friday. This route does not operate on weekends. Connections to Routes A, B, C, E, F, L and Commuter are available at the Sierra Gardens Transfer Point.
- **Local Route L – Civic Center, Harding, Lead Hill, Douglas, Sierra College Boulevard** -- Route L operates Monday through Friday on an hourly basis from 6:25am to 6:15pm. Saturday service operates hourly from 8:25am to 5:02pm. This route goes from the Civic Center Transfer Point to the Lead Hill area, the Kaiser Medical Center, the Renaissance Creek Shopping Center and Sierra Gardens Transfer Point. The Civic Center Transfer point offers connections to local routes A, B, D and Commuter Service. The Sierra Gardens Transfer Point offers connections to local routes A, B, C, E, F, G and Commuter Service.
- **Local Route M- Galleria to West Park** -- Route M operates Monday through Friday bi-directionally from 5:57 am to 9:57 pm and on Saturdays from 7:57 am to 4:57 pm. This route consists of a long east-west route operating between the Vintage Square senior housing complex at the corner of Market Street and Pleasant Grove Boulevard, eastward on Pleasant Grove across State Highway 65 to Fairway Drive, connecting to WinCo Foods and a Costco outlet, then south on Fairway Drive and Galleria Boulevard, ending at the Galleria at Roseville and the Galleria Transfer Point. Other destinations along Route M include Target and Kohl's, Walmart and Sam's Club, Safeway, a State DMV office, Silverado Middle School, Woodcreek High School, Roseville Aquatics Complex, Sun City Roseville, Eskaton Roseville Manor, CVS and Vintage Square. Passengers can make connections at the Galleria to local routes A, B and S, as well as

Commuter bus and Placer County Transit. Certain stops in the Woodcreek Oaks area are only served on weekday evenings by request only.

- **Local Route R- Louis/Orlando, Foothills Blvd** -- Route R operates Monday through Friday during the peak hours of 7:30 am to 8:57 am and from 3:53 pm to 5:20 pm, in both directions of travel. There is no weekend service on this route. This route operates mainly along Foothills Boulevard beginning at Pasco Scientific / Pride Industries on the north, then turning east on Cirby and south on Riverside, ending at the Louis/Orlando Transfer Point. At Louis/Orlando, riders can connect to Routes A, B, and Commuter Service, as well as Sacramento Regional Transit and Placer County Transit. Destinations along this route include Pride Industries, Hewlett-Packard, Telefunken, Save Mart, California Family Fitness, Bel Air, Rite Aid and Crethaven Park.
- **Local Route S- Galleria to Santucci Justice Center** -- Route S operates 6.5 round trips Monday through Friday between the Galleria Transfer Point and the Placer County Santucci Justice Center which includes the Placer County Superior Court. Service is provided on approximately hourly frequencies, except that one late morning and one mid-afternoon run is not operated.

ROSEVILLE COMMUTER SERVICE

Commuter Express to Sacramento

Roseville Transit operates ten morning and evening commuter routes between Roseville and downtown Sacramento Monday through Friday during the peak commute hours of 5 - 9 am and 3:30 - 6:30 pm. Various Park-and-Ride (PnR) lots and other key locations are served in Roseville. As shown in Table 2, various runs serve differing stops within Roseville, though all but two runs serve the Taylor Road/I-80 PnR in both directions.

Within downtown Sacramento, all buses enter via 12th Avenue and exit via 16th Avenue, with service as far south as P Street and as far west and 15th Street. All AM buses operate consistent counterclockwise loop serving 15 stops in the downtown area, while all PM buses operate a consistent loop generally 1 to 2 blocks off of the AM loop serving 13 stops.

As also shown in Table 7, three AM runs and three PM runs provide “reverse commute” service for commuters to Roseville from downtown Sacramento. The Civic Center Transfer Center is served in the reverse direction in both the AM and PM periods, while Galleria and Louis/Orlando are served by AM reverse commute runs only and Sierra Gardens and Taylor/I-80 are served by PM reverse commute runs only.

TABLE 7: Summary of Existing Commuter Service

In Order of Downtown Service Times

Other Downtown Stop Times Not Shown

Stop	AM 1 ⁽¹⁾	AM 2	AM 3	AM 4	AM 7	AM 6 ⁽¹⁾	AM 8	AM 10	AM 9
Foothills/Junction	--	5:35	6:00	--	--	--	--	--	--
Mahany PnR	--	5:41	6:07	--	--	--	--	--	7:10
Roseville Amtrak	--	--	6:17	--	--	--	--	--	--
Galleria	--	5:51	--	--	--	--	--	--	--
Louis/Orlando	--	--	--	6:00	--	--	--	--	--
Cirby/Sunrise	--	--	--	6:04	--	--	--	--	--
Maidu PnR	5:10	--	--	6:09	--	--	--	--	--
Taylor/I-80 PnR	5:17	6:00	--	6:18	--	6:45	6:55	7:18	7:23
Saugstad PnR	--	--	6:21	--	6:50	--	--	7:27	7:31
Downtown P&7th	6:01	6:37	6:58	6:54	7:24	7:30	7:40	8:14	8:18
<i>Galleria</i>	<i>Reverse</i>		7:44	--	--	--	--	--	--
<i>Louis/Orlando</i>	<i>Commute</i>		--	7:24	--	--	--	--	--
<i>Civic Center</i>			--	--	--	--	--	--	9:00

Stop	PM 1	PM 2	PM 3	PM 4	PM 6	PM 7	PM 8	PM 9	PM 10
<i>Sierra Gardens</i>	<i>Reverse</i>		--	--	--	3:40	--	--	--
<i>Taylor/I-80 PnR</i>	<i>Commute</i>		--	--	--	--	--	4:15	4:37
<i>Civic Center</i>			--	--	--	--	--	--	4:47
Downtown P&7th	3:31	3:36	3:46	3:57	4:11	4:26	4:41	4:56	5:26
Louis/Orlando	4:05	--	--	--	--	--	--	--	--
Taylor/I-80 PnR	--	4:27	4:37	4:48	4:55	5:10	5:25	6:00	--
Cirby/Sunrise	4:11	--	--	--	--	--	--	--	--
Maidu PnR	4:15	--	--	--	--	5:17	--	--	--
Saugstad PnR	4:29	--	--	--	5:07	5:32	--	6:12	6:22
Roseville Amtrak	--	--	--	--	5:16	--	--	--	--
Foothills/Junction	--	--	--	--	5:25	--	--	6:30	--
Mahany PnR	--	--	--	--	5:33	--	--	6:38	--
Taylor/I-80 PnR	--	--	--	--	--	--	--	--	6:37

Note 1: Monday to Thursday only.

Game Day Express

Game Day Express is a special service which began in October 2016 and provides Roseville residents transportation to Sacramento Kings basketball games at the Golden 1 Center in downtown Sacramento. The bus departs the Civic Center Transfer Point one hour and 15 minutes before game time. Tickets for the service can be purchased on-line, over the phone, at the Roseville Transit office, or on the bus. General public passengers are charged \$4.50 one-way or \$9.00 per round-trip. Discount passengers with a valid discount ID card can ride for \$3.25 one-way and \$6.50 round trip.

ROSEVILLE DIAL-A-RIDE AND ADA PARATRANSIT SERVICE

Roseville Transit Dial-A-Ride provides curb-to-curb public bus service and complementary ADA (Americans with Disabilities Act) paratransit service. Dial-A-Ride is a general public shared ride

transit service that operates within the city limits of Roseville. Passengers are transported in small buses that are ADA compliant and equipped with wheelchair lifts and securement areas.

Roseville ADA Paratransit service is also a shared ride curb to curb service but is only available for individuals with disabilities preventing them from using local routes. The ADA Paratransit Service operates Monday through Friday from 5:45 am to 10:00 pm and on weekends from 8:00 am to 5:00 pm, with limited to no service on holidays.

The ADA Certification Process

The City of Roseville follows the Federal Transit Administration's ADA guidelines to determine a person's eligibility based on their ability to get to and from the bus stop, board and exit the bus, and the ability to understand and navigate the local service.

Applicants have 60 calendar days in which to return a completed, signed, original application to the Alternative Transportation office by mail or in person. All information is kept confidential and will be used to determine if the applicant can ride the fixed route system or if the applicant is eligible for Paratransit services. A determination is made in 21 days. If ADA Paratransit eligibility is denied, a letter indicating the reason(s) for the denial and how to appeal the decision will be mailed. Denial of eligibility applies only to Roseville ADA Paratransit service.

Eligibility may be granted to an individual if the disability or incapacity is expected to last more than 90 days and is long-term but not permanent. Roseville will honor ADA Paratransit certifications from other transit agencies. An individual from out-of-town requesting ADA Paratransit Service must present verification of their ADA Paratransit certification to the Alternative Transportation office prior to the first reservation. Visitors using the service more than 21 days will be required to submit a Roseville Transit ADA Paratransit application.

ROSEVILLE TRANSIT FARE STRUCTURE

Roseville Transit's fares are structured based on passenger category and media type. Multi-trip passes are also available for purchase. Discounted fares are available for qualified passengers showing the following forms of valid identification: Roseville Transit Discount ID Card, middle or high school issued ID card, Medicare card, DMV Senior Citizen photo ID card, and discount ID card issued by another transit agency. The Roseville Transit Discount ID card is issued to qualified persons with disabilities, youth ages 13 to 18, and seniors ages 60 and older. Children age 4 and under ride free (up to 2 children) with a fare paying adult. Roseville Transit's fare structure is summarized in Table 8.

Stop and Shop Validation

If transit passengers spend \$10 or more at the Galleria at Roseville, they can receive a free trip home on Roseville Transit local fixed routes (excludes purchases at a few department stores).

Connect Card Program

Connect Card is a relatively new electronic transit fare payment system for Sacramento Regional public transit operators. Connect Card is a “smart card” - a plastic credit card with an electronic chip that allows the rider to purchase a set number of rides in advance. That value is stored in the card and the appropriate amount is deducted from the card each time it is used. The primary benefit to the Connect Card program is that a passenger only needs one card to ride many of the regional services, consisting of Sacramento Regional Transit, El Dorado Transit, Etran, Folsom Stage Line, Placer County Transit, Roseville Transit, SCT/Link, YoloBus, and Yuba-Sutter Transit. To obtain a Connect Card, riders create an account online and load transit fares onto the Connect Card through their checking account. As Connect Card is a relatively new program, not all passengers are currently using it. Generally more commuters use Connect Card than other types of passengers

Fare Category	Local Fixed		
	Route	Dial-a-Ride	Commuter
Single Cash Fare			
General Public	\$1.50	\$3.50	
Discount (with ID)	\$0.75	\$2.50	
Same-Day Trips		\$7.50	
Non-Roseville Resident			\$4.50
Roseville Resident & Reverse			\$3.25
Children ages 4 and under	Free up to two per paying adult		
Local Daily Pass (Electronic)			
General Public	\$4.00		
Discount (with ID)	\$2.00		
Local 10-Ride Pass			
General Public	\$15.00	\$37.50	
Discount (with ID)	\$7.50	\$25.00	
Same-Day Trips			
Non-Roseville Resident			
Roseville Resident & Reverse			
Local 30-Day Pass			
General Public	\$58.00		
Residents			\$110.00
Non-Residents			\$155.00

Source: Roseville Transit

ROSEVILLE TRANSIT FACILITIES AND EQUIPMENT

The City of Roseville Alternative Transportation Administration office is located at 316 Vernon Street, near the Civic Center Transfer Point. Operations are performed by the contractor and are based at the City of Roseville corporation yard at 2075 Hilltop Circle. Vehicle maintenance is conducted by City of Roseville staff at the same location.



Bus Shelter Inventory

The City of Roseville has an extensive list of benches and shelters located at around 300 bus stop locations. Of that total, 43 shelters date back to 1996 or 1998 and may need to be replaced or upgraded, 6 are in the process of being updated, and 3 locations had only benches and no shelters.

Park-and-Ride Facilities

Several Park and Ride lots located within the City of Roseville and served primarily by commuter routes and some local fixed routes. Park and Ride lot characteristics are as follows:

- Church Street and North Grant Street – Roseville Amtrak Station
 - 78 parking spaces available
 - Bike lockers
 - Served by Roseville Transit
 - Served by Amtrak Capitol Corridor, Greyhound lines
- Foothills Boulevard and Junction Boulevard California Family Fitness
 - 25 parking spaces available
 - Served by Roseville Transit
- Louis Orlando Transit Center - Louis Lane and Orlando Avenue
 - 44 parking spaces
 - 2 electric vehicle charging stations
 - Bike lockers
 - Served by Roseville Transit, Sacramento Regional Transit, and Placer County Transit
- 1000 Pleasant Grove Boulevard - Highland Crossing Shopping Center
 - 25 parking spaces available
 - Served by Roseville Transit

- Pleasant Grove Boulevard and Michener Drive – Mahany Park
 - 42 parking spaces available
 - Bike lockers
 - Served by Roseville Transit

- Maidu Drive and Rocky Ridge Drive – Maidu Regional Park
 - 50 parking spaces available
 - Bike lockers
 - Served by Roseville Transit

- Galleria Circle and West Drive – Galleria Transfer Point
 - 50 parking spaces available
 - Served by Roseville Transit and Placer County Transit

- Douglas Boulevard and Buljan Drive – Saugstad Park
 - 91 parking spaces available
 - Bike lockers
 - Served by Roseville Transit

- Stanford Ranch Road and Five Star Boulevard
 - 35 parking spaces available

- Taylor Road and Eureka Road - Taylor & I-80 Park & Ride Lot (adjacent to Golfland Sunsplash)
 - 150 parking spaces available
 - Bike lockers
 - Served by Roseville Transit and Placer County Transit

Roseville’s Fleet Inventory

The City of Roseville has an extensive fleet of revenue and non-revenue vehicles as shown in Appendix C. There are sixteen (16) vehicles for local fixed route use. These vehicles range in passenger capacity from 28 to 32 seated passengers. Eleven (11) 40 foot buses for the commuter routes. These vehicles can hold from 39 – 45 seated passengers. The Dial-A-Ride fleet includes 11 seventeen-passenger buses. The City of Roseville also maintains ten non-revenue vehicles used for staff/supervisor transport. Four of the fixed route buses and four commuter route buses have met minimum service life requirements and are due for replacement. Three of the oldest busses have more than 500,000 miles. All of Roseville’s bus fleet is operating on either diesel or regular gasoline.

Route Observations

Consultant staff rode a selection of Roseville Transit local fixed routes and one commuter route in November 2017 to gain a better understanding of areas served and potential issues and bus stop deficiencies. Observations consisted of the following:

- *On-time Performance*- Most of the local fixed routes observed ran on-time. In fact, during the middle of the day, some routes arrived at checkpoints early and waited. Route E and the Commuter Route were slightly behind schedule. Drivers indicated that during the holidays and peak commute times, traffic can delay the bus routes.
- *Operational Issues* - Overall, Roseville Transit buses are clean, appear to be well maintained and stocked with current transit information. Bus drivers are helpful and follow protocol by calling out major stops for passengers. Occasionally, if the driver needs to tie down a wheelchair or walker, there is a few minutes of delay. Bicycle boardings are relatively quick and do not slow down the boarding process. East Roseville Ave and Sunrise Ave can be congested and cause short delays.
- *Bus Stop Deficiencies* – The Galleria Transfer Center can accommodate up to four Roseville Transit buses on the upper level and four PCT buses on the lower level. Sufficient shelters and benches are available for waiting passengers and ample convenient parking is located nearby. There didn't appear to be room on the upper level for a fifth bus.
- *Other Issues and Observations* – The peak travel times are in the morning and late afternoon with lower levels of during the day for medical appointments or other essential needs. Typical transit generators are the Galleria, Foothills Shopping Center, Walmart, library and Vintage Square. The City of Roseville is a mixture of commercial centers and largely low-density housing developments (mostly single family homes). As such it is difficult to serve all portions of each development without creating long passenger travel times and high operating costs. Therefore, buses are usually located on the major arterials adjacent to the development, which is not always convenient for residents.

OTHER REGIONAL TRANSIT PROVIDERS

Amtrak Capital Corridor

Roseville Transit passengers can access Amtrak Capital Corridor trains (traveling as far west as San Jose and as far east as Auburn) at the Amtrak station (close to a Route D stop). There is currently only a single Capital Corridor train serving Roseville 7:03 AM on weekdays and 8:43 AM on weekends in the westbound direction, and 5:48 PM / 8:38 PM on weekends. Three to

seven daily Amtrak Thruway buses also provide service to and from the Sacramento rail station for passengers traveling by train west of Sacramento.

Placer County Transit

Placer County Transit is the county operated regional transit provider for all of western Placer County. Roseville Transit passengers can transfer directly to PCT Lincoln Sierra College and Auburn Light Rail routes at the Galleria Transfer Point and to the PCT Auburn Light Rail Route at Louis and Orlando or at Sierra College.

Placer County also provides two general public Dial-A-Ride service that provide connection opportunities to Roseville Transit:

- The Rocklin/Loomis DAR (Monday-Friday 6:00 AM to 7:55 PM, Saturday 9:00 AM to 3:55 PM) serves locations in northeast Roseville, including the Galleria.
- The Granite Bay DAR (Monday-Friday 9:00 AM to 11:00 AM, and 2:00 PM to 4:00 PM) provides the opportunity to connect with Roseville Transit on stops along Sierra College Boulevard.

Sacramento Regional Transit

The Sacramento RT transit system connects with Roseville Transit's local routes at the Louis/Orlando transfer hub (along Auburn Avenue) in southwest Roseville. At present, three RT routes serve this hub:

- Route 21 (Sunrise-Citrus Heights) provides service to Sunrise Mall and Mather Field/Mills Station every half-hour between 6:24 AM and 9:58 PM on weekdays, every hour between 10:52 AM and 6:52 PM on Saturdays, and every hour between 10:55 AM and 6:55 PM on Sundays.
- Route 93 (Hillsdale) provides service to Watt/I-80 (LRT connection) via McLellan Business Park generally every half hour between 5:41 AM and 9:34 PM on weekdays and every hour from 8:00 AM to 6:35 PM on Saturdays and Sundays.
- Route 103 (Auburn Boulevard) provides commute period service to Watt/I-80 via Auburn Road, with four westbound departures between 5:51 AM and 6:51 AM, and four eastbound arrivals between 4:33 PM and 6:03 PM.

It should be noted that Sacramento RT is currently conducting a route realignment study that could change routes and services to Louis/Orlando. Also, Sac RT's new SmaRT Ride micro transit system services the Kaiser Riverside medical campus per an agreement between the City of Roseville and Sacramento Regional Transit.

OTHER CITY OF ROSEVILLE ALTERNATIVE TRANSPORTATION SERVICES

South Placer Transportation Call Center

The City of Roseville contracts with the Western Placer Consolidated Transportation Services Agency (WPCTSA) to operate the South Placer Transportation Call Center. The Call Center provides transit riders with one phone number for information and reservations for all demand response services in the South Placer area including Roseville Transit, Placer County Transit and Health Express. The program is intended to reduce call reservation staff time and costs for the various transit agencies, and to increase overall efficiency of the public transit process. When a call for a ride comes in, Call Center staff determine which operator (including Health Express) should receive the trip booking.

Transit Ambassador Program

In partnership with WPCTSA, the City of Roseville operates a Transit Ambassador Program for Western Placer County services. The program includes conducting a variety of outreach efforts to existing and potential passengers, such as face-to-face assistance to passengers, transit training for potential transit users and attending outreach events. The City of Roseville manages the program, recruits and trains volunteers and provides insurance for the volunteers. WPCTSA pays up front for insurance for volunteers and bills Roseville for the cost. Volunteers undergo anywhere from 6 to 30 hours of training. The cost to the City of Roseville for administering the Transit Ambassador program was \$37,000 in FY 2016/17.

In FY 2016/17, a total of seven Transit Ambassadors contributed 469 volunteer hours assisting passengers on public transportation and providing support to staff at outreach events throughout the western Placer region.

Mobility Training Program

The City of Roseville also operates a mobility training program to individuals and groups using Paratransit mobility trainers. This is an extensive program designed to teach persons with disabilities, seniors, or others requiring assistance how to live more independently by riding the bus. It covers transit services throughout the south Placer area.

This chapter first provides a review of transit ridership. This is followed by a review of existing transit funding sources and costs. Operational characteristics of the services are then reviewed. Finally, the existing marketing program is discussed.



RIDERSHIP PATTERNS AND ANALYSIS

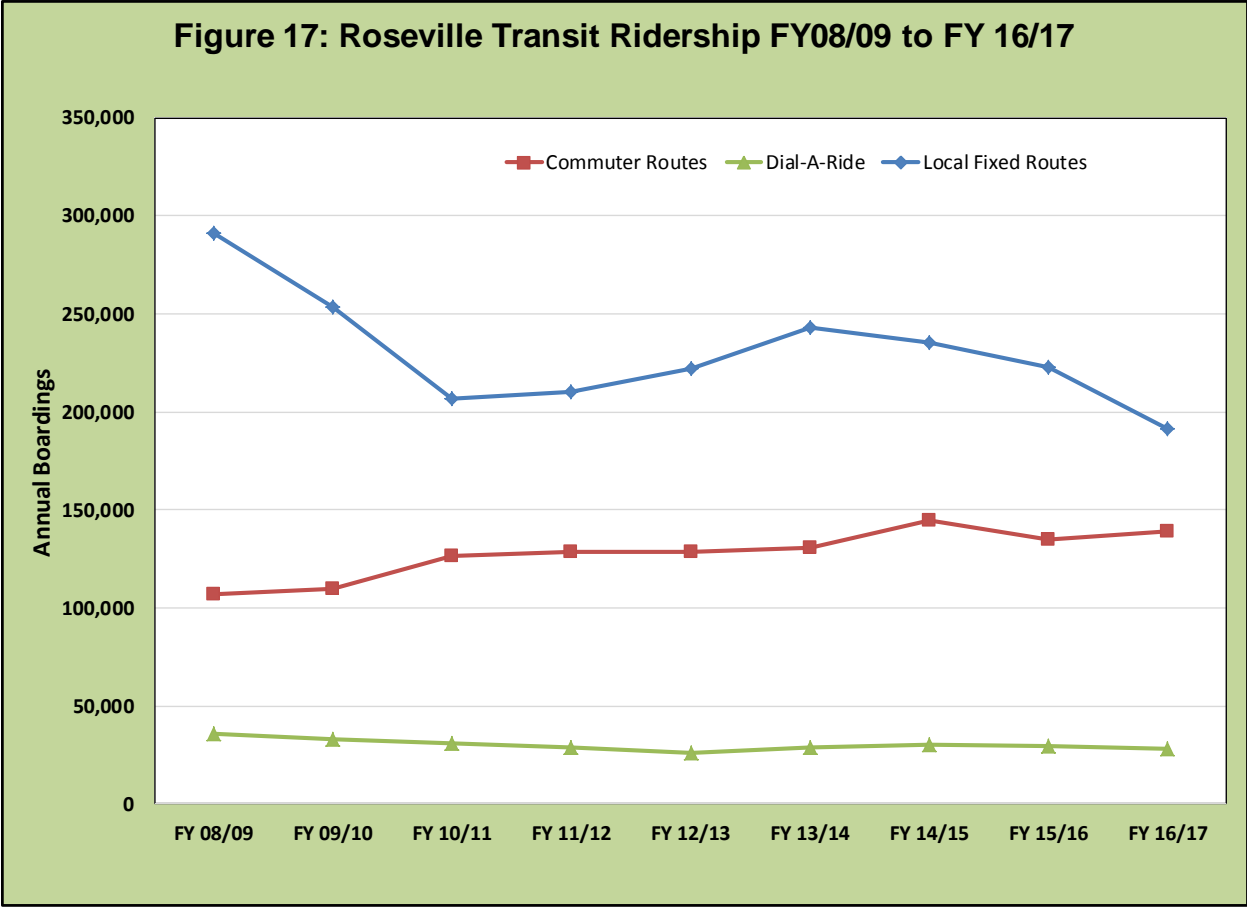
Historical Ridership

As with many public transit operators, ridership on Roseville Transit peaked in FY 2008/09 and has generally seen a downward trend since then. FY 2016/17 systemwide ridership on Roseville Transit of 357,313 is down 17 percent from FY 2008/09 levels (433,854), as shown in Table 9 and Figure 17. By service, the local fixed routes have seen the largest decline in ridership (34 percent), from 291,267 to 192,701 passengers per year. Ridership on the DAR has decreased 20 percent from 35,499 to 28,404 between FY 2008/09 to FY 2016/17. In contrast, ridership on the Commuter Service increased 30 percent from 107,088 to 136,208 in FY 2016-17; however the peak in ridership occurred in FY 2014/15 (144,445).

Table 9: Roseville Transit Historical Ridership

Fiscal Year	Local Fixed Routes	Commuter Routes (1)	Dial-A-Ride	Total Systemwide
FY 08/09	291,267	107,088	35,499	433,854
FY 09/10	253,747	109,584	32,762	396,093
FY 10/11	207,085	126,214	30,811	364,110
FY 11/12	210,340	128,824	28,834	367,998
FY 12/13	222,283	128,570	25,981	376,834
FY 13/14	243,298	130,448	28,654	402,400
FY 14/15	235,475	144,445	30,200	410,120
FY 15/16	222,689	134,880	29,505	387,074
FY 16/17	191,800	139,084	28,408	359,292
% Change from FY 08/09 to FY 16/17	-34%	30%	-20%	-17%

Note 1: Includes Game Day Express Ridership
 Note: Data for FY 2011/12 - FY 2014/15 from Triennial Performance Audit. Data from FY 2015-16 to FY 2016-17 from Roseville Transit Quarterly Performance Reports.



Nationwide Trends Contributing to Bus Ridership Decline

The decline in fixed-route transit ridership in Roseville mirrors a general decline in transit ridership nationwide. Research conducted by the American Public Transportation Association (APTA) in 2017 provides several different potential explanations for the recent nationwide downward trend in public transit ridership³. The price of gasoline is relatively low and down from 2008 levels. There has also been a significant increase in the number of auto loans since 2009. Another factor could be that telecommuting is more common. Not only does this decrease the number of days employees actually commute to work, it makes the cost of a monthly transit pass less attractive. If employees do not have a monthly pass they are likely not as “loyal” to the transit system, and may be more likely to find other modes of transportation to work. Employees of Transportation Network Companies (TNCs) (who formerly were public transit riders) may see driving for the TNC as a way to pay for the cost of auto ownership. Also, TNCs now offer “ridesplitting” services which may be more attractive to some passengers. Lastly, gentrification may have displaced some transit dependent groups to less transit oriented areas. Interestingly, while total bus ridership is down by 13 percent from 2000 – 2015, rail ridership is up by 46 percent in the US.

³ APTA Policy and Development Research, November 2017, *Understanding Recent Ridership Changes*

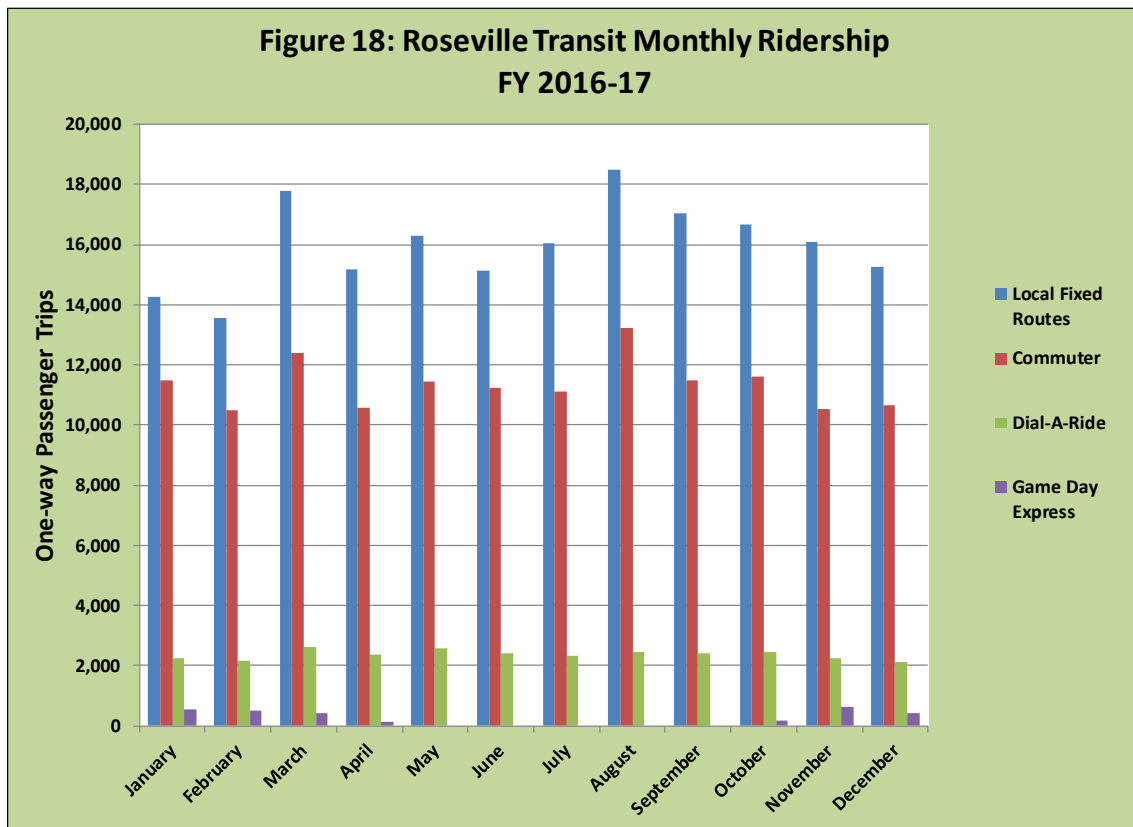
Monthly Ridership Trends

Table 10 and Figure 18 present FY 2016/17 Roseville Transit ridership by month. August is the busiest month for the local fixed routes (18,494 trips), when ridership is 16 percent higher than the average month. Commuter route ridership also peaks in August (13,225 trips, or 16 percent higher than average), whereas March was the busiest month for the Dial-A-Ride (2,623). Game Day Express service only operated for seven months of the year, and did not operate from May through September. The highest ridership for Game Day Express was 618 rides in November, coinciding with basketball season.

Table 10: Western Placer Commuter Service Summary

	Annual Data			Performance Measure				
	Ridership	Vehicle Hours	Vehicle Miles	Operating Cost	Pax per Hour	Pax per Mile	Operating Cost per Hour	Operating Cost per Pax
Roseville Transit	137,102	6,327	242,187	\$837,296	21.7	0.57	\$132.34	\$6.11
PCT Commuter	70,677	3,163	101,279	\$865,744	22.3	0.70	\$273.74	\$12.25
Total	207,779	9,490	343,466	\$1,703,040	21.9	0.60	\$179.46	\$8.20

Source: FY 2016-17 data from individual operators.



Ridership by Passenger Type

Commuter Routes

Table 11 presents ridership on the Commuter Routes by type of fare paid for FY 2016/17. As noted above, Roseville has a different fare structure for City of Roseville residents and non-residents. The majority of commuter passengers (77 percent) are Roseville residents.

Fare Type	Roseville Resident	Non-Resident	Total
Cash	1,097	640	1,737
10 Ride	28,542	6,191	34,733
30 Day	66,787	13,592	80,379
Monthly Roseville/Capital Corridor	8,267	630	8,897
PCE Add Fare	--	--	8,421
Amtrak Monthly	--	--	876
Short Fare	--	--	416
Free	--	--	0
Total			135,459
Percent of Total			
Cash	1%	0%	1%
10 Ride	21%	5%	26%
30 Day	49%	10%	59%
Monthly Roseville/Capital Corridor	6%	0%	7%
PCE Add Fare	--	--	6%
Amtrak Monthly	--	--	1%
Short Fare	--	--	0%
Free	--	--	0%
Total	77%	16%	100%

Source: Roseville Transit 12 June Com Stats 2017

Commuter passengers tend to be frequent riders. As such, of the Roseville residents 64 percent boarded with a 30 day pass, 27 percent used a 10 day passes and 8 percent used the Monthly Roseville/Capital Corridor pass. Only 22 percent of commuter passengers were non-residents (including persons transferring from Placer Commuter Express service, who are presumed to not be residents). Proportions for type of fare media used by non-residents are similar to the residents with the majority using 30 day passes. Roughly 6.2 percent of commuter passenger boardings are made by PCT commuter pass holders who paid the additional \$.50 fare to ride a Roseville Transit commuter bus. Less than one percent of boardings were made with an Amtrak Capital Corridor pass.

Local Fixed Routes

As shown in Table 12, there are roughly the same proportion of boardings made by general public passengers as are made by discounted passengers (42 percent each). Students represent 1.3 percent of the boardings, while 10 percent of passengers boarding were transferring from PCT or Sac RT. Lastly, 3.2 percent of passengers were free (typically less than 5 years of age) and

0.9 percent were short fare. Of the 42 percent discounted passengers, 32 percent (or 13 percent of the total) are ADA, while 68 percent (or 29 percent of the total) are others entitled to the discount fare.

Table 12: Roseville Transit Ridership by Passenger Type 2016/17		
	Annual Ridership	
	#	%
Local Fixed Routes		
General Public	79,620	42.6%
Discount	78,519	42.0%
Student	2,474	1.3%
Free	5,989	3.2%
Transfers from PCT and RT	18,693	10.0%
Short Fare	1,678	0.9%
Total	186,973	
Dial-A-Ride		
General Public	4,299	17.2%
Discount	20,513	82.2%
Same Day	22	0.1%
Free	106	0.4%
Total	24,940	
Source: Roseville Transit 12 June DAR Stats 2017, 12 June FR Stats 2017		
Note: Ridership by fare totals do not represent " Adjusted Total" and therefore do not match totals in other tables.		

Dial-A-Ride

For the Dial-A-Ride service, 82 percent of passenger boardings paid a discounted fare. Less than one percent of boardings were considered “same day” trips.

ADA Paratransit Ridership

The Roseville Transit ADA complementary paratransit service carried 7,699 one-way passenger trips in FY 2016-17. Roughly 24 percent of these trips were subscription trips and 16 percent represent trips taken by a Personal Care Attendant (PCA). The Alta California Regional Center pays for roughly ¼ of the ADA Paratransit trips.

Ridership by Day of Week

Table 13 identifies weekday ridership versus weekend ridership for the local fixed route and DAR service. For the fixed routes, Saturday ridership was only 35 percent of average weekday ridership, indicating that overall only 6.6 percent of ridership was carried on Saturdays. For the DAR, Saturday ridership was 32 percent of average weekday ridership, while Sunday ridership

was 33 percent of average weekday ridership. Saturday generates 5.7 percent of annual ridership while Sunday generates 5.9 percent. The DAR is the only service which operates on Sundays.

Table 13: Roseville Transit Ridership by Day of Week

	Fixed Routes				Dial-A-Ride			
	Annual	% of Total	Average Daily	% of Average Weekday	Annual	% of Total	Average Daily	% of Average Weekday
Weekday	174,584	93.4%	685	100%	28,088	88.4%	109	100%
Saturday	12,389	6.6%	238	35%	1,800	5.7%	35	32%
Sunday	--	--	--	--	1,888	5.9%	36	33%
Total	186,973	100.0%			31,776	100.0%		

Note: Unadjusted totals
Source: 12 June FR Stats 2017, 12 June DAR Stats 2017

CURRENT FINANCIAL CONDITIONS

Operating Revenues

Table 14 provides annual revenues available to the Roseville Transit program as per the FY 2016-17 City of Roseville Financial Statements. As shown, Transportation Development Act Funds (TDA) represent the largest revenue source for transit (69.5 percent), followed by passenger fares (18.8 percent). During this fiscal year, Roseville Transit did not receive any Federal Transit Administration grants (although this has occurred in prior years).

Operating Expenses

Table 15 presents Roseville Transit operating expenses and cost model for FY 2016-17. The operating cost of the Roseville Transit program in FY 2016-17 was \$5.5 million. When developing and evaluating service alternatives, it is useful to develop a “cost model,” which can easily show the financial impact of any proposed changes. Table 15 also presents the FY 2016-17 cost allocation model for Roseville Transit operations. It should be noted that the cost model

Table 14: Roseville Transit Operating Revenues

	FY 2016-17 Actual	%
Passenger Fares	\$1,016,447	18.8%
Auxiliary Revenue ⁽¹⁾	\$148,708	2.7%
Non-Transportation Revenue ⁽²⁾	\$139,368	2.6%
SB 325 Allocations (Transportation Development Act)	\$3,758,224	69.5%
Transit Assistance Funds	\$348,287	6.4%
FTA Funds	\$0	0.0%
Other State Grants	\$0	0.0%
Total Operating Revenues	\$5,411,034	100%

Source: Data originating from City of Roseville Financial Statements with review by Finance Dept. Financial Analyst and Alternative Transportation Div. Financial Analyst.

Note 1: Advertising Revenue, Program Revenue, Accident Recovery, Reimbursement
 Note 2: Interest Earnings, Transfers In, Misc Revenue, Development Contribution

shows the total operating cost rather than the total subsidy, which is total operating cost minus passenger fare revenues. Each cost item is allocated to that quantity on which it is most dependent. Maintenance costs, for example are allocated to vehicle service miles. This provides a more accurate estimate of costs than a simple total-cost-per-vehicle-hour factor, which does not vary with the differing mileage associated with an hour of service on DAR versus the fixed-route. It should also be noted that this model excludes depreciation.

MV Transportation, the operating contractor, is paid a fixed monthly fee and per revenue vehicle hour (the time which vehicles are in service) for services provided. Fuel and vehicle maintenance (which represents per mile costs) are provided by the City of Roseville. As such, an increase in deadhead travel would increase the City’s per mile cost but not per hour costs. The appropriate Roseville Transit cost model service factors therefore reflect vehicle revenue service hours but total vehicle miles (includes both revenue and deadhead miles). For FY 2016-17, the Roseville Transit equation is:

$$\begin{aligned} \text{Operating Cost} &= \$1.15 \times \text{total vehicle miles} \\ &+ \$36.41 \text{ per vehicle service hour} \\ &+ \$2,649,281 \text{ annually for fixed costs} \end{aligned}$$

This equation can be used to estimate the cost of any changes in service, such as the operation of additional routes or changes in service span as well as evaluate Roseville Transit performance by route.

Table 15: Roseville Transit Expenses and Cost Model

FY 2016 - 2017 Actuals

Operating Expense Category	Total	Fixed	Cost Model Variable	
			Vehicle Revenue Hour	Vehicle Service Mile
City Administrative Staff Salaries and Benefits	\$387,695	\$387,695	\$0	\$0
Transit Operations Services and Supplies	\$636,502	\$636,502	\$0	\$0
Fuel	\$423,531	\$0	\$0	\$423,531
Vehicle Maintenance	\$608,932	\$0	\$0	\$608,932
MV Operating Contract	\$3,450,450	\$1,622,295	\$1,828,156	\$0
Casualty and Liability Costs	\$27,800	\$0	\$27,800	\$0
Utilities	\$2,790	\$2,790	\$0	\$0
Total Operating Costs	\$5,537,700	\$2,649,281	\$1,855,956	\$1,032,463
FY 2016/17 Service Quantities			50,969	899,317
		Cost Model FY 2016/17 = \$2,649,281 +	\$36.41	+ \$1.15
			per Veh-Hour	Per Veh-Mi

Source: City of Roseville Financial Statements. Excludes depreciation.

FY 2016/17 OPERATING STATISTICS AND PERFORMANCE

Systemwide

Table 16 presents operating data and performance by type of service for Roseville Transit. A review of this data indicates the following:

- Systemwide productivity (as measures in one-way passenger-trips per vehicle revenue hour) for Roseville Transit is 7.1 trips per vehicle revenue hour. This is slightly lower than the City adopted standard of 8.0 trips per hour.
- As a whole Roseville Transit carries 0.4 passenger-trips per vehicle service mile and costs \$15.34 per trips to operate. Systemwide operating cost per vehicle revenue hour is \$108.65.
- The Commuter Routes are by far the most productive type of service.
- Subsidy per trip reflects the desired output of a transit service (ridership) and the most important input (public subsidy). A lower figure is preferred, as it reflects that less public funding is required for each passenger served. Operating subsidy per trip by type of service is displayed in Figure 19. As shown, DAR is the most expensive type of service with a subsidy per trip of \$40.01, while the Commuter Service requires only \$1.25 in subsidy per passenger-trip. Operating subsidy per trip systemwide is \$12.07.

Table 16: Roseville Transit Performance - Systemwide

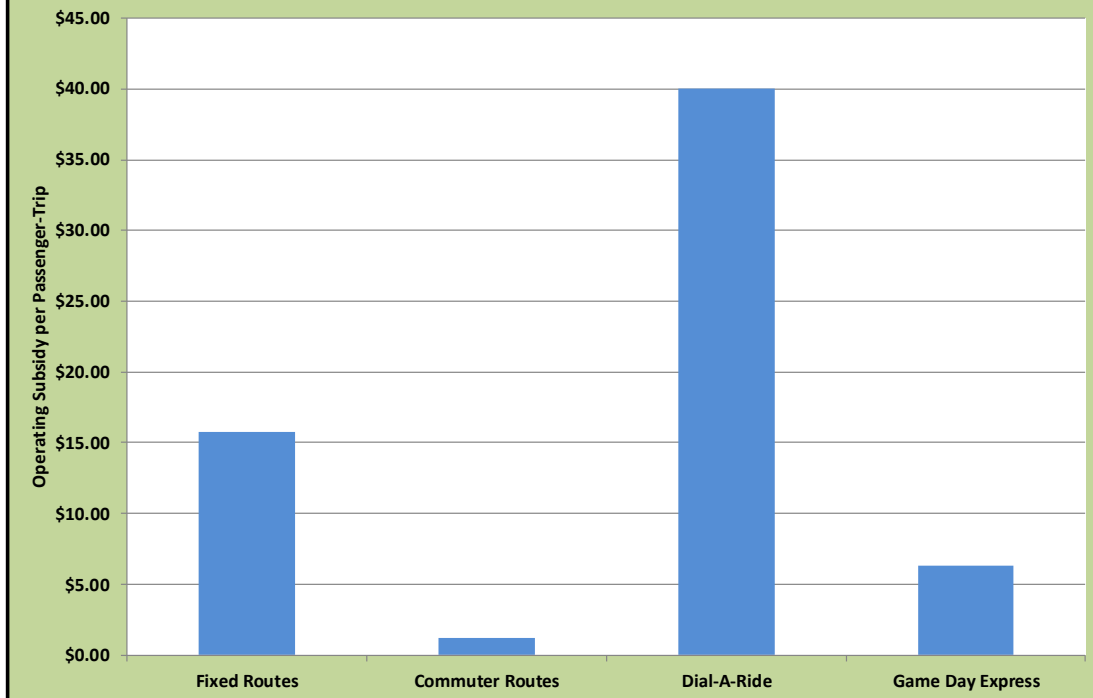
FY 2016-17

Input Data -- Annual						
	Passenger Trips	Vehicle Revenue Hours	Vehicle Service Miles	Operating Cost	Fare Revenue	
Fixed Routes	192,701	32,753	470,644	\$3,435,382	\$402,432	
Commuter Routes	137,102	6,327	242,187	\$837,296	\$666,287	
Dial-A-Ride	28,408	11,642	184,006	\$1,240,301	\$103,788	
Game Day Express	2,671	247	2,480	\$24,680	\$7,747	
Total Systemwide	360,882	50,969	899,317	\$5,537,660	\$1,180,254	

Performance Analysis						
	Pax per Vehicle Hour	Pax per Vehicle Mile	Operating Cost per Trip	Operating Cost per Veh-Hour	Subsidy per Trip	Farebox Ratio
Fixed Routes	5.9	0.4	\$17.83	\$104.89	\$15.74	11.7%
Commuter Routes	21.7	0.6	\$6.11	\$132.34	\$1.25	79.6%
Dial-A-Ride	2.4	0.2	\$43.66	\$106.54	\$40.01	8.4%
Game Day Express	10.8	1.1	\$9.24	\$99.92	\$6.34	31.4%
Total Systemwide	7.1	0.4	\$15.34	\$108.65	\$12.07	21.3%
Systemwide Standard	8.0	--	--	--	--	15.0%

Source: Roseville Transit Quarter 4 2016-17

Figure 19: Roseville Transit Operating Subsidy per Passenger-Trip
FY 2016-17



- A measure of the portion of operating cost which is covered by passenger fares is the farebox recovery ratio. The farebox recovery ratio is particularly important for determining the level of eligibility for TDA funds. Roseville Transit exceeds the TDA farebox ratio requirement and City standard of 15 percent with a farebox ratio of 21.3 percent.

Local Fixed Routes

Table 17 presents operating data and performance by route for the local fixed routes. Vehicle service miles and revenue hours were estimated for each route based on a snapshot of miles and hours recorded for June 2017. The Roseville Transit cost model identified above was applied to service level quantities for each route to determine operating cost per route. In FY 2016-17, the local fixed routes carried 192,701 one-way passenger trips, operated 32,753 vehicle revenue hours and 470,644 vehicle service miles. Routes A and B, Roseville Transit’s core routes, clearly carry the most passengers (52,025 and 49,610), reflecting in part the fact that they have the greatest span of service. Route M has the next greatest ridership (29,334 trips). Route S carries the fewest passengers (4,454 trips). Route I, which was the reverse of Route D, was discontinued in August of 2017; therefore data for the two routes are combined. As Routes C, G, F and E are interlined (operated by the same bus and driver), operating data for these routes are combined in Roseville Transit operating reports.

Table 17: Roseville Transit Local Fixed Route Operating Statistics					
FY 2016-17					
Route	Passenger Trips	Vehicle Revenue Hours	Annual		
			Vehicle Service Miles	Operating Cost ⁽²⁾	Fare Revenue
A	52,025	7,630	112,222	\$803,276	\$108,649
B	49,610	7,398	90,179	\$757,422	\$103,603
D / I ⁽¹⁾	19,794	3,743	58,808	\$398,383	\$41,338
C, G, F, E	9,052	3,173	56,068	\$344,855	\$18,904
L	18,184	3,437	36,243	\$345,453	\$37,974
M	29,334	4,557	73,463	\$487,127	\$61,260
R	10,248	743	16,701	\$84,877	\$21,401
S	4,454	2,071	26,960	\$214,016	\$9,302
Total Local Fixed Routes	192,701	32,753	470,644	\$3,435,382	\$402,432

Source: Roseville Transit Quarter 4 2016-17, FR Service Revenue Log 16-17
 Note 1: Route I has been discontinued. Route I was the reverse of Route D and only operated as a separate route for two months during this period.
 Note 2: Including fixed operating costs allocated by vehicle revenue hours.

Table 18 presents six performance indicators typically used to evaluate public transit’s effectiveness and efficiency for the local fixed routes:

- ◆ **One-Way Passenger-Trips per Vehicle Revenue Hour** – Roseville Transit has adopted a standard of 8.0 passenger trips per hour for local fixed route services. Passenger-trips per hour is considered to be a measure of the services’ productivity. Only Route R meets this standard (13.8 trips per hour). Route R operates only four round trips per day and primarily serves passengers travelling to Pride Industries day programs. Collectively, the fixed routes carry 5.9 trips per hour. Route S, which makes limited trips between the Galleria and the Santucci Justice Center, carries the fewest trips per hour (2.2). Routes A and B, the core routes, carry close to 7 trips per hour. Notably, the interlined Routes C, G, F and E (which only provide service every 2 hours) have the second-lowest productivity.

Table 18: Roseville Transit Performance - Fixed Routes
FY 2016-17

Shading Indicates Attains Standard

Route	Pax per Vehicle Hour	Pax per Vehicle Mile	Operating Cost per Trip ⁽¹⁾	Subsidy per Trip ⁽¹⁾	Farebox Ratio ⁽¹⁾
A	6.8	0.5	\$15.44	\$13.35	13.5%
B	6.7	0.6	\$15.27	\$13.18	13.7%
D / I	5.3	0.3	\$20.13	\$18.04	10.4%
C, G, F, E	2.9	0.2	\$38.10	\$36.01	5.5%
L	5.3	0.5	\$19.00	\$16.91	11.0%
M	6.4	0.4	\$16.61	\$14.52	12.6%
R	13.8	0.6	\$8.28	\$6.19	25.2%
S	2.2	0.2	\$48.05	\$45.96	4.3%
Total Fixed Route	5.9	0.4	\$17.83	\$15.74	11.7%
Fixed Route Standard	8.0	--	--	\$5.00	15%

Source: Roseville Transit Quarter 4 2016-17
Note 1: Including fixed operating costs allocated by vehicle revenue hours.

- ◆ **One-Way Passenger-Trips per Vehicle Service Mile** – As a whole, the fixed routes carry 0.4 trips per mile. Route S and C/G/F/E, which serve Sierra College and Cirby Ave, have the lowest trips per mile (0.2) while Route B and R have the highest (0.6).
- ◆ **Operating Cost per One-Way Passenger Trips** – Operating cost per trip for all fixed routes combined is \$17.83. Per route this ranges from a low of \$8.28 on Route R to a high of \$48.05 on Route S. Route R only operates during peak periods, thereby making the route more efficient by this measure.
- ◆ **Operating Subsidy per One-way Passenger Trip** - In total the local fixed routes require \$15.74 in subsidy per trip. Route S requires the greatest amount of subsidy per trip (\$45.96), followed by C/G/F/E (\$35.01). The most cost effective route is Route R (\$6.19 per trip), followed by Routes A and B (\$13.35 and \$13.18 respectively). Roseville Transit has set a standard for subsidy per trip on the local fixed routes of \$5.00 per trip. None of the routes make this standard, although Route R comes fairly close.

- ◆ **Farebox Ratio** - The farebox recovery ratio for Roseville Transit fixed route services is 12.0 percent, which is below the City local fixed route farebox ratio standard of 15 percent. State TDA farebox ratio requirements are only applicable to systemwide performance measures, discussed above. On a route by route basis, only Route R meets the standard.

Commuter Routes

Commuter Service operating statistics and performance are displayed in Table 19 and 20. Of the AM Routes, Route 8 (which picks up at the Taylor and I-80 Park and Ride and drops off in downtown Sacramento at 7:45 AM) carried the most passenger-trips (9,542 per year). For the afternoon service, Route 2 (3:30 PM Sacramento departure) carried the most trips (8,243). AM Routes 9 and 3 operate the most vehicle hours (over 400 annually) and miles (around 14,000 annually) of the morning runs. For the afternoon runs, PM Route 9 operated the most vehicle revenue hours (554 hours) and PM Route 6 travelled the most miles.

- ◆ **One-Way Passenger-Trips per Vehicle Revenue Hour** –Productivity on the commuter routes far surpasses the City standard of 8.0 trips per hour. The AM Routes have an average passenger- trips per hour of 22.5 while the PM Routes carry 20.9 trips per hour. The most productive routes are AM Route 8 (7:47 AM arrival in Sacramento) and PM Route 4 (4 PM departure from Sacramento). The least productive routes are AM Route 1 (9.9 trips per hour) which arrives in Sacramento at 6:00 AM and PM Route 10 (11.1 trips per hour) which departs Sacramento at 5:20 PM.
- ◆ **One-Way Passenger-Trips per Vehicle Service Mile** –The Commuter Routes average 0.6 passenger trips per mile. AM Route 1 has the lowest trips per mile (0.2) and AM Route 8 and 4 have the highest (0.8).
- ◆ **Operating Cost per One-Way Passenger Trips** – Operating cost per trip for the Commuter Routes as a whole is \$6.11. The most cost efficient route is AM Route 8 which costs \$3.54 per trip, followed by PM Route 2 (\$4.06). The least cost effective routes under this performance measure are AM Route 1 (\$14.12) and PM Route 10 (\$10.93).
- ◆ **Operating Subsidy per One-way Passenger Trip** – The Commuter Routes have a very low subsidy per trip of \$1.25 overall. In fact many of the routes more than pay for themselves. This is helped by the fact that commuters are regular customers and tend to purchase monthly passes on a regular basis.
- ◆ **Farebox Ratio** – Along the same lines, farebox ratio is 79.6 percent for the commuter routes as a whole, which exceeds the standard of 75 percent. The commuter route with the greatest farebox ratio is AM Route 8 (137.1 %). The route with the lowest farebox ratio is AM Route 1 (34.4 percent).

Dial-A-Ride

Operating data and performance measures for Roseville Transit Dial-A-Ride are displayed in Table 21. Demand response services by nature are much less productive and cost efficient, particularly in an area as extensive as Roseville. Roseville Transit DAR carries 2.4 passenger trips per hour, which is below the 3.0 standard. The service carries 0.2 trips per mile and costs \$43.66 per trip. Operating cost per hour is \$106.54 and subsidy per trip is \$40.01. The Dial-A-Ride service has a respectable farebox ratio of 8.6 percent but this is much lower than the 15 percent standard.

Table 19: Roseville Transit Commuter Route Operating Statistics					
FY 2016-17					
Routes	Passenger Trips	Vehicle Revenue Hours	Vehicle Service Miles	Operating Cost ⁽¹⁾	Fare Revenue
AM Routes					
1	2,711	274	12,209	\$38,264	\$13,174
2	8,744	284	13,206	\$40,306	\$42,496
3	6,574	439	14,202	\$55,145	\$31,948
4	9,008	356	11,960	\$45,162	\$43,779
5	8,687	300	12,707	\$41,081	\$42,217
6	4,095	234	11,711	\$34,099	\$19,903
7	4,494	185	9,967	\$27,831	\$21,840
8	9,542	234	11,462	\$33,813	\$46,370
9	7,644	465	13,953	\$57,104	\$37,150
10	7,138	284	10,714	\$37,445	\$34,689
<i>Subtotal AM Routes</i>	<i>68,638</i>	<i>3,056</i>	<i>122,090</i>	<i>\$410,251</i>	<i>\$333,565</i>
PM Routes					
1	4,664	279	11,711	\$38,141	\$22,668
2	8,243	249	9,967	\$33,444	\$40,060
3	5,763	208	10,465	\$30,424	\$28,005
4	7,978	211	11,711	\$32,079	\$38,772
5	7,445	292	12,957	\$40,693	\$36,181
6	8,201	381	13,455	\$49,123	\$39,856
7	7,391	452	13,206	\$55,123	\$35,917
8	5,883	221	11,462	\$32,691	\$28,589
9	8,185	554	12,957	\$63,818	\$39,776
10	4,712	424	12,209	\$51,510	\$22,898
<i>Subtotal PM Routes</i>	<i>68,464</i>	<i>3,271</i>	<i>120,097</i>	<i>\$427,046</i>	<i>\$332,722</i>
Total	137,102	6,327	242,187	\$837,296	\$666,287
Source: Roseville Transit Quarter 4 2016-17, Comm Rev Log 16-17					
Note 1: Including fixed operating costs allocated by vehicle revenue hours.					

Table 20: Roseville Transit Performance - Commuter Routes

FY 2016-17

Shading Indicates Attains Standard

Route	Pax per Vehicle Hour	Pax per Vehicle Mile	Operating Cost per Trip ⁽¹⁾	Subsidy per Trip ⁽¹⁾	Farebox Ratio ⁽¹⁾
AM Routes					
1	9.9	0.2	\$14.12	\$9.26	34.4%
2	30.7	0.7	\$4.61	-\$0.25	105.4%
3	15.0	0.5	\$8.39	\$3.53	57.9%
4	25.3	0.8	\$5.01	\$0.15	96.9%
5	29.0	0.7	\$4.73	-\$0.13	102.8%
6	17.5	0.3	\$8.33	\$3.47	58.4%
7	24.2	0.5	\$6.19	\$1.33	78.5%
8	40.8	0.8	\$3.54	-\$1.32	137.1%
9	16.4	0.5	\$7.47	\$2.61	65.1%
10	25.1	0.7	\$5.25	\$0.39	92.6%
<i>Subtotal AM Routes</i>	22.5	0.6	\$5.98	\$1.12	81.3%
PM Routes					
1	16.7	0.4	\$8.18	\$3.32	59.4%
2	33.1	0.8	\$4.06	-\$0.80	119.8%
3	27.7	0.6	\$5.28	\$0.42	92.0%
4	37.8	0.7	\$4.02	-\$0.84	120.9%
5	25.5	0.6	\$5.47	\$0.61	88.9%
6	21.5	0.6	\$5.99	\$1.13	81.1%
7	16.3	0.6	\$7.46	\$2.60	65.2%
8	26.6	0.5	\$5.56	\$0.70	87.5%
9	14.8	0.6	\$7.80	\$2.94	62.3%
10	11.1	0.4	\$10.93	\$6.07	44.5%
<i>Subtotal PM Routes</i>	20.9	0.6	\$6.24	\$1.38	77.9%
Total	21.7	0.6	\$6.11	\$1.25	79.6%
Commuter Standards	8.0	--	--	--	75.0%

Source: Roseville Transit Quarter 4 2016-17

Note 1: Including fixed operating costs allocated by vehicle revenue hours.

Table 21: Roseville Transit Performance - Dial-A-Ride

FY 2016-17

Annual Data						
	Passenger Trips	Vehicle Revenue Hours	Vehicle Service Miles	Operating Cost ⁽¹⁾	Fare Revenue	
Dial-A-Ride Operating Statistics	28,408	11,642	184,006	\$1,240,301	\$103,788	

Performance Analysis						
	Pax per Vehicle Hour	Pax per Vehicle Mile	Operating Cost per Trip	Operating Cost per Hour	Subsidy per Trip	Farebox Ratio
Dial-A-Ride Performance Measures	2.4	0.2	\$43.66	\$106.54	\$40.01	8.4%
DAR Standard	3.0	--	--	--	--	15.0%

Source: Roseville Transit Quarter 4 2016-17

On-Time Performance

In FY 2016-17, the Dial-A-Ride service was “on-time” 98.5 percent of the time. DAR is considered on-time if the passenger is picked up within the 30 minute window. Fixed Route services averaged 89.4 percent on-time performance while the Commuter Routes averaged 93.3 percent on-time performance. On-time for the fixed and commuter routes is 1 minute before and 5 minutes after the scheduled departure time.

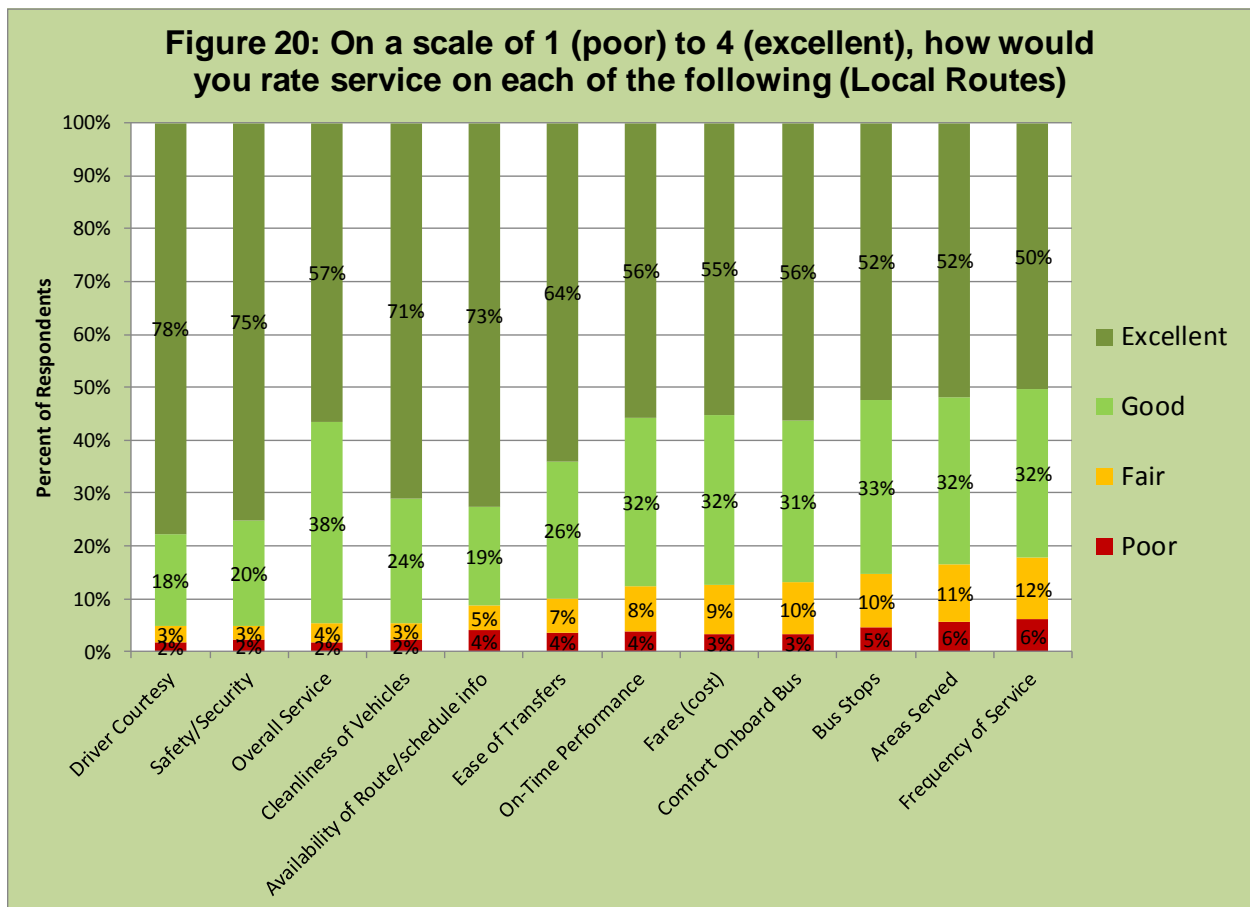
ROSEVILLE TRANSIT ON-BOARD SURVEY RESULTS

LSC Transportation Consultants conducted on-board surveys on Roseville’s fixed route, Commuter and Dial-A-Ride services system between Tuesday, November 7 and Friday, December 15, 2017 (including one Saturday on December 9 for the local fixed route service). The team surveyed each weekday run once during this time period, and surveyed half of the Saturday runs, administering bilingual passenger feedback surveys (English and Spanish), collecting boarding and alighting counts by stop, and conducting travel time-checks at specific stops. Complete results of the survey effort are included as Appendix D. A summary of important findings is described below:

Passenger Characteristics and Feedback

Fixed Route

- Roseville Transit’s ridership base is primarily a workforce ridership. Eighty-two percent are aged 17-59, and 73 percent are employed.
- Ninety percent of respondents use the bus at least two days a week.
- A third of respondents noted that they did not possess a driver’s license. This is a change from the 2010 surveys, when more than half (60 percent) of respondents stated that they did not have a driver’s license.
- Ninety-five percent of respondents rated Overall Service either “Good” or “Excellent.” Respondents were well-satisfied, with 82 percent or more providing a positive score in all service categories. Highest ranked categories were “Driver Courtesy” and “Safety/Security.” Lowest ranked categories were “Frequency of Service” and “Areas Served”, as shown in Figure 20.



- Nearly half of all riders (43 percent) thought that increasing the frequency of service is the improvement that is most likely to draw more ridership.
- Multiple respondents gave specific suggestions for improving Roseville transit. More common suggestions included:
 - More service to West Roseville, Granite Bay
 - Wi-Fi
 - Better transfers – buses should take the same pass
- Nearly three-quarters of all respondents (73 percent) obtain their transit information from sources produced for general consumption, i.e., not individualized service such as talking to a customer service representative on the phone. This is a change from the 2010 surveys, when the top three sources of transit information among respondents were “Bus driver,” “At the bus stop,” or “Call City Offices.”

Commuter Service

- Fully 96 percent of Commuter riders are employed, with 77 percent between the ages of 26 and 59, 3 percent between 17 and 25, and 20 percent 60 or older.
- 90 percent use the service two to five days a week, with 6 percent riding all five days a week, 2 percent one day a week to 2 days a month, and 1 percent less than one day a month.
- 96 percent of riders have a driver’s license, and 54 percent drive to the bus. Another 39 percent walk to their boarding stop, while less than 5 percent each got a ride, transferred from a local route, or bicycled.
- Overall, riders are happy with the service, with over 95 percent indicating the service is “good” or “excellent”. Individual factors that scored relatively low (82 to 88 percent indicating good or excellent) consisted of on-time performance, fares, bus stops, service frequency, and comfort on the bus.
- When asked what would most increase ridership, the most prevalent response (51 percent) was for more frequent service, followed by 32 percent indicating service to new areas. A mid-day commuter run was also a commonly identified need.

Dial-A-Ride

- A quarter of respondents would not have made the trip if Dial-A-Ride were not available. Another 59 percent stated that they would have gotten a ride or taken a taxi. Of those that selected “Other,” three (12 percent of the total) stated that they would have used Uber or Lyft.

- Respondents ranked each of eleven rider satisfaction categories very highly, with 85 percent or more rating each category positively. Respondents gave System Safety the highest ranking, followed by Bus Cleanliness. Other highly-ranked categories included On-line Information Services, Areas Served, and Driver Courtesy, as well as Overall Service. The two categories with the lowest rankings were Travel Time and On-Time Performance.

Boarding and Alighting Survey

Ridership by Run

The following runs have relatively high average boardings:

- Route A: 11:00 AM run – 17 passengers; 8:00 AM, 9:00 AM, 1:00 PM and 3:00 PM runs – 12 passengers.
- Route B: 12:30 PM and 2:30 PM runs – 12 passengers.
- Route M: 1:30 PM run – 20 passengers.
- Route R: 7:30 AM and 4:00 PM runs – 16 passengers.
- PM Commuter: 3:30 PM – 46 passengers; and 3:50 PM – 42 passengers.

At the other extreme, the following runs had average ridership of 5 or less passengers per run:

- Route A: 6:00 AM, 6:30 AM, 8:30 AM, 10:30 AM, 11:30 AM, 3:30 PM, 4:00 PM, 5:00 PM, 5:30 PM, 6:00 PM, 7:00 PM, 8:00 PM, and 9:00 PM.
- Route B: 6:00 AM, 6:30 AM, 7:00 AM, 12:00 PM, 1:00 PM, 2:00 PM, 3:30 PM, 4:30 PM, 5:30 PM, 6:00 PM, 6:30 PM, and 7:30 PM.
- Route D: 6:30 AM, 11:30 AM, 12:30 PM, 1:30 PM, 3:30 PM, 4:30 PM, and 5:30 PM.
- Route CGFE: 4:40 PM.
- Route L: 6:30 AM, 7:30 AM, 10:30 AM, 11:30 AM, 4:30 PM and 5:30 PM.
- Route M: 6:30 AM, 10:30 AM, 6:30 PM, 7:30 PM, and 8:30 PM.
- Route R: 8:30 AM and 4:30 PM.
- Route S: 7:30 AM, 8:30 AM, 11:00 AM, 11:30 AM, 1:30 PM, and 4:00 PM.

There were no passengers observed boarding the following runs:

- Route CGFE: 6:30 PM.
- Route S: 5:00 PM.

Ridership by Stop/Passenger Loads

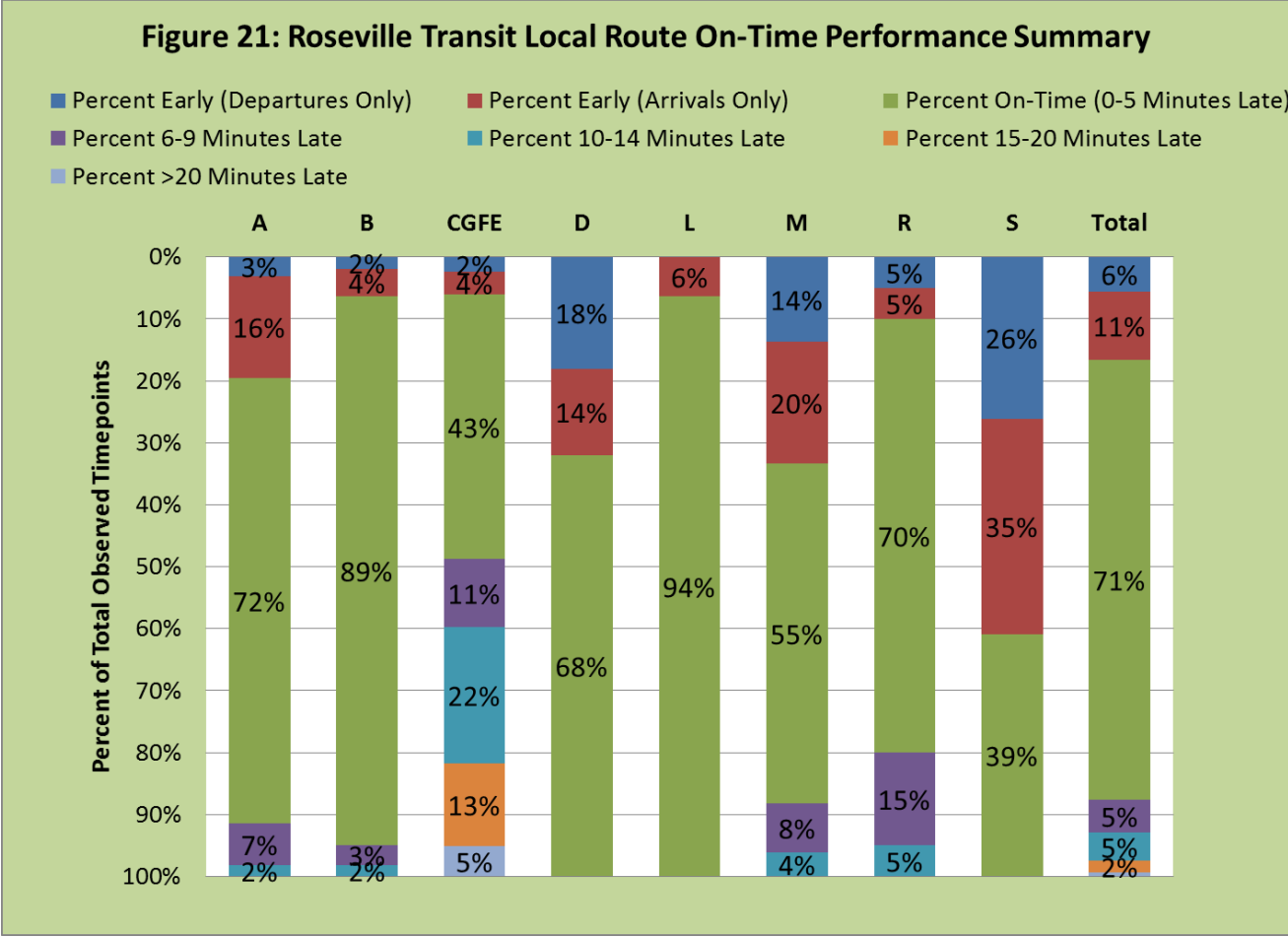
Key findings related to passenger activity at individual stops and maximum passenger loads after stops include:

- Excluding the commuter routes, the largest passenger activity occurs at the Galleria Transfer Point. The station is serviced by Routes A, B, M and S and experiences a total of 181 boarding and alighting counts on an average day.
- Route A experiences the largest total daily passengers, with a total of 184 boardings throughout the day. The greatest activity on Route A is at the Galleria Center Transfer Point, the Civic Center Transfer Point, and the Louis/Orlando Transfer Point. These stations experienced 69, 58, and 61 total boarding and alighting counts respectively.
- Route D has the greatest activity at the Woodcreek/Junction stop and Civic Center Transfer Point, with 17 and 31 total average daily boardings and alightings, respectively.
- Route R has high activity at the Foothills Boulevard at Pride Industries Stop, with 25 average daily boardings and alightings, and at Louis/Orlando Transfer Point, with 34 average daily boardings and alightings.
- On the commuter routes, the stop with the highest number of boardings and alightings is the Taylor & I-80/Sunsplash stop, with 146 total average daily boardings and 186 total average daily alightings. The next most popular stop is Saugstad, with 35 boardings and 40 alightings, then Mahany Park, with 13 boardings and 15 alightings.
- The highest maximum load on all Roseville local routes is 17, generated once per day each on routes M and R. The highest loads on the commuter routes are after the last stop in Sacramento, 16th and H, with 46 passengers.

On-Time Performance Survey

As part of the data collection that generated the onboard surveys and boarding/alighting counts, surveyors also recorded the times that stops were served on each run and route. Data was recorded on the local service at a total of 595 time points on weekdays. An additional 94 time points were recorded on the commuter routes. This information was analyzed to identify the on-time performance of the individual fixed routes, as well as to evaluate the specific route segments and times of day that experience delay. Figure 21 shows the results for the local routes graphically.

On weekdays on the local routes, 71 percent of time points were served within Roseville Transit's standard on-time "window" of zero to five minutes behind schedule. An additional 11 percent of weekday time points consisted of early arrivals at transfer points along the route. Other, non-arrival stops served early totaled 6 percent of the weekday observations. Time points served six or more minutes behind the published schedule totaled 13 percent of all weekday observations.



Other key findings include:

- Route A operates later than scheduled between the Louis/Orlando and the Civic Center Transfer Point stops on multiple runs throughout the day. Route A consistently arrives at the Galleria Transfer earlier than scheduled until 3:00 PM, when it begins to operate on-time or late throughout the PM commuter peak.
- Route B operates later than scheduled between the Sierra Gardens Transfer Point and the Galleria Transfer Point between the 3:40 PM and 6:10 PM commuter peak. Earlier in the day there are late arrivals at the Galleria on the 10:10 AM and 12:10 PM runs.
- Route CGFE consistently operates behind schedule on the afternoon runs.
- Route M consistently operates behind schedule in the 1:30 PM to 5:30 PM timeframe. Outside of that timeframe, the route consistently operates earlier than scheduled between the Pleasant Grove before Foothills stop and the Galleria Transfer Point.

- The A M commuters #3 (6:00 AM departure), #7 (6:50 AM departure), #9 (7:10 AM departure), and #10 (7:18 AM departure) were fifteen or more minutes late by the time they reached the first timepoint in Sacramento.
- Only one of the PM commuters, PM Commuter #2 (3:30 PM departure), met the on-time standard of no more than five minutes late for all stops. PM Commuter #9 and #10, both of which have reverse commutes leaving from Roseville, were more than 15 minutes late to the first time point in Sacramento on the day of observation. PM Commuter #9 was 45 minutes late to the first time point in Sacramento.

ROSEVILLE TRANSIT MARKETING PROGRAM

The City of Roseville Alternative Transportation staff includes one Marketing and Communications Analyst position whose time is spent on promoting all facets of the entire Public Works Department which includes but is not limited to: transit, bicycling and other transportation options.

Alternative Transportation staff attends outreach events at locations, such as Sierra College. The Roseville Transit website is easy to follow and provides good access to maps and schedules and relevant announcements. Text and e-mail alerts are available to those who sign up. Roseville Transit has a good presence on social media and Roseville Transit information is also available through the South Placer Transit Information website and Placer County Transportation Planning Agency website. The City of Roseville conducts a number of marketing campaigns (including paid advertising) throughout the year in an effort to increase ridership.

Another marketing effort for Roseville Transit and the south Placer region is the Transit Ambassador Program which is funded through the Consolidated Transportation Services Agency. Volunteers are trained and spend time at transfer centers to answer questions and assist passengers with deciphering transit information and planning trips. Roseville Transit also has an extensive Mobility Training for individuals or groups who may need special help in order to use transit independently.

The Marketing and Communications Analyst also provides support to regional partners when it comes to communications and marketing, i.e. Summer Youth Bus Pass, South Placer Transit Information, etc.

The City of Roseville will direct a future contract to research and develop an overall marketing and communications plan for Roseville Transit. The plan will identify target budgets for resources, and outline marketing, advertising, and public relations initiatives.

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A “peer analysis” is a useful tool in comparing a transit program with other, similar programs. This can provide a good context for the ridership and performance figures, and help in identifying areas of relative strength and weakness. This discussion first presents the peer systems selected for comparison, followed by the data and analysis.



PEER TRANSIT OPERATORS

Table 22 displays operating data for five municipally operated transit systems in California with populations ranging from 128,000 to 163,000. These peer systems were also chosen to be similar to Roseville Transit, such as by not serving a major university. A brief overview of each system follows:

- **Corona Cruiser** – The City of Corona is located in inland Southern California and has a slightly larger population than Roseville (161,000). The city operates two fixed routes and a DAR service six days per week. Systemwide service levels are less than Roseville Transit, as well as ridership (213,164).
- **E-Tran** – The relatively newly-incorporated City of Elk Grove outside of Sacramento operates 7 fixed routes (6 days per week) and 10 commuter routes into Sacramento. The population of the city is roughly 30,000 more than the City of Roseville. The service is similar to Roseville Transit in that they provide local fixed routes, commuter, general public Dial-A-Ride as well as paratransit services. Ridership on E-Tran is significantly greater than Roseville Transit, with 922,757 trips at similar service levels.
- **Simi Valley Transit** – The City of Simi Valley in southern California operates four fixed routes and a demand response service six days per week. Population (126,126) and ridership (377,104) levels are very similar to Roseville Transit services, but Simi Valley Transit operates fewer vehicle miles annually (roughly 160,000 fewer).
- **Thousand Oaks** – Nearby to Simi Valley is the City of Thousand Oaks with a population size very similar to the City of Roseville. The City operates four fixed routes, one commuter shuttle to a Metrolink station and Dial-A-Ride, six days per week. Ridership is very similar to Roseville Transit (128,623) but service levels are greater.
- **Visalia Transit** – Located in the Central Valley, the Visalia Transit receives funding from Tulare County’s Measure R tax. As such, service levels are significantly higher than Roseville Transit. Visalia Transit operates 13 fixed routes, Town Trolley, DAR, and a shuttle service to

Sequoia National Park. Visalia Transit operates around 1.5 million trips per year but has a population very similar to Roseville Transit.

Table 22: Roseville Transit Systemwide Peer Analysis

	Operating Data					
	Annual Ridership	Vehicle Service Hours	Vehicle Service Miles	Service area Population ⁽¹⁾	Annual Operating Costs	Fare Revenues
Roseville Transit	360,882	50,969	899,317	128,276	\$5,537,660	\$1,180,254
Corona Cruiser	213,164	31,970	394,915	161,614	\$2,242,023	\$366,913
E-Tran (Elk Grove)	922,757	59,012	901,579	163,634	\$7,397,909	\$1,454,582
Simi Valley Transit	377,104	42,701	563,461	126,126	\$6,327,326	\$704,217
Thousand Oaks Transit	255,950	66,015	1,043,089	128,623	\$4,554,192	\$689,402
Visalia Transit	1,598,083	140,823	1,991,572	128,738	\$9,365,073	\$1,766,472
Peer Average	673,412	68,104	978,923	141,747	\$5,977,305	\$996,317

	Performance Measures					
	Ridership per Capita	Pax per Hour	Pax per Mile	Operating Cost per Hour	Operating Cost per Trip	Farebox Ratio
Roseville Transit	2.81	7.08	0.40	\$108.65	\$15.34	21.3%
Plan Recommended Standard	--	7.00	0.50	\$100.00	\$12.00	15.0%
Corona Cruiser	1.32	6.67	0.54	\$70.13	\$10.52	16.4%
E-Tran (Elk Grove)	5.64	15.64	1.02	\$125.36	\$8.02	19.7%
Simi Valley Transit	2.99	8.83	0.67	\$148.18	\$16.78	11.1%
Thousand Oaks Transit	1.99	3.88	0.25	\$68.99	\$17.79	15.1%
Visalia Transit	12.41	11.35	0.80	\$66.50	\$5.86	18.9%
Peer Average	4.87	9.27	0.66	\$95.83	\$11.79	16.2%
Roseville % of Peer Average	58%	76%	61%	113%	130%	131%
Roseville Ranking of 6 Systems	4th Highest	4th Highest	5th Highest	4th Lowest	4th Lowest	Highest

Source: State Controller 2016 Data

Note 1: American Community Survey 2016 estimate

PERFORMANCE COMPARISON

- The annual ridership average for the peer transit systems is 673,412. If Visalia Transit is not included, the average is 442,244. Roseville Transit's ridership falls below both of these figures, at 58 percent of the peer average. Roseville Transit's vehicle hours and miles are less but not far off from the peer annual vehicle hours of 68,104 and annual vehicle miles of 978,923.

- Peer ridership per capita is 4.87 trips, on average. This is greater than Roseville Transit's ridership per capita of 2.81 (76 percent of the peer average). Visalia Transit brings up the average significantly with 12.41 trips per capita. E-Trans also has relatively high ridership per capita of 5.64. Corona Cruiser has the lowest ridership per capita of 1.32 trips per person. If Visalia is excluded from the peers, Roseville's rate is just below the average of 2.98.
- In terms of productivity, the peer average annual passenger-trips per hour is 9.27. E-Trans is the most productive of the services, carrying 15.64 passenger trips per hour. Roseville Transit carries 7.08 trips per hour, which is better than both Corona Cruiser and Thousand Oaks Transit, and is 76 percent of the peer average.
- The passenger-trips per vehicle service mile peer average is 0.66. Roseville Transit ranks second to lowest (0.40), in front of Thousand Oaks Transit (0.25). E-Trans carries the most passenger-trips per mile (1.02).
- Roseville Transit's operating budget is in-line with the peer average of \$5.9 million. Visalia Transit has the largest budget of \$9.3 million and Corona has the smallest budget of \$2.2 million.
- Roseville Transit's operating cost per hour is 13 percent greater than the peer average of \$95.38, but less than E-Trans (\$125.36) and Simi Valley (\$148.18).
- The peer average operating cost per passenger-trip is \$11.79. At \$15.34, Roseville Transit is 30 percent higher than this average.
- Roseville Transit's passenger fare revenues (\$1,180,284) is greater than the peer average of \$996,317.
- In terms of farebox ratio, Roseville Transit has the highest farebox ratio of all the peer transit operators, 21.3 percent.

Sacramento Commuter Comparison

Several transit operators in the greater Sacramento region provide commuter public transit services into downtown Sacramento: Yuba-Sutter Transit from Marysville/Yuba City, El Dorado Transit from Placerville, Placer County Transit from as far as Colfax and Yolobus from Woodland. While each system has its differences, the fact that all serve the same employment market makes this a useful peer comparison. Table 23 compares these services to Roseville Transit's commuter routes.

The peer average ridership for the Sacramento Commuter Services is 96,745, lower than Roseville Transit's ridership of 137,102. Annual vehicle hours operated range from 2,565 on

Table 23: Roseville Transit Commuter Route Peer Analysis

	Annual Data				Performance Measure		
	Ridership	Vehicle Hours	Vehicle Miles	Operating Cost	Pax per Hour	Pax per Mile	Operating Cost per Hour
Roseville Transit	137,102	6,327	242,187	\$837,296	21.7	0.57	\$132.34
PCT Commuter	70,677	3,163	101,279	\$865,744	22.3	0.70	\$273.74
El Dorado Transit	139,792	9,057	281,027	\$1,411,252	15.4	0.50	\$155.82
Yuba Sutter Transit	118,307	11,630	418,000	\$855,307	10.2	0.28	\$73.54
YoloBus Route 45	58,204	2,565	65,323	NA	22.7	0.89	NA
Peer Average	96,745	6,604	216,407	\$1,044,101	17.7	0.59	\$167.70
<i>Roseville % of Peer Average</i>					123%	96%	79%
<i>Roseville Ranking</i>					3rd Highest of 5	3rd Highest of 5	2nd Lowest of 4
Source: FY 2016-17 data for all but YoloBus, which is FY 2014-15							

Yolobus Route 45 to 11,630 on Yuba Sutter Transit. Roseville Transit is very close to the peer average of 6,604 in terms of vehicle hours. Yuba-Sutter Transit also travels the greatest number of vehicle miles (418,000), much more than the peer average of 216,407. Yolobus Route 45 only travels 65,323 annual vehicle miles.

Roseville Transit, PCT and Yolobus Route 45 all carry over 20 passenger-trips per vehicle hour. At 21.7, Roseville Transit is 23 percent above the peer average of 17.7. Yuba Sutter Transit has the lowest productivity, at 10.2 trips per hour. Roseville Transit’s passenger per mile performance is very similar to the peer average of 0.59 trips per mile. Yuba-Sutter Transit’s Commuter Routes (not including mid-day service to Sacramento) are clearly the most cost effective, with an operating cost per hour of \$73.54. Roseville Transit’s operating cost per hour is 17 percent lower than the peer average of \$132.34 and below PCT (\$273.74) and El Dorado Transit (\$155.82). PCT’s cost per hour is significantly above the peer average. Many factors may contribute to this, including that half of the hours for each commuter route is deadhead travel and therefore not included in the revenue hour calculation, split shifts and the high proportion of deadhead travel require drivers to check in multiple times, there were particularly high maintenance costs in FY 2016-17, and difficulties with the contractor requiring additional administrative oversight. Additionally, PCT cost figures include allocated county staff time spent managing the commuter service contract; whereas, that level of detail was not available for the other transit operators.

General Public DAR Peer Comparison

Many small city/suburban transit operators provide Dial-A-Ride service; however most of these services are only available to ADA eligible passengers. Other similar public transit operators which offer general public DAR similar to Roseville Transit are: PCT, El Dorado Transit and Visalia Transit. Table 24 displays operating and performance characteristics for these transit operators. Only data for PCT's Rocklin/Loomis DAR is presented and it should be noted that Visalia Transit's DAR service is only available to the general public if space is available. Ridership of the various services varies significantly from 8,752 trips on the PCT Rocklin/Loomis DAR to 34,224 trips on Visalia Transit DAR. Roseville Transit ridership, service levels and costs are all greater than the peer average.

	Annual Ridership	Vehicle Service Hours	Vehicle Service Miles	Est. Annual Operating Costs
Roseville Transit	28,408	11,642	184,006	\$1,240,301
Placer County Transit (Rocklin Loomis)	8,752	5,129	49,561	\$368,980
El Dorado Transit	20,880	11,293	208,545	\$1,513,306
Visalia Transit	34,224	11,938	158,347	\$793,906
Peer Average	21,285	9,453	138,818	\$892,064
Roseville % of Peer Average	133%	123%	133%	139%
	Pax per Hour	Pax per Mile	Operating Cost per Hour	Operating Cost per Trip
Roseville Transit	2.4	0.15	\$106.54	\$43.66
Recommended Standard	2.5	0.20	\$100.00	\$35.00
Placer County Transit (Rocklin Loomis)	1.7	0.18	\$71.94	\$42.16
El Dorado Transit	1.8	0.10	\$134.00	\$72.48
Visalia Transit	2.9	0.22	\$66.50	\$23.20
Peer Average	2.1	0.2	\$90.82	\$45.94
Roseville % of Peer Average	114%	94%	117%	95%

- Passengers per Vehicle Hour – Roseville Transit DAR is the second most productive of the peers and carries 2.4 trips per hour, above the peer average of 2.1 trips per hour.
- Passenger per Vehicle Mile – Roseville Transit is at 94 percent of the peer average in terms of passenger trips per vehicle mile.

- Operating cost per Vehicle Hour – Roseville Transit’s operating cost per hour (\$106.54) is greater than the peer average of \$90.82 but less than El Dorado Transit’s cost of \$134.
- Operating cost per Passenger-trip – Roseville Transit’s operating cost per trip (\$43.66) is less than the peer average of \$45.94.

Peer Fare Structure Comparison

Another worthwhile comparison is to review the fare structures of the peer transit systems. Table 25 shows that only E-Trans has a higher general public base fare. Table 26 demonstrates that Roseville Transit’s Resident commuter fare is below the peer average. Only YoloBus has the same fare.

Table 25: Roseville Transit Fixed Route Base Fare Peer Comparison		
	General Public One-way fare	Discount One-Way Fare
Roseville Transit	\$1.50	\$0.75
Corona Cruiser	\$1.50	\$0.70
E-Trans (Elk Grove)	\$2.25	\$1.10
Simi Valley Transit	\$1.50	\$0.75
Thousand Oaks Transit	\$1.50	\$0.75
Visalia Transit	\$1.50	\$0.75

Table 26: Roseville Transit Commuter Route Fare Peer Comparison		
	One-Way Fare	Monthly Pass
Roseville Transit (Resident)	\$3.25	\$110.00
PCT Commuter ⁽¹⁾	\$4.25	\$131.25
El Dorado Transit	\$5.00	\$180.00
Yuba Sutter Transit	\$4.00	\$128.00
YoloBus Route 45	\$3.25	\$121.00
Peer Average	\$4.13	\$140.06
Note 1: Fare from Rocklin/Roseville		

SUMMARY

The following findings can be made from the existing services review of Roseville Transit:

- Although commuter route ridership has grown 30 percent over the past 9 years, systemwide ridership has declined by 17 percent.
- Due to a high commuter route farebox ratio, Roseville Transit meets the TDA farebox requirement of 15 percent. Roseville Transit's farebox ratio is also higher than the other peer transit operators reviewed.
- On a per route basis, Route R performs the best in terms of productivity and cost efficiency. Likely due to the fact, this route serves a significant transit generator (Pride Industries) during peak hours. Route S had the worst performance in FY 2016-17. Although this route has low ridership, it provides an important connection to county government services.
- The low productivity of the interlined Routes C, G, F and E indicate the need for a review of this service element, including an evaluation of alternative service models.
- Roseville Transit serves as an element of a regional transit network, as 10 percent of fixed route boardings are transfers from PCT or Sac RT.
- Overcrowding is an issue on some of the Commuter runs, particularly in the afternoon.
- The peer comparison demonstrated that Roseville has lower ridership than many similar sized cities outside of the Sacramento region. However, compared to other Sacramento Commuter Services, Roseville Transit's commuter routes perform well.
- Passengers are most interested in more frequent service. There are also specific desires for expanded connections with Granite Bay, and service to West Roseville.
- Roseville Transit's fixed route fare structure is in line with peers and the resident commuters receive a good discount.

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Chapter 7

GOALS, OBJECTIVES AND PERFORMANCE STANDARDS

An important element in the success of any organization is a clear and concise set of goals and objectives, as well as the performance measures and standards needed to attain them. As a public entity, a public transit organization is expending public funds and therefore has a responsibility to provide the public with transparent information on how funds are being spent and how well it is doing in meeting its goals. Funding partners also have a responsibility to ensure that funds provided to the transit program are being used appropriately. This is accomplished by providing information on the effectiveness and efficiency of the transit program. Additionally, an adopted set of goals and performance standards helps to communicate the values of the transit program to other organizations, to the public, and to the organization staff.



The current mission statement for the Roseville Transit program is as follows:

“We provide and continually enhance reliable, convenient and safe transportation options.”

The Study Team reviewed the goals, objectives and performance standards from the prior Short Range Transit Plan. Table 27 presents existing and updated performance standards which will be used for analysis of the service alternatives. The standards are compared to actual performance in FY 2009-10 and FY 2016-17. The recommended standards were based on applicable laws, performance history and peer transit operator performance. Peer transit performance data can be found in Tables 22, 23 and 24.

Table 27: Roseville Transit Goals, Objectives and Performance Standards (1 of 2)

Objective	Performance Measure	Existing Standard	Actual Performance		Standard met in 2016-17?	Recommended Standard
			FY 2008-09	FY 2016-17		
Goal 1: Sustainably operate an efficient and effective transit system through maximizing service and minimizing cost impacts						
Minimize Operating Cost	<u>Farebox Ratio</u>					
	Systemwide	15%	17.1%	21.3%	Yes	15%
	Fixed Route	15%	9.5%	11.7%	No	15%
	Commuter	75%	66.9%	79.6%	Yes	75%
	Dial-A-Ride	10%	8.0%	8.4%	No	8%
	<u>Operating Cost per Vehicle Hour</u>					
	Systemwide	\$80	\$78.48	\$108.65	No	\$100
	Fixed Route		\$78.80	\$104.89	No	\$100
	Commuter		\$74.32	\$132.34	No	\$130
	Dial-A-Ride		\$80.25	\$106.54	No	\$100
	<u>Operating Cost per Passenger</u>					
	Systemwide	\$10	\$12.11	\$12.07	No	\$12
	Fixed Route		\$11.83	\$15.74	No	\$15
Commuter		\$6.12	\$6.11	Yes	\$6	
Dial-A-Ride		\$34.29	\$40.01	No	\$35	
Increase Transit Passengers	<u>Passengers per Vehicle Hour</u>					
	Systemwide	8.0	6.5	7.1	No	7.0
	Fixed Route		6.7	5.9	No	7.0
	Commuter		12.2	21.7	Yes	20.0
	Dial-A-Ride	3.0	2.3	2.4	No	2.5
	<u>Passengers per Vehicle Mile</u>					
	Systemwide	1.00	0.47	0.4	No	0.5
	Fixed Route		0.53	0.4	No	0.5
	Commuter		0.50	0.6	No	0.6
	Dial-A-Ride		0.21	0.2	No	0.2
	<u>Annual Growth in Passengers</u>					
	Systemwide	2%	-8.7%	-7.2%	No	Growth Exceeding Annual Population Growth Rates
	Fixed Route		-11.3%	-13.9%	No	
Commuter		2.3%	3.1%	Yes		
Dial-A-Ride		-7.7%	-3.7%	No		
Increase Revenues	<u>Fare per Passenger</u>					
	Systemwide	\$2.00	\$2.07	\$3.27	Yes	\$3.50
	Fixed Route		\$1.13	\$2.08	Yes	\$2.25
	Commuter		\$4.09	\$4.85	Yes	\$5.00
	Dial-A-Ride		\$2.74	\$3.65	Yes	\$3.75

Table 27: Roseville Transit Goals, Objectives and Performance Standards (2 of 2)

Objective	Performance Measure	Existing Standard	Actual Performance		Standard met in 2016-17?	Recommended Standard
			FY 2008-09	FY 2016-17		
Goal 2: Provide safe, reliable, and high quality transportation						
Provide Service Safely	Passenger injuries	<1 per 100K boardings	Met Standard	NA	Unknown	<1 per 100K boardings
	Preventable accidents	Min. of 60K miles between preventable accidents	Met Standard	1 per 39,101 miles	No	<1 per 50,000 miles
	All accidents	<1 per 25,000 miles	--	1 per 23,059 miles	No	<1 per 25,000 miles
Reliable Transit Service	<u>On-time performance</u>					
	Fixed Route	95% of all trips on-time (1 minute early or no more than 5 minutes late)	Met Standard	89.4%	No	95% of all trips on-time (1 minute early or no more than 5 minutes late)
	Commuter Bus	95% of all trips on-time (1 minute early or no more than 5 minutes late)	Met Standard	93.3%	No	95% of all trips on-time (1 minute early or no more than 5 minutes late)
	Dial-A-Ride	90% pick up within 30 minute window	Met Standard	98.5%	Yes	Pick up within 30 minute window
	<u>Maintenance Standard</u>	> 10,000 miles per road call	--	1 per 28,104 miles	Yes	> 10,000 miles per road call
	<u>Dial-A-Ride Missed Trips</u>	< 1 percent of monthly trips	Met Standard	0.03%	Yes	< 1 percent of monthly trips

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This chapter presents the analysis of a wide range of transit service alternatives. At the end of this section, the various alternatives are compared and an analysis on system performance is presented.



These alternatives have been developed based upon a review of existing service performance, public input, and with the intent of addressing the City’s adopted transit goals. In particular, this plan addresses the first goal: *“Sustainably operate and effective transit system through maximizing service and minimizing cost impacts”*. Some of these alternatives address the key objective under this goal of *“Minimize operating cost”* by identifying services that are not cost-effective. Other alternatives address another key objective: *“Increase transit passengers”* and the associated *“Increase revenues”* by assessing options that could increase ridership.

In reviewing these alternatives, it is important to consider that the Roseville Transit service is an interconnected network of routes, with many passengers using a combination of routes to complete individual trips. In addition, many Roseville Transit local route riders also transfer to other connecting services. To provide a background on this, the onboard surveys conducted on the Roseville Transit local routes (excluding the commuter service) were analyzed to estimate the number of individual one-way passenger trips occurring between various portions of the service area on an average weekday. A total of 227 valid passenger survey responses were evaluated, and then factored by the average one-way passenger-trips (adjusted to eliminate transfers). The resulting origin/destination pattern across the service region is presented in Table 28 and shown in Figure 22. Beyond reflecting the intricate pattern of passenger-trips, this figure indicates the following:

- The busiest overall individual origin/destination pairs are between southwest Roseville and the Galleria area, followed by northern Roseville and the Galleria.
- All of the five busiest origin/destination pairs with more than 40 passenger-trips per day are to from the Galleria area, reflecting this area’s role as a key hub in the Roseville Transit system.
- The Douglas East and East zones (the latter of which includes Sierra College) have relatively low ridership to/from other zones.
- The overall pattern is generally consistent with the current route structure. In particular, it is consistent with the Route A/Route B loops that are the key element of the local route structure.

Figure 22
Roseville Transit Average Daily Transit Passenger Trips
by Origin and Destination

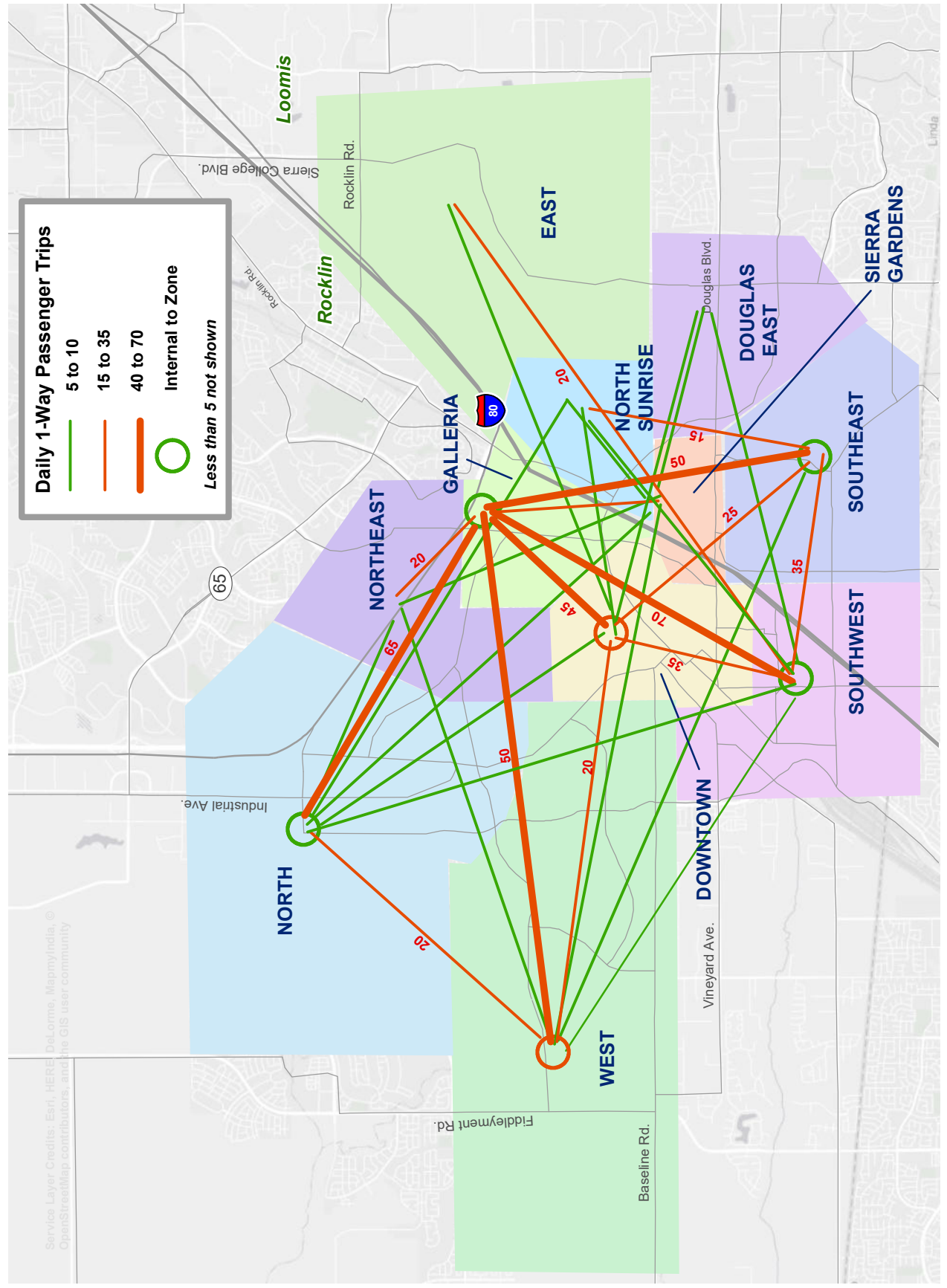


TABLE 28: Roseville Transit Estimated Average Weekday Daily 2-Way Passenger Trips by Origin-Destination

		AND ZONE												Total 2-Way	Proportion of All Trip-Ends
		West	North	Northeast	Downtown	Galleria	North Sunrise	East	Douglas East	Sierra Gardens	Southeast	Southwest			
BETWEEN ZONE	West	15	20	10	20	50	0	0	0	5	5	5	145	10%	
	North	--	5	5	10	65	5	0	0	10	0	10	135	10%	
	Northeast	--	--	--	0	20	0	0	0	5	0	0	40	3%	
	Downtown	--	--	--	15	45	10	5	5	10	25	35	195	14%	
	Galleria	--	--	--	--	5	0	0	5	20	50	70	335	24%	
	North Sunrise	--	--	--	--	--	0	0	0	5	15	10	45	3%	
	East	--	--	--	--	--	--	0	0	20	0	0	25	2%	
	Douglas East	--	--	--	--	--	--	--	0	10	0	5	25	2%	
	Sierra Gardens	--	--	--	--	--	--	--	--	0	10	25	120	8%	
	Southeast	--	--	--	--	--	--	--	--	--	5	35	150	11%	
	Southwest	--	--	--	--	--	--	--	--	--	--	5	205	14%	

Source: Survey of 227 Roseville Local Route Passengers

In addition, the surveys were used to identify the total transfer patterns between the various Roseville Transit routes, as well as to/from connecting services. As shown in Table 29, transfers are a key part of the transit system, with fully 47 percent of all Roseville Transit passengers transferring as part of their trip. This 47 percent is made up of up 36 percent that transfer between Roseville Transit routes, 6 percent that transfer to/from Sacramento RT routes, and 5 percent that transfer to/from PCT routes. Within the Roseville Transit system, a relatively high proportion of transfers occur among riders on Routes C, D, E, F, G and L, all of which have more than 60 percent of passengers using other routes as part of their trip. This information is useful in assessing how service changes on one element of the Roseville system can impact ridership on connecting routes.

TRANSPORTATION NETWORK COMPANY/ MICROTRANSIT

Prior to discussing individual service options, it is worthwhile to more broadly discuss emerging forms of public mobility, namely the use of Transportation Network Companies (TNCs), such as Lyft or Uber, or the “app-based” demand-response general public “microtransit” services.

Serving lower-demand areas, serving low-demand periods (such as evenings) and making first-mile/last-mile connection have long been a challenge for public transit agencies. With the nationwide decline in public transit ridership, transit operators and public agencies are looking for new and innovative ways to provide public transit that will attract more riders at a lower cost. Contracting with TNCs or “microtransit” companies is seen by many as a potential solution. The following section explores this topic in greater detail, while Appendix E presents a review of seven pilot projects which have been conducted throughout the country. Lastly, this

TABLE 29: Transfer Summary -- Roseville Local Route Riders

Source - Survey of 340 Riders

Shading Reflects Relative Value From Low (Green) to High (Red)

	No Transfer	A/B	C/G/E/F	D	L	M	R	S	Roseville Commuter	Auburn/LR	Lincoln/SC	RT 21	RT 93	Subtotal: Roseville Local	Subtotal: PCT	Subtotal: RT	Total Transfers	Total
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Percentage of Ridership on Route Transferring To/From Other Routes

	A/B	C/G/E/F	D	L	M	R	S	Roseville Commuter	Auburn/LR	Lincoln/SC	RT 21	RT 93	Subtotal: Roseville Local	Subtotal: PCT	Subtotal: RT	Total Transfers	Total	
A/B	58%	0%	3%	5%	5%	7%	3%	3%	0%	3%	3%	5%	6%	25%	7%	11%	42%	100%
C/G/E/F	38%	33%	10%	0%	14%	0%	0%	0%	5%	0%	0%	0%	0%	57%	0%	0%	62%	100%
D	36%	26%	0%	0%	14%	21%	2%	0%	0%	0%	0%	0%	0%	64%	0%	0%	64%	100%
L	33%	37%	10%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	67%	0%	0%	67%	100%
M	59%	22%	0%	12%	0%	0%	1%	0%	0%	0%	4%	1%	0%	36%	4%	1%	41%	100%
R	45%	32%	0%	5%	0%	5%	0%	0%	5%	0%	0%	0%	9%	41%	0%	9%	55%	100%
S	52%	33%	0%	0%	0%	0%	0%	0%	5%	5%	5%	0%	0%	33%	10%	0%	48%	100%
Total	53%	13%	3%	6%	4%	6%	2%	2%	1%	2%	3%	3%	4%	36%	5%	6%	47%	100%

Estimated Average Weekday Ridership

	A/B	C/G/E/F	D	L	M	R	S	Roseville Commuter	Auburn/LR	Lincoln/SC	RT 21	RT 93	Subtotal: Roseville Local	Subtotal: PCT	Subtotal: RT	Total Transfers	Total	
A/B	216	0	11	17	17	26	11	11	0	12	12	17	23	92	25	40	156	373
C/G/E/F	26	23	7	0	10	0	0	0	3	0	0	0	0	40	0	0	43	69
D	12	9	0	0	5	7	1	0	0	0	0	0	0	21	0	0	21	33
L	22	24	7	13	0	0	0	0	0	0	0	0	0	44	0	0	44	67
M	64	24	0	13	0	0	1	0	0	0	4	1	0	38	4	1	44	108
R	18	13	0	2	0	2	0	0	2	0	0	0	4	16	0	4	22	40
S	9	6	0	0	0	0	0	0	1	1	1	0	0	6	2	0	9	18
Total	373	93	19	42	31	42	14	11	5	14	19	19	26	252	33	45	334	707

section applies the lessons learned from other projects to recommend areas of Roseville where contracting with microtransit/TNCs may be feasible.

What is a TNC or Microtransit?

It is first important to define TNCs and microtransit and compare these methods of service delivery to existing/traditional public transit. Table 2 presents a comparison of the different characteristics of each type of service. As microtransit and TNC use is constantly evolving, Table 30 presents the general concept for these types of ridesharing services.

Fixed Route public transit services work best in dense urban environments, particularly if the service can be operated frequently. The primary distinguishing characteristic is that there is no flexibility as to where a passenger can board/disembark the bus. Given adequate ridership demand, fixed route services should be the most productive type of service in terms of passenger trips per vehicle per day (at least 250) or passenger-trips per vehicle hour (around 10 to 30). The disadvantage of fixed route services is that if a passenger’s destination is not within a quarter mile of the fixed route, the service is not convenient. If demand is not adequate, moreover, this can be an ineffective service strategy.

Table 30: Parameters for Shared Transportation Modes

	Fixed Route	Dial-A-Ride	Route Deviation	Microtransit	TNC
Distinguishing Characteristics	Set stops	Generally 3/4 mile of fixed route or municipal boundaries	Fixed route can pick up/drop off passengers outside of published stops within certain limits	Technology enabled reservations and driver routing, defined service area, fixed stops that can be modified to meet demand	Technology enabled reservations and driver routing, complete demand/response, no fixed stops
Dispatching Technology	Generally not required. Radio contact between driver and dispatcher	Transit agency has routing software such as Trapeze. Passengers do not have access.	Radio contact with dispatcher	Driver routing through application	Driver routing through application, no dispatcher
Reservation Method	None Necessary	Telephone, usually at least 24 hours in advance, or standing order	Telephone, 1 hour in advance	Smart phone app, telephone	Smart phone app, telephone
Service Area	urban, intercity, intracity	urban and rural communities	Rural, small city, intercity	Urban, suburban	Urban, suburban, very limited in rural areas
Public or Private	public	public	public	private or public/private partnership	private
Size of vehicle	15-40 pax	2-10 pax	10-25 pax	10-25 pax	0-6 pax
Typical Passengers per Day per Vehicle	200-600	20-50	75	30	15
Typical Passengers per Revenue Hour	10-30	2-4	8	2	1.5
Average Fare	\$1.00 - \$3.00	\$2.00 - 5.00	\$2.00 - 5.00	\$1.50 - \$7.00	\$2.00 and up depends on distance travelled

- **Dial-A-Ride (DAR)** or “paratransit” services evolved as a way to serve passengers who are unable to access a fixed-route bus service as they allow for “curb to curb” transportation within a defined service area. DAR services can be limited to older adults or persons with disabilities or are used as a way to broadly serve the general public in a rural or suburban area where fixed route would not be productive. DAR service typically carry only 2 to 4 passenger trips per vehicle hour or 20 to 50 per day (depending on service span). Passengers must call the transit agency (often at least 24 hours in advance) to schedule a ride, or have a standing subscription for service at specific times. Although curb to curb is very convenient, many passengers find that having to make advance reservations limiting.
- **Route Deviation** is a hybrid of fixed route and DAR that is typically used in rural or low-density suburban areas as a way to cost effectively provide fixed route service while meeting ADA complementary paratransit service requirements. Passengers requesting a deviation must call the transit agency in advance for pick up; however shorter notice may be required than for DAR services. In terms of productivity, route deviation is closer to a fixed route service and may carry around 8 passenger-trips per hour.
- **Microtransit** is a relatively new concept and therefore is bit more difficult to define. For this study, microtransit is defined as a privately operated ridehailing form of transportation which employs on-demand dynamic route transportation technology.

The US Department of Transportation defines microtransit as *“a privately owned and operated shared transportation system that can offer fixed routes and schedules, as well as flexible routes and on-demand scheduling. The vehicles generally include vans and buses.”*

It should also be noted that some existing microtransit program have used public agency vehicles and drivers.

The primary difference between microtransit and a route deviation service is that microtransit employs technology that has only recently been available. Microtransit includes the use of software and smartphone technology which: (1) allow the passenger to reserve a ride directly (without the use of a dispatcher), (2) provides the driver with pick-ups and drop off assignments in real time and (3) calculates the most efficient route between passenger pick-ups/drop offs. Microtransit service may also require a passenger to walk to a specific service location. General routes and schedules are followed, but these can be modified as passenger demands evolve. Microtransit services will typically use vans instead of larger buses but will cost more than a fixed route service. The hope is that technology will allow microtransit programs to carry more passengers than a DAR service for a smaller cost.

- **TNC’s** are widely used in urbanized areas and are a privately operated form of demand response transportation enabled through the use of technology for both reservations and driver routing. Drivers generally choose the hours and areas they serve, rather than being dispatched by the TNC. Passengers must have access to a smart phone or internet to make

reservations. Wait times for a TNC are typically less than 15 minutes. Vehicles are not wheelchair accessible, and drivers do not meet FTA drug and alcohol requirements and are not trained in accommodating persons with disabilities. The cost of a ride with a TNC increases with the distance travelled. Therefore, TNC's are most popular for short distance trips where they are more convenient than a city bus or DAR. In rural areas, there may not be adequate demand for service to make TNC driving profitable. As a result, TNC service is either not available in rural areas, or requires long wait times.

Public transit agencies are beginning to partner with TNCs in areas where demand for DAR service is low and expensive to operate. The challenge with using a TNC is that most are not ADA accessible. Therefore, most transit agencies only use TNCs for operating non-ADA paratransit service.

TNC/Microtransit Success Factors and Applications to Placer County

This section summarizes specific elements which make partnering with a TNC or operating a microtransit program feasible and how this might apply to public transit in Placer County. Table 31 presents a list of "success factors" for TNC use and identifies areas in Western Placer County which include these factors.

- **Can TNC drivers make a living?** – Part of the appeal of becoming an Uber or Lyft driver is that the driver dictates his/her own work schedule and therefore will only work when and where he/she feels that there is money to be made. An example of the available Uber vehicle map on a typical weekday afternoon shows that there is sufficient supply of drivers to make a TNC program work in the urbanized areas. Another factor is whether a trip to an outlying residential area will generate a long return trip with little potential for a return fare. In Roseville, this is more likely to happen for TNC service to lower density residential areas with relatively little associated commercial/employment centers, such as areas north of Pleasant Grove Boulevard or west of Foothills Boulevard.

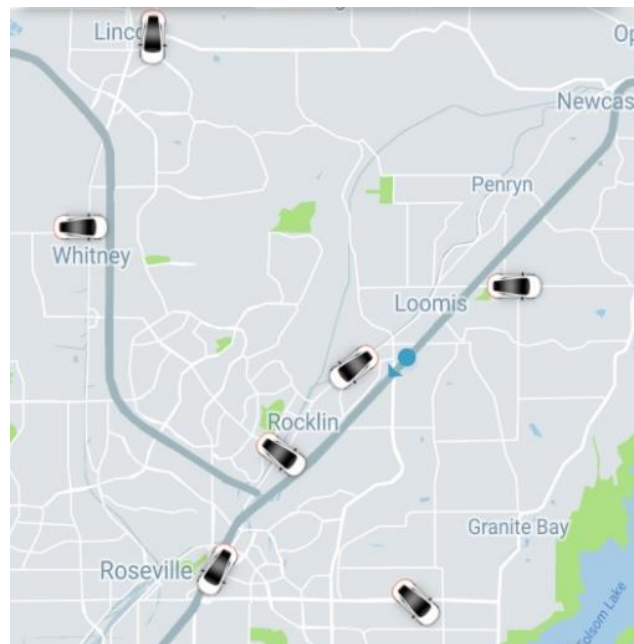


Table 31: TNC/Microtransit Success Factors

Success Factor	Roseville Conditions	Potential Markets in Roseville
Adequate rider demand to make serving the area profitable for TNC drivers	Yes	Relatively high potential east of Foothills Blvd, south of Pleasant Grove Blvd
Existing vehicles available for microtransit program	Potentially	Citywide
Is public paratransit service available to accommodate ADA Trips?	Yes	Citywide
Short distance trips	Yes	Relatively high potential east of Foothills Blvd, south of Pleasant Grove Blvd
Evening service	Not currently offered	Relatively high potential in downtown and in larger commercial centers
Strong ridership demand in peak commute times, generated by regional transit services	Proportion of existing commuter services not driving to their stop is currently low	Provide "first-mile/last-mile" connections to commuter transit service and Capital Corridor
Low proportion of special needs population	Yes, other than in retirement communities	All except retirement communities
Paid Parking	None	Not applicable

- Can existing DAR vehicles be used for microtransit service?** – If Placer County transit operators were to take on a microtransit program, a significant cost savings would occur by using existing public transit vehicles.
- Is ADA compliant service already available?** - The examples discussed in Appendix E show that providing ADA compliant service through a TNC or microtransit program is expensive, if not infeasible. The low number of rides requested for an ADA compliant service is not cost efficient. In many cases, it may not be possible to provide ADA service as most TNC drivers or taxi cab companies do not have wheelchair accessible vehicles. Therefore, a TNC program will be more successful in areas which are currently served by existing complimentary paratransit service. The Roseville DAR program provides this existing service throughout Roseville.
- Short distance trips** – The Transportation Research Board (TRB) Shared Mobility Center identified price as one of the five key reasons to use a TNC. The research indicates that passengers find TNC use the most cost effective for trips three miles or less. Given this parameter, Roseville TNC programs would be the most successful within areas close to trip destinations, such as around downtown, the Galleria area, or along Douglas Boulevard.

- **Evening service** – Drinking/dining in the evening was also noted by the TRB as one of the main factors which increase TNC use. In particular, many passengers use TNC services in order to avoid the potential for DUI driving. As the last runs of Roseville Transit start around 9 PM on weekdays and 4 PM on Saturdays, TNC services to replace existing transit service would not address this potential “market”. However, later evening service could be a potential future market, if deemed desirable. Again the more urban and commercialized areas of Roseville and Rocklin would be the most successful.
- **Peak commute times** – Beyond weekend evenings, TRB research showed that demand for TNC use is the highest during rush hour commutes. Given the commute patterns of Roseville residents, a potential market would be for subsidized TNC service to provide “first-mile/last-mile” connections between regional transit services (Amtrak station, key commuter park-and-rides) and residences.
- **Large proportion of special needs population** – There is a segment of the population which may not technically be eligible for ADA paratransit service but may still need special assistance boarding a vehicle. These residents may feel intimidating by TNC’s and prefer the familiarity and personal attention of DAR. A TNC program may be less successful in areas of Roseville with high concentrations of elderly and disabled residents such as near the Sierra Pines Golf Course and Kaseburg-Kingswood neighborhood in Roseville and Del Webb senior development.
- **Parking** – A third key factor for increased TNC use as noted by TRB research is limited or expensive parking. As Roseville generally has ample free parking, this factor would not apply to the study area.

Overall, this review of factors indicate that TNC service could potentially be successful throughout Roseville. Relatively strong potential “markets” are:

- Service to lower density residential areas where fixed-route transit service has proven to generate low productivity levels, particular in areas (such as southeast Roseville) where trip lengths are relatively short.
- Service providing connecting trips to/from regional commuter services (Capital Corridor rail service or Sacramento Commuter bus services)
- Evening service, if expansion of the hours of public transit were to be desired.

Other Considerations

The underlying objective of providing public transit is to provide transportation that is accessible to everyone, particularly those who have no other option. As such, PCTPA and transit

operators should consider designing TNC/Microtransit services which are also accessible and usable by passengers without a smart phone.

TNC's may be more attractive to a segment of the population and are growing at a fast rate but there is a negative side. TNC's do not help to reduce traffic congestion. Some TNC trips are taking away from existing public transit or non-motorized trips or may even be a trip that would have not been taken all together. Additionally, there is the fact that the TNC must travel to the passenger pick up location. Therefore, in developing partnerships with TNCs, transit agencies and public entities could consider incentivizing shared ride forms of TNC transportation. One strategy used in other existing programs is to offer the subsidized discount only as part of the "Uber Pool" and/or "Lyft Line" service options, both of which provide at least the potential that an individual passenger could share their trip with other passengers.

LOCAL FIXED ROUTE ALTERNATIVES

Route C/G/F/E Alternatives

Routes C, G, F and E are all operated using a single bus that operates each route in turn (in that order) from the Sierra Gardens transfer point. Routes C and F comprise the clockwise and counterclockwise (respectively) operation of a loop in south Roseville (consisting generally of Douglas Avenue, Rocky Ridge Drive, South Cirby Way and Sunrise Avenue), while Routes E and G are similar clockwise and counterclockwise (respectively) operations of a longer loop consisting of I-80, Rocklin Road, Sierra College Boulevard, Eureka Road, and Douglas Boulevard. The overall productivity of these combined routes is relatively low at 2.9 passenger boardings per vehicle-hour, compared with a systemwide average of 5.9. As a result, the cost per passenger is 2.1 times the systemwide average, at an estimated value for Fiscal Year 2018/19 of \$21.10.

To gain an understanding of the effectiveness of the individual routes, a performance analysis was conducted using Roseville Transit data and survey data. As shown in Table 32, Routes E and G are relatively more productive than are Routes C and F, at 3.6 passengers per hour compared with 2.0. While the passengers per vehicle-mile are roughly equivalent, the cost and subsidy per passenger trip on Routes E and G are approximately 1/3 less than those of Routes C and F.

It is also useful to review the ridership served on various portions of these routes:

- On Routes C and F, most of the boardings/alightings are along Cirby near Piedmont and Nighthawk (Pepperwood Apartments) with a total of 8 passenger-trips per day, at Sierra Gardens (6), and at Sunrise/Cirby (5). Notably, no passenger activity was observed at the far end of the route (Country Village Mobile Home Park) or at Oakmont High School.

TABLE 32: Performance Analysis of Routes C, G, F and E

Route	Annual						Performance Analysis				
	Passengers	Vehicle-Hours of Service	Vehicle-Miles of Service	Marginal Operating Cost (1)	Fares Revenue	Operating Subsidy	Pax per Vehicle Hour	Pax per Vehicle Mile	Operating Cost per Trip	Subsidy per Trip	Farebox Ratio
C	1,460	730	8,820	\$40,400	\$3,000	\$37,400	2.0	0.17	\$27.67	\$25.62	7.4%
G	3,066	857	18,584	\$57,400	\$6,400	\$51,000	3.6	0.16	\$18.72	\$16.63	11.1%
F	1,460	730	9,450	\$41,100	\$3,000	\$38,100	2.0	0.15	\$28.15	\$26.10	7.3%
E	3,066	857	19,214	\$58,200	\$6,400	\$51,800	3.6	0.16	\$18.98	\$16.89	11.0%
Total	9,052	3,173	56,068	\$197,100	\$18,800	\$178,300	2.9	0.16	\$21.77	\$19.70	9.5%

Source: Roseville Transit figures for FY 2016/17 for four routes in total, allocated by observed ridership, scheduled service time and route length
 Note 1: Estimated FY 18/19 costs.

- On Routes E and G, passenger activity was concentrated at Sierra College (14) and at Sierra Gardens (7). Other passenger trips were largely scattered along Douglas Boulevard and Eureka Road. Only 3 passenger-trips were served along Sierra College Boulevard between Sierra College and Douglas Boulevard.

There are several factors that appear to be limiting ridership on these combined routes:

- The every-two-hour service frequency makes the service inconvenient for many potential passenger trips. A general rule of thumb in urban transit planning is that service at more than hourly frequencies generates very low ridership. While the combination of routes does provide roughly hourly service to/from Sierra College and the southern Cirby Way residences, this is still a detriment to overall ridership.
- Much of Routes C/E are also served by other more frequent routes: Routes A/B along Sunrise and Route L along Douglas. Only areas along Cirby and Rocky Ridge are not served by other routes.
- Similarly, portions of Routes E and G are also served by the hourly Route L. While these routes do provide the only direct service between Sierra College and Sierra Gardens, the origin/destination analysis indicates that more of the overall transit demand for Sierra College travel to/from Roseville is concentrated on Galleria rather than Sierra Gardens.

Eliminate Routes C, G, F and E

A straightforward option would be to simply eliminate Routes C, G, F and E. The Fiscal Year 2018/19 marginal cost of this (and other) service alternatives can be estimated by using the negotiated rate identified in the service contract for that year and by inflating the other costs from 2016/17 values assuming a 3 percent annual rate of inflation. This yields the following 2017/18 marginal operating cost equation:

$$\begin{aligned} \text{Marginal Operating Cost} &= \$40.57 \times \text{vehicle-hours of service} \\ &+ \$1.22 \times \text{vehicle-miles of service} \end{aligned}$$

Applying this equation, the elimination of these routes would reduce operating costs by \$197,100 in FY 2018/19, as shown in Table 33. The number of buses in operation at peak would also be reduced by one.

The disadvantage of this would be the impact on ridership. In particular, passengers along portions of the routes not also served by other routes would have all fixed route service eliminated. On Routes C and F, this consists of Cirby Way east of Sunrise Avenue to the Country Village Mobile Home Park, as well as along Rocky Ridge Drive between Cirby Way and Douglas Boulevard (an estimated 8 one-way passenger-trips per day). On Routes E and G, Roseville Transit service would be eliminated to Sierra College as well as along Sierra College Boulevard from Rocklin Road to Douglas Boulevard (an estimated 15 passenger-trips per day)⁴. Other existing passengers along these routes (largely along Sunrise Avenue and Douglas Boulevard) would have lower frequency of Roseville Transit route service, via Routes A, B and L.

For these passengers, an “elasticity analysis” can be conducted. Elasticity analysis is a standard means of assessing the ridership impact of a change in existing service. Based upon the principals of microeconomics, it considered the proportionate change in ridership compared with the proportionate change in service or fare factor (in this case, the effective travel time), as observed in similar transit services that have observed ridership changes associated with changes in the service factor in the past. In this particular case, the factor to be evaluated is the reduction in the frequency of service. Adding the loss of passengers in areas losing all service to the loss due to the lower frequency in the other areas, the overall impact of this alternative would be a loss of 7,000 passenger-trips per year. Applying the average fare per passenger on the existing routes, this would result in a reduction in farebox revenue of \$14,500 per year, as shown in Table 31. Considering both the reduction in operating costs and the loss of revenue, the net impact would be a reduction in annual operating subsidy of \$182,600.

Provide Direct 2-Way Hourly Routes C and E on Cirby Way and I-80

The every-two-hour frequency on existing Routes C, G, F and E makes the schedule confusing to understand, results in long wait times at specific stops between buses, eliminates half of the potential transfer opportunities and also creates substantial overlap with other routes. An alternate route configuration would be to provide two routes that could together be operated on hourly headways, as shown in Figure 23:

⁴ Sierra College would still be served by hourly PCT service directly to/from the Galleria, which could serve some of the passengers currently using the Roseville Transit routes. For purposes of this analysis, the additional inconvenience of transferring between systems and lower service frequency is assumed to eliminate these passenger-trips.

TABLE 33: Roseville Transit Local Route Alternatives Service/Cost Analysis

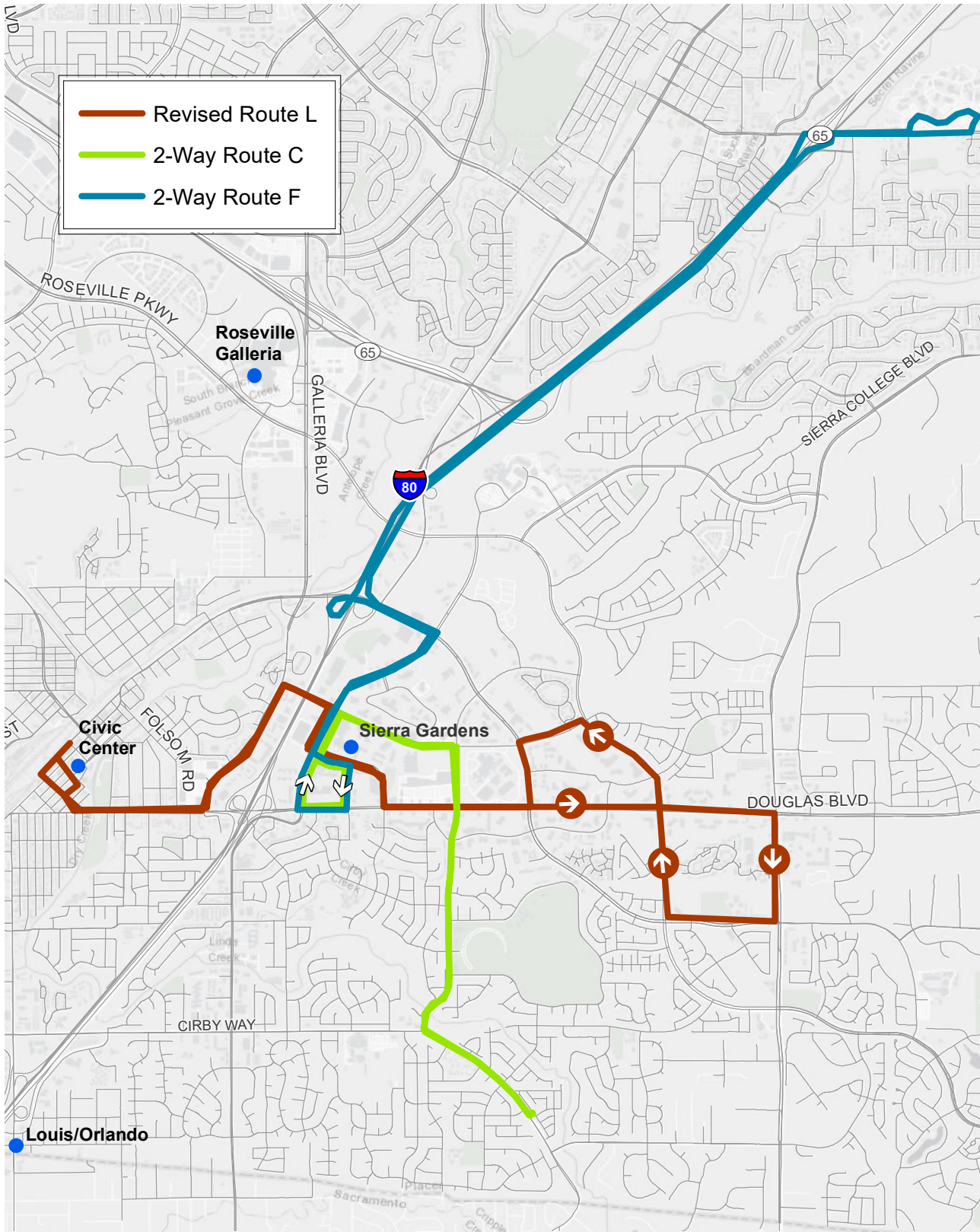
	Run Parameters		Weekday Service				Saturday Service(1)				Annual		Annual	
	Hours	Miles	Runs	Days/Yr	Hours	Miles	Runs	Days/Yr	Hours	Miles	Hours	Miles	Marginal	
														Cost
Eliminate Routes C,G,E,F												-3,173	-56,068	-\$197,100
Streamline Routes C and E														
Route C	0.42	6.4	13	255	5,417	83	0	52	0	0	1,384	21,216	\$82,000	
Route E	0.58	11.1	12	255	7	133	0	52	0	0	1,789	33,966	\$114,000	
Total												3,173	55,182	\$196,000
<i>Net Change</i>												0	-886	-\$1,100
Combined Route L/Streamlined Route C, Eliminate F, G and E														
Existing Route L	1.00	9.9	12	255	12	119	9	52	9	89	3,528	34,927	\$185,700	
Combined Route L/Streamlined C	1.00	10.3	12	255	12	124	9	52	9	93	3,528	36,338	\$187,500	
<i>Net Change</i>												0	1,411	\$1,800
Elimination of Existing Routes CGFE												-3,173	-56,068	-\$197,100
Total Net Change in Fixed route												-3,173	-54,657	-\$195,300
Extension of Roseville Route S to Public Defender's Office	--	--	--	242	1	10	0	0	0	0	242	2,420	\$12,800	
Increased Weekday Service on Routes D, L and M														
Route D	1.00	15.4	10.0	255	10	154	0	52	0	0	2,550	39,270	\$151,400	
Route L	1.00	9.9	10.0	255	10	99	0	52	0	0	2,550	25,245	\$134,300	
Route M	1.00	17.0	11.0	255	11	187	0	52	0	0	2,805	47,685	\$172,000	
Total												7,905	112,200	\$457,700
Add Reverse Route D on Weekdays	1.00	15.4	10.0	255	10	154	0	52	0	0	2,553	39,270	\$151,500	
Revised Route S -- 8 Runs per Day														
Existing Service	--	--	--	242	4.5	80	0	0	0	0	1,089	19,360	\$67,800	
Revised Service	1.00	10.3	8.0	255	8	82	0	52	0	0	2,040	21,012	\$108,400	
<i>Net Change</i>												951	1,652	\$40,600
Revised Route S -- 11 Runs per Day														
Revised Service	1.00	10.3	11.0	255	11	113	0	52	0	0	2,805	28,892	\$149,000	
<i>Net Change</i>												1,854	27,240	\$108,400
Hourly Route R Service	1.00	12.7	6.0	255	6	76	0	52	0	0	1,533	19,431	\$85,900	
Eliminate First Hour of Routes D, CGFE and M Weekday Service														
Route CGFE	2.00	35.6	-0.5	255	-1	-18	0	52	0	0	-255	-4,539	-\$15,900	
Route D	1.00	15.4	-1	255	-1	-15	0	52	0	0	-255	-3,927	-\$15,100	
Route M	1.00	17.0	-1	255	-1	-17	0	52	0	0	-255	-4,335	-\$15,600	
Total												-765	-12,801	-\$46,600
Eliminate Weekday Service After 7 PM														
Route A	1.00	11.1	-3	255	-3	-33	0	52	0	0	-765	-8,492	-\$41,400	
Route B	1.00	11.3	-3	255	-3	-34	0	52	0	0	-765	-8,645	-\$41,600	
Route M	1.00	17.0	-3	255	-3	-51	0	52	0	0	-765	-13,005	-\$46,900	
Additional Dispatch														-\$19,100
Total												-2,295	-30,141	-\$149,000
Extend Saturday Service Until 6 PM														
Route A	1.00	11.1	0	255	0	0	1	52	1	11	52	577	\$2,800	
Route B	1.00	11.3	0	255	0	0	1	52	1	11	52	588	\$2,800	
Route D	1.00	15.4	0	255	0	0	1	52	1	15	52	801	\$3,100	
Route L	1.00	11.0	0	255	0	0	1	52	1	11	52	572	\$2,800	
Route M	1.00	17.0	0	255	0	0	1	52	1	17	52	884	\$3,200	
Additional Dispatch														\$1,300
Total												260	3,422	\$16,000
Sunday Service -- 9 Hour Span														
Route A	1.00	11.1	0	255	0	0	9.0	52	9.0	100	468	5,195	\$25,300	
Route B	1.00	11.3	0	255	0	0	8.7	52	8.7	98	453	5,122	\$24,600	
Route D	1.00	15.4	0	255	0	0	8.9	52	8.9	137	462	7,114	\$27,400	
Route L	1.00	11.0	0	255	0	0	8.6	52	8.6	95	448	4,929	\$24,200	
Route M	1.00	17.0	0	255	0	0	9.0	52	9.0	153	468	7,956	\$28,700	
Additional Dispatch														\$11,700
Total												2,299	30,315	\$141,900
Sunday Service -- 7 Hour Span														
Route A	1.00	11.1	0	255	0	0	7.0	52	7.0	78	364	4,040	\$19,700	
Route B	1.00	11.3	0	255	0	0	6.7	52	6.7	76	349	3,947	\$19,000	
Route D	1.00	15.4	0	255	0	0	6.9	52	6.9	106	358	5,512	\$21,200	
Route L	1.00	11.0	0	255	0	0	6.6	52	6.6	73	344	3,785	\$18,600	
Route M	1.00	17.0	0	255	0	0	7.0	52	7.0	119	364	6,188	\$22,300	
Additional Dispatch														\$9,100
Total												1,779	23,472	\$109,900

TABLE 34: Roseville Transit Local Route Service Alternatives Summary

Alternative	Change In Annual Service						Change in Peak Buses
	Service Hours	Service Miles	Marginal Operating Cost	Ridership	Fare Revenues	Operating Subsidy	
Eliminate C, G, F, E	-3,173	-56,068	-\$197,100	-7,000	-\$14,500	-\$182,600	-1
<i>Change From Existing CGFE</i>	-100%	-100%	-100%	-77%	-77%	-102%	-100%
Streamline Routes C and E	0	-886	-\$1,100	5,400	\$11,200	-\$12,300	0
<i>Change From Existing CGFE</i>	0%	-2%	-1%	60%	59%	-7%	0%
Combine Route L with Streamlined C, Provide TNC Service, Eliminate Routes E, F and G							
Net Change in Fixed Route	-3,173	-54,657	-\$195,300	-5,500	-\$11,400	-\$183,900	-1
TNC Service	--	--	\$75,600	8,400	\$16,800	\$58,800	--
Total	-3,173	-54,657	-\$119,700	2,900	\$5,400	-\$125,100	-1
<i>Change From Existing CGFE, L</i>	-48%	-59%	-31%	11%	9%	-39%	-50%
Increased D, L and M Frequency	7,905	112,200	\$457,700	21,100	\$44,100	\$413,600	3
<i>Change From Existing D, L, M</i>	67%	67%	53%	31%	31%	58%	100%
Add Reverse Route D	2,553	39,270	\$151,500	3,900	\$5,900	\$145,600	1
<i>Change From Existing D</i>	68%	67%	38%	20%	14%	41%	100%
Hourly Route R Service	1,533	19,431	\$85,900	4,000	\$8,300	\$77,600	0
<i>Change From Existing R</i>	206%	116%	170%	39%	39%	266%	0%
Revise Route S -- 8 Runs/Day	951	1,652	\$40,600	2,700	\$5,600	\$35,000	0
<i>Change From Existing S</i>	46%	6%	35%	61%	60%	33%	0%
Revise Route S -- 11 Runs/Day	1,854	27,240	\$108,400	5,200	\$10,800	\$97,600	0
<i>Change From Existing S</i>	90%	101%	93%	117%	116%	91%	0%
Extend Route S to Public Defender's Office	242	2,420	\$12,800	2,400	\$5,000	\$7,800	0
<i>Change From Existing S</i>	12%	9%	11%	54%	54%	7%	0%
Eliminate First Hour of Routes D, C, G and M Weekday Service	-765	-12,801	-\$46,600	-1,900	-\$3,900	-\$42,700	0
<i>Change From Existing CGFE, D, M</i>	-7%	-7%	-5%	-3%	-3%	-6%	0%
Eliminate Weekday Service After 7 PM	-2,295	-30,141	-\$149,000	-6,800	-\$14,100	-\$134,900	0
<i>Change From Existing All Routes</i>	-7%	-92%	-455%	-21%	-43%	-412%	0%
Extend Saturday Service Until 6 PM -- All Routes	260	3,422	\$16,000	2,200	\$4,600	\$11,400	0
<i>Change From Existing All Routes</i>	0.8%	0.7%	0.6%	1.1%	1.1%	0.5%	0.0%
Extend Saturday Service Until 6 PM -- Routes A & B Only	104	1,165	\$6,900	1,300	\$2,600	\$4,300	0
<i>Change From Existing All Routes</i>	0.3%	0.2%	0.2%	0.7%	0.6%	0.2%	0.0%
Sunday Service - 8 AM to 5 PM	2,299	30,315	\$141,900	7,800	\$16,200	\$125,700	0
<i>Change From Existing All Routes</i>	7%	6%	5%	4%	4%	5%	0%
Sunday Service 8 AM to 3 PM	1,779	23,472	\$109,900	3,800	\$7,900	\$102,000	0
<i>Change From Existing All Routes</i>	5%	5%	4%	2%	2%	4%	0%



Figure 23
Streamlined C and F Alternative



- Route C would depart Sierra Gardens Transfer Point, and make a loop clockwise on Douglas Boulevard westbound and N. Sunrise Avenue northbound before servicing Lead Hill Boulevard eastbound. (This would allow Route L to serve Sierra Gardens Transfer Point in the eastbound direction, rather than traveling along Lead Hill Road, thereby increasing the transfer opportunities between Route L and Routes A, B, C and E.) Route C would then head southbound on Rocky Ridge and eastbound on Cirby Way to the current terminus at Rimma Drive. The return route would follow the outbound route, except the bus would turn left on Sierra Gardens Drive from southbound N. Sunrise Avenue to return to the Transfer Center.
- The other route (identified as Route E for purposes of this discussion) would depart the Sierra Gardens Transfer Point, make a clockwise loop on Douglas Boulevard East and North Sunrise Avenue, and then use Eureka Road, I-80 and Rocklin Road to arrive at Sierra College. Turning around via Campus Drive, the route would follow the outbound route back to Sierra Gardens Transfer Point, making the southbound left onto Sierra Gardens Drive.

In total, these routes would be 17.5 miles in length and require approximately 50 minutes to operate. This alternative would result in a slight reduction in vehicle mileage, resulting in a small (\$1,100 per year) reduction in operating costs.

There would be several factors impacting ridership, both positively and negatively:

- The ability to transfer to/from the eastbound Route L at Sierra Gardens Transfer Center would generate an estimated 2,300 annual passenger trips.
- The provision of two-way service on Lead Hill Boulevard (rather than the existing one-way eastbound only) would generate 2,000 passenger trips.
- More convenient hourly service in both directions for the stops along Rocky Ridge Drive and South Cirby Way would increase ridership by 1,600 passenger trips.
- Consistent hourly schedule of service at Sierra College would increase annual ridership by 900 passenger-trips
- The loss of service along Cirby Way between Sunrise and Rocky Ridge would reduce ridership. While the onboard surveys recorded no existing ridership, a loss of 200 is assumed along this stretch to be conservative.
- Loss of service along Sierra College Boulevard between Douglas Boulevard and Sierra College would reduce ridership by an estimated 600 passenger trips.

- The reduction in service frequency for passengers at other stops with a reduction (but not elimination) of fixed route service would reduce ridership by 600 passenger-trips.

In total, ridership is estimated to increase by 5,400 passenger-trips per year. This in turn would increase farebox revenue by roughly \$11,200. Overall, a reduction in annual operating subsidy of \$12,300 would result.

There were six other route alternatives considered for this service element:

- Two way service between Sierra Gardens and Sierra College could be operated along Douglas Boulevard and Sierra College Boulevard, along with the service via Cirby Way to the south. However, this would require approximately 65 minutes to operate, and would not allow good timed connections to other routes.
- A route connecting Louis/Orlando, Sierra Gardens and Sierra College was considered, via Orlando Avenue, Cirby Way Rocky Ridge Drive, Douglas Boulevard, N. Sunrise Avenue, E. Roseville Parkway, I-80 and Rocklin Road. However, this would require approximately 70 minutes per round trip (eliminating timed connections), would partially duplicate existing Route A and B service, and would provide a service (one-bus connections between Sierra College and Louis/Orlando) that is already provided at a shorter travel time by the PCT Auburn—Light Rail Route.
- Adding the segment on Rocky Ridge and South Cirby to Route L was considered, but found to take more than an hour to complete. This would also disrupt existing east-west trips across Roseville on Route L.
- Providing consistent hourly service on both Routes E and G was considered. As each route requires 37 minutes to operate, two buses would be required. This would increase costs on the order of \$178,000 per year and would result in an inefficient overall utilization of buses. Ridership would only increase by approximately 2,500 passenger-trips per year. Due to these factors, this option is not considered further.
- Service could be provided from Sierra College in Rocklin to the Civic Center transit plaza, adjacent to the Sierra College Roseville Center nearby on Vernon Street. While this would provide a convenient means of transferring between classes on the two campuses, experience at other similar “commuter” college campuses indicate that the actual transit demand for travel between campuses is quite low, given the need to coordinate fixed class schedules with limited transit services and the availability of a relatively low-cost semester parking pass (\$53 per semester). This route option would also eliminate the ability to share a vehicle with Routes C and F.
- Service between Sierra College (Rocklin) and Sierra Gardens could be provided via Taylor Road rather than via I-80. Depending on the time of day, travel via Taylor Road can take

approximately 8 to 10 minutes more than I-80, due to traffic signals and congestion. A round-trip would therefore need to be scheduled to include an additional 20 minutes. To provide hourly service with one vehicle, this would in turn require dropping the Route C service. Service along Taylor Road would generate additional ridership, but given that the portion north of SR 65 is in Rocklin, much of the additional ridership would be generated in Rocklin. It would also parallel existing PCT Lincoln-Sierra College between Sierra College and Sunset Parkway, reducing ridership on this existing service.

Replace the Eastern Portion of Route L with TNC Service, Provide Streamlined Route C Service and Eliminate Sierra College Service

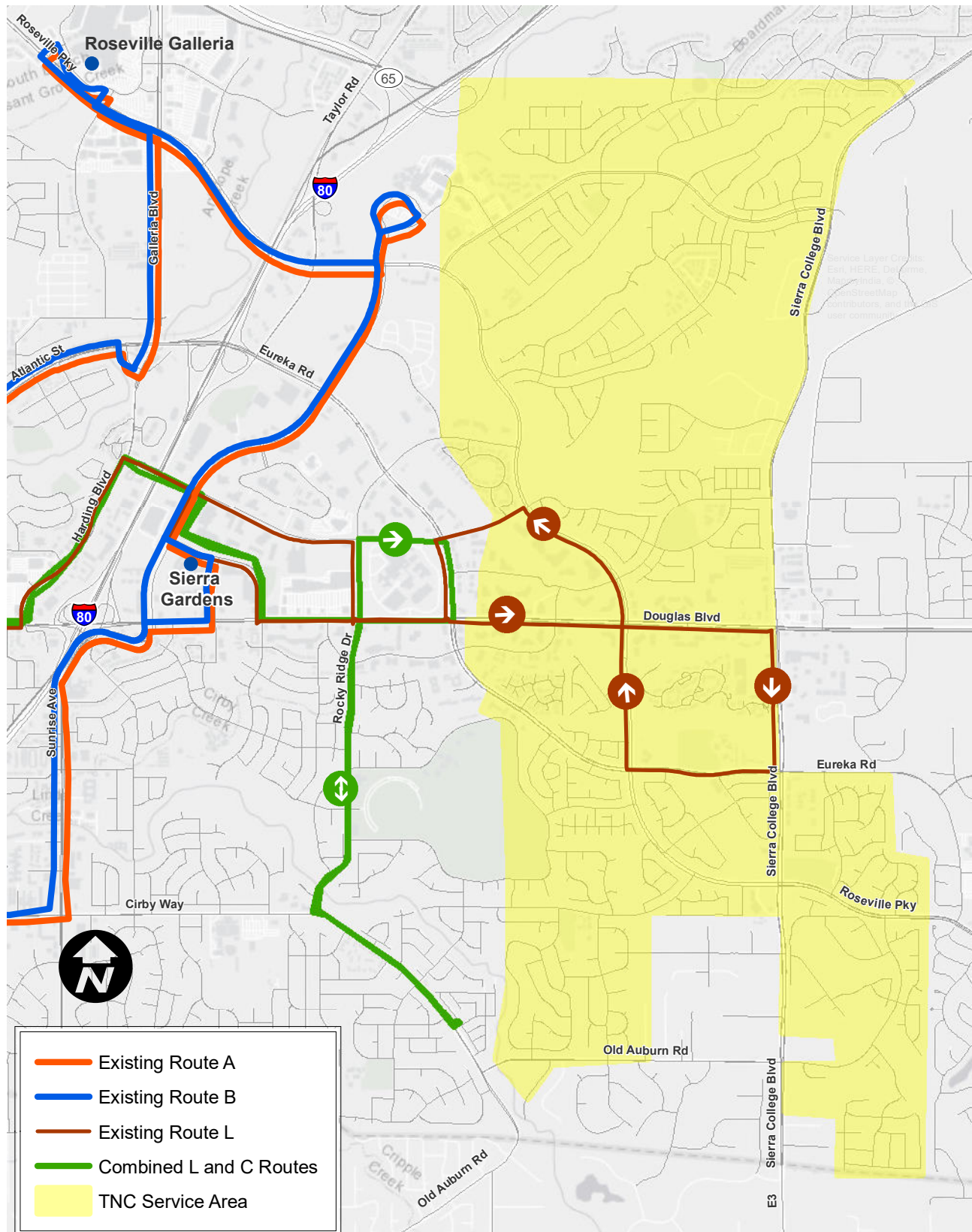
While performing better than Routes C/G/F/E, Route L has a relatively low utilization (5.3 passengers per vehicle-hour) and a relatively high subsidy per trip (\$16.91, in 2016/17). A review of the ridership activity by stop shows that approximately 80 percent of the ridership is generated in the western portion of the route (west of Eureka Boulevard) and only 20 percent in the eastern portion (which encompasses 35 percent of the route mileage).

Given this, one option would be to truncate Route L at Eureka Boulevard and use the resulting time within an hourly headway to operate the streamlined Route C, as discussed above. Along with the elimination of Roseville Transit service to Sierra College, this could reduce the number of buses in operation by one, and reduce fixed route operating costs by \$195,300 per year. This revised fixed route is shown in Figure 24.

To replace and augment this reduction in fixed route service, subsidy could be provided for residents using a Transportation Network Company (TNC), such as Lyft or Uber. To manage the program and control costs, restrictions would need to be defined for the program, such as the following:

- At least one trip-end would need to be within the program zone. Figure 24 presents an example zone defined as all of incorporated Roseville east of the Eureka Boulevard/Douglas Boulevard intersection (extending to the north and south). Note that this area includes substantial areas not currently served, but excludes areas that would continue to be served with fixed routes.
- Any trips outside of the TNC area could be limited to specific locations, such to Sierra Gardens Transfer Point and the Galleria Transfer Point (for connections to other transit services). It may also be appropriate to add other key nearby destinations, such as Sierra College, Sutter Roseville Medical Center, and/or Kaiser Permanente Roseville Medical Center. Other commercial destinations along Douglas Boulevard between I-80 and Eureka Boulevard may also be appropriate.

Figure 24
Replace Eastern Route L With TNC Service



- Passengers wishing to use the subsidy program must provide the discount code. Distribution of this discount code could provide a check on total program costs.

A typical average Uber fare for trips following these guidelines is \$9.00. Subtracting the average existing transit fare, the subsidy per passenger-trip would be on the order of \$7.00. Actual ridership would vary greatly depending on the specific constraints placed on the program. If the program were to serve the existing ridership on Route L that would be eliminated (3,800 per year) plus existing Route E and G ridership on the areas to be eliminated (4,600 per year), the total existing passenger-trips that could shift to the TNC program would equal 8,400 per year. At a subsidy of \$7.00 per trip, this program would require a subsidy on the order of \$58,800 per year. While other administrative costs could be incurred regarding the formation and monitoring of this program, the net impact on operating subsidy requirements would be a savings on the order of \$125,100. This could also be considered a pilot program for future expansion of TNC subsidy programs to other low-demand portions of Roseville, such as northwest Roseville. This program could also be combined with a TNC service for the Granite Bay area, as identified in the Placer County Transit SRTP. This plan element would replace the current Granite Bay Dial-A-Ride with a subsidized TNC service for Granite Bay residents (with destinations extending into Roseville).

One issue with this alternative (or any other alternative providing TNC service for a specific area or population) is the equity issue of providing a service for one segment of Roseville residents without providing it to all. In the short run, this limited TNC program could be considered a “demonstration program”, identified due to the low existing transit ridership (which providing funding for TNC service through the elimination of current fixed route service) combined with the density of development and potential TNC market in the area. In the long run assuming the success of the demonstration service, the City would need to define policies identifying what areas or travel corridors warrant inclusion in a TNC program.

Route Revisions in Northwest Roseville to Serve New Development

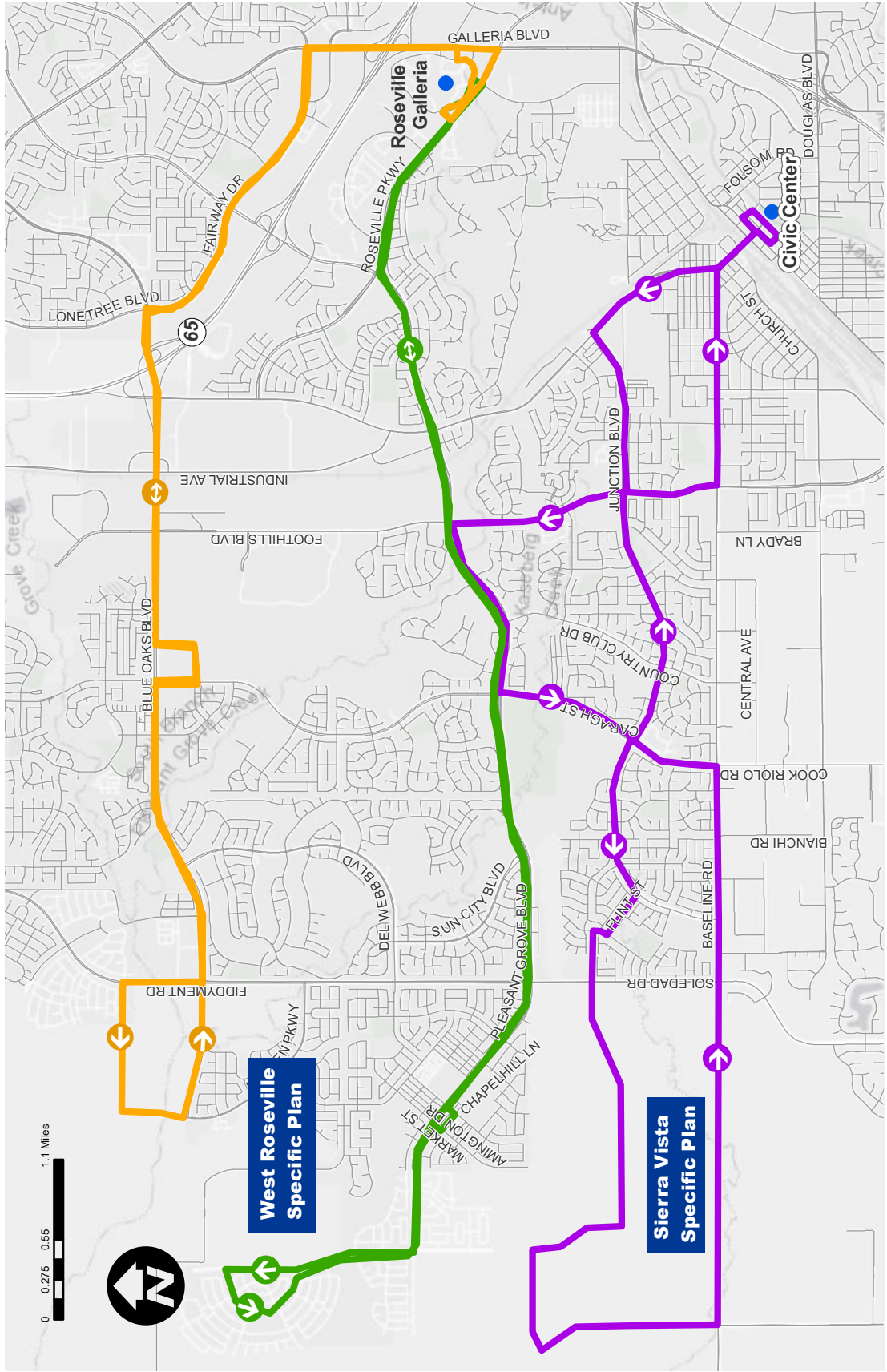
Significant development is currently underway in northwest Roseville and this is expected to continue over the SRTP planning period. At some point (dependent on specific development schedules), the existing routes (notably Routes D and M) will need to be modified to serve new development in the Sierra Vista Specific Plan Area and the West Roseville Specific Plan Area. In addition, there is development occurring in the HP Campus area that increases the need for transit service along the Blue Oaks Boulevard corridor.

Figure 25 presents a conceptual route plan that could serve expected development over the mid-term in this area:

- Route D would be extended westward to serve the Sierra Vista Specific Plan area. The route shown is designed in particular to serve commercial areas (largely along Baseline Road) and the higher density residential areas. To provide adequate running time

**Figure 25
West Roseville Route Concept**

-  Extended Route D
-  New Route N
-  Extended Route M



within an hourly schedule, the current out-and-back route element north of Pleasant Grove Boulevard would be eliminated. This segment between Pleasant Grove Boulevard and Blue Oaks Boulevard currently only generates 7 passenger trips per day, and would not be cost-effective to serve if service is also provided along both of these east-west corridor. This revision also has the benefit of reducing the travel time between the existing western portions of Route D and the Civic Center.

- Route M would be extended westward along Pleasant Grove Boulevard and north on Durango Way, to serve additional residential development areas. To provide the additional running time, the route between the Galleria and Pleasant Grove Boulevard would be shifted from Fairway Drive to Roseville Parkway, with the Fairway Drive area served by the following route.
- A new route (such as Route N) would depart the Galleria following the existing Route M route via Galleria Boulevard and Fairway Drive, extending along Fairway Drive and westward along Blue Oaks Boulevard. The route would leave Blue Oaks Boulevard to better serve residential development in the HP Campus area, and would have a terminal loop in the northern portion of the West Roseville specific Plan area (focusing on streets serving high density residential areas).
- As discussed above, the frequency of service on Route R could also be increased, providing additional north-south travel options in the area.

Depending on the specific span of service on the new routes, this revision would increase annual operating costs on the order of \$600,000 per year. Ridership would depend upon the level of development, as well as the span of service.

Increase Weekday Service Frequency on Routes D, L and M to Half-Hourly

At present, only Routes A and B provide service every half-hour. With the exception of the Route CGFE service discussed above, the other routes provide service only hourly. A common request is for increased frequency of service on these hourly routes. In addition to substantially improving the quality of service, this would improve transfer connections, notably at the Galleria at the top of the hour and at Civic Center Transfer Center at roughly 50 minutes past the hour.

Providing half-hourly service over the bulk of the service day (excluding early morning and late afternoon periods with low ridership) would cost \$457,700 per year, and require three additional buses in operation. Ridership, based on an elasticity analysis and the improved connections, would increase by an estimated 21,100 per year. Including the additional fare revenues, the overall operating subsidy requirements would be increased by \$413,000 annually.

Add Reverse Route D Service

Route D consists of a large one-way loop (that overlaps in two places) along with a northerly two-way service segment along Woodcreek Oaks Boulevard. This route structure ensures that passengers (other than those within walking distance of the two locations along Junction Boulevard where the loop overlaps) will have a long in-vehicle travel time in one direction or the other, totaling an hour on the bus to complete a round trip. This is one factor that results in relatively poor productivity of this route.

One means of solving this would be to operate an additional bus in the opposite direction (along the lines of the previously-operated Route I). If this is operated on weekdays only and on a limited span of service from 8:10 AM to 6:10 PM, it would increase annual operating costs by \$151,500 per year. An elasticity analysis based on the reduction in in-vehicle travel time indicates that this would result in a ridership increase of 3,900 per year. Factoring for the additional fare revenues, operating subsidy would be increased by \$145,600 per year. An additional peak bus would also be required.

Revise Route S – 8 Runs per Day

Route S provides service connecting the Galleria with the Santucci Justice Center eight times per day. The current route proceeds northbound via Roseville Parkway, Pleasant Grove Boulevard and Industrial Avenue (very few riders are served between the two end points), and returns via SR 65. Full round trips are operated on four of the service times, while the other four only provide service in one or the other direction. To avoid providing service when the Justice Center is not in operation, this route is not operated on more holidays (13) than the remainder of the system (6).

This route is the least efficient of the Roseville Transit fixed routes, serving an average of only 2.2 passengers per vehicle-hour of service and requiring over \$45 in subsidy per passenger-trip. In addition, the growth in traffic congestion on SR 65 has made it increasingly difficult to operate on a consistent schedule. One option that could help address both of these issues would be to revise the route to travel north from the Galleria on Stanford Ranch Road, then northwest on Fairway Drive, west on Blue Oaks Boulevard and north on Industrial Avenue, returning on the same route. This could provide new service to commercial destinations along Fairway Drive north of Pleasant Grove Boulevard (including Target and Kohl's) not currently served. It would also double frequency between the Galleria and the commercial destinations along Fairway Drive south of Pleasant Grove Boulevard, specifically timed to provide direction transfers with Routes A and B at the top of the hour. While this revised route is slightly shorter, it would take an estimated 10 minutes more per run to operate. To provide a more consistent service along Fairway Drive, full round-trips would be operated on each run, and the number of holidays would be reduced to match the remainder of the fixed routes. The net impact of this option would be to increase operating costs by \$40,600.

Ridership associated with the new service north of Pleasant Grove Boulevard can be estimated by considering the transit trip generation of the existing service along Fairway Drive south of Pleasant Grove Boulevard, factored to reflect the difference in service quality. In addition, the increased frequency south of Pleasant Grove Boulevard would increase ridership. The overall increase in ridership generated by this option is estimated to be 2,700 annual passenger-trips. Subtracting the increase in passenger fares, the overall impact on operating subsidy would be \$35,000.

Revise Route S – 11 Runs per Day

An additional alternative would be identical to that discussed above, except that consistent hourly service would be provided 11 hours per day (from 7:00 AM to 6:00 PM). This would increase annual operating costs by \$108,400, but increase ridership by 5,200 passenger-trips per year. Total impact on operating subsidy, adjusted for the increased fares, would be \$97,600 per year.

Route S Extension to Public Defender's Office

As also discussed in the parallel Placer County Transit document, there is a need for service between the Santucci Justice Center (in Roseville) and the Public Defender's Office 0.7 miles to the north (in unincorporated Placer County). This service could potentially be provided by extending Roseville Transit Route S service north of the Justice Center to the Public Defender's Office. The vehicle could turn around at the end of Technology Drive to return to Industrial Boulevard. Reflecting the intermittent need for this service, it would best be offered on an on-call basis, requiring a call to the dispatch office at least 15 minutes prior to the scheduled time. This would add approximately 1 hour of in-service time per day and an additional 10 vehicle-miles per day. Assuming all these hours and miles are "charged" to Placer County by the City, the total cost over 242 annual days of service would be \$12,800. A rough estimate of the additional ridership generated by this extension would be 2,000 passenger-trips per year. Subtracting the additional fare revenue, the subsidy would be approximately \$9,800 per year.

Another option to provide the connection to the Public Defender's Office that would not impact Route S would be for Placer County to subsidize the provision of a discount for TNC trips between the Office and the Santucci Justice Center. To serve the same ridership level at PCT fare levels, the subsidy would be approximately \$9,500 per year.

Hourly Route R Service

Route R provides four runs per weekday along the Foothills Boulevard corridor between Louis/Orlando Transit Center on the south and the industrial park that includes PRIDE Industries (just north of Blue Oaks Boulevard) on the north. This is the most productive of the existing Roseville Transit routes, carrying 13.8 passenger-trips per vehicle-hour. Of the total ridership, 36 percent is generated by PRIDE Industries and (to a lesser extent) the adjacent Pasco Scientific plant.

Given this existing high productivity and the fact that additional service could increase transfer opportunities with Routes D and M, it is worth considering providing an additional six round-trips per weekday to provide roughly hourly service⁵. This service enhancement would increase annual operating costs by \$85,900 per year. Ridership impacts were evaluated by considering an elasticity analysis of the non-employee ridership, and found to be 4,000 additional passenger-trips per year. Subtracting the associated fare revenues, the impact on annual subsidy would be \$77,600.

Reduce Early Morning Weekday Service

The initial runs on Routes C, D, G and M have relatively low ridership (only one or two riders were observed in the onboard surveys). Eliminating these initial runs (starting service between 6:57 AM and 7:30 AM) would save \$46,600 in annual operating costs, while reducing ridership by an estimated 1,900 passenger-trips per year. The reduction in operating subsidy would be \$42,700 per year.

Reduce Evening Service

Weekday evening service consists of one bus each on Routes A, B, and M, providing hourly service. Ridership after 7:00 PM is relatively low, with an estimated average of 16 passenger-trips per day. Eliminating these runs would reduce operating costs by an estimated \$149,000 per year (assuming no parallel reduction in DAR service). Overall ridership is estimated to be reduced by 6,800 passenger-trips per year, including some trips during the remaining service span that would not be made as passengers could not complete a round-trip. Including the loss of \$14,100 in fares, the overall impact on operating subsidy would be a reduction of \$134,900 per year.

One impact of this reduction would be the elimination of the 7:30 PM connection at the Galleria for passengers arriving on the last PCT Auburn-Light Rail trip from Sierra College. One option would be to retain the 7:00 PM on Routes A and/or B to provide this connection, if additional survey data warrants it.

Later Saturday Service

The current Saturday service (Routes A, B, D, L and M only) ends around 5:00 PM. Providing one additional hour on all or some of the routes would address a common passenger request and provide more opportunity for employment, shopping and recreational trips on Saturdays. The following two options were considered:

- Adding one additional hour on all five routes currently operating on Saturday would increase annual costs by \$16,000. Considering the relative ridership in this hour on other transit systems running a longer span of service, this would increase ridership by

⁵ Service times would shift during the day to best serve the employee work shifts.

2,200 per year and fare revenue by \$4,600 per year, resulting in an operating subsidy increase of \$11,400 annually.

- In reviewing the existing ridership on Saturdays by route, ridership on Routes A and B is roughly double that of the other three routes. Extending the service span for these two routes only would increase costs by \$6,900 while still increasing ridership by 1,300 per year, resulting in an operating subsidy of \$4,300 per year.

Sunday Service

The desire for Sunday service is often raised in the annual transit unmet needs hearing process. This idea, however, generated little positive response in the onboard passenger surveys. To assess this, two different spans of service were evaluated:

- If Sunday service were provided between roughly 8 AM and 5 PM (matching the existing Saturday span of service), the annual operating cost impact (including additional dispatch cost) would be \$141,900. Based on the relative proportion of ridership generated on other similar systems currently operating service, annual ridership is estimated to be 7,800 per year. Including fare revenue, the annual operating subsidy required would be \$125,700.
- If Sunday service were to end around 3 PM, annual operating costs would drop to \$109,900. Ridership by hour at other transit systems, however, indicate a relatively high proportion of Sunday ridership in these late afternoon hours that would be eliminated. As a result, ridership would drop to 3,800 per year and subsidy requirements would still be \$102,000 annually.

Timed Transfers Between Local Routes

Existing schedules were reviewed (in light of current ridership patterns) at the key transfer points, which yielded the following conclusions:

- At the Galleria, existing schedules are well-coordinated between Roseville Transit routes, as well as with PCT routes.
- At the Civic Center Transfer Station, Routes A and B are on-site at 10 and 40 after the hour, while Route D arrives at 13 after and departs at 20 after and Route L arrives at 15 after and departs at 25 after. As a result, passengers arriving on Routes D and L have a long wait to transfer to Routes A and B (a common pattern), though a relatively short wait for transfers in the opposite direction (from A or B to D or L). While drivers currently strive to hold runs in order to make connections work, overall transfers could be substantially improved if Route D schedules were moved 3 minute early and Route L schedules were moved 5 minutes earlier. This would provide a schedule by which all four routes were at this location at 10 minutes after the hour (fully using the available

four-bus bay capacity). This shift would not change transfer opportunities at Sierra Gardens on Route L. On Route D, the transfer opportunity with Route M at Pleasant Grove/Foothills would require a 7 minute wait rather than the existing 4 minute wait when transferring from D to M, but a corresponding 3 minute reduction in wait time in the opposite direction. Overall, this shift in schedules would be beneficial to ridership, so long as it does not cause a problem with school bell times.

- At the Sierra Gardens Transfers Center, schedules are well coordinated between Route A, the Route CGFE bus and Route L. While Route B serves this location 5 minutes after the other buses depart, there is no way to shift the Route B schedule at this location without negatively impacting transfer opportunities at other, more critical, transfer points.
- At the Louis/Orlando Transit Center, Route A is well-coordinated with RT Route 93, while Route B is well-coordinated with RT Route 21.

Overall, the shift to slightly earlier schedules on Routes D and L should be considered further, in order to improve timed connections at Civic Center Transfer Station.

Modifications to Address On-Time Performance Issues

Several options were considered to address current on-time performance challenges:

- **Route A** operates 6 or minutes behind schedule on 9 percent of observed runs, while **Route B** is behind schedule on 5 percent of observed runs. Most of the longer delays occur in the mid-afternoon period. These routes generally run on the most direct routes available. One options to reduce the route length would be to use Orlando Avenue between Cirby Way and the Louis Orlando Transit Center rather than Riverside Avenue. This would reduce the route lengths by a quarter mile and avoid three signals, thereby resulting in several minutes of running time savings. This would eliminate service to the stops (in each direction) on Cirby east of Riverside. At present, 3 passengers board/alight at this Route A (westbound) stop and 10 at the Route B (eastbound) stop. Given that ridership is low on Route A while the Route A on-time performance is worse, it would be a net benefit to overall ridership if Route A were rerouted via Orlando Avenue while Route B were to remain on the current alignment. This rerouting of Route A would provide new service to the Merryhill School and the Somerset Hills Apartments. This option is a net benefit as it would make a noticeable improvement in overall on-time reliability.
- **Routes C, G, F and E** have the worst overall on-time performance, with fully 51 percent of runs operating late (up to 25 minutes late). Most delays occur in the afternoon when traffic congestion creates delays. One modification (beyond those discussed above) would be to discontinue service along Eureka Road south of Douglas Boulevard, operating along Douglas Boulevard west of Sierra College Boulevard. This would result

in a slight improvement (at the cost of 4 passengers per day loss in ridership), but would not address the bulk of the problem.

- **Route M** operates late on 12 percent of the runs, largely in the mid-afternoon. As this route is relatively direct and as the western terminus generates substantial ridership, the only option to reduce running time would be to use Roseville Parkway between the Galleria and Pleasant Grove Boulevard, rather than Fairway Drive. This, however, would eliminate approximately 30 percent of Route M ridership, and would clearly be an overall detriment.
- The final route identified as having late runs in the data collected as part of this SRTP (**Route R**) was the result of a late start on an initial run, and thus can be addressed through operations. As it was not a function of the route or schedule, it is not a subject for an SRTP.

Service to Roseville Amtrak Station

Capitol Corridor rail service to the Roseville Amtrak Station is currently limited to a 7:03 AM westbound departure and 5:48 PM eastbound departure on weekdays, and an 8:43 AM westbound and 8:48 PM eastbound departures on weekends. However, the Capitol Corridor Joint Powers Authority is planning on increasing service to three round-trips per weekday in 2021. In addition, service is tentatively planned for up to 10 round-trips starting in 2025 (depending on funding).

The nearest existing Roseville Transit stop is at Main Street/Washington Boulevard, approximately a 900 foot walk away from the train station. However, this stop is only served hourly in the northbound direction, requiring almost a full hour to connect with other transit routes at the Civic Center Transfer Station. This Transfer Station is approximately 1,000 feet walk distance from the train station (only 100 feet more), which is less than a five minute walk (though not a particularly pleasant walk along a sidewalk through a long underpass).

Given the success of the *Capital Corridor* service and the plans for expansion, it is clear that public transit connections to the Roseville Train Station will be needed within this SRTP planning period. There are three ways in which this could be provided:

- Existing Route D could be modified to service a stop at the station. To be effective, this would need to occur in both directions. This would add approximately 0.6 miles per round-trip and approximately 3 minutes of running time. Given the limited number train trips in the short term, most runs would not serve any passengers. Service would only be available once an hour in each direction. While the existing rail times are within the Route D span of service, the fact that the rail times are near the beginning and end of the overall system span of service means that little connecting service would be available (particularly in the morning) to provide trips beyond downtown Roseville. As Roseville is near the eastern end of the rail service, many of the new service times can

be expected to occur prior to or after the span of Roseville Transit service. Overall, this would be an inefficient strategy.

- Route D service could be provided on an on-call basis, with rail passengers required to contact the Roseville Transit dispatcher at least 15 minutes prior to specific scheduled times for service. This would avoid the provision of inefficient service to the Train Station (at least one passenger would be served each time), but would still have the other disadvantages of the previous alternative.
- A TNC subsidy program could be established to provide subsidized TNC trips between the train station and the nearby key transit centers at Civic Center and the Galleria. Passengers would be provided with a discount code that is valid to/from either of the transit centers. The subsidy level could be set to result in a cost to the passenger equivalent to the Roseville Transit fare. The substantial advantage of this approach is that passenger wait times would be dramatically reduced. In addition, it would be available to serve all train times, and would avoid operational impacts on Route D. TNC service would also be more convenient for passengers accompanied by baggage.

On balance, pursuing a TNC subsidy strategy to serve the train station appears to be the best strategy. This is similar to the TNC subsidy program provided by the Solano Transportation Authority for service to/from the Vacaville/Fairfield *Capital Corridor* station. Whether this service is a responsibility of the City of Roseville or the Capital Corridor JPA would be a matter for future discussion. If the latter, it is worth noting that a similar first-mile/last-mile program could also be appropriate for the other stations in western Placer County.

Service to Watt/I-80

Another potential new route option would be provision of a new route connecting the existing local route network with the RT Blue Line LRT service at Watt/I-80. One bus could operate hourly service between Watt/I-80 and Civic Center via Louis/Orlando. This would incur annual operating costs on the order of \$118,000 per year and would require at least one additional bus. It would not provide better access to significantly more employers than does the existing downtown commuter service (with connections to Light Rail or other RT services). In addition, there already is a publicly-funded hourly service connecting the Light Rail station with the Roseville (PCT Auburn – Light Rail Route). As ridership potential is low, this option is not considered further.

Serve New Roseville Stops as Development Warrants

At present, no other additional park-and-ride locations in Roseville are recommended for service. Doing so would further complicate the already-complicated route structure, and would not significantly improve total commute times. In the future as areas grow, however, new park-and-ride lots will warrant service. The provision of new park-and-ride locations/transit

stops depends on a variety of factors specific to the geography of the community and the neighborhoods. General considerations are as follows:

- It can be expected that passengers access the commuter transit stops by car. As a result, driving a few miles more on local roadways to a more distance stop is not a significant burden or detriment to using the commuter service.
- As discussed above, serving locations with small ridership or parking capacity can reduce the overall effectiveness of a commuter transit program. A reasonable standard would be to not serve a location generating less than 15 passenger boardings per day (unless a specific stop is directly along an existing route and can be served with only a few minutes of delay to passenger on board).
- Passengers tend to want to be driving towards their work location, rather than away, to access a park-and-ride. In Roseville, this means that park-and-rides should be located south and west of the residential area.

COMPARISON OF LOCAL FIXED ROUTE ALTERNATIVES AND PERFORMANCE ANALYSIS

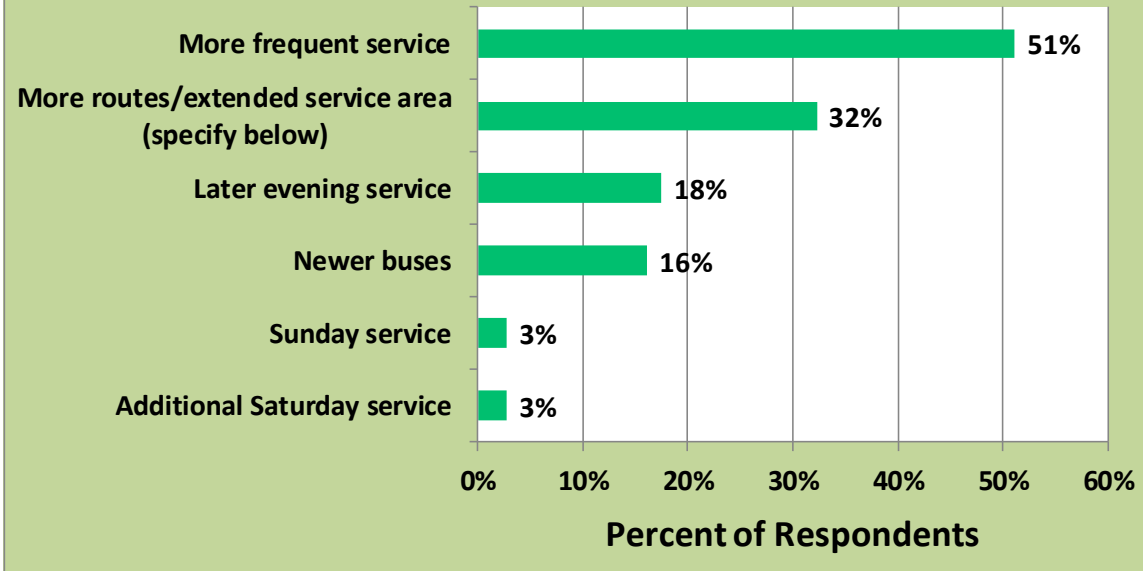
Table 31 summarizes the ridership and operating subsidy requirement impacts of the various local fixed route alternatives. Figure 26 also presents the ridership impacts in graphical terms. As shown, the greatest potential ridership increases are associated with half-hourly weekday service on Routes D, L and M (21,100 annual passenger-trips) followed by Sunday service (7,800), the streamlined Routes C and E (5,400) and the revised Route S with 11 runs per day (5,200). Three alternatives would reduce ridership, with the largest reductions coming from the elimination of CGFE service (7,000) and the elimination of weekday service after 7 PM (6,800).

Impact on annual subsidy requirements also vary widely, as shown in Figure 27. The most expensive alternative is the provision of half-hourly weekday service on Routes D, L and M (an increase of \$413,600), followed by reverse Route D service (\$145,600 per year) and the Sunday service options (between \$102,000 and \$125,700 per year). The subsidy implications of several options are relatively modest, including the Route S extension, changes in Saturday service, and the streamlined Routes C and E. Other alternatives would result in substantial reductions in subsidy, with the greatest (\$182,600) coming from the elimination of the Route CGFE bus.

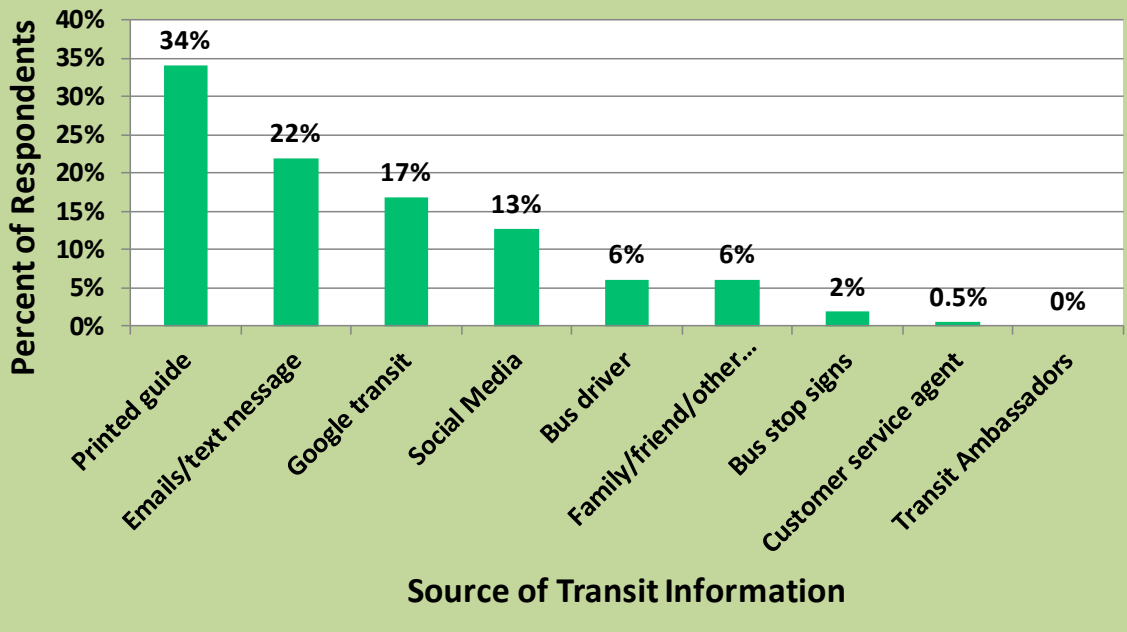
Performance Analysis

An analysis of the performance of the service alternatives is presented in the right side of Table 35. This considers the following key transit service performance measures. For those measures with a performance measure, those attaining the recommended performance standard are shown in green shading.

**Figure 26: What do you think would most increase ridership on Roseville Transit?
(Check only one) (Commuter)
(n = 217)**

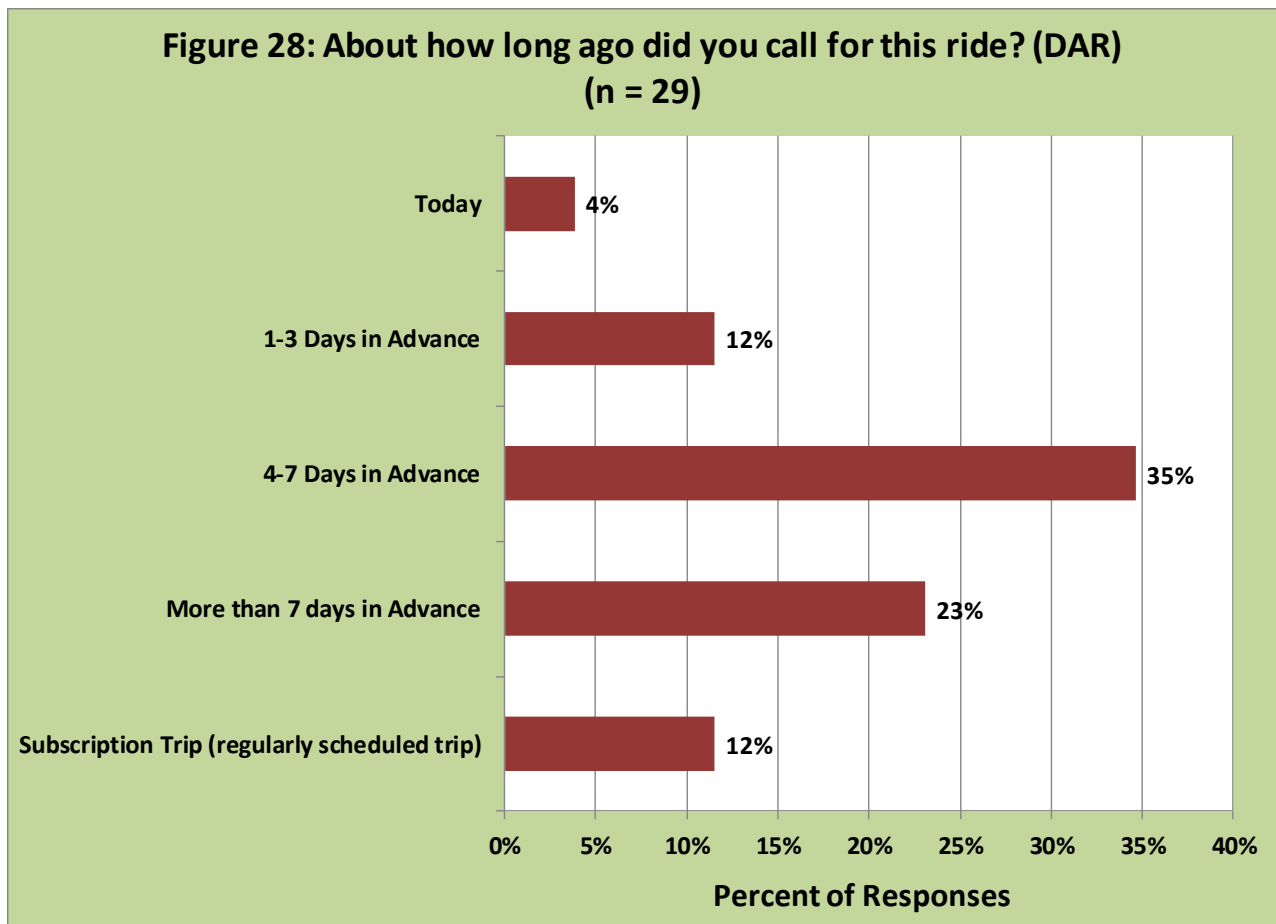


**Figure 27: What is your primary source for transit information? (Commuter)
(n = 214)**



Passenger-Trips per Vehicle-Hour

The marginal passenger-trips per vehicle-hour is a key measure of the productivity of a transit service. Note that the alternative to streamline Routes C and E does not result in a change in vehicle-hours, making this measure inapplicable. As also shown in Figure 28, the “best” of the alternatives by this measure is the alternative to combine Routes L and C, eliminate Routes E and G and provide TNC service in eastern Roseville, which yield a negative 0.9 figure (reflecting an increase in ridership over a decrease in vehicle-hours). Note that the vehicle-hours pertain only to Roseville Transit, and exclude TNC vehicle-hours. Of those alternatives that increase both ridership and vehicle-hours, the best is adding one additional hour of Route A and B service on Saturdays, which generates 12.5 passenger-trips per additional vehicle-hour. This is followed by the Route S service to the Public Defender’s office (9.9). Of those that reduce both ridership and vehicle-hours, the better alternative is the elimination of Route CGFE, which eliminates a relatively low 2.2 passenger-trips per vehicle-hour compared with the 3.0 passenger-trips lost for every hour of reduced service associated with the elimination of weekday service after 7 PM.



Note that some alternatives are identified as attaining the performance standard because they add more passengers per new vehicle-hour than the standard, or add passengers while reducing vehicle-hours. Others are identified as attaining the standard because they eliminate existing service that does not attain the standard at present.

Passenger-Trips per Vehicle-Mile of Service

This measure yields a negative value for the streamlined Routes C/E alternative and the option that combines L with C, eliminated E and G and provides TNC service, reflecting an increase in ridership and a decrease in vehicle-miles (a good outcome). Of the alternatives that increase ridership and mileage, the “best” is the revision to Route S with 8 runs per day, with 1.63 passenger-trips per vehicle-mile. Other alternatives that achieve the pertinent standard are the two other options addressing Routes CGFE, the extension of Route S to the Public Defender’s office and the extension of Saturday span of service. Other alternatives are consistent with the standard in that they eliminate service not attaining the standard.

Cost Per Passenger-Trip

The operating cost per passenger-trip yields negative value for both options to revise the Route CGFE service, reflecting an increase in ridership and a reduction in cost. Of those alternatives resulting in both an increase in ridership and costs, the “best” is the Route S service to the Public Defender’s office, which requires a relatively low \$5.33 in additional cost per new passenger-trip. At the other extreme, adding a reverse Route D would require \$38.85 in operating cost for every new passenger-trip served.

Subsidy per Passenger-Trip

This measure directly relates the key public input (funding) to the key desired output (ridership). The results exhibit the same pattern as the previous performance measure. The best of those alternatives is the combination of Routes C and L, provision of a TNC subsidy program in eastern Roseville and elimination of Routes E, F and G, which would save \$43.14 in subsidy for every additional passenger-trip served. Of those that increase subsidy, the best is the extension of Route S to the Public Defender’s office, requiring \$3.25 in subsidy for every new trip, while the worst is the reverse Route D service. There is no adopted standard for this performance measure. These figures are also shown in Figure 29.

Marginal Farebox Return Ratio

This is the ratio of marginal passenger-fares to marginal operating costs. The negative values for some alternatives (notably regarding Route CGFE) reflect a positive condition, in that fares increase while operating costs decrease. Some alternatives (eliminating evening service, eliminating Route CGFE) have positive ratios reflecting reductions in fares over reductions in costs. Of those alternatives increasing fares as well as costs, the better alternatives as reflected by a higher farebox ratio, with the best being the extension of Route S service to the Public Defender’s Office and the extension of Route A and B Saturday span of service.

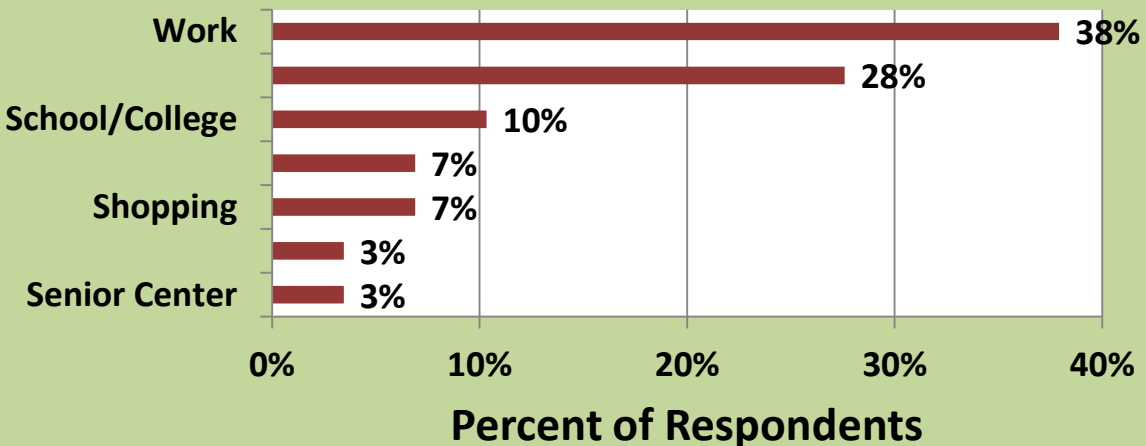
TABLE 35: Roseville Transit Fixed Route Service Alternatives Performance Analysis

Alternative	Values Achieving Recommended Performance Standards Shaded						
	Annual Change		Change From Existing Service				Marginal Farebox Ratio
	Ridership	Operating Subsidy	Psgr-Trips per Service-Hour	Psgr-Trips per Service-Mile	Cost per Psgr-Trip	Subsidy per Psgr-Trip	
<i>Performance Standard</i>			7.0	0.50	< \$15.00	No Standard	15%
Eliminate C, G, F, E	-7,000	-\$182,600	2.2	0.12	\$28.16	\$26.09	7.4%
Streamline Routes C and E	5,400	-\$12,300	--	-6.09	-\$0.20	-\$2.28	-1018%
Combine Route L with Streamlined C, Provide TNC Service, Eliminate Routes E, F and G	2,900	-\$125,100	-0.9	-0.05	-\$41.28	-\$43.14	-4.5%
Increased D, L and M Frequency	21,100	\$413,600	2.7	0.19	\$21.69	\$19.60	9.6%
Add Reverse Route D	3,900	\$145,600	1.5	0.10	\$38.85	\$37.33	3.9%
Extend Route S to Public Defender's Office	2,400	\$7,800	9.9	0.99	\$5.33	\$3.25	39.1%
Hourly Route R Service	4,000	\$77,600	2.6	0.21	\$21.48	\$19.40	9.7%
Revise Route S -- 8 Runs/Day	2,700	\$35,000	2.8	1.63	\$15.04	\$12.96	13.8%
Revise Route S -- 11 Runs/Day	5,200	\$97,600	2.8	0.19	\$20.85	\$18.77	10.0%
Eliminate First Hour of Routes D, C, G and M Weekday Service	-1,900	-\$42,700	2.5	0.15	\$24.53	\$22.47	8.4%
Eliminate Weekday Service After 7 PM	-6,800	-\$134,900	3.0	0.23	\$21.91	\$19.84	9.5%
Extend Saturday Service Until 6 PM -- All Routes	2,200	\$11,400	8.5	0.64	\$7.27	\$5.18	28.8%
Extend Saturday Service Until 6 PM Rts A & B Only	1,300	\$4,300	12.5	1.12	\$5.31	\$3.31	37.7%
Sunday Service - 8 AM to 5 PM	7,800	\$125,700	3.4	0.26	\$18.19	\$16.12	11.4%
Sunday Service 8 AM to 3 PM	3,800	\$102,000	2.1	0.16	\$28.92	\$26.84	7.2%

Financial numbers in FY 2018/19 dollars

Note: Green indicates alternatives that are consistent with standard by expanding service in a manner that exceeds standard.
 Note: Blue shading indicates alternatives that are consistent with standard by eliminating service not currently attaining standard.

Figure 29: What is the main purpose of your trip? If you are going home what was the main purpose of your trip? (DAR) (n = 29, multiple responses allowed)



Summary

In sum, this review provides useful information for making decisions regarding the individual routes and services. It is also important to consider that there are many other factors (in particular, the ability to provide a dependable and safe transit service) beyond these financial and performance measures. Many alternatives will require additional analysis (including specific surveys and data collection) before a final decision can be made. Nonetheless, the following are key overall findings that result from this evaluation:

- Alternatives with a high potential consist of the following:
 - Combination of Route L with a streamlined Route C and provision of a TNC service for east Roseville. If a TNC program is not feasible, streamlining the existing CGFE service into two-way Routes C and E is also viable.
 - Extending the Saturday span of service until 6 PM.
 - Shift the Route D and Route L 3 to 5 minutes earlier to provide better connections at Civic Center.
 - A TNC subsidy program for connections between the train station and the nearby transit hubs.

- Alternatives that have a low potential consist of the following:
 - Reverse Route D service
 - Sunday service
 - Half-hourly service on Routes D, L and M
 - Hourly Route R service

Other alternatives not mentioned largely reflect trade-offs between costs, the benefits of expanding service area, and the benefits of providing more or less evening service. The revision of Route S to serve Fairway Drive may be more feasible if some of the required increase in subsidy can be generated by Placer County, as this expands service availability to the Santucci Justice Center.

COMMUTER SERVICE ALTERNATIVES

Roseville Transit's Commuter service is a successful element of the overall transit program. It improves the quality of life of Roseville residents by reducing the stress and costs associated with commuting, increasing the attractiveness of Roseville as a residential area for downtown employees, and helps to address the congestion and air quality impacts along the I-80 corridor. At the same time, it is relatively productive (approximately 3 times as many passenger boardings per vehicle-hour as the local fixed routes) and financially sustainable (passenger fare

revenues cover almost 80 percent of the operating costs). The alternatives presented below address the key issues currently facing this service, namely:

- Should service be expanded?
- What locations should be served, both in Roseville and in Sacramento?
- How should schedules be changed to best meet rider needs?
- What strategies can improve on-time performance?

Summary of Regional Commuter Services

As background information for the evaluation of Roseville Transit commuter service alternatives, it is worthwhile to review the overall services providing commuter transit service from western Placer County into downtown Sacramento, specifically the PCE service and the Roseville Transit commuter service.

Table 36 presents a summary of the two systems as a whole. As shown, in total the services carry roughly 208,000 passenger-trips per year, consisting of approximately 2/3 on Roseville Transit and 1/3 on PCE. The quantity of service totals 9,460 vehicle-hours and 343,466 vehicle-miles of service annually, at approximately the same splits. Total operating costs in FY 2016/17 were just over \$1.7 Million, of which slightly more than half was for PCE service. The productivity of the two services are very similar, at 22.3 passengers per vehicle-hour of service for PCE and 21.7 for Roseville Transit, for an overall figure of 21.9. Costs for PCE on a per-hour and per-passenger basis are substantially higher than for Roseville’s commuter program.

Table 36: Western Placer Commuter Service Summary

	Annual Data				Performance Measure			
	Ridership	Vehicle Hours	Vehicle Miles	Operating Cost	Pax per Hour	Pax per Mile	Operating Cost per Hour	Operating Cost per Pax
Roseville Transit	137,102	6,327	242,187	\$837,296	21.7	0.57	\$132.34	\$6.11
PCT Commuter	70,677	3,163	101,279	\$865,744	22.3	0.70	\$273.74	\$12.25
Total	207,779	9,490	343,466	\$1,703,040	21.9	0.60	\$179.46	\$8.20

Source: FY 2016-17 data from individual operators.

Overall annual ridership trends over the last ten years are shown in Table 37. The region as a whole carried a peak of 225,212 commuter passengers in FY 2014/15, with a slight decline over the most recent years. By system, the Roseville program has dropped only 4 percent, while PCE has dropped by 12 percent.

**Table 37: Western Placer Commuter Services
Ridership Trends**

Fiscal Year	Roseville Commuter (1)	Placer County Express	Total
FY 08/09	107,088	77,120	184,208
FY 09/10	109,584	75,098	184,682
FY 10/11	126,214	80,093	206,307
FY 11/12	128,824	83,114	211,938
FY 12/13	128,570	80,636	209,206
FY 13/14	130,448	81,782	212,230
FY 14/15	144,445	80,767	225,212
FY 15/16	134,880	78,722	213,602
FY 16/17	139,084	70,677	209,761
% Change from FY 08/09 to FY 16/17	30%	-8%	14%
% Change from FY 14/15 to FY 16/17	-4%	-12%	-7%

Note 1: Includes Game Day Express Ridership

Table 38 provides an overall summary of scheduled services, organized by the time that downtown Sacramento is served. This table also presents the average daily ridership on each of the runs. A review of this information indicates the following:

- A total of 14 AM trips and 14 PM trips are provided on Mondays through Thursdays, with two less AM and one less PM trips on Fridays. While PCE AM arrivals in downtown Sacramento are concentrated between 7:00 AM and 7:50 AM, Roseville Transit serves a broader span between 6:01 AM and 8:18 AM. In the afternoon, the first departure (on Roseville Transit) occurs at 3:31 PM, with the first PCE departure not occurring until 4:31 PM. The last departure time on both services occurs around 5:30 PM. Notably, Roseville Transit runs departing around 3:30 PM and 4:00 PM generate substantial ridership prior to PCE service.
- Passengers per trip are mostly higher on PCE runs than on Roseville Transit runs, with the exception of the two later afternoon PCE runs. While in part this reflects the greater seating capacity of PCT's 45-foot buses, this also indicates more need for expansion of the PCE service, as well as a need to review service times. In general the highest ridership is seen on AM runs serving work start times around 7:00 AM to 7:30 AM, and PM run times serving work end times around 4:00 PM, 4:30 PM and 5:00 PM.

Total ridership by stop within Placer County is shown in Table 39. This shows the concentration of passenger activity at the Taylor Road Park-and-Ride (adjacent to Sunsplash), where 61.7 percent of all passengers board or deboard (463 total trip-ends per day, on average). The next

TABLE 38: Combined Existing Commuter Schedules and Daily Ridership by Run

In Order of Downtown Service Times

AM															
Stop	Rsvl Bus 1(1)	Rsvl Bus 2	Rsvl Bus 4	Rsvl Bus 3	PCE Bus 1	Rsvl Bus 5	PCE Bus 2	Rsvl Bus 7	Rsvl Bus 6(1)	Rsvl Bus 8	PCE Bus 3	PCE Bus 4	Rsvl Bus 10	Rsvl Bus 9	Daily Trips
Average Daily Riders	13.6	34.8	35.9	26.2	40.5	34.6	40.3	17.9	20.6	30.5	36.8	34.6	28.4	30.5	
Colfax Depot	--	--	--	--	5:20	--	5:40	--	--	--	6:18	--	--	--	3
Clipper Gap PnR	--	--	--	--	5:32	--	5:52	--	--	--	6:30	--	--	--	3
Auburn Station	--	--	--	--	5:42	--	6:03	--	--	--	--	6:37	--	--	3
Penryn PnR	--	--	--	--	5:55	--	6:15	--	--	--	6:45	--	--	--	3
Loomis Station	--	--	--	--	5:59	--	6:19	--	--	--	--	6:53	--	--	3
Rocklin Station	--	--	--	--	6:06	--	6:26	--	--	--	--	7:00	--	--	3
Foothills/Junction	--	5:35	--	6:00	--	--	--	--	--	--	--	--	--	--	2
Mahany PnR	--	5:41	--	6:07	--	--	--	--	--	--	--	--	--	7:10	3
Roseville Amtrak	--	--	--	6:17	--	--	--	--	--	--	--	--	--	--	1
Galleria	--	5:51	--	--	--	--	--	--	--	--	--	--	--	--	1
Louis/Orlando	--	--	6:00	--	--	--	--	--	--	--	--	--	--	--	1
Cirby/Sunrise	--	--	6:04	--	--	--	--	--	--	--	--	--	--	--	1
Maidu PnR	5:10	--	6:09	--	--	--	--	--	--	--	--	--	--	--	2
Taylor/I-80 PnR	5:17	6:00	6:18	--	6:15	6:40	6:35	--	6:45	6:55	7:00	--	7:18	7:23	11
Saugstad PnR	--	--	--	6:21	--	--	--	6:50	--	--	--	--	7:27	7:31	4
Downtown	6:01	6:37	6:54	6:58	7:00	7:16	7:20	7:24	7:30	7:40	7:50	7:50	8:14	8:18	14

REVERSE COMMUTE															
Galleria	--	--	7:44	--	--	--	--	--	--	--	--	--	--	--	--
Louis/Orlando	--	--	--	7:24	--	--	--	--	--	--	--	--	--	--	--
Civic Center	--	--	--	--	--	--	--	--	--	--	--	--	--	9:00	--
Sierra Gardens	--	--	--	--	--	7:51	--	--	--	--	--	--	--	--	--
Sierra Gardens	--	--	--	--	--	--	3:50	--	--	--	--	--	--	--	--
Taylor/I-80 PnR	--	--	--	--	--	--	--	--	--	--	--	4:15	--	--	--
Galleria	--	--	--	--	--	--	--	--	--	--	--	--	4:37	--	--
Civic Center	--	--	--	--	--	--	--	--	--	--	--	--	4:47	--	--

PM															
Stop	Rsvl Bus 1	Rsvl Bus 2 (1)	Rsvl Bus 3	Rsvl Bus 4	Rsvl Bus 5	Rsvl Bus 6	Rsvl Bus 7	PCE Bus 1	PCE Bus 2	Rsvl Bus 8	PCE Bus 3	Rsvl Bus 9	Rsvl Bus 10	PCE Bus 4	Daily Trips
Average Daily Riders	23.4	32.8	23.0	31.8	29.7	32.7	29.4	37.0	43.6	23.4	28.9	32.6	18.8	22.2	
Downtown	3:31	3:36	3:46	3:57	4:02	4:11	4:26	4:32	4:37	4:41	4:47	4:56	5:26	5:30	14
Louis/Orlando	4:05	--	--	--	--	--	--	--	--	--	--	--	--	--	1
Taylor/I-80 PnR	--	4:27	4:37	4:38	4:43	4:55	5:10	5:12	--	5:25	5:27	6:00	6:37	6:10	12
Cirby/Sunrise	4:11	--	--	--	--	--	--	--	--	--	--	--	--	--	1
Maidu PnR	4:15	--	--	--	--	--	5:17	--	--	--	--	--	--	--	2
Saugstad PnR	4:29	--	--	--	--	5:07	5:32	--	--	--	--	6:12	6:22	--	5
Roseville Amtrak	--	--	--	--	--	5:16	--	--	--	--	--	--	--	--	1
Foothills/Junction	--	--	--	--	--	5:25	--	--	--	--	--	6:30	--	--	2
Galleria	--	--	--	--	4:52	--	--	--	--	--	--	--	--	--	1
Mahany PnR	--	--	--	--	5:02	5:33	--	--	--	--	--	6:38	--	--	3
Rocklin Station	--	--	--	--	--	--	--	--	5:17	--	5:35	--	--	6:18	3
Loomis Station	--	--	--	--	--	--	--	--	5:24	--	5:42	--	--	6:25	3
Penryn PnR	--	--	--	--	--	--	--	5:24	--	--	5:49	--	--	6:32	3
Auburn Station	--	--	--	--	--	--	--	--	5:40	--	6:00	--	--	6:43	3
Clipper Gap PnR	--	--	--	--	--	--	--	5:39	--	--	6:12	--	--	6:55	3
Colfax Depot	--	--	--	--	--	--	--	5:51	--	--	6:24	--	--	7:07	3

Source: Existing schedules. Downtown Times Shown for P&7th (Roseville) and P&5th (PCE). Other Downtown Stop Times Not Shown

Note 1: Monday to Thursday only.

TABLE 39: Western Placer Commuter Service Ridership by Stop*Average Daily Boarding & Alighting at Stops In Placer County*

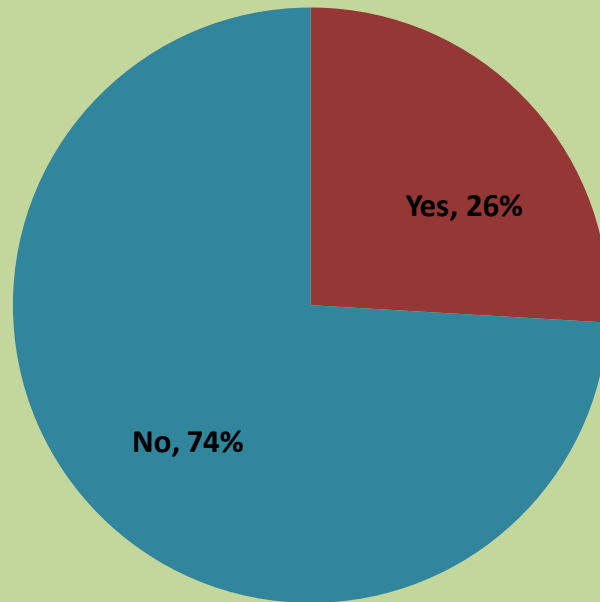
	PCE	Roseville	Total	Percent of Total		
				PCE	Roseville	Both
Colfax Depot/Main St	3	--	3	1.1%	--	0.4%
Clipper Gap PnR	6	--	6	2.0%	--	0.7%
Auburn Station/Nevada St	24	--	24	8.5%	--	3.2%
Penryn PnR	14	--	14	4.8%	--	1.8%
Loomis Station	18	--	18	6.3%	--	2.3%
Rocklin Station	85	--	85	30.2%	--	11.3%
Roseville/Taylor Rd PnR	132	332	463	47.0%	70.5%	61.7%
Saugstad	--	75	75	--	15.9%	9.9%
Mahany Park	--	28	28	--	5.9%	3.7%
Cirby at Sunrise	--	14	14	--	3.0%	1.9%
Maidu Community Center	--	10	10	--	2.1%	1.3%
Galleria Transfer Point	--	8	8	--	1.7%	1.0%
Amtrak	--	5	5	--	1.1%	0.7%
TOTAL	280	471	751	100.0%	100.0%	100.0%

FY 2016/17 figures provided by service providers.

highest location, Rocklin Station with 85 passenger-trip-ends, serves only 11.3 percent. This table also indicates the low ridership generated east of Auburn, as well as at some of the other Roseville Transit stops.

Finally, the onboard passenger surveys conducted as part of this SRTP can be used to evaluate the overall residence location of riders on the combined system. As shown in Table 40, when adjusted to reflect the average daily ridership on the two systems, this analysis indicates that just over half of all transit commuters on the two systems live in Roseville (53 percent) followed by 20 percent that live in Rocklin and 3 percent in Lincoln. Figure 30 also shows the relative proportion of residents in each community choosing to use one or the other service. As indicated, 16 percent of Roseville residents choose to use the PCE service, while on the other hand 18 percent of Rocklin residents choose to use the Roseville Transit commuter service. This data also indicates ridership coming from other counties (such as Nevada County, the northern portion of El Dorado County, as well as Citrus Heights in Sacramento County) to use the two transit systems. This data also provides the information on the residential location within Roseville of Roseville Transit commuter passengers (by zip code). As shown, 53 percent of these passengers live in the western portion of Roseville (generally west of Foothill Boulevard, 29 percent live in the central portion between Foothill Boulevard and I-80/Rocklin city limit, and 18 percent live east of I-80. This indicates a large number of commuters are driving east from their homes to the park-and-ride locations.

Figure 30: Was there a vehicle that you could have used for this trip instead of Dial-A-Ride? (n = 27)



Additional Runs

Roseville Transit's commuter runs frequently run at or near the seating capacity: in the surveys conducted as part of this SRTP study, the PM Route 2 carried 46 passengers while the PM Route 4 carried 42. The passenger seating capacity of the largest buses in the fleet is 45. While the average annual ridership per runs only reaches as high as 35.9 in the AM period (Bus 4) and 32.8 in the PM period (Bus 2), the variability in ridership by season and day of week results in overcrowding on particular days. In addition to providing a poor ride experience for those passengers forced to stand, the potential that an individual passenger may not get a seat is a substantial disincentive to use a commuter transit service at all. It is important to avoid this perception by providing adequate capacity to ensure a seat in all but the most unusual periods.

Part of this overcrowding issue is related to the fact that ridership in the PM period is 13 percent higher than in the AM period (perhaps reflecting commuters that can use a carpool or vanpool in the AM but find Roseville Transit more convenient in the PM.) Also, the ridership in the PM service period is more concentrated in peak periods than in the AM service period: the five PM runs starting in the half hour between 3:40 PM and 4:10 PM carry 54 percent of all PM ridership, while the five AM runs arriving downtown in the half hour between 6:58 AM and 7:28 AM carry 42 percent of all AM ridership.

Overall, the existing ridership data indicates the need to increase the service by two to four trips per day for service between downtown and Taylor/I-80. (Discussion of service to other park-and-ride locations in Roseville is provided, below). While more detailed surveys of existing passenger would be needed to specific exact new schedules, available data indicates the following:

- In the AM period, the first priority would be a run departing Taylor/I-80 around 6:10 AM, followed by a run departing Taylor/I-80 around 6:30 AM.
- In the PM period, the first need is to provide additional capacity departing downtown around 3:30 to 3:45 PM, to Taylor/I-80. The second priority is to provide a run starting around 4:15 PM.

As shown in Table 41, two additional runs per day would increase annual operating costs by \$59,500, while four additional runs would increase this figure to \$119,000. An elasticity analysis indicates that two runs would increase annual ridership by 13,500 passenger-trips per year, increasing to 25,500 for four runs per day as summarized in Table 38. At the existing average fare per passenger, this would generate increases in passenger fares of \$65,600 with two new runs and \$123,900 with four new runs. Overall, fares would slightly exceed the marginal operating cost, yielding reductions in subsidy of \$6,100 with two additional runs and \$4,900 with four additional runs.

Earlier PM Commuter Runs

At present, the first downtown departures begin at 3:25 PM. An earlier PM departure time was mentioned by five survey respondents, making it the second-most frequent request. An additional 3:00 PM run would incur an operating cost of \$25,000 per year. Based on the relative ridership on El Dorado Transit service (which operates an earlier PM run), ridership generated by this additional run is estimated to be 6,300 per year (500 less than if this additional run were operated within the existing peak periods). Including the additional fare revenue, this would result in a decrease in operating subsidy of \$5,600. This bus would also have approximately 57 minutes to return to Sacramento to start the PM Route 9 run, so an additional bus would not be required.

Mid-Day Run

Provision of a mid-day commuter run is a common request among existing Roseville Transit commuter riders: of the 18 specific requests for additional runs out of the current span of service generated by the onboard surveys conducted for this SRTP, 7 were for mid-day service. This would allow passengers to work half-days in either the morning or afternoon, and also provide convenient service for other Roseville resident trips to downtown Sacramento. While

Table 40: Western Placer Commuter Programs Average Daily Ridership by Rider Residence

	Transit System			Percent of Total		
	Roseville		Total	Roseville		Total
	Transit	PCE		Transit	PCE	
Roseville	332	64	396	71%	23%	53%
<i>Western Roseville</i>	177	NA	NA	38%	NA	NA
<i>Central Roseville</i>	97	NA	NA	21%	NA	NA
<i>Eastern Roseville</i>	58	NA	NA	12%	NA	NA
Rocklin	45	108	153	9%	39%	20%
Lincoln	7	19	26	1%	7%	3%
Unincorporated Placer County	2	24	26	0%	9%	3%
Auburn	0	23	23	0%	8%	3%
Sacramento	45	0	45	9%	0%	6%
Citrus Heights	3	0	3	1%	0%	0%
Loomis	7	14	21	1%	5%	3%
Granite Bay	13	0	13	3%	0%	2%
Nevada County	0	6	6	0%	2%	1%
El Dorado County	3	0	3	1%	0%	0%
Colfax	0	5	5	0%	2%	1%
Rancho Cordova	2	0	2	0%	0%	0%
Carmichael	0	0	0	0%	0%	0%
Orangevale	2	0	2	0%	0%	0%
Fair Oaks	2	0	2	0%	0%	0%
North Highlands	0	0	0	0%	0%	0%
Other	10	17	27	2%	6%	4%
Total	471	280	751	100%	100%	100%

Source: Onboard passenger surveys, factored by ridership totals.

TABLE 41: Typical Passenger Boardings and Vehicles in Operation per Hour
Roseville Dial-A-Ride

	Hour (Start Time)														
	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday															
Total Passenger Boardings	6	8	9	12	8	7	10	7	8	1	6	3	2	1	2
- General Public	2	2	0	2	1	0	0	0	1	0	1	3	0	0	1
# of Vehicles in Service	2	4	5	5	5	4	5	5	4	3	3	2	1	1	1
Saturday															
Total Passenger Boardings		1	4	5	3	2	2	3	2	2	1	0			
- General Public		0	1	2	0	1	0	0	1	0	0	0			
# of Vehicles in Service		1	2	2	2	2	1	2	1	2	2	1			
Sunday															
Total Passenger Boardings		1	6	7	3	3	4	3	3	3	1	0			
- General Public		1	1	1	1	1	1	0	1	1	0	0			
# of Vehicles in Service		1	3	3	3	3	2	2	3	3	1	1			

Source: Operator manifests for March, 2017

there are other existing public transit options, a commuter run could provide a much more convenient service. For example, a mid-day trip from downtown Sacramento to the Taylor/I-80 Park-and-Ride currently takes approximately 1 hour and 40 minutes to complete (by RT Blue Line LRT, PCT Auburn-Light Rail Route, and Roseville Transit Route B). In comparison, a commuter run requires only roughly 30 minutes for the same trip.

An example of another commuter bus service that operates mid-day runs is Yuba-Sutter Transit, which operates two mid-day runs from Marysville/Yuba City that serve stops in downtown Sacramento around Noon and 2:00 PM. These runs in total average 41 passenger-trips per day, split evenly between the two runs. Roughly one-third of this ridership consists of travel into downtown Sacramento in the mid-day, while the other two-thirds is for trips from downtown.

A reasonable route for mid-day service would be to connect downtown Sacramento with Saugstad Park, Taylor/I-80 and the Galleria. The latter stop would allow connections to other Roseville and PCT routes to complete connections to other park-and-ride locations. An 11:30 AM departure from the Galleria would serve downtown stops around 12:30 PM, returning to the Galleria by 1:30 PM. This additional round-trip would increase costs by an estimated \$34,700 per year. Ridership generated by this alternative is estimated to be 8,900 (including additional ridership on existing runs). The average fare per new passenger would be relatively low, considering that many of the passengers currently use unlimited monthly passes (and thus would not generate new fare revenue). Subtracting an estimated \$14,300 per year in new fare revenue, the net impact on overall subsidy would be a relatively modest \$20,400 per year.

A mid-day run would also benefit passengers using the Placer County Express service. It would provide direct trips from the Taylor/I-80 stop also served by PCE, and would also provide direct transfers at the Galleria to the Lincoln-Sierra College Route (for connection to the Rocklin Station Park-and-Ride) as well as to the Auburn-Light Rail Route (for connection to the Auburn Station Park-and-Ride). As such, a portion of the subsidy required for this enhanced service could be funded through Placer County.

Reverse Commute Runs

At present, the Roseville Commuter schedules include three “reverse commute” opportunities per commute period, providing service from downtown Sacramento to Roseville in the morning and return trips in the afternoon. Ridership on these runs, however, is minimal: over a total of five days of service, only four passengers were recorded. As the contract with the service contractor is on an in-service hourly basis, taking these runs off of the schedule would reduce overall operating costs by \$43,700, at least in the short run. (In the long-run, the driver costs associated with the deadhead travel could be part of the bid rate in a future contract.) A total of approximately 400 passenger-trips would be eliminated (including passenger-trips on the opposite side of individual passenger round-trips). Including the loss of \$1,900 of passenger fares, this alternative would reduce operating subsidy by \$41,800 per year.

There are very real limits on the potential market for reverse commute runs. The population of downtown Sacramento is relatively limited, indicating that most potential riders on reverse commute runs would need to transfer from other public transit services (a disincentive to ridership). In addition, the fact that employment sites in Roseville are not concentrated around the park-and-ride locations means that reverse commuters would largely need to transfer to local routes, further reducing the attractiveness of public transit. Those employers within close walking distances of the reverse commuter stops in Roseville (such as the retailers in the Galleria) also tend to have shift times not compatible with viable reverse commuter transit schedules. In sum, there is little chance that an increase in reverse commute schedules or marketing would result in any significant increase in ridership that would warrant the additional costs of providing the service.

Changes in Roseville Stops Served

The current commuter service design is a complicated structure of various stops served on the individual runs. Over the ten total runs in each period, a total of seven individual combination of stops are served. Other than the four runs in each period serving only the Taylor/I-80 Park-and-Ride, the other six routes all serve different combinations.

The boarding and alighting data, as presented in Table 13, shows that Roseville commuter ridership activity within Roseville is concentrated at the Taylor Road Park-and-Ride (70 percent of all boardings and alightings), followed by 16 percent at Saugstad Park and 6 percent at

Mahany Park. Divided by the number of daily runs serving each stop yields the following average of number passengers getting on or off each bus:

Taylor/I-80	20	Galleria	4
Saugstad Park	8	Amtrak Station	3
Mahany Park	5	Maidu Comm. Center	2

This ridership pattern is very consistent with that seen on other commuter systems: the last stops before leaving the residential area for the employment center are the most popular. This makes sense when considered from the perspective of the individual commuter (the large majority of which have a car available): driving to the last stop saves overall travel time. A Roseville resident living near Mahany Park, for example can choose to drive to Mahany Park to catch a bus that will get to Saugstad Park in 21 minutes, or instead leave 11 minutes later to drive to Saugstad Park in 10 minutes⁶.

Service to Mahany Park

A common passenger request is for additional service to/from Mahany Park, including the potential for direct service to/from downtown Sacramento. With regards to the schedule serving this stop, a particular comment is the desire for an earlier and later afternoon runs. The first return trip serving Mahany Park currently departs downtown at 4:02 PM, arriving at Mahany Park at 5:02 PM, while the last departs downtown at 4:56 PM, arriving at Mahany Park at 6:38 PM. One option would be to provide the opportunity to request service to Mahany Park on the PM Bus 1 and Bus 10 runs, both of which currently terminate at Saugstad Park. This would add approximately 11 minutes and 4.4 miles to each run, but would provide downtown departures at 3:31 PM and 5:26 PM, greatly expanding the afternoon schedule options. Another possible improvement would be to provide service to Mahany on demand at the end of the Bus 8 PM run, which currently terminates at Taylor/I-80. This would add approximately 19 minutes and 4.9 miles to this run, but would reduce the in-vehicle-travel time for passengers wishing to leave work around 4:30 PM from the current 1 hour 42 minutes (on Bus 9) down to 1 hour 3 minutes on Bus 8. In addition, this would allow PM Bus 9 to terminate at Saugstad Park, as the Bus 8 service would be much more attractive to riders.

The operating cost associated with this option would depend on the actual ridership requests; conservatively assuming that all runs are extended on all days (and including the savings of trimming the Bus 9 run), the total cost increase would be \$7,900 per year. The improvements in PM span of service as well as reduced running times on later runs would increase ridership by an estimated 8,000 passenger-trips per year.

Current runs provide travel times between Mahany Park and downtown ranging from 56 minutes to 1 hour 8 minutes in the AM period, and from 1 hour to 1 hour 42 minutes in the PM

⁶ The fact that the Taylor Road Park-and-Ride is more popular than Saugstad Park is probably a reflection of the more convenient access to a broader area of the Taylor Road location, as well as the non-Roseville ridership.

period. Due to traffic congestion on I-80, Capital City Freeway and/or I-5, the direct drive time between these two locations can often be 45 minutes to 1 hour. Particularly in the PM commute period, the shortest travel time is often via I-5 and SR 99 to Baseline Road. While there is a perception among the passengers that the current routes add considerably to their travel time, in reality an express run serving only Mahany Park in Roseville would be scheduled to only save approximately 15 minutes.

The cost of providing one express run per day in each direction would be \$47,500 per year (as well as the cost for an additional bus). An elasticity analysis of the existing ridership levels generated by the Mahany Park stop indicates that the express service would increase ridership by an estimated 2,500 (in the short term, prior to additional development in the area). Including the additional fare revenue, the increase in subsidy would be \$35,400 per year.

Service to Maidu Park-and-Ride and Louis/Orlando Park-and-Ride

While two AM runs and two PM runs currently serve Maidu Park, a total of only 10 passenger-trips per day (or five round-trips) are served at this location on the average weekday. As three of the four runs serve Maidu Park between other stops, serving this stop both increases operating costs while increasing the travel time for other passengers. In addition, a new 39-space park-and-ride has recently opened adjacent to the Louis/Orlando transfer station. This location (2.8 miles from Maidu Park) is more conveniently located just off of I-80, and in a location that can also accommodate commuters driving (or taking local Roseville Transit routes) from other neighborhoods to the north. Overall ridership would benefit from eliminating the service to Maidu Park and instead provide a minimum of two runs in each commute period serving the Louis/Orlando park-and-ride.

Service to New Roseville Stops

Other park-and-ride lots in Roseville could potentially be served. One location in particular is a 25-space lot near Washington Boulevard and Freedom Way. This location, however, is not convenient to a substantial number of Roseville residences, and is relatively small. Moreover, the number of locations in Roseville currently served already results in a complicated schedule that limits individual passenger's choices or results in long in-vehicle travel times on one end of a passenger's round-trip or the other. Adding service to additional stops would further complicate the schedule, increase the potential for passengers to end up on runs not returning them to their car, and tend to reduce the overall convenience and effectiveness of the program. Establishing service to new locations is therefore not recommended, until new development substantially increases demand.

The provision of new park-and-ride locations/transit stops depends on a variety of factors specific to the geography of the community and the neighborhoods. General considerations are as follows:

- It can be expected that passengers access the commuter transit stops by car. As a result, driving a few miles more on local roadways to a more distance stop is not a significant burden or detriment to using the commuter service.
- As discussed above, serving locations with small ridership or parking capacity can reduce the overall effectiveness of a commuter transit program. A reasonable standard would be to not serve a location generating less than 15 passenger boardings per day (unless a specific stop is directly along an existing route and can be served with only a few minutes of delay to passenger on board).
- Passengers tend to want to be driving towards their work location, rather than away, to access a park-and-ride. In Roseville, this means that park-and-rides should be located south and west of the residential area.

Changes in Sacramento Stops Served

Existing Stops

A review of boarding/alighting activity at the existing stops served in downtown Sacramento indicates overall good utilization at almost all stops. The only exception is the N & 10th stop, which is only served in the AM period and was observed to only generate 1 passenger alighting. This stop is only one block from the busier stop at N & 9th, and should be dropped from the schedule.

There have also been passenger requests to split the downtown stops between runs, in order to reduce running times. This, however, greatly adds to the complexity of the individual runs (particularly given the existing variation in stops served in the Roseville area by run), reduces the service options available at individual stops, increases the potential for passengers to board the wrong bus, and would only save roughly 5 to 7 minutes per run. For these reasons, El Dorado Transit, which for many years operated two different loops in the downtown area, recently chose to consolidate their stops into a single loop. This strategy is not recommended for Roseville Transit.

Service to Employers North of Downtown

The area north of downtown (around Richards Boulevard / 7th Street) is a growing employment area, including the new California Highway Patrol Headquarters building. While free parking is available in this area, the State subsidizes transit fares for employees. Service to stops along Richards Boulevard east of 7th Street and along 7th Street between Richards and B Street could be provided in three ways:

- Two AM and two PM runs could be rerouted. The AM runs would turn west on Richards Boulevard, south on 7th Street, and return east on B Street to 12th Street. This would add 0.5 miles and approximately 2 minutes to the running time. In the PM, the route

would turn west from northbound 16th Street on B Street, north on 7th Street and east of Richards Boulevard to return to 16th Street. This would add 1.6 miles and approximately 6 minutes to each schedule. The disadvantage of this option would be that the large majority of riders on the runs would be provided with longer travel times, particularly in the afternoon.

- Two or all three of the reverse commute runs in both directions could be modified to include these new stops. This would add approximately 18 minutes to the travel time for employees in this northern area, but would not delay the greater number of passengers in the existing downtown service area.
- These two strategies could be combined, by serving the northern area only in the inbound direction to downtown on two or three runs in each peak period. This provides a minimal increase in travel time for existing passengers in the AM runs, while avoiding the larger increase in travel time on the PM runs. It also minimizes the operating costs and potential delays to buses.

While specific timing of service would require surveys of employee interest and work schedules, this latter strategy appears to be a net benefit to the transit service. Surveys of existing riders as well as CHP employees would also be helpful in identifying the specific need for this service.

Service to the Sacramento Valley Train Station

As part of efforts to enhance the *Capital Corridor* and the *San Joaquins* rail service (as well as the Railyard Redevelopment project), Sacramento's rail station at 4th and H streets is being improved and provided with expanded service. This station is four blocks west of the nearest PM stop and five blocks west of the nearest AM stop. In both directions, it is along the portion of the downtown loop where passenger loads are near their highest, indicating that regular service to the train station would impact the travel times of many existing passengers. This in turn would be a detriment to the primary purpose of the commuter service. Adding service to the beginning of the PM service in downtown and the end of the AM service (to minimize impacts to existing passengers) would add approximately 10 minutes to each run.

In addition, until/unless planned railyard development takes place, ridership demand generated by the train station can be expected to be episodic (as it depends on the limited schedules of Roseville Transit commuter buses and the schedule of rail service) and there are other public transit opportunities for travel between this train station and Roseville (notably Amtrak Thruway buses as well as the combination of RT light rail and PCT Auburn-Light Rail service). Unless a strong pattern of regular requests for service at specific times emerges, Roseville Transit commuter bus service directly to the train station is not recommended at this time.

Service to Other Employment Centers in Sacramento Region

There are common requests to provide direct Roseville Transit service to other employment centers in Sacramento, such as the Broadway corridor and UC Davis. While the area north of downtown discussed above can be served with the existing route with only a small impact on operating costs and existing rider's travel time, service to other areas in Sacramento would require new routes, or extensions of the existing runs that would significantly increase operating costs.

There are several factors, moreover, that make downtown Sacramento employers particularly strong generators of transit ridership, and that tend to work against the potential for direct service to other areas to be productive:

- Paid parking is a strong disincentive to commuting by auto, and indeed is typically found to be the single greatest determinate as to whether workers commute by transit. Parking fees in downtown Sacramento range between roughly \$135 and \$185 per month, while many employees in outlying areas of Sacramento do not face parking fees.
- Those major employers that subsidize transit passes (in particular Sacramento County and the State of California, which pay up to \$65 per month) are concentrated in downtown. While this voucher program is also available to State and County employees at non-downtown work locations, the proportion of total persons employed in other areas that have transit subsidy programs are much less than in downtown.
- The high density of employment sites within a convenient walk distance of a relatively short (15 minute) loop makes downtown a particularly efficient area to serve with a commuter service. Commuter services are typically only attractive to ridership if the walk between the destination stop and the work site is very convenient. More suburban work locations outside of the downtown typically require long travel times to reach individual employers separated by parking areas, and/or long walks from nearby streets to the front door.
- The work hours for government and office employees in downtown Sacramento are highly concentrated in the traditional "white collar" commute periods, allowing transit services to be efficiently focused on the busy AM and PM peak periods. In contrast, other areas of Sacramento have a broader mix of employers (such as health care, retail and manufacturing) with a broader array of work shifts that increase the cost of service a substantial proportion of workers.

For these reasons, commuter services provided by other transit programs in the Sacramento area have not proven productive. In particular, the El Dorado Transit service (which provides a successful commuter transit program from El Dorado County into downtown Sacramento) operated a commuter service to the Rancho Cordova area (including the Franchise Tax Board) for several years. As this service only generated 5 to 7 passenger-trips per run, it was ultimately

terminated. A similar Roseville Transit route serving other employment sites in Sacramento would face these same challenges, and is not recommended.

It is worth noting that the Connect Card program now provides more convenient means of making transfers in downtown Sacramento to RT services to other employment centers. It also provides greater ability to track transfer activity. If future review of transfers indicates a strong pattern of transfers between Roseville Transit and RT routes, the potential for new service to provide trips to other employment sites could be revisited.

Revisions to Improve On-time Performance

The Commuter Service on-time performance data collected as part of this study indicated that 29 percent of AM service operated 6 or more minutes behind schedule (up to 24 minutes late) and 46 percent of PM service operated late (up to 45 minutes late). It is clear from the observations that virtually all of this delay is generated by traffic delays along I-80 and/or the Capital City Freeway. Route running times within Roseville and within downtown Sacramento are consistent with the published schedule. However, the growth in traffic volumes on the freeways are now near or exceeding roadway capacity, where any minor collision or disabled vehicle can result in long delays, particularly in the late afternoon.

This issue, of course, is regional in nature and far outside the capacity of the transit service to control. To a degree, regular passengers can adjust their daily morning routine by choosing an earlier run that provides them with their desired level of assurance of arriving by their scheduled work start time. There are several strategies that could help address on-time performance:

- Consider routing the service via I-80 and I-5 west of Watt/I-80, rather than Capital City Freeway. With the completion of the “Across the Top” improvements on I-80 and the growth in congestion on the Capital City Freeway, drive times on the I-5 route can often be 15 minutes quicker. Caltrans plans, moreover, are more advanced to complete HOV lanes along I-80 and I-5 (including a freeway-to-freeway connection at the I-80/I-5 interchange) than they are along the Capital City Freeway. It is worth noting that the PCE service via this alternative route was observed (in the limited data collected as part of this SRTP) to be late a relatively low 15 percent of the time. This option would require reconfiguration of the downtown service route. One strategy would be to provide a route consistent with the current and relatively simple PCE route using J Street eastbound, 15th Street southbound and P Street westbound, which serves stops within at most a two block walk of all existing Roseville Transit stops.
- Eliminate or modify the existing strategy of operating PM Routes 3 and 10 with the same bus. At present, Route 10 can only serve departing downtown stops on time if the bus has already successfully negotiated the freeway corridor in both directions without encountering significant delays – an increasingly unlikely outcome. If it is not feasible to operate a second bus due to limited bus availability, moving the Route 3 departure time

earlier by five minutes and Route 10 departure time later by five minutes would provide at least some additional ability to keep to schedule.

- Consider building ten minutes of additional time into the schedules for AM Runs 3 to 10 and all PM runs. This would reduce the proportion of runs operating late by an estimated 15 percent, though many runs impacted by severe traffic delays would still be behind schedule, and other runs would arrive ahead of schedule. Overall, this would provide passengers with a more realistic indication of their actual arrival time, and would help the reputation of the transit program regarding reliability. The impact of this additional scheduled time would be approximately \$31,000 per year, except that the City already pays for actual on-the-clock time generated by delays. The net result would be an increase in costs on the order of \$15,000 per year.

COMPARISON OF COMMUTER ALTERNATIVES AND PERFORMANCE

The performance analysis for the commuter services is presented in Table 42 and Figure 31 depicts the results. Those attaining the pertinent performance standards are shaded in green. A review of these results indicate the following:

- Ridership impacts range from a loss of 400 from the elimination of the reverse commute service to an increase of 25,500 generated by four additional runs.
- Subsidy impacts range from a reduction of \$41,800 (elimination of reverse commute service) to an increase of \$35,400 for a Mahany Park express run. Several other alternatives yield net reductions in operating subsidy by generating fare revenue increases greater than the cost increase.

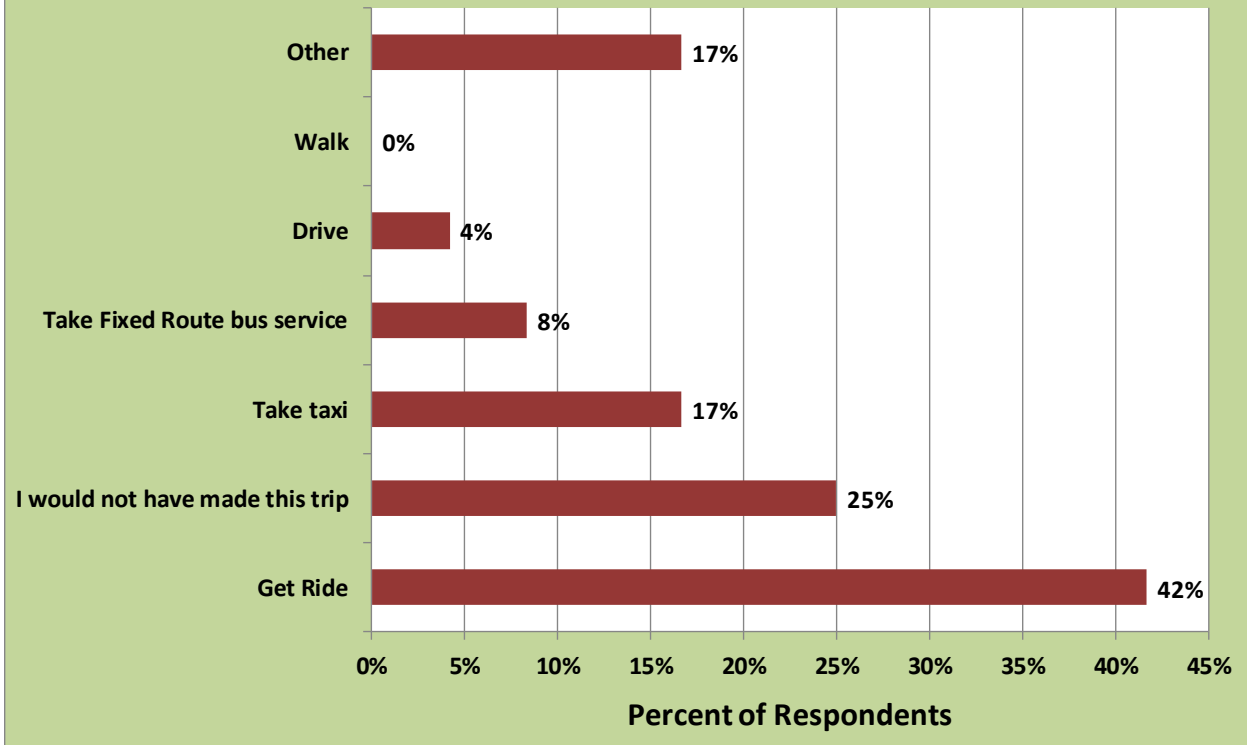
Alternative	Values Achieving Recommended Performance Standards Shaded							
	Annual Change		Change From Existing Service					
	Ridership	Operating Subsidy	Psggr-Trips per Service-Hour	Psggr-Trips per Service-Mile	Cost per Psggr-Trip	Subsidy per Psggr-Trip	Marginal Farebox Ratio	
			Performance Standard	20.0	0.60	< \$6.00	No Standard	75%
1 New Run in Each Direction Per Day	10,200	\$9,900	12.5	0.47	\$5.83	\$0.97	83%	
2 New Runs in Each Direction Per Day	19,400	\$24,700	11.9	0.45	\$6.13	\$1.27	79%	
3:00 PM Run	5,000	\$700	17.3	0.46	\$5.00	\$0.14	97%	
Mid-day Service	8,900	\$20,400	17.7	0.76	\$3.90	\$2.29	41%	
Improved PM Service to Mahany Park	8,100	-\$31,500	64.3	3.46	\$0.98	-\$3.89	499%	
Mahany Park Express Run	2,500	\$35,400	5.0	0.11	\$19.00	\$14.16	25%	
Eliminate Reverse Commute Service	-400	-\$41,800	0.5	0.04	\$109.25	\$104.50	4.3%	

Financial numbers in FY 2018/19 dollars

Note: Green indicates alternatives that are consistent with standard by expanding service in a manner that exceeds standard.

Note: Blue shading indicates alternatives that are consistent with standard by eliminating service not currently attaining standard.

Figure 31: If the Dial-A-Ride service was not available, how would you have made this trip? (n = 24, multiple responses allowed)



- Passenger-trips per vehicle-hour of service would be as high as 64.3 (resulting from the relatively strong ridership benefit associated with short extensions to provide greater PM service to Mahany Park). The additional 3:00 PM run attains the standard by providing more than 20 passenger-trips, while the elimination of the reverse commute service is consistent with the standard in that the vehicle-hours eliminated only generate 0.5 passenger-trips apiece. It is worth noting that the Mahany Park express run generated a relatively low 5.0 passenger-trips per vehicle-hour, but the other three expansion alternatives all generated results not far below the 20 passenger-trips per vehicle-hour standard.
- The impact on passenger-trips per vehicle-mile show a similar pattern, ranging from 3.46 passenger-trips gained per vehicle-mile for the improved PM service to Mahany Park to a loss of 0.04 for elimination of reverse commute service.
- Eliminating the reverse commute service would save \$109.25 in operating cost for every passenger-trip lost. Of the alternatives that increase costs, the “best” is the extension in PM runs to provide improved Mahany Park service, which requires only \$0.98 in additional cost per new passenger. On the other hand, operating express service for Mahany Park requires \$19 per passenger-trip.

- The subsidy per passenger-trip shows a similar pattern, with the elimination of reverse commute service saving \$104.50 in subsidy per additional new passenger-trip. On the other extreme, the Mahany Park express service requires \$14.16 in subsidy per passenger-trip, while the mid-day service requires \$2.29 and the other options all yield a net reduction in operating subsidy per passenger-trip.
- The marginal operating farebox ratios exceed 100% (revenues higher than costs) for most of the expansion alternatives, with the exception of the mid-day service and the Mahany Park express service. Eliminating the reverse commute service attains the farebox ratio standard as it is only 4 percent.

Summary

In sum, this review provides useful information on a wide range of commuter service alternatives. It is also important to consider that there are many other factors such as passenger preference, funding availability and bus availability beyond these financial and performance measures that merit consideration. Many alternatives will require additional analysis (including specific surveys and data collection) before a final decision can be made. Nonetheless, the following are key overall findings that result from this evaluation:

- The alternatives with a high potential consist of the following:
 - Extending some of the PM runs to improve service to the Mahany Park park-and-ride.
 - Elimination of the reverse commute service.
 - Providing at least two and preferably four additional runs per day, with one of the new PM runs departing downtown around 3 PM.
 - Revising the schedules to provide an additional 10 minutes of running time along the freeway corridor (and consideration of shifting to the I-5 corridor)
 - Serving the Louis/Orlando park-and-ride, instead of the Maidu Park park-and-ride.

These alternatives help address goals of expanding ridership, improving cost-efficiency by reducing ineffective services, and improving service quality.

- A moderate level of potential is associated with the following:
 - Provision of mid-day runs. While it attains some but not all performance standards, it would provide a real benefit to the commuter service and its riders.
 - Providing service to the area north of downtown (CHP Headquarters) on specific runs in a manner that minimizes impact on existing riders.
- Alternatives that have a low potential consist of the following:
 - Express runs to/from Mahany Park

- Establishing service to new portions of Sacramento outside of the downtown, as well as to the Sacramento train station.

Other alternatives not mentioned largely reflect trade-offs between costs and the benefits of expanding service availability.

DIAL-A-RIDE

The overall purpose of Roseville’s Dial-a-Ride program is to provide mobility to Roseville residents that otherwise would not have the accessibility to activities needed for a high quality of life. In addition, the program serves some trips that are otherwise not efficient to serve with the local fixed routes. Increasing ridership is not a key goal of the program, so long as it fills the needs of the community. Providing a high quality of service is instead the key goal of the service.

The program currently serves approximately 28,400 passenger-trips per year. This figure is 20 percent below the annual ridership in Fiscal year 2008/09, and 6 percent below the figure for FY 2014/15. While ridership over the last two years increased by 1 percent on Saturdays, it decreased by 4.4 percent on weekdays and 12 percent on Sundays. Table 40 presents a summary of typical passenger activity by hour and day of week, as well as the number of vehicles in operation.

	Placer County Transit	Roseville Transit	Auburn Transit
One-Way - General Public	\$1.25	\$1.50	\$1.00
One-Way - Senior/Youth/Disabled	\$0.60	\$0.75	\$0.50
24 Hour Pass - General Public	\$2.50	\$4.00	\$2.50
24 Hour Pass - Senior/Youth/Disabled	\$1.25	\$2.00	\$1.25
10 Ride Pass - General Public	\$10.00	\$15.00	--
10 Ride Pass - Senior/Youth/Disabled	\$5.00	\$7.50	--
14 Day Pass - General Public	\$21.50	--	--
14 Day Pass - Senior/Youth/Disabled	\$10.75	--	--
30 Day Pass - General Public	\$37.50	\$58.00	\$40.00
30 Day Pass - Senior/Youth/Disabled	\$18.75	\$29.00	\$20.00
30 Ride Pass - General Public	--	--	\$24.00
30 Ride Pass - Senior/Youth/Disabled	--	--	\$12.00
5 and under	Free	Free ¹	Free
Summer Youth	\$10.00	\$10.00	\$10.00
*Free is 4 years old and under on Roseville Transit. Maximum 2 children per adult rider.			
Source: LSC Transportation Consultants, Inc.			

The overall Dial-A-Ride program was reviewed to reach the following conclusions:

- Late cancellations are those where a passenger does not call at least 2 hours in advance of the scheduled pick-up time window. FY 2016/17 data indicates that this occurs on 1.4 percent of all trips, in addition to 0.3 percent of cancellations that occur at the door. The percentage of total cancellations is generally considered to be high if over 15%. Overall, cancellations are not a significant issue for the Roseville program.
- 2.5 percent of trips result in a “no show” (the passenger is not at the pickup location) The industry standards for these metrics are no more than 5 percent for no-shows, again indicating that the Roseville program has a good handle on this factor.
- The City of Roseville’s policies on late cancellations and no-shows is consistent with industry practice in that it is based on the percent of trips (rather than the absolute number), includes an appeal process, provides an advance notice prior to imposing a penalty, and provides ADA passengers with the option of a suspension rather than only imposing a fine.
- Missed trips occur on 0.028 percent of all scheduled trips (only 8 over the course of a year). This rate is typically not considered to be of concern unless it exceeds 0.05 percent.
- 24 percent of Dial-A-Ride passenger-trips are “subscription” trips (standing orders to serve specific passengers at specific times and days). This is a relatively low proportion compared with other similar systems, and indicates that the program is managing the level of subscription trips to avoid limiting availability for other “casual” ride requests.
- The Dial-A-Ride program serves 2.4 passenger-trips per vehicle service hour. Factors that tend to reduce this figure are the dispersed nature of most of the passenger trips (with individual trips made between scattered locations, rather than group trips to program sites) as well as the large geographic size of the service area. Considering these factors, this figure is relatively good compared with paratransit services in similar communities, and indicates an appropriate level of service for the level of ridership.
- The reservation process is standard in the industry, and does not appear to creating any significant problems for the service or the passengers.
- It is important to consider that the overall goal of a public transit program is not to maximize ridership, but to ensure that the community’s mobility needs are being met. This is particularly true on demand response services such as Dial-A-Ride, as growth in ridership requires increased operations and associated costs. If DAR passengers choose to shift to new mobility options (such as TNCs), this should be considered a positive step.

Elimination of General Public Ridership on Dial-A-Ride

One option that could be considered would be to eliminate the availability of Dial-A-Ride service to the general public (persons without disabilities and not elderly). General public ridership makes up 17 percent of all passenger-trips (or approximately 12 trips per day). As reflected in Table 18, above, this proportion is 14 percent on weekdays, 20 percent on Saturdays, and 24 percent on Sundays. This data was reviewed to estimate the reduction in vehicle-hours that could be made if general public riders were to be eliminated. This was found to be three vehicle-hours on weekdays, one on Saturdays and four on Sundays. Over the course of a year, this equates to a 7.4 percent reduction in vehicle-hours of service (though the peak number of vans in service would remain unchanged). This in turn would reduce operating cost by an estimated \$51,300 per year. Assuming all existing DAR General Public riders would be eliminated (rather than shifting to fixed route service), fare revenue would be reduced by \$15,000 per year, resulting in a net reduction in operating subsidy of \$36,300 per year.

A performance analysis of this alternative indicates the following:

- At 5.0 passenger-trips eliminated per vehicle-hour of reduction, this alternative is not consistent with the standard of providing service that yields at least 2.5 passenger-trips per vehicle-hour.
- Similarly, the elimination of 3.2 passenger-trips per vehicle-mile is not consistent with the standard of 0.20.
- This alternative would save \$8.43 in operating cost per passenger-trip lost, less than the standard of no more than \$35.00.
- The farebox ratio of fares to operating cost would be 29 percent, more than the minimum standard of 8 percent.

In sum, eliminating general public ridership from the Dial-A-Ride program is not consistent with any of the standards. It also provides a service to Roseville residents who find that the fixed route service does not meet their needs.

FARE ALTERNATIVES

Potential changes in the passenger fare structure for Roseville Transit are reviewed in this section.



Fixed Route Fares

In the interest of marketing and coordination between the western Placer County public transit services, a review of the fare structures of the three fixed route operators is worthwhile.

A comparison of fixed route fares on the two programs is shown in Table 44. As shown, Roseville Transit has the highest base fare of \$1.50. This is in line with other peer transit around the region, per the following examples and as shown in Table 22 in Chapter 6:

Table 44: Western Placer County Public Transit Route Rates			
	Placer County Transit	Roseville Transit	Auburn Transit
One-Way - General Public	\$1.25	\$1.50	\$1.00
One-Way - Senior/Youth/Disabled	\$0.60	\$0.75	\$0.50
24 Hour Pass - General Public	\$2.50	\$4.00	\$2.50
24 Hour Pass - Senior/Youth/Disabled	\$1.25	\$2.00	\$1.25
10 Ride Pass - General Public	\$10.00	\$15.00	--
10 Ride Pass - Senior/Youth/Disabled	\$5.00	\$7.50	--
14 Day Pass - General Public	\$21.50	--	--
14 Day Pass - Senior/Youth/Disabled	\$10.75	--	--
30 Day Pass - General Public	\$37.50	\$58.00	\$40.00
30 Day Pass - Senior/Youth/Disabled	\$18.75	\$29.00	\$20.00
30 Ride Pass - General Public	--	--	\$24.00
30 Ride Pass - Senior/Youth/Disabled	--	--	\$12.00
5 and under	Free	Free ¹	Free
Summer Youth	\$10.00	\$10.00	\$10.00

*Free is 4 years old and under on Roseville Transit. Maximum 2 children per adult rider.

Source: LSC Transportation Consultants, Inc.

- Folsom Stage -- \$2.50
- Gold Country Stage (Grass Valley) -- \$1.50 to \$3.00 depending on zone
- El Dorado Transit -- \$1.50
- E-Tran (Elk Grove) -- \$2.25
- Roseville Transit -- \$1.50
- Sacramento RT -- \$2.75

One notable difference between Roseville Transit and the other two western Placer operators is the age for a child. On Auburn Transit and PCT, a child may ride free at age 5 and under; whereas on Roseville Transit the child must be 4 and under. To be consistent, Roseville Transit should consider changing the age of a child to 5 and under. Given the high proportion of riders in the area that use multiple transit services, providing consistent fare policies help to improve the convenience of the transit network as a whole, and reduce conflicts between passengers and drivers.

Commuter Fares

Table 45 presents a comparison of commuter service fares on PCE and Roseville Transit. The base one-way cash fare from Rocklin/Roseville is slightly less on PCE (\$4.25) than for non-residents on Roseville Transit (\$4.50), although the resident fare on Roseville Transit is lower (\$3.25). Similarly, the cost of a PCE monthly pass from the Roseville/Rocklin area (\$131.25) is between the Roseville 30-day Pass for non-residents (\$155) and residents (\$110). PCE has a lower one-way fare for Connect Card users traveling from between Penryn and Roseville to Sacramento. Roseville Transit does not offer this option.

In addition, other commuter transit fares in the Sacramento Region are as follows:

	<u>Base 1-Way</u>	<u>Monthly Pass</u>
El Dorado Transit	\$5.00	\$180.00
Yuba Sutter Transit	\$4.00	\$128.00
YoloBus Route 45	\$3.25	\$121.00

In comparison, Roseville Transit’s resident fares are at the low end of the peer system fares.

One option would be to better align Roseville Transit commuter and PCE fares as a step to coordinate the two similar services. Overall, fare prices are fairly similar between the two operators. As noted above, the price from Rocklin/Roseville on PCE is \$4.25 vs. \$4.50 for non-residents on Roseville Transit. A complicating factor is the discounted fare option for Roseville Transit residents (\$3.25). It would likely be an unpopular policy to eliminate this discount for Roseville Transit residents. Roughly 77% of Roseville Transit riders are residents.

Table 45: Western Placer County Commuter Service Fares

Placer County Express				
	Colfax / Clipper Gap	Auburn / Penryn / Loomis	Rocklin / Roseville	Sacramento
Cash One-Way	\$5.75	\$4.75	\$4.25	\$4.25
Monthly Pass	\$178.50	\$147.00	\$131.25	--
Connect One-Way	\$5.75	\$4.50	\$3.70	\$3.70

Roseville Transit			
	Resident	Non-Resident	Reverse Commuter
Single Fare	\$3.25	\$4.50	\$3.25
10-Ride Pass	\$32.50	\$45.00	\$32.50
30-Day Pass	\$110.00	\$155.00	\$110.00
Roseville Transit Commuter/Capital	\$110.00	\$155.00	--
Corridor Monthly Pass			

Source: Individual websites.

If Roseville Transit were to eliminate the discount for a Roseville resident and align commuter fares with the PCE base fare from Roseville (\$4.25 cash/ \$132 monthly pass), roughly 10,000 trips per year would be lost and \$23,000 in fare revenue would be gained. Roseville Transit services have a high farebox ratio of 79 percent, which achieves the standard of 75 percent, and thus does not necessarily need to increase fares for this service. Given that the commuter services have such a high farebox ratio and given the potential for conflict from eliminating the Resident discount, promoting the use of Connect Card may be a better way of coordinating PCE and Roseville Transit services.

College Transit Pass Program

College transit pass programs have become relatively common, particularly among larger colleges and universities. Under these programs, funds are provided (typically from student activity fees) to offset the loss of transit fares that accompanies a fare program by which students are allowed to board the bus system at no charge. Some programs also include college staff and faculty (with funding provided from non-student-fee sources. Consideration was given both to a college pass program for Sacramento State University and for Sierra College.

Sacramento State University students may ride all Sacramento RT fixed-route transit services, including the light rail, by presenting a valid Sacramento State OneCard and the student

commuter sleeve. Students pay a nominal fee for this service through their registration fees. Approximately 5,000 “Sac State” students live in Placer County. This bears the questions whether western Placer County transit operators should also offer discounts or free rides to Sac State students through a registration fee program.

Two factors which contribute to the success of a college transit pass program are student transit demand and parking costs. The demand for transit service between Placer County and Sac State is reduced by the long travel times resulting from the current schedules of the various transit services. As an example, a student living near downtown Roseville wishing to use transit to the Sac State campus faces a total travel time ranging from 1 hour 45 minutes (using Roseville Route B, RT Route 21 and Gold Line LRT) up to 2 hours 15 minutes (using Roseville Route B, RT Route 93 and RT Route 26), depending on the time of travel. In comparison, driving would take around 30 minutes. Daily parking fees at Sac State student lots are \$6.00, which does not create much incentive to spend an additional 2.5 to 3 hours a day commuting to/from campus. Given this, it is not surprising that the onboard passenger surveys did not identify any existing Roseville Transit passengers traveling to or from Sac State. It can be concluded that a pass program for Sac State students would not generate a noticeable level of use on Roseville Transit unless parking costs increase and/or much more direct transit services are provided.

A partnership between Sierra College and western Placer County transit operators may be more useful. A reasonable scenario would be a pass program that provides free boardings on Roseville Transit and PCT to current students (showing a current student ID, or ultimately a Connect Card). The reduction in farebox revenue would be offset by funding generated by the campus. To determine the feasibility of this option, surveys would need to be conducted to help determine specific student travel patterns and interest in public transit. Next, the transit operators would need to negotiate with Sierra College an annual subsidy which is reasonable and meets the needs of all parties. College pass programs are typically financed by student fees or parking revenues.

Regional Day Pass

Currently, the three fixed route transit operators in western Placer County charge different fares, although there are free transfers between the different systems. Table 44 shows the different fare structures for each transit operator. Western Placer County communities focus on commercial services in Roseville and Rocklin. Therefore, it is not out of the question for someone to require travel on all three operators in one day. While the second leg of the journey would be covered by a transfer but the third leg would require purchasing a new fare. In an effort to make transferring more simple and seamless, a regional day pass could be implemented.

Many other areas, such as Sacramento, San Luis Obispo and King County, Washington have developed universal passes and fare revenue-sharing agreements so that riders can transfer between one system and another without having to pay a second fare. In the San Luis Obispo area, multiple transit agencies have coordinated to offer a universal pass to riders. The San Luis

Obispo Regional Transit Authority (RTA) coordinates with South County Transit, Paso Express, and San Luis Obispo Transit. Each system has different fare pricing; however, riders may purchase an one-day pass for \$5.00 which can be used on any of the four different systems. Likewise, there is a regional 31-day pass valid for rides on any of the four transit systems.

Internally, the agencies share revenues by calculating a fare-weighted ridership percentage for each system, and distribute collected pass revenues to each agency based on the percentage of fare-weighted ridership. Fare-weighted ridership is calculated by multiplying the number of pass-holding trips on each transit system by the average fare for that system (presumably the weighted average of adult, senior, and youth single-ride fares collected).

A reasonable regional day pass price for unlimited rides on the three Western Placer County transit operators would be around \$4.50. This represents a 10 percent discount to round trips on all three transit operators in one day (including free transfers).

Use of regional passes in similar systems indicate that actual usage would be low. The available survey data regarding the number passengers making multiple transfers indicates that use (and thus fare revenue impacts) would be small. However, this would be a step towards making the various western Placer County transit systems operate more effectively as a regional network.

MARKETING STRATEGIES

The City of Roseville will direct a future contract to research and develop an overall marketing and communications plan for Roseville Transit. The plan will identify target budgets for resources, and outline marketing, advertising, and public relations initiatives.

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This chapter focuses on the capital items needed to operate public transit, focusing on buses and bus stop facilities.



Zero Emission Bus Technology

Roseville Transit’s fleet is currently a mix of diesel and gasoline fueled vehicles. The California Air Resource Board (CARB) is in the process of developing new regulations (the “Transit Fleet Rule”) that are expected to ultimately require all public transit fleets in the state to use only Zero Emission Bus (ZEB) vehicles. ZEB technologies consist of Battery Electric Buses (BEBs) and hydrogen fuel cell buses. However, in 2009 staff concluded that the technology was not commercially ready and the Board directed staff to withhold the ZEB purchase requirement. Since that time CARB staff has been evaluating the commercial readiness of zero-emission technology. In 2015 staff concluded that the commercialization of ZEB technologies had advanced to the point where they may feasibly be incorporated into transit fleets. Staff is now in the process of proposing amendments to the Transit Fleet Rule. A draft proposal, called the Innovative Clean Transit Regulation is summarized below.

The regulation would apply to all public transit agencies that own, lease, or operate buses with a gross vehicle weight rating greater than 14,000 lbs. In the draft proposal, buses subject to the regulation include cutaway buses, transit buses (including bus rapid transit), articulated buses, double-deckers, commuter coaches, trolley buses and vintage trolley buses. Based on comments received on the draft, however, CARB staff has indicated that cutaway buses will not be included in the initial implementation requirement as there are currently no ZEB Altoona-tested⁷ cutaway vehicles and it is unclear when manufacturers may begin testing for zero-emission cutaways.

The following is a summary of the overall rule proposal. Fleet size would be based on the number of buses in the active fleet in 2019.

January 1, 2020

- Large transit fleets with 100 buses or more would need to:
 - Purchase 25 percent ZEB when bus purchases are made or implement an equivalent innovative zero emissions mobility program.
 - Purchase renewable fuels when diesel or natural gas contracts are renewed.
 - Report fleet-wide information for all modes and fuel purchases needed to evaluate their progress in meeting a fleet-wide performance-based goal.
- All transit agencies in more polluted areas of California would be required to purchase low NOx engines if available at the time of conventional bus purchases.

⁷ FTA regulations require all federally-funded transit vehicles models be tested in a facility located in Altoona, PA.

January 1, 2023

- The proposed concept would be expanded to include medium-size transit fleets with more than 30 buses.
- Affected transit fleets would need to meet a 50 percent ZEB purchase requirement.

January 1, 2026

- All transit fleets, including smaller transit systems would need to meet a 75 percent ZEB purchase requirement.

January 1, 2029

- All bus purchases would need to be ZEBs.

The purchase requirement applies at time of normal purchase and does not require any accelerated purchases. Transit agencies that make ZEB purchases before they are required by the regulation would generate a ZEB credit that could be banked and used for a future purchase date.

Staff is also proposing an “innovative zero emission” credit mechanism that would count towards the ZEB purchase requirement. Innovative zero emission mobility options are non-bus (nor fixed guideway) transportation services provided by the transit agency with lighter Zero Emission Vehicles (ZEVs) like micro transit, on-demand van or car transportation, or autonomous shuttle services. The transit agency would need to apply to the CARB Executive Officer to determine the appropriate credit amount for new and innovative services based on the details of the program. The credit would be provided in the form of a ZEB purchase credit where 350,000 zero emission passenger miles per year from the program would be deemed to be equivalent to purchasing a ZEB.

As noted above, CARB is currently in the process of meeting with transit agencies to understand the impacts of the proposed rule and to modify the rule as necessary. Another change under consideration is to allow each transit agency to develop and submit an individualized plan, approved by their board, for a transition to zero emissions, including their start date. Staff is interested in providing this flexibility but also wants to encourage near-term action. CARB staff plans to bring a proposed recommendation to the CARB board in June 2018.

With the exclusion of cutaway buses, Roseville Transit’s bus fleet consists of 29 large buses, just within the 30 bus criteria for a small-sized fleet. As such, the City is not required to be purchasing ZEBs until 2026 (under the current proposal). However, it is clear that operators of all transit fleets should be preparing for ultimately transitioning to ZEB fleets over time. Of the two ZEB technologies, by far the more prevalent option is Battery Electric Buses.

Battery-Electric Transit Vehicles

Technology and experience for battery-electric transit vehicles are still fairly new. Some larger transit systems and mid-sized system have purchased battery-electric buses, with many more on order. The closest existing BEB fleet to western Placer County is the 17 buses at the San Joaquin RTD system in Stockton. Recharging BEB's can either occur at the fleet operations facility (generally overnight using a slow charging station), or along the route at stops where at least 10 minutes of time are available (using an overhead fast-charging technology). As an example of cost, Marin County recently purchased two battery-electric vehicles for \$1.6 million. The cost includes purchase of the buses, GPS and fare collection equipment purchase and vehicle inspections.

Beyond the issue of cost, a key factor regarding battery electric buses is the potential range between charges. While buses with a range of 120-150 miles have been available for several years, some manufacturers have recently announced new technology that can operate up to 350 miles between charges – much more than Roseville Transit's daily mileage per bus. However, these claims do not reflect the requirements to also power onboard heating and cooling systems – an important consideration in Roseville's hot summers.

Vehicle Replacement

A review of Roseville Transit's vehicle fleet shows that the following buses will be eligible for replacement over the next seven years based on age:

- Currently eligible for replacement – 1 fixed route 28 passenger bus, 4 commuter buses, 3 DAR vehicles
- 2019 – 4 fixed route 29 passenger buses, 8 DAR vehicles
- 2021 – 7 commuter buses
- 2026 – 4 fixed route vehicles (CARB purchase rules apply)

In order to maintain a good working fleet with minimal maintenance costs, Roseville Transit should seek grant funding to replace vehicles according to the schedule above. By the end of the planning period, Roseville Transit should be purchasing ZEB vehicles in accordance with CARB regulations.

Bus Stop Improvements

Passenger facilities include all equipment and amenities that serve the passenger as they access the bus. This includes bus stop shelters, benches and signs, information kiosks, pedestrian crossing amenities and transfer centers. The quality of passenger amenities is a very important factor in a passenger's overall perception of a transit service. Depending on the trip, a

passenger can spend a substantial proportion of their total time using the transit service waiting at their boarding location. If this is an uncomfortable experience, if it is perceived to be unsafe, or if it does not provide adequate protection from rain and inclement weather, the bus stop can be the deciding factor regarding a potential passenger's use of the transit system.

A bus shelter is typically considered to be warranted at stops with a minimum of 10 passenger boardings per day⁸. A review of the existing location of shelters compared with observed passenger activity indicates that the following stops warrant a shelter:

- Woodcreek Northbound after Junction
- Pleasant Grove Westbound at Foothills

Passenger amenities should be replaced as need during the planning period. If an alternative with a new route alignment is chosen, bus stop signs and pullouts will need to be constructed.

While a Caltrans facility, the Taylor Road Park-and-Ride needs improvements. This is the single busiest commuter bus boarding location on the Roseville system (as well as the PCE system). In particular, a minimum of two large shelters should be provided, along with additional overhead street lighting.

The facilities provided at three of the four key hubs in the Roseville system (Civic Center, Galleria and Auburn/Whyte) are adequate and in good condition. Improvements would be beneficial at the Sierra Gardens Transfer Point. This location consists of a pull-out along the south side of Sierra Gardens Drive between North Sunrise Avenue and Santa Clara Drive, behind the Placer Village shopping center. It is provided with two bus shelters, and has adequate sidewalk width to accommodate wheelchair loading/unloading as well as sidewalk connections to other nearby destinations. The bay is adequate to accommodate up to three transit vehicles at a time (under the current schedule there are a maximum of two vehicles at this location at the peak times). The location is difficult to serve for buses traveling in the westbound direction. As a result, Route L serves a stop on the north side of Sierra Gardens Drive at Santa Clara Drive, 100 yards to the east. No passenger amenities are provided at this location. A 3-way Stop control of this intersection provides some protection to passengers walking between the bus stop locations. A deficiency of this overall location is that overhead lighting is not sufficient for the main stop (eastbound direction). In addition, a bus bench is warranted for the westbound stop. Construction of improvements at this is already scheduled for 2018.

⁸ For example, the transit design guidelines for the Sunline Transit Agency (California), El Dorado Transit (California), Regional Transit District (Colorado), Pima County (Arizona) and Denton (Texas) all cite 10 boardings per day as a standard for warranting a shelter.

This chapter presents the recommended work plan for Roseville Transit for the next 5-7 years. The work plan was developed in consideration of the identified goals and policies, and the information and analysis found in previous chapters and in the appendices. This chapter includes:



- Service Plan
- Capital Plan
- Financial Plan
- Institutional/Management Plan
- Implementation Plan

Figure 32 presents an overview of the plan.

SERVICE PLAN

This Service Plan presents a list of recommended service modifications for Roseville’s Local Fixed Route, Commuter and Dial-a-Ride services. This plan also identifies service enhancements that may be implemented if additional transit funding becomes available. Table 46 summarizes the impacts of the Service Plan elements on service levels, ridership and costs.

Local Fixed Route Services

FR1. Revise Routes C/G/F/E/L

Description of Existing Service: Routes C/G/F/E serve southeastern Roseville and provide service to Sierra College, using one bus on a two-hour-long schedule. Route L serves east Roseville from the Civic Center Transfer Point to Sierra College Boulevard using one bus and a one-hour long schedule.

Issue: Ridership on routes C/G/F/E is very low (2.9 passengers per vehicle hour, which is only half of the local route systemwide average). In particular, the ridership generated by serving Sierra College is low (only 7 boardings and 7 alightings per day, or just over 1 passenger per trip) due in part to unproductive route segments along I-80 and Sierra College Boulevard. Ridership on Route L to the east of Eureka Boulevard is low with few boardings and alightings.

Recommendations: After a review of a wide range of alternatives as discussed in Chapter 8, two potential strategies are recommended for further consideration:

Figure 32
Roseville Transit Short Range Transit Plan

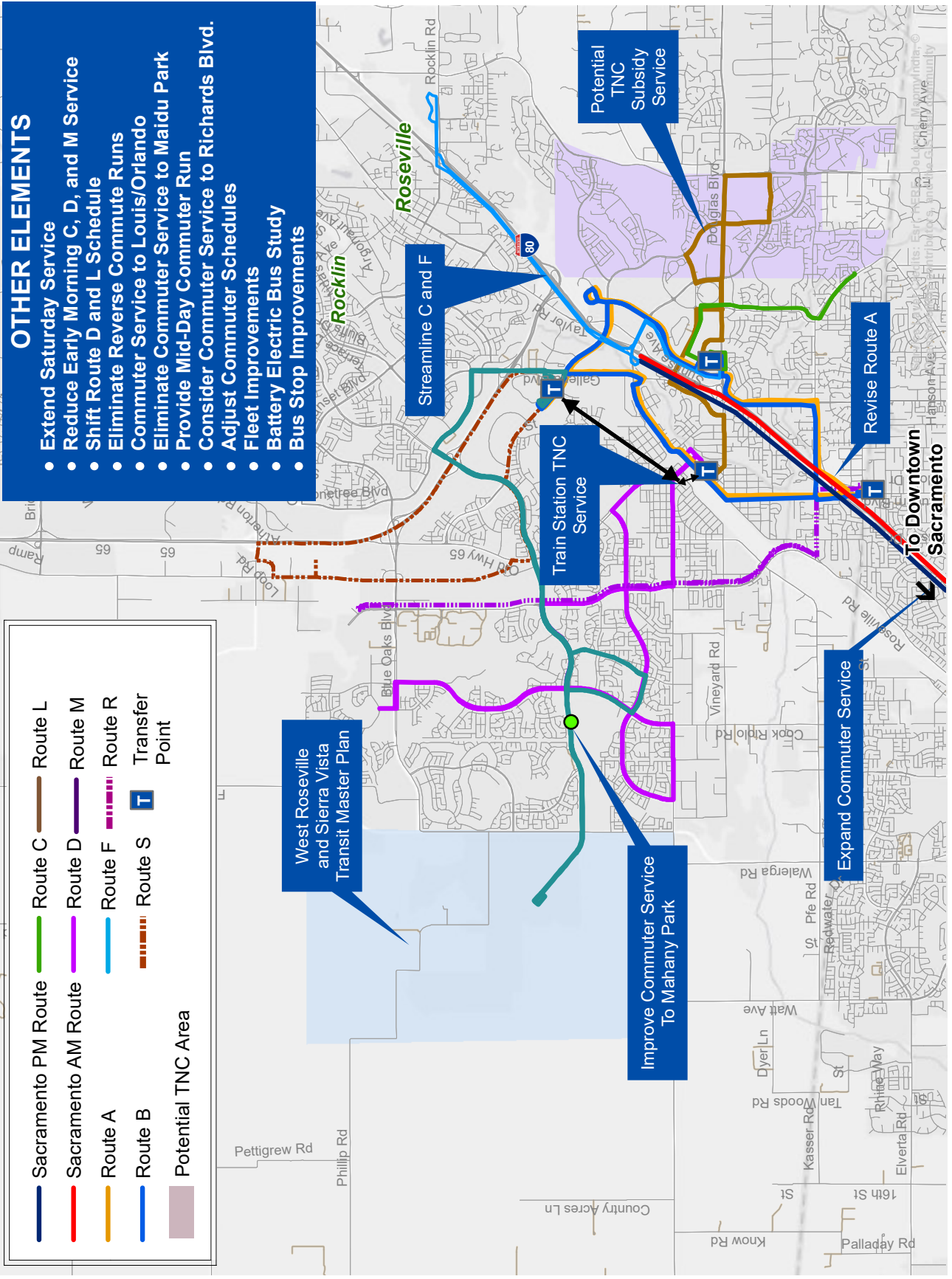


TABLE 46: Roseville Transit Short Range Transit Plan

Plan Element	Annual Quantities – Change From Existing						
	Passengers	Vehicle-Hours	Vehicle-Miles	Operating Cost	Farebox Revenue	Operating Subsidy	Peak Vehicles
Local Fixed Routes							
<i>Existing Total</i>	192,701	32,753	470,644	\$3,435,382	\$402,432	\$2,720,651	10
Revise Route C/G/F/E ¹	5,400	0	-886	-\$1,100	\$11,200	-\$12,300	\$0
Eliminate First Hour of Rt D, C, G and M Wkdy Service	-1,900	-765	-12,801	-\$46,600	-\$3,900	-\$42,700	\$0
Extend Saturday Service Until 6 PM	2,200	260	3,422	\$16,000	\$4,600	\$11,400	\$0
Total Impacts of Service Modifications	5,700	-505	-10,266	-\$31,700	\$11,900	-\$43,600	\$0
Total With Service Modifications	198,401	32,248	460,378	3,403,682	414,332	2,677,051	10
<i>Percent Impacts of Service Modifications</i>	3.0%	-1.5%	-2.2%	-0.9%	3.0%	-1.6%	0.0%
Commuter Service							
<i>Existing Total</i>	137,102	6,327	242,187	\$837,296	\$666,287	\$171,009	9
Expand Capacity by 2 AM and 2 PM Runs	19,400	1,630	43,344	\$119,000	\$94,300	\$24,700	2
Improved PM Service to Mahany Park	8,100	126	2,344	\$7,900	\$39,400	-\$31,500	0
Eliminate Maidu Park, Add Louis/Orlando	3,000	-134	-1,109	-\$6,800	\$14,600	-\$21,400	0
Eliminate Reverse Commute Service	-400	-773	-10,080	-\$43,700	-\$1,900	-\$41,800	0
Mid-day Service	8,900	504	11,693	\$34,700	\$14,300	\$20,400	0
Total Impacts of Service Modifications	39,000	1,352	46,192	\$111,100	\$160,700	-\$49,600	2
Total With Service Modifications	176,102	7,679	288,379	\$948,396	\$826,987	\$121,409	11
<i>Percent Impacts of Service Modifications</i>	28.4%	21.4%	19.1%	13.3%	24.1%	-29.0%	22.2%
TOTAL Roseville Transit							
<i>Existing Total</i> ²	358,211	50,722	896,837	\$5,512,980	\$1,172,507	\$4,028,173	24
Total Impacts of Service Modifications	44,700	847	35,926	\$79,400	\$172,600	-\$93,200	2
Total With Service Modifications	402,911	51,569	932,763	\$5,592,380	\$1,345,107	\$3,934,973	26
<i>Percent Impacts of Service Modifications</i>	12.5%	1.7%	4.0%	1.4%	14.7%	-2.3%	8.3%
Note 1: While the plan includes options for either streamlined Route C/F service or a TNC subsidy program, the streamlined C/F option is reflected here in order to be conservative as it has the higher subsidy requirement.							
Note 2: Also includes DAR.							

- Modify routes C/G/F/E and L to eliminate unproductive segments and provide one-hour headways minimum – Figure 32 and Figure 23 in Chapter 8 show an example of how this could be accomplished. In this example, the existing bus could be used to operate a streamlined Route C and F, operating an hourly route connecting South Cirby Way with Sierra College via Sierra Gardens and I-80. Route L would also be realigned slightly to serve Sierra Garden in both directions, making better connections to other routes. The more consistent service would increase ridership (by 5,400, or 60 percent), and the shorter mileage would reduce operating subsidy (by \$12,300, or 7 percent).
- Eliminate routes C/G/F/E, modify route L and replace with TNC or Microtransit Service – The City could eliminate routes C/G/F/E and replace this service with a TNC subsidy program or Microtransit service (private or public). The TNC/Microtransit service would be provided in areas of the City previously served by routes C/G/F/E and L. This change

would eliminate Roseville Transit service to Sierra College and substantially reduce operating costs -- the cost savings of operating one less bus is anticipated to be larger than the TNC subsidy cost, leading to an overall cost savings of \$119,700 (31 percent of the existing C/G/F/E and L operating costs). A modest (2,900 passengers per year, or 9 percent) increase in ridership would occur, depending on the parameters of the TNC subsidy. This option could potentially be implemented as a demonstration project, as it would be a good candidate location to test the potential for TNC subsidy or microtransit service options to replace under-performing fixed route service.

There would be a wide range of policy issues that would need to be addressed in establishing a TNC/Microtransit program, including the appropriate area for trip origins, the appropriate area for trip destinations, the subsidy level, the hours/days the discount would be provided, program pre-approvals, and accessibility under the Americans with Disabilities Act and Title VI. This strategy would also raise questions of equity with other areas of Roseville not within the demonstration TNC area. The City should further pursue this option and address these policy questions. In the meantime, the streamlined Route C/F strategy discussed above would increase the productivity and performance of service in this area.

FR2. Extend the Saturday Span Of Service Until 6 PM

Description of Existing Service: The last runs of Saturday service depart around 4 PM.

Issue: The mobility of transit users is limited. Extension of Saturday service is a common passenger request and would provide more opportunity for employment, shopping and recreational trips on Saturdays.

Recommendation: It is recommended that one additional hour of service should be added to the routes operated on Saturday (A, B, D, L and M). This will increase ridership by 2,200 per year (1.1 percent) while increasing subsidy requirements by \$11,400 (0.5 percent).

FR3. Reduce Early Morning Weekday Service on Routes C, D, G and M

Description of Existing Service: Service on Routes C, D, G and M begin at 6:30am, 6:20am, 6:50 am and 6:30 am respectively each weekday morning.

Issue: The initial runs on Routes C, D, G and M have relatively low ridership (only one or two riders on each run) and are not cost-effective (requiring \$24.53 in operating cost per passenger).

Recommendation: If confirmed by review of additional ridership data, these initial runs should be eliminated in order to improve efficiency and provide funding for other transit improvements. Eliminating these initial runs will save \$42,700 in annual operating subsidy (6

percent over these routes), while reducing ridership by only an estimated 1,900 passenger-trips per year (3 percent).

FR4. Shift Route D and Route L 3 to 5 Minutes Earlier

Description of Existing Service: While schedules at other transfer locations are well-timed, some routes at Civic Center miss each other by a few minutes, resulting in long passenger waits between connecting buses.

Issue: Routes A and B are on-site at 10 and 40 after the hour, while Route D arrives at 13 after and departs at 20 after and Route L arrives at 15 after and departs at 25 after.

Recommendation: Route D schedules should be shifted 3 minute earlier and Route L schedules 5 minutes earlier. This will provide a schedule by which all four routes were at this location at 10 minutes after the hour (fully using the available four-bus bay capacity). This shift would not change transfer opportunities at Sierra Gardens on Route L. While this would shift other transfer opportunities (such as between Routes D and M along Pleasant Grove Boulevard), the passenger counts indicate very little transfer activity at these locations. Overall, this would not impact operating costs, and should result in a long-term modest growth in ridership.

FR5. Minor Modification of Route A to Improve On Time Performance

Description of Existing Service: Route A operates a large clockwise loop. At its southern end, it operates westbound on Orlando Way and then southbound on Auburn Boulevard to the Louis/Orlando Transit Center.

Issue: Route A operates six or more minutes behind schedule on 9 percent of runs, falling below the standard of being on time for at least 95 percent of the runs.

Recommendation: It is recommended that this route be realigned to use Orlando Way westbound between Cirby Way and the Louis/Orlando Transit Center, rather than the current route westbound on Cirby Way and southbound on Auburn Boulevard. While this will eliminate westbound service to the stop on Cirby Way at Cirby Hills Drive, this stop only serves 3 passengers per day and is within a reasonable walk distance of the stop on the east side of Riverside Avenue north of Cirby Way. The realignment, moreover, will save at least 2 minutes of running time each hour during busy periods, thereby benefitting all passengers by improving on-time performance. It will also allow new stops to be served at Merryhill School and Somerset Hills Apartments. Note that this strategy will require modifications to the existing raised median on Orlando Way at the northern entrance to the Transit Center, which will require review and approval by the City Traffic Engineer.

FR6. Additional Service to the Roseville Train Station.

Description of Existing Service: Capital Corridor currently provides train service to the Roseville Train Station, with one train departing Roseville for Sacramento and the bay area each morning,

and one train returning each evening. However, Roseville Transit fixed routes do not currently directly serve the Train Station.

Issue: While the demand for service to the station is currently modest, the planned expansion of *Capital Corridor* service will increase the importance of providing connecting service. Within the time frame of the SRTP, it is anticipated that Capital Corridor will expand service to the Roseville Train Station, adding 2 morning and 2 evening trains each weekday for a total of 3 trips morning and 3 evening. Beyond the 5-7 year horizon for this plan, Capital Corridor plans to increase the number of trips to 10 each morning and 10 each evening.

Recommendation: As discussed in Chapter 8, it is anticipated that the most effective means of serving the station would be to subsidize a discount code for TNC service (including potentially local cab companies) to provide trips between the Train Station and the Civic Center as well as the Galleria transit centers. To provide a \$1.25 cost to the passenger (consistent with the transit fare), the average subsidy would be on the order of \$5.50 to \$6.00 per trip. Ridership (and thus subsidy requirements) would depend on the level of train ridership, but is expected to be modest. The cost of this program could potentially be shared with the Capital Corridor JPA.

Dial-A-Ride Services

Chapter 8 includes a detailed review of the Roseville Transit Dial-A-Ride service. The review indicates that the service is overall going a good job of meeting its key goals of addressing the mobility needs of the community that cannot be accommodated on the fixed routes and providing a high quality of service. One option considered was the elimination of general public ridership on the DAR service. This would reduce the necessary vehicle-hours of service by three on weekdays, one on Saturdays and four on Sundays, resulting in a reduction in operating subsidy of \$36,300 per year. However, this would eliminate 5,000 passenger-trips per year, much of which consist of trips that cannot be made on the fixed-route service. Overall, allowing general public on the DAR was found to be consistent with adopted performance measures, and should not be eliminated. There were no further recommendations identified for Roseville Transit Dial-A-Ride service.

The Placer County Transit SRTP includes a recommendation for elimination of the PCT Dial-A-Ride and replacement with a TNC subsidy program (for persons able to use such as service) along with “contracting” with the City of Roseville to provide ADA paratransit service in Granite Bay. The City should work with Placer County to craft an agreement that provides this service in a manner that does not result in any net cost impacts to the City, or reduction in service quality to its residents.

Commuter Service

Roseville Transit’s Commuter service is a successful element of the overall transit program, carrying approximately 3 times as many passenger boardings per vehicle-hour as the local fixed

routes) and covering almost 80 percent of the operating costs through passenger revenues. There are a number of issues facing the service that are addressed by this plan, namely:

- Capacity constraints at peak times
- Demand increases associated with development of new areas of Roseville
- On-time performance challenges
- Desire for service to new areas.

CS1. Expand Commuter Service

Description of Existing Service: Roseville Transit currently provides commuter bus service to Downtown Sacramento, with ten buses departing Roseville for Sacramento each morning, and ten buses returning each evening.

Issue: Roseville Transit's commuter runs frequently run at or near the seating capacity: in the surveys conducted as part of this SRTP study, the PM Route 2 carried 46 passengers while the PM Route 4 carried 42. The passenger seating capacity of the largest buses in the fleet is 45. Other routes reach capacity on particular days. In addition to providing a poor ride experience for those passengers forced to stand, the potential that an individual passenger may not get a seat is a substantial disincentive to use a commuter transit service at all. It is important to avoid this perception by providing adequate capacity to ensure a seat in all but the most unusual periods.

Recommendation: Overall, the existing ridership data indicates the need to increase the service by at least one and ultimately two trips in each commute period per day for service between downtown and Roseville. While more detailed surveys of existing passenger should be conducted to define specific new schedules, available data indicates the following:

- In the AM period, the first priority would be a run departing Taylor/I-80 around 6:10 AM, followed by a run departing Taylor/I-80 around 6:30 AM.
- In the PM period, the first need is to provide additional capacity departing downtown around 3:30 to 3:45 PM, to Taylor/I-80. The second priority is to provide a run starting around 4:15 PM.

Two additional runs in each direction will increase operating costs by an estimated \$119,000 per year (or a 14 percent increase over the operating cost of the existing Commuter service). Ridership is forecast to increase by 19,400 per year (14 percent) once potential passengers are fully aware of the availability for additional capacity. The additional fare revenues will offset much of the additional costs, yielding an increase in annual operating subsidy requirements of (\$24,700). While two additional buses will be needed at peak times, the purchase of three commuter buses is recommended to keep the commuter fleet spare ratio over the desired 20 percent level.

CS2. Eliminate Reverse Commute Runs

Description of Existing Service: The Roseville Commuter schedules include three “reverse commute” opportunities per commute period, providing service from downtown Sacramento to Roseville in the morning and return trips in the afternoon.

Issue: Ridership on these runs is very minimal (roughly 1 passenger per day over all runs), while costs are high (on the order of \$43,700 under the current service contract). This is primarily due to the dispersed nature of employment sites in Roseville, the presence of other public transit options to travel to Roseville, the limited housing in downtown Sacramento, and the challenges of traveling into downtown to access the reverse commute runs.

Recommendation: This service should be eliminated. This will reduce ridership by roughly 400 passengers per year, but reduce operating subsidy by an estimated \$41,800 (or 24 percent), at least in the short run. (In the long-run, the driver costs associated with the deadhead travel could be part of the bid rate in a future contract.) A total of approximately 400 passenger-trips would be eliminated (including passenger-trips on the opposite side of individual passenger round-trips). Including the loss of \$1,900 of passenger fares, this alternative would reduce operating subsidy by \$41,800 per year (or 24 percent).

CS3. Improve PM Service to Mahany Park

Description of Existing Service: Mahany Park is the primary park-n-ride lot in northwest Roseville for commuter service. Roseville commuter buses pick up at Mahany Park three times in the morning (AM 2, AM 3 and AM 9) and drop off at Mahany Park two times in the evening (PM 5 and PM 6).

Issue: The range of time when service is provided to Mahany Park is limited. Roseville Transit commonly receives passenger requests for additional service to/from Mahany Park, including the potential for direct service to/from downtown Sacramento.

Recommendation: As discussed in Chapter 8, providing a direct “express” runs to/from Mahany Park was found to not meet performance standards and is not recommended. However, additions to existing runs are recommended as follows:

- Passengers should be provided the opportunity to request service to Mahany Park on the PM Bus 1 and Bus 10 runs, both of which currently terminate at Saugstad Park. This will provide downtown departures at 3:31 PM and 5:26 PM, greatly expanding the afternoon schedule options.
- Service should also be provided to Mahany Park on demand at the end of the Bus 8 PM run, which currently terminates at Taylor/I-80. This will reduce the in-vehicle-travel time for passengers wishing to leave work around 4:30 PM from the current 1 hour 42 minutes (on Bus 9) down to 1 hour 3 minutes on Bus 8. In addition, this would allow PM

Bus 9 to terminate at Saugstad Park, as the Bus 8 service would be much more attractive to riders.

By adding to existing runs, the cost impacts of this strategy is relatively modest, at \$7,900 per year (1 percent). Ridership is forecast to increase by 2,500 per year (2 percent), generating farebox revenues that will more than offset the cost increases and thus will reduce overall operating subsidy requirements.

CS4. Consolidate Stop Locations in Southeast Roseville

Description of Existing Service: In southeast Roseville, commuter buses currently serve the Maidu Park, Cirby at Sunrise and Louis Orlando stops. These stops are located within 2.6 miles of each other. The City recently completed a new 39-space park-and-ride lot and other passenger amenities at the Louis/Orlando Transit Center.

Issue: Serving multiple nearby stops depart increases travel time for passengers. Two AM runs and two PM runs currently serve Maidu Park with a total of only 10 passenger-trips per day (or five round-trips) are served. Serving this stop incurs a cost of approximately \$7,000 per year. The Maidu Park lot has bike lockers that may serve commuters. Statistics are not available for the Cirby at Sunrise location, but this location is not an established park-and-ride lot, although the property owner has apparently been tolerant of commuter parking.

Recommendation: Either the Maidu or Cirby at Sunrise stops should be eliminated. Depending on the stop eliminated, passengers will need to drive from 1 to 3 miles further. However, this will reduce costs while being more convenient for most residents north of I-80.

CS5. Provide a Mid-Day Commuter Run

Description of Existing Service: The current Roseville Commute consists of ten morning commute runs (with a latest arrival in downtown Sacramento at 8:18 AM) and ten afternoon commute runs (with the first departure from downtown Sacramento at 3:31 PM), with no service in the mid-day period.

Issue: Provision of a mid-day commuter run is a common request among existing Roseville Transit commuter riders: of the 18 specific requests for additional runs out of the current span of service generated by the onboard surveys conducted for this SRTP, 7 were for mid-day service. Experience with the other Sacramento commuter service that offers mid-day service shows that passengers use the service to work half-days and to conduct personal errand or business downtown.

Recommendation: Provision of a mid-day round-trip (an 11:30 AM departure from the Galleria and return trip from downtown stops around 12:30 PM) is recommended as a lower priority. It will increase costs by an estimated \$34,700 per year (4 percent), while yielding an overall ridership increase of 8,900 (6 percent). Overall operating subsidy increase will total \$20,400, or

12 percent. While less productive than other improvements, this run will significantly increase the overall range of trip purposes and usefulness of the commuter service.

CS6. Consider Service to Employers North of Downtown

Description of Existing Service: The existing downtown stops are all in the downtown area south of the Union Pacific Railroad tracks.

Issue: The area north of downtown (around Richards Boulevard / 7th Street) is a growing employment area, including the new California Highway Patrol Headquarters building. Unlike other potential new employment centers in Sacramento, this area could be served at a relatively modest cost. Specifically, two AM runs could turn west on Richards Boulevard, south on 7th Street, and return east on B Street to 12th Street, adding 0.5 miles and approximately 2 minutes to the running time. In the PM, this area could be served on two runs prior to the existing stops (in order to minimize the impact on travel time for existing passengers). While impacts on operating costs would be low, whether serving this area would be a net benefit (considering the additional travel time) will depend on the specific commute patterns of this area.

Recommendation: City staff should contact the major employers in the area to determine (potentially through surveys) the residential location, commute times, parking availability, cost of parking, availability of employer-based commuter subsidies and the overall level of interest in service to this area. While there are common requests to provide direct Roseville Transit service to other employment centers in Sacramento, such as the Broadway corridor and UC Davis Health Center, providing service to new areas would incur substantial new costs for new routes or major route extensions. As ridership potential in these areas is much lower than in downtown (as these areas do not have paid parking or a high proportion of employers willing to subsidize transit fares), service to additional areas is not recommended.

CS7. Modifications to Improve On-Time Performance

Description of Existing Service: The Commuter Service schedules have been developed based on typical travel times over recent years.

Issue: At present, 29 percent of AM service operated 6 or more minutes behind schedule (up to 24 minutes late) and 46 percent of PM service operated late (up to 45 minutes late). Virtually all of this delay is generated by traffic delays along I-80 and/or the Capital City Freeway. This issue, of course, is regional in nature and far outside the capacity of the transit service to control.

Recommendation: To provide a schedule more in line with the realities of freeway congestion, it is recommended that 10 minutes be added to the schedule for AM Runs 3 to 10 and all PM runs. This will reduce the proportion of runs operating late by an estimated 15 percent, though many runs impacted by severe traffic delays would still be behind schedule, and other runs

would arrive ahead of schedule. Overall, this will help the reputation of the transit program regarding reliability. The impact of this additional scheduled time would be approximately \$31,000 per year, except that the City already pays for actual on-the-clock time generated by delays. The net result will be an increase in costs on the order of \$15,000 per year.

In addition, the City should eliminate or modify the existing strategy of operating PM Routes 3 and 10 with the same bus. At present, Route 10 can only serve departing downtown stops on time if the bus has already successfully negotiated the freeway corridor in both directions without encountering significant delays – an increasingly unlikely outcome. If it is not feasible to operate a second bus due to limited bus availability, moving the Route 3 departure time earlier by five minutes and Route 10 departure time later by five minutes would provide at least some additional ability to keep to schedule.

Finally, City and contractor staff should monitor changes in traffic delays on the Central City Freeway. With the completion of the “Across the Top” improvements on I-80 and the growth in congestion on the Capital City Freeway, drive times on the I-5 route can often be 15 minutes quicker. Caltrans plans, moreover, are more advanced to complete HOV lanes along I-80 and I-5 (including a freeway-to-freeway connection at the I-80/I-5 interchange) than they are along the Capital City Freeway. It is worth noting that the PCE service via this alternative route was observed (in the limited data collected as part of this SRTP) to be late a relatively low 15 percent of the time. This option would require reconfiguration of the downtown service route, but stops within a two block walk of all existing Roseville Transit stops could be easily provided.

CAPITAL PLAN

Fleet Improvements

The service plan will not change the number of buses needed to operate the Dial-A-Ride or local fixed route services, except if the TNC option is implemented the number of peak fixed-route buses in operation would be reduced by one. Three full-sized commuter buses will be needed to operate the additional Commuter runs. While in the short term these could potentially be leased, preferably Federal or state funding should be used to purchase these vehicle in the long term.

In addition, the following vehicles in the existing fleet will require replacement over the SRTP period:

- Currently eligible for replacement – 1 fixed route 28 passenger bus (01-377), 4 commuter buses (00-461 to 00-465), 3 DAR vehicles (11-460, 11-463, 11-473)
- 2019 – 4 fixed route 29 passenger buses (09-414, 09-416, 09-417, 09-419), 8 DAR vehicles (14-444 to 14-469)
- 2021 – 7 commuter buses (09-408 to 09-498)

Funding these vehicle purchases will require careful management of Federal, state and regional grant sources, as well as local capital reserves. Appendix C presents a full fleet inventory.

Regional Battery Electric Bus Readiness Study

The California Air Resources Board (CARB) is currently developing updates to the Transit Fleet Rule intended to reduce the greenhouse gas emissions of California's transit fleets. Current draft regulations would not require Roseville Transit bus purchases within the seven-year SRTP period to be Zero Emission Bus (such as Battery Electric Bus or "BEB") technology, reflecting the relatively small size of the fleet as well as the lack of BEB options for smaller capacity transit vehicles.

While BEB vehicles are not required to be implemented within the SRTP period, it is clear that this technology will be a requirement not long after 2025. Though BEB technologies are advancing rapidly, there are many factors that need to be evaluated before the right strategy can be identified, including the following:

- Appropriate charging technologies: slow charge (overnight in the storage yard) versus fast charge (at layover points along the routes).
- Impacts on existing maintenance/storage facilities.
- Impacts on transit centers.
- Operating range, particularly given the power demands of air conditioning, heating and climbing grades.
- Cost implications of charging during peak vs. off-peak periods.

Given that all western Placer County transit operators are facing these new requirements and that facilities at the transit centers (such as Galleria and Watt/I-80) could serve multiple transit systems, it would be most effective to address these issues through a "Regional BEB Readiness Plan"⁹. Roseville Transit should be an active part of this planning process. In particular, it would be useful to have a clear plan for BEB implementation by 2020, in time to inform the purchase of the five commuter replacement buses in 2022.

Passenger Facility Improvements

Providing attractive and comfortable bus stops is important in attracting and maintaining ridership. It is particularly important for sensitive populations, such as seniors or persons with disabilities to be provided with shelter from the weather and seating.

⁹ While Roseville has participated in a previous plan through the Sacramento Air District, this new study would focus on the specifics of BEB operations among the western Placer transit operations.

A review of the existing location of shelters indicates that the following stops warrant a shelter:

- Woodcreek Northbound after Junction
- Pleasant Grove Westbound at Foothills

Passenger amenities should be replaced as need during the planning period. New bus stops will need to be established southbound on Orlando Avenue between Cirby Way and Louis/Orlando Transit Center. Longer term changes to address development in West Roseville would also be accompanied by the need for new stops. In addition, the changes in commuter services will require the signing of a stop at the Louis/Orlando Transit Center, and potentially new stops in the Richards Boulevard area of northern Sacramento.

Improvements are also needed at the Taylor Road Park-and-Ride (owned by Caltrans), which is the busiest passenger location on both the Roseville Transit commuter service and Placer Commuter Express systems. Specifically, a minimum of two large shelters should be provided (with a total covered area of approximately 240 square feet and seating for 24), along with additional overhead street lighting. Siting and design of these improvements will need to address utility line easements. The City should work with Caltrans to implement these improvements.

There is also a need for improvements to the Sierra Gardens Transfer Point, which the City is in the process of implementing.

FINANCIAL PLAN

Overall Financial and Ridership Impact

As shown in Table 44, the overall impact of this plan will be to increase operating costs by \$79,400 per year (or 1.4 percent)¹⁰. Ridership will increase by 44,700 annual boardings (or 12.5 percent) per year. This ridership increase (particularly on the commuter service) will increase farebox revenues by \$172,600 (14.7 percent) per year. As a result, the overall impact of the plan on the need for operating subsidy funding is a decrease of \$93,200 (or 2.3 percent).

It is worthwhile to review these financial impacts for the local fixed route and the commuter services:

- The **local fixed routes** operating costs will be reduced overall by \$31,700 per year (0.9 percent). A 3.0 percent (5,700 passengers per year) ridership increase will generate a 3.0 percent increase in farebox revenues (\$11,900 per year), resulting in a \$43,600 overall decrease in operating subsidy requirements (1.6 percent).

¹⁰ Note that the more conservative option (the streamlined Route C/F option, with higher costs) is assumed regarding the eastern Roseville service.

- The **commuter service** will have a total increase in operating costs of \$111,100 per year, or 13.3 percent. Ridership is forecast to grow by 39,000 (28.4 percent), yielding a \$160,700 increase in farebox revenues (24.1 percent). On balance, operating subsidy requirements will be decreased by \$49,600.

Given these figures, it is expected that operating funding can be provided through existing funding sources, notably Local Transportation Funds and State Transit Assistance funding. However, it is important to note that there are always uncertainties in the ongoing provision of State and Federal funding sources that may require additional local funding sources over the course of this SRTP period.

Depending on propulsion technology and other vehicle attributes, the total costs for vehicle purchases over the next seven years will be on the order of \$15 Million to \$18 Million. Potential funding sources include:

- FTA Bus and Bus Facilities Infrastructure Investment Program
- FTA 5309 Capital Investment Grants
- FTA Congestion Mitigation and Air Quality Program
- FTA 5339(a) Grants for Buses and Bus Facilities Program
- FTA 5339 (c) Low or No Emission Vehicle Program
- California Proposition 1B Transit Capital Program
- Sacramento Emergency Clean Air & Transportation Grant Program

Participate in a Regional Day Pass Program

Surveys conducted as part of this SRTP indicate that 14 percent of Roseville Transit local route riders also use other transit services as part of their overall trip. A trip from a neighborhood in Auburn to a medical office in Roseville, for example, can require traveling on Auburn Transit, PCT and Roseville Transit. Even though transfers are available to passengers on their first boarding, a second transfer and the need to understand various fare programs to complete such a trip tends to discourage residents from using transit. A regional day pass program, priced at \$4.50 for general public and \$2.25 for seniors, youth and persons with disabilities should be established that allows for all-day boardings on Auburn Transit, PCT and Roseville Transit local fixed route services. While in the short term this is expected to have a negligible impact on overall ridership and fare revenues, over the longer term it would encourage the growth of longer regional trips via transit. Tracking the passes sold and passenger boardings on each system would allow the operators to “settle up” on a monthly basis to ensure that the revenues are distributed equitably.

Investigate Sierra College Student Pass Program

Pass programs that provide “free” transit boardings for college students in exchange for a per-pupil fee are increasingly common across California and the nation. The Sierra College Rocklin campus is well-served by public transit, and faces parking issues as student population grows.

The City of Roseville should participate in discussions with Placer County and PCTPA regarding the potential for a student pass program. The transit operators would then need to negotiate with Sierra College to identify an annual subsidy which is reasonable and offsets the expected loss of passenger revenue. If pursued, a college pass program should become part of the Connect Card options.

Promote Use of the Connect Card

The greater Sacramento Region's transit operators have invested a great deal of effort in the development and deployment of a region-wide "Connect Card" that provides a convenient means of purchasing fares and boarding transit services throughout the region. This consists of a "reloadable" card that is valid for the major transit services throughout the region (including Roseville Transit and PCT). Roseville should continue its efforts to promote the use of the Connect Card. This could ultimately allow the reduction in the number of multiday/multiride pass options, simplifying the management and accounting of the Roseville Transit fare media.

INSTITUTIONAL/MANAGEMENT PLAN

This plan includes no recommended changes to the institutional structure of Roseville Transit. Management through City staff and service provision through a private contractor allows the transit program to take advantage of the larger Public Works Department, allows the transit management staff to be relatively "lean" (compared to a separate transit organization), provides specialized transit operations expertise in a cost-effective manner through the contractor staff, and minimizes overall costs of service.

Updated Standards

Table 27 in Chapter 7 presents recommended revisions to the Roseville performance standards that can encourage improvements in efficiency and effectiveness and that better reflect the realities of the transit "markets" served by the organization. Adoption of these updated standards is recommended.

Marketing Strategies

Roseville Transit benefits from a wide range of high-quality marketing materials (schedules and brochures) as well as an attractive and effective website. The only recommendation is that schedules should show service times for additional stops. For instance, the Route D schedule only shows times for two stops over the course of the hour-long route, which gives riders little information about when to arrive at a particular stop. A typical rule of thumb is to provide a scheduled time roughly every five stops.

The growth of social media has increased the ability to provide targeted marketing campaigns to promote specific transit services. For instance, popular social media platforms allow a transit agency to provide ads only in specific geographic neighborhoods, or to persons of particularly

demographics that may be more likely to make use of a new service. In light of the variety of Roseville services, the ability to target limited advertising dollars to high-potential new riders is a key benefit.

The commuter service could benefit from a joint marketing program between PCE and the Roseville commuter service. Data presented in this document reflects that many residents of all portions of western Placer County choose between the two commuter transit programs. The fact that an individual passenger could use the “other” service when circumstances require (such as a work assignment running late) is a potential strength of the two services that is not currently capitalized. Joint marketing of the two commuter bus programs should include marketing of a website and phone number where joint information of the two programs can be obtained. Note that this would not include joint branding.

Planning for Transit Service in Developing Areas

The West Roseville and Sierra Vista areas will merit focused a detailed transit master planning processes during the course of this SRTP plan period. While general land uses and policies have been defined for these areas (including the need for transit services and the provision of funding strategies for transit), specific routes, stops and schedules will depend on more detailed planning to be developed over the next several years. Once this detail is available, transit master planning for these areas should be conducted. An additional route into the area along the Blue Oaks Boulevard corridor (as discussed in Chapter 8) will ultimately be warranted.

IMPLEMENTATION PLAN

The following is a “to do” list that can be initiated immediately to start implementation of this plan.

Near Term

- Investigate TNC service options, and develop policies with regards to provision of such services
- Extend the Saturday span of service Until 6 PM
- Reduce early morning weekday service
- Shift Route D and Route L 3 to 5 minutes earlier
- Realign Route A on Orlando Avenue
- Improve PM commuter service to Mahany Park

- Replace the Maidu Park commuter service stop with service to the Louis/Orlando Transit Center
- Eliminate reverse commute service
- Modify commuter schedules to better reflect realistic travel times
- Contact employers in Richards Boulevard area (and potentially conduct employee surveys) to identify the potential for commuter service
- Conduct passenger surveys regarding mid-day commuter service
- Purchase necessary replacement vehicles
- Begin grant and procurement process for three additional commuter buses
- Participate in a regional Battery Electric Bus Readiness Study
- Continue ongoing bus stop improvement program
- Participate in discussions regarding a regional day pass program and Sierra College student pass program

Mid-Term

- Provide TNC Subsidy for Trips Between the Roseville Train Station and nearby Transit Hubs
- Expand Commuter Service
- If vehicle availability allows, operate PM Routes 3 and 10 with different buses
- Purchase seven replacement commuter buses
- Initiate mid-day Commuter Service
- Continue ongoing bus stop improvement program

Long-Term

- Procure five new DAR vehicles in 2025
- Review delays on Capital City Freeway and review the Commuter Service route

- Continue ongoing bus stop improvement program
- Prepare transit master plan for the West Roseville area
- Purchase four replacement fixed route vehicles