

**Western Placer County
Comprehensive Operational Analysis
Technical Memorandum #4
Service Options**



Prepared for

**Placer County Transportation Planning Agency
Technical Advisory Committee**

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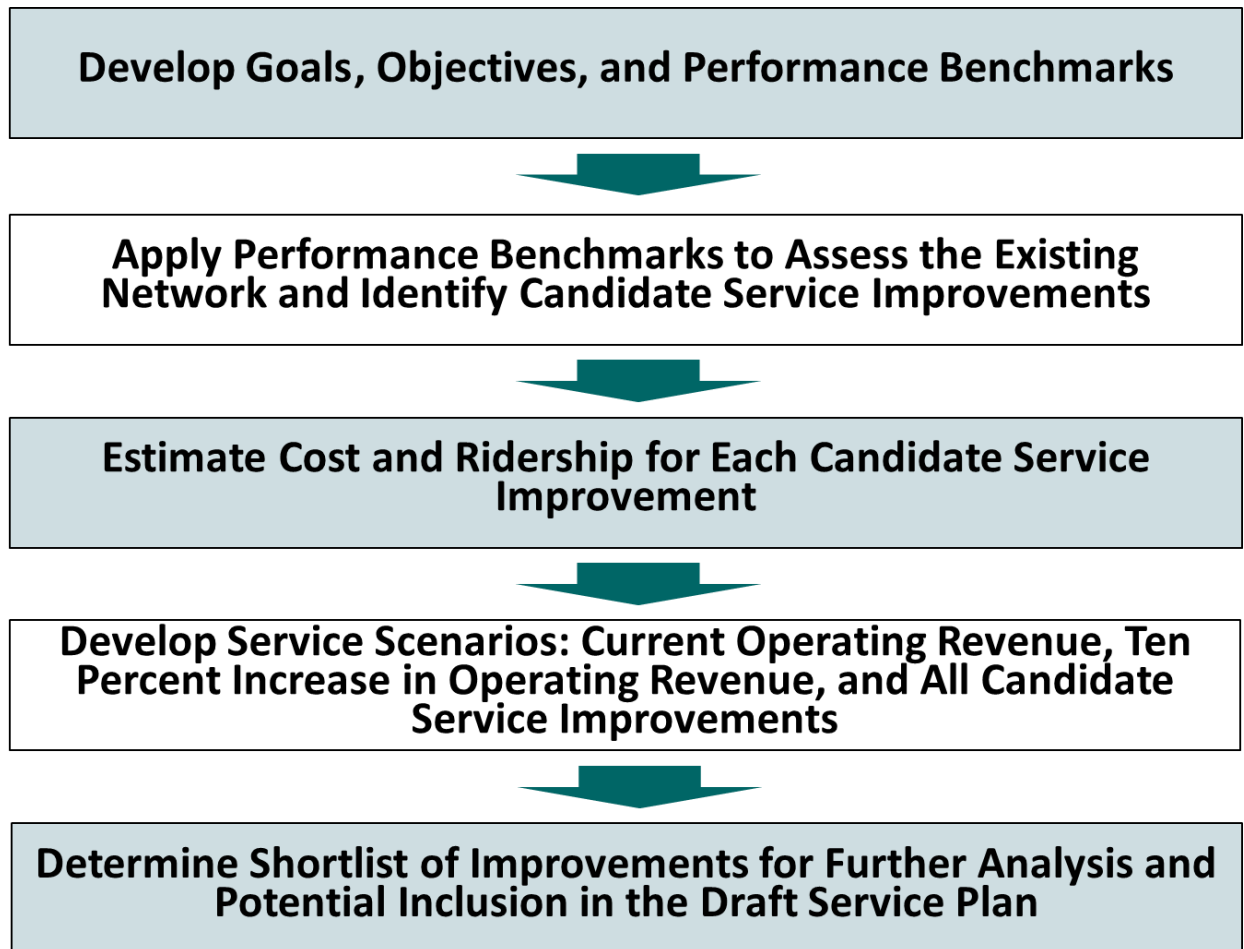
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1. INTRODUCTION

One of the key steps in the preparation of Placer County Transportation Planning Agency's (PCTPA) Comprehensive Operational Analysis (COA) is the development and evaluation of a range of candidate service improvements. These improvements were developed to meet the goals, objectives, and performance benchmarks that will be discussed in Chapter 2. As shown in Chapter 6, the improvements are packaged into three scenarios assuming different levels of operational funding: Current Operating Revenue, Ten Percent Increase in Operating Revenue, and All Service Improvements (no revenue constraint). The scenarios illustrate the types of service investments that are possible with each of the three levels of operational funding and the ridership change from those investments. Figure 1 shows the process used to develop the scenarios. Steps in the process are described in the chapters below:

- Chapter 2 presents the goals, objectives, and performance benchmarks used to assess the current network and identify candidate service improvements.
- Chapter 3 details the analysis of the existing system that was conducted to determine which services were either under or over performing compared to the average for each bucket of services.
- Chapter 4 summarizes the process of identifying the range of candidate service improvements that would increase ridership and productivity.
- Chapter 5 presents service options for each route and their estimated operating costs, ridership, and key performance measures and whether the option should be considered for further analysis as part of the draft service plan.
- Chapter 6 shows how the candidate service improvements were packaged into the three illustrative service scenarios for Technical Advisory Committee (TAC) member discussion.

Figure 1. Scenario Development Process



2. GOALS, OBJECTIVES, AND PERFORMANCE BENCHMARKS

This chapter presents the COA’s goals, objectives, and performance benchmarks based on the performance of the existing network.

- Goals are overarching outcomes for the entire transit system that stakeholders and the public desire to achieve.
- Objectives are more specific actions that need to be taken by policymakers and transit operators in pursuit of the goals.
- Performance benchmarks measure how well each objective is being met and provide a common method to evaluate individual existing routes and on-demand services.

METHODOLOGY

The project team began by reviewing the goals, objectives, and performance standards from Placer County Transit’s (PCT) 2018-2025 Short-Range Transit Plan (SRTP) and Auburn Transit’s 2018-2025 SRTP. Since those plans were adopted, the pandemic has significantly reduced transit ridership levels nationwide (PCT systemwide ridership dropped over 40% between Fiscal Year (FY) 2018-2019 and 2022-2023 from 385,832 to 220,756 annual boardings). The ridership decline has been most pronounced on rush hour commute services. Ridership on Route 60 - Placer Commuter Express to downtown Sacramento dropped 86% between FY 2018-2019 and 2022-2023 (from 79,095 annual boardings to 11,037) and vanpools also had an 86% ridership drop (from 23,930 annual boardings to 2,064). It is unlikely that ridership for rush hour work trips will fully recover to pre-pandemic levels due to the permanence of the hybrid work environment. However, some commuter service demand has occurred for the middle of the week due to return to work policies enacted in recent months.

Performance benchmarks are a point of reference for assessing each route or on-demand service. They were developed by grouping existing services into three categories to ensure that the evaluation accounts for the service’s context in the network (e.g., type of areas served and mode of service). The benchmarks are based on the performance of existing services in FY 2022-2023 to account for the pandemic’s lasting impacts on ridership demand and the role of different transit modes (e.g., fixed route vs. on-demand) in serving western Placer County’s diverse needs. Services in each category include:

- Urban/Suburban Fixed Routes: Route 10 - Auburn/Light Rail, Route 20 - Lincoln/Sierra College, Route 30 - Highway 49, Route 60 - Placer Commuter Express, Route 70 - Lincoln Circulator, and Route 80 - Lincoln Circulator Overflow
- Urban/Suburban On-Demand Areas: PCT Dial-A-Ride services (Auburn/Highway 49, Granite Bay, Lincoln, and Rocklin-Loomis) and Auburn Transit OnDemand
- Rural Fixed Routes: Route 40 - Alta/Colfax and Route 50 - Taylor Road Shuttle

The goals, objectives, and performance benchmarks reflect the impacts of the pandemic on ridership and the performance of services since the 2018 SRTPs were adopted. Table 1 lists the COA’s goals, objectives, and performance benchmarks. Chapter 3 presents the FY 2022-2023 performance of each fixed route and on-demand service relative to these goals, objectives, and benchmarks.

Table 1. Existing Service Goals, Objectives, and Performance Benchmarks

Goals	Objectives	Performance Benchmarks
Increase Transit Usage	Increase Ridership and Ridership Effectiveness	Annual Boardings
		Boardings per Vehicle Service Hour
		Boardings per Vehicle Service Mile
Plan and Provide an Efficient, Effective, and Equitable Network	Manage Operating Costs	Operating Cost per Boarding
		Operating Cost per Vehicle Service Hour
	Improve Service Coverage	Population Within 1/2 Mile of Fixed Route Bus Stops
		Population Within On-Demand Service Areas
	Improve Service to Equity Populations	Population in Medium to Very High Transit Need Areas Within 1/2 Mile of Fixed Route Bus Stops
		Population in Medium to Very High Transit Need Areas Within On-Demand Service Areas
Deliver Reliable and Integrated Transportation Options	Improve Usability of the Network	Percentage of On-Time Fixed Route Bus Trips
		Average Wait Time for On-Demand Services
	Increase Network Connectivity and Integration	Directness of Travel (Ratio of In-Vehicle Transit Travel Times/Distances Compared to Driving Times/Distances)
		Miles of Overlap Between Roseville Transit and PCT Fixed Routes

PEER AGENCY COMPARISON

While the performance benchmarks are based on existing western Placer County transit services, the performance of the PCT fixed route network was also compared to other transit agencies. As shown in Table 2, PCT’s fixed routes perform below the average of other agencies in terms of cost and ridership. Three agencies, Monterey Salinas Transit, Santa Cruz Metro, and El Dorado Transit have higher cost per vehicle service hour. Only The Bus and El Dorado Transit perform worse than PCT on the three ridership performance metrics. Tulare County Area Transit performs worse for boardings per hour and mile.

Table 2. Peer Agency Review

Transit Agency	Location	Cost per Vehicle Hour	Cost per Boarding	Boardings per Vehicle Hour	Boardings per Vehicle Mile
Butte Regional Transit	Butte County, CA	\$119.31	\$17.05	7.00	0.49
Monterey Salinas Transit	Monterey, CA	\$201.19	\$21.45	9.38	0.60
Santa Cruz Metro	Santa Cruz, CA	\$248.29	\$15.52	16.00	1.20
Livermore Amador Valley Transit Authority	Livermore, CA	\$162.14	\$17.36	9.34	0.69
Yolobus	Yolo County, CA	\$148.95	\$16.35	9.11	0.48
The Bus	Merced, CA	\$114.65	\$30.60	3.75	0.24
Gold Coast Transit	Ventura County, CA	\$146.32	\$11.95	12.24	1.09
Northern Arizona Intergovernmental Public Transport Authority	Flagstaff, AZ	\$124.10	\$7.03	17.65	1.42
MET Transit	Billings, MT	\$106.51	\$14.66	7.27	0.50
Suntran	St. George, UT	\$69.02	\$6.78	10.18	0.72
Tulare County Area Transit	Tulare County, CA	\$119.71	\$24.70	4.85	0.17
Solano County Transit	Solano County, CA	\$190.68	\$25.05	7.49	0.41
San Luis Obispo Regional Transit Authority	San Luis Obispo, CA	\$190.82	\$15.74	12.12	0.52
El Dorado Transit	El Dorado County, CA	\$204.72	\$43.11	4.37	0.21
Average		\$153.32	\$19.10	9.30	0.63
Placer County Transit (Fixed Routes Only)	Placer County, CA	\$192.93	\$34.43	5.6	0.28

Source: National Transit Database, 2022.

3. EXISTING SYSTEM PERFORMANCE

The performance benchmarks were used to evaluate individual routes and on-demand services in the existing network. They determined how each fixed route and on-demand service performs in comparison to the FY 2022-23 average of performance for each benchmark. Performance was measured against the existing network averages rather than those of peer agencies to account for the diverse context of western Placer County's large service area, the wide range of land uses and rapid growth, and the varying topography within Placer County.

MEASURING EXISTING PERFORMANCE

Performance was measured for the ten benchmarks for PCT's fixed routes and the seven benchmarks for PCT's and Auburn Transit's on-demand service areas. For example, the average boardings per vehicle service hour for urban/suburban fixed routes is 6.5. Three fixed routes (Route 10, Route 20, and Route 80) perform better than this average (7.3, 7.1 and 34.6, respectively) and three (Route 30, Route 60, and Route 70) perform worse (5.0, 3.5, and 4.7, respectively).

Table 3 and Table 4 show services that perform substantially worse than average) in red shading. Those with orange shading perform slightly worse than average for each performance benchmark. Candidate service improvements for these services focus on improving performance and/or reducing low-performing services. Conversely, services that perform slightly better than average are highlighted in yellow while services that perform better than average are highlighted in green. These services, especially the green ones, warrant consideration for more service in the areas that they serve because current performance indicates ridership demand that could be tapped if the service was improved.

Thresholds for the colors depend on the benchmark. For example, higher boardings per vehicle service hour indicates better service performance, but higher operating cost per boarding indicates worse performance.

The following thresholds were used for benchmarks involving annual boardings, boardings per vehicle service hour and vehicle service mile, population near bus stops and on-demand service areas, and percentage of on-time trips. Service in the red category does not meet the minimum performance benchmark and needs to be evaluated to improve performance. Service in the green category warrants attention for additional service.

- 0-50% of the average (Red)
- 50-100% of the average (Orange)
- 100%-150% of the average (Yellow)
- above 150% of the average (Green)

Benchmarks involving operating cost, wait time for on-demand services, directness of travel, and miles of overlap use inverse color-coding thresholds:

- Above 150% of the average (Red)
- 100%-150% of the average (Orange)
- 50-100% of the average (Yellow)
- 0-50% of the average (Green)

Table 3. Service Performance Comparison (Fixed Routes)

Objectives:	Increase Ridership and Ridership Effectiveness			Manage Operating Costs		Improve Service Coverage	Improve Service to Equity Populations	Improve Usability of the Network	Increase Network Connectivity and Integration	
	Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Operating Cost per Boarding	Operating Cost per Vehicle Service Hour	Population Within 1/2 Mile of Fixed Route Bus Stops	Population in Medium to Very High Transit Need Areas Within 1/2 Mile of Fixed Route Bus Stops	Percentage of On-Time Fixed Route Bus Trips	Directness of Travel (Ratio of In-Vehicle Transit Travel Times Compared to Driving Times)	Miles of Overlap Between Roseville Transit and Placer County Transit Fixed Routes
Urban/Suburban Fixed Routes										
Route 10	61,577	7.26	0.25	\$30.91	\$224.43	9,847	2,262	83%	2.03	11.31
Route 20	57,247	7.15	0.42	\$26.96	\$192.67	39,031	19,789	83%	2.86	2.90
Route 30	30,324	4.98	0.32	\$37.76	\$188.19	12,953	4,346	88%	2.41	0.00
Route 60	11,037	3.54	0.22	\$53.74	\$190.44	8,000	3,635	No Data	1.90	11.00
Route 70	16,007	4.72	0.33	\$39.33	\$185.59	20,111	9,182	51%	4.00	0.00
Route 80	14,646	34.57	2.60	\$5.28	\$182.38	20,111	9,182	51%	4.00	0.00
Average	31,806	6.47	0.33	\$30.87	\$199.68	18,342	8,066	71%	2.87	4.20
Rural Fixed Routes										
Route 40	3,014	1.83	0.08	\$114.16	\$208.41	2,858	1,541	43%	1.76	0.00
Route 50	3,798	0.92	0.05	\$150.08	\$138.42	13,776	1,541	84%	2.35	1.60
Average	3,406	1.18	0.06	\$134.19	\$158.45	8,317	1,541	64%	2.06	0.80
All Routes Average	24,706	5.60	0.28	\$34.43	\$192.93	15,836	6,435	69%	2.67	3.35

Better than Average ■
 Slightly Better than Average ■
 Slightly Worse than Average ■
 Worse than Average ■

Table 4. Service Performance Comparison (On-Demand Services)

Objectives:	Increase Ridership and Ridership Effectiveness			Manage Operating Costs		Improve Service Coverage	Improve Service to Equity Populations	Improve Usability of the Network
	Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Operating Cost per Boarding	Operating Cost per Vehicle Service Hour	Population Within On-Demand Service Areas	Population in Medium to Very High Transit Need Areas Within On-Demand Service Areas	Average Wait Time for On-Demand Services
On-Demand Services								
Highway 49 Dial-A-Ride	8,839	1.52	0.24	\$91.26	\$138.42	15,149	4,346	11.97
Rocklin/Loomis Dial-A-Ride	6,812	1.48	0.18	\$93.36	\$138.42	76,593	16,821	25.52
Granite Bay Dial-A-Ride	146	0.86	0.26	\$160.59	\$138.41	21,607	0	22.92
Lincoln Dial-A-Ride	5,245	1.46	0.21	\$95.07	\$138.42	39,779	9,182	21.32
Auburn OnDemand	27,355	2.52	0.23	\$28.02	\$70.71	13,776	1,541	25.00
Average	9,679	1.93	0.22	\$56.43	\$109.10	33,381	6,378	21.35

Better than Average
 Slightly Better than Average
 Slightly Worse than Average
 Worse than Average

The following observations regarding the benchmarks were used to identify candidate service improvements that will distribute resources to boost network efficiency, build ridership, and increase overall usefulness of the network.

- Route 60 performs well below the average for urban/suburban fixed routes in terms of operating cost per boarding and is slightly below average for boardings per vehicle service hour. Reducing operating costs by shortening the route, reducing the number of trips, or integrating the route with Roseville Transit’s commuter services should be considered to address the low performance of the route in the post-pandemic travel market.
- Granite Bay Dial-A-Ride performs below other on-demand services in terms of boardings per vehicle service hour. It also has a significantly higher operating cost per boarding than other PCT Dial-A-Ride services. Options to reduce costs and increase ridership include modifying the hours of service and/or coordinating with Roseville Transit’s Arrow service.
- Route 10 performs above average for boardings per vehicle service hour. Route 20 is also above average for all three ridership and cost performance categories: boardings per vehicle service hour, boardings per vehicle service mile, and cost per boarding. Route 80’s ridership numbers are an outlier due to the large number of student boardings.
- Auburn Transit’s OnDemand service performs higher in the ridership and cost categories than PCT Dial-A-Ride services and is more efficient than the former Auburn Loop route.
- Route 70 does not meet the benchmark for directness of travel. Route 70 should be considered for more flexible on-demand service to serve intra-Lincoln trips and to connect with services that connect to other parts of the county. Route 20 also performs below average and should be evaluated for ways to streamline or otherwise restructure the route to make it more competitive with automobile travel times.
- Route 10 and Route 60 do not meet the benchmark for overlap with Roseville Transit routes and should be considered for coordination of services between the two agencies.

PERFORMANCE STANDARDS FOR CURRENT SERVICE

While the benchmarks provide a point of reference for comparing individual services with each other, performance standards specify minimum levels of attainment for key cost and ridership measures. Three minimum performance standards for current service were developed based on the service benchmarks: boardings per vehicle service hour, boardings per vehicle service mile, and marginal operating cost per boarding. These minimum standards are based on the intervals for each service category in the tables above. Current service should achieve at least 50% of the average for boardings per vehicle service hour and mile. Marginal operating cost per boarding should be no more than 150% of the average.

Minimum recommended performance standards are identified in Table 5. Current services that do not meet these standards should be modified to improve performance and/or reduce operating costs. These standards are the same threshold as the “Worse than Average” categories in Table 3 and Table 4. Additional performance standards for fare revenue, operating cost, and on-time performance may be developed as part of the SRTP.

Table 5. Minimum Performance Standards for Current Services

Service Category	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
Urban/Suburban Fixed Routes	3.3	0.17	\$46
Rural Fixed Routes	0.6	0.03	\$134
On-Demand Services	1.0	0.11	\$84

4. CANDIDATE SERVICE IMPROVEMENTS

This chapter presents the process for identifying candidate service improvements. The candidate service improvements are separated into the following four categories:

- Coverage: increase the geographic area that the network covers
- Frequency: reduce the amount of time (headways) between buses arriving at a stop
- Productivity: reduce and/or consolidate services to lower costs or improve ridership
- Span: increase the number of hours or days of the week that a service operates

PROCESS FOR IDENTIFYING IMPROVEMENTS

The project team used the following information to develop the list of candidate improvements:

- Improvements recommended in PCTPA's 2018-2025 SRTP that have not been implemented were evaluated based on their relevance to post-pandemic travel patterns and included if they still have the potential to achieve the COA's goals.
- Findings from the three COA technical memos regarding existing conditions, online and onboard surveys, and transit needs were used to identify underperforming routes (both in ridership and costs) along with areas that may warrant new or additional service.
- Results from the outreach events conducted in Fall 2023 were used to determine improvements that the public and stakeholders prioritized most, such as increased frequency across the network.
- Geographic gaps in the network were reviewed to identify currently developed and developing areas that are not currently served by either fixed routes or on-demand services. Addressing service to areas adjacent to the Roseville city boundary will involve coordinating with Roseville Transit.
- Potential effects on existing service and opportunities for route changes if the RapidLink pilot project becomes a permanent service (see the Appendix for information on the pilot service).

5. SERVICE IMPROVEMENT OPTIONS

This chapter presents an analysis of a range of options for improvements to existing services and the addition of new services. Each option includes information on estimated marginal operating cost and ridership. Ridership and cost information is based on the Fall 2023 service levels and schedules. Some weekday early morning/late evening trips were added to Route 10, Route 20, Route 30, and Route 70 in January 2024, but ridership data for this analysis was only available for Fall 2023.

The estimated performance of each service option is compared to the minimum cost and ridership performance standards in Table 6. These standards are the average performance of existing service in Tables 2-5 above. Service improvements should perform either in the “Better than Average” or “Slightly Better than Average” categories. Service improvements that do not meet these minimum standards are not considered for further analysis and will not be included in the draft service plan.

Table 6. Minimum Performance Standards for Service Increases

Service Category	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
Urban/Suburban Fixed Routes	6.5	0.33	\$30.87
Rural Fixed Routes	1.2	0.06	\$134.19
On-Demand Services	1.9	0.22	\$56.43

This chapter also includes service productivity improvements based on the minimum performance standards for current service in Table 5. These changes could free up resources that can be used to make service improvements that will yield higher ridership with no or minimal increase in operating cost.

While each improvement is analyzed individually, it is important to note the interconnected nature of the transit network in western Placer County, with many passengers using more than one service to complete their trips. Changing one element of the network can impact other services. The individual service change options will be synthesized into a revenue-constrained service plan during the next phase of the COA.

FIXED ROUTES

Route 10 – Auburn to Light Rail (Watt/I-80)

Current service on Route 10 includes five stops in each direction along its approximately 29-mile-long route: Auburn Station, Sierra College, Roseville Galleria, Louis and Orlando Transit Center, and the Watt/I-80 Light Rail Station. Departures from Auburn (effective January 2024) occur every hour between 5:00 AM and 7:00 PM on weekdays and between 8:00 AM and 8:00 PM on Saturdays. The route provides transfer connections with PCT fixed routes and Dial-A-Ride services, Auburn OnDemand, Roseville Transit fixed routes, Sacramento Regional Transit (SacRT) bus routes and Blue Line, and Amtrak Capital Corridor service and San Joaquins Thruway buses.

Two buses provide hourly service, with end-to-end scheduled running times of 60 minutes in each direction. The Galleria timepoint is scheduled at 30 minutes from either end of the route. Table 7 shows running times between stops for most weekday trips. No layover at either end of the route is included but run times on the last timepoint segment are increased based on direction of travel.

Table 7. Route 10 Weekday Running Times (Minutes)

Direction	Auburn Station- Sierra College	Sierra College- Galleria	Galleria- Louis Orlando	Louis Orlando- Watt/ I-80	Total
Westbound	17	13	10	20	60
Eastbound	20	10	20	10	60

Ridership

Annual ridership in FY 2022-2023 was 61,577 boardings, the highest in the PCT network. The route was in service for 8,480 hours over that same time, resulting in an average of 7.3 boardings per vehicle service hour, also the highest in the network. Average weekday ridership in FY 2022-2023 was 216 boardings and the route was in service an average of 20.7 hours on weekdays. This resulted in a weekday average of 10.5 boardings per vehicle service hour. Mondays were the highest ridership day of the week over that time.

Table 8 shows the average weekday and Saturday boardings for Route 10 by hour of the day. During weekdays, the highest number of boardings occur in the morning peak and tapers off to a consistent amount through the rest of the day. During Saturdays, ridership is highest in the early and late morning with minimal boardings in the late afternoon. Note that these numbers do not account for the restoration of regular service hours for PCT fixed routes as of January 2024.

Table 8. Route 10 Average Boardings by Hour

Hour	Weekday Boardings	Saturday Boardings
8:00 AM	11.9	10.6
9:00 AM	36.7	23.3
10:00 AM	32.7	8.5
11:00 AM	19.8	19.1
12:00 PM	18.8	21.2
1:00 PM	17.8	0.0
2:00 PM	16.8	12.7
3:00 PM	18.8	12.7
4:00 PM	17.8	0.0
5:00 PM	18.8	0.0
6:00 PM	5.9	0.0
Total	216	108

Table 9 shows estimated average weekday boardings by stop on Route 10. The Galleria has the highest ridership on weekdays and Watt/I-80 has the highest on Saturdays. There is also a significant amount of passenger turnover at the Galleria with about two-thirds of passengers exiting the bus at that stop either for transfer connections to other routes or to access nearby destinations.

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Table 9. Route 10 Average Boardings by Stop

Stop	Weekday Boardings	Saturday Boardings
Auburn Station	49	15
Sierra College	41	8
Roseville Galleria	68	19
Louis Ln & Orlando Ave	14	8
Light Rail - Watt I80	44	58
Total	216	108

The onboard survey (discussed in more detail below) also provided information on passenger travel patterns along the route. Table 10 shows the percentage of weekday passengers on Route 10 who made trips between each stop pair. The highest percentage of trips were between the Galleria and Watt/I-80. Trips from stops east of the Galleria (Auburn Station and Sierra College) to stops west of the Galleria (Louis Ln & Orlando Ave, Light Rail/Watt I80) comprise 24% of all trips on Route 10.

Table 10. Route 10 Percentage of Weekday Passengers Between Stops

Trips Between:	Auburn Station	Sierra College	Roseville Galleria	Louis Ln & Orlando Ave	Light Rail - Watt I80
Auburn Station		10%	15%	5%	7%
Sierra College			17%	6%	6%
Roseville Galleria				5%	26%
Louis Ln & Orlando Ave					2%

Onboard Survey Results

A total of 111 Route 10 passengers responded to the Fall 2023 Origin/Destination survey. Respondents did not answer all questions, so total respondents for each topic below does not equal 111 in some cases. The following is a summary of the results:

- Thirty-eight percent of respondents indicated that they transfer to complete their trip compared to a fixed route average of 57%.
- The main trip purposes were for university and work (32% and 25% respectively), followed by personal business/other (16%), recreational/social (12%), and shopping (9%).
- Most riders (70%) did not have a car available for their trip, indicating that the route is used by riders for basic mobility needs.
- More frequent service was rated as the top service priority by more riders than any other category by the 48 people who answered those questions. On a scale of one (top priority) to six (lowest priority), more frequent service had the best average rating (2.3) followed by later evening service (2.6), Sunday service (3.3), and more Saturday service (4.0). Improved bus stops and extended service area scored lowest (4.4 and 4.5 respectively). These priorities indicate that more frequent service is desired by customers.
- Service frequency was rated lowest when riders were asked to rate performance on the route for a range of service attributes. On a scale of one (poor) to five (excellent), riders rated frequency at 3.8, while areas served and condition of bus stops both scored 4.1. The highest scores were for

driver courtesy (4.7), fares (4.6), and safety/security and overall service (4.5). These scores indicate that riders would benefit most from increased frequency on the route and upgrades to the bus stop infrastructure.

- Riders were also given the opportunity to offer specific, open-ended suggestions about the transit improvements they would most like to see. Numbers in parentheses indicate the number of responses:
 - Longer service spans (22)
 - More frequent service (17)
 - Sunday service (11)

Other infrequently mentioned open-ended comments included requests for better reliability, cleaner buses, and more customer information at stops.

Candidate Service Improvements

Options for changes to Route 10 are presented below. They include upgrading frequency and span of service on the existing route as well as route changes that would provide a stop in the Rocklin area. Considerations for these improvements is how they would connect with services at the Galleria proposed by Roseville Transit as part of their COA and how they could complement RapidLink if RapidLink becomes a permanent fixture in the network.

Improve Weekday Headways from 60 to 30 Minutes

As noted above, the most common request from existing riders is for more frequent service. Adding two more buses to the route for a total of four would allow the existing weekday 60-minute headway to be improved to 30 minutes. This would enhance the attractiveness of the route, especially for passengers who transfer to another fixed route and/or on-demand service or use the route for shorter, occasional trips. Given that ridership is strong throughout the midday and peaks, a reasonable option is to add ten round trips and offer 30-minute service on weekdays between approximately 8:00 AM and 6:00 PM. As shown in Table 11, this change would increase ridership, with an estimated ridership effectiveness similar to the FY 2022-2023 existing urban/suburban fixed route average of 6.5 boardings per vehicle service hour.

Table 11. Route 10 Operating Requirements and Performance – 30-Minute Weekday Headways Between 8:00 AM and 6:00 PM

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
20	5,060	149,270	\$765,704

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
32,789	6.5	0.22	\$23.35

Note: Shaded bold cells meet or exceed the respective performance standard.

While this improvement has impressive ridership benefits, it is also relatively expensive. Less costly options include improving weekday headways during part of the day. This would still require two additional buses for the route for those times but would have a lower overall increase in operating costs. Table 12 shows the estimated impacts of these possibilities. Increasing frequency during the morning has the highest ridership effectiveness because of the higher ridership during the 9:00 AM and 10:00 AM hours.

Table 12. Route 10 Operating Requirements and Performance – 30-Minute Weekday Headways 9:00 AM to 12:00 PM and 9:00 AM to 5:00 PM

Operating Requirements				
Improvement	Additional Daily One-Way Trips	Additional Annual Vehicle Hours	Additional Annual Vehicle Miles	Increase in Annual Marginal Operating Cost
30 Minute Weekday Headways Between 9:00 AM and 12:00 PM	6	1,518	44,781	\$229,711
30 Minute Weekday Headways 9:00 AM - 5:00 PM	16	4,048	119,416	\$612,563

Performance				
Improvement	Increase in Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
30 Minute Weekday Headways 9:00 AM - 12:00 PM	14,673	9.7	0.33	\$15.66
30 Minute Weekday Headways 9:00 AM - 5:00 PM	27,224	6.7	0.23	\$22.50

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze weekday frequency improvements on Route 10 as part of the draft service plan due to high ridership productivity.

Improve Saturday Headways from 60 to 30 Minutes

Another potential improvement is to increase Saturday service from 60-minute to 30-minute headways throughout the day. Given that Saturday ridership is about half that of weekdays, it is not expected that this improvement would result in high ridership effectiveness. Table 13 shows the results of improving Saturday headways.

Table 13. Route 10 Operating Requirements and Performance – 30-Minute Saturday Headways

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
20	1,040	30,680	\$157,378

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
3,370	3.2	0.11	\$46.71

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Do not include Saturday frequency improvements on Route 10 in the draft service plan due to low ridership productivity.

Add Weekday Evening Service from 7:00 to 9:00 PM with 60-Minute Headways

This potential improvement would add two trips in the evening from Auburn Station and Watt/I-80. This would require additional staff hours for dispatching to match the added hours. PCT added departures earlier in the evening starting in January 2024 and ridership on those trips should be monitored to see how well the additional trips are used. The observed ridership can then be compared to the estimates in Table 14, which are based on service performance before January 2024.

Table 14. Route 10 Operating Requirements and Performance – Weekday Evening Service

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
4	1,012	29,854	\$168,321

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
4,638	4.6	0.16	\$36.30

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze weekday evening service on Route 10 as part of the draft service plan after assessing how much ridership increased due to service that was added in January 2024.

Add Sunday Service with 60-Minute Headways

Sunday service was identified as an important need by onboard survey respondents. This would require additional staff hours for dispatching since PCT does not operate on Sundays and could make scheduling driver shifts less efficient due to the added service day.

Table 15 shows the proposed trips and estimated costs for Sunday service.

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Table 15. Route 10 Operating Requirements and Performance – Add Sunday Service

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
16	960	28,320	\$159,672

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
4,342	4.5	0.15	\$36.78

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Do not include Sunday service on Route 10 in the draft service plan due to low ridership productivity.

Revise Routing in Rocklin

Route 10 has five stops in each direction. While revising the route to provide a stop in each direction in Rocklin would improve access to the route, it would also increase the existing running time. Further study of this option is needed to assess impacts on running time and if the additional stop can be accommodated within the existing 120-minute round-trip run time between Auburn Station and Watt/I-80 or a 60-minute round-trip run time between Auburn Station and the Galleria. An option to avoid using I-80 between Sierra College and the Galleria is to instead use Rocklin Road, Pacific Street, Taylor Road, and Roseville Parkway. This routing would serve Rocklin Station, but also require additional run time in each direction. Table 16 shows the driving times (based on estimates from Google Maps) between stops for the current route and this route option. More detailed run time analysis and testing is needed to determine if it is feasible to accommodate this route option and maintain a 60-minute headway without adding a bus for Route 10.

Table 16. Route 10 Current Route Drive Time vs. Bus Run Time

From	To	Drive Time (PM Peak)	Actual Run Time	Estimated Run Time via Rocklin Station
Westbound				
Auburn Station	Sierra College	14-18	17	17
Sierra College	Galleria	9-10	13	15
Eastbound				
Galleria	Sierra College	9-10	10	17
Sierra College	Auburn Station	14-18	20	20

Note: Times in minutes; drive times from Google Maps.

Conclusion: Continue with further analysis of run times and ridership impacts of changing Route 10 in Rocklin as part of the draft service plan.

Route 20 – Lincoln/Sierra College

Current service on Route 20 includes 16 stops in the eastbound (Lincoln to Sierra College) direction and 14 stops in the westbound (Sierra College to Lincoln) direction. Departures from Lincoln are hourly

between 6:00 AM and 7:00 PM weekdays and 8:00 AM and 5:00 PM on Saturday. The route provides connections with PCT fixed routes and Dial-A-Ride services, Roseville Transit fixed routes, and Amtrak Capital Corridor service and San Joaquins Thruway buses.

Two buses provide hourly service, with end-to-end scheduled running times of 60 minutes southbound and 58 minutes northbound. The Galleria timepoint is scheduled at 30 minutes from Twelve Bridges Library at either end of the route. Five trips originate at 3rd Street and F Street in Lincoln (6:00 AM, 8:00 AM, 5:00 PM, 6:00 PM, and 7:00 PM). Table 17 shows running times between the Galleria and each end of the route scheduled for most of the weekday trips with a two-minute layover at Sierra College.

Table 17. Route 20 Weekday Running Times

Direction	Twelve Bridges Library to Galleria	Galleria to Sierra College
Southbound	30	30
Northbound	30	28
Total	60	58

Ridership

Annual ridership in FY 2022-2023 was 57,247 boardings. The route was in service for 8,011 hours over that same time, resulting in an average of 7.1 boardings per vehicle service hour. Average weekday ridership in FY 2022-2023 was 201 boardings and the route was in service an average of 20 hours on weekdays. This resulted in a weekday average of 10.1 boardings per vehicle service hour. Tuesdays were the highest ridership day of the week over that time.

Table 18 shows the average weekday and Saturday boardings for Route 20 by hour of the day. During weekdays, the highest number of boardings occur in the midday and afternoon periods. During Saturdays, ridership is highest in the late morning and early afternoon periods. Note that these numbers do not account for the restoration of regular service hours for PCT fixed routes as of January 2024.

Table 18. Route 20 Average Boardings by Hour

Hour	Weekday Boardings	Saturday Boardings
8:00 AM	24.0	0
9:00 AM	6.3	4.7
10:00 AM	6.3	18.7
11:00 AM	17.7	20.2
12:00 PM	35.4	12.4
1:00 PM	19.0	7.8
2:00 PM	27.8	28.0
3:00 PM	24.0	10.0
4:00 PM	15.2	0
5:00 PM	25.3	0
Total	201	98

Table 19 shows estimated average weekday boardings by stop on Route 20. The highest ridership stops include Sierra College (weekdays only), Roseville Galleria, Thunder Valley Casino, and Twelve Bridges

Library. Similar to Route 10, there is a high amount of turnover at the Galleria with just over two-thirds of passengers exiting the bus at that stop.

Table 19. Route 20 Average Boardings by Stop

Stop	Weekday Boardings	Saturday Boardings
Sierra College	24.7	0.0
Granite Dr (Safeway)	2.5	1.6
Sierra Meadows Dr & Manzanita	0.0	0.0
Sierra Meadows Dr & Chaparral	0.0	3.1
Sierra Meadows Dr & Pacific St	0.0	0.0
Pacific St & Midas Ave	3.7	0.0
Pacific St & Pine St	0.0	0.0
Pacific St & Bush St	0.0	0.0
Pacific St & Farron St	1.2	0.0
Pacific St & Sunset Blvd (Les	0.0	0.0
Sunset Blvd & 3 rd St	0.0	1.6
S Whitney Blvd & Sunset Blvd	4.9	1.6
S Whitney Blvd & Springview Dr	0.0	0.0
S Whitney Blvd & Lincoln Ave	0.0	0.0
Roseville Galleria	58.0	32.7
Stanford Ranch Rd & Fairway Dr	1.2	0.0
Stanford Ranch Rd & Highland	0.0	0.0
Sunset Blvd & Pebble Creek Dr	0.0	0.0
Sunset Blvd & Park Dr	7.4	1.6
Sunset Blvd & Blue Oaks Blvd	1.2	3.1
Sunset Blvd & W Oaks Blvd	2.5	0.0
Sunset Blvd & W Stanford Ranch	1.2	0.0
Sunset Blvd & Atherton Rd	11.1	0.0
Placer Corp. -flag stop	0.0	0.0
Thunder Valley Casino	34.5	18.7
Twelve Bridges Library	34.5	26.4
3 rd St & F St (Walmart)	3.7	0.0
S Loop Rd	2.5	0.0
Sunset Blvd & Lonetree Blvd	0.0	0.0
Sunset Blvd & Pebble Creek Dr	2.5	3.1
Stanford Ranch Rd & Plaza Dr	1.2	0.0
Sunset Blvd & Springview Dr	0.0	0.0
Pacific St & Sunset Blvd	0.0	1.6
Pacific St & Sierra Meadows Dr	0.0	0.0
Granite Dr & Sierra Meadows Dr	0.0	0.0
Granite Dr (Across from Church)	0.0	0.0
Target	1.2	1.6
Rocklin Crossings (Walmart)	1.2	1.6
Total	201	98

Onboard Survey Results

A total of 81 Route 20 riders responded to the Fall 2023 Origins/Destinations survey. Respondents did not answer all questions, so total respondents for each topic below does not equal 81 in some cases. The following is a summary of the results:

- The main trips purposes were for work (28%), recreational/social and university (both 20%), and personal business (13%).
- Most riders (73%) did not have a car available for their trip, indicating that the route is used by riders for basic mobility needs.
- More frequent service was rated as the top service priority by more riders than any other category by the 44 people who answered those questions. On a scale of one (top priority) to six (lowest priority), more frequent service had the best average rating (2.6), followed by Sunday service and later evening service (both 3.1), and more Saturday service (3.8). Improved bus stops and extended service area scored lowest (3.9 and 4.5 respectively).
- Service frequency was rated lowest when riders were asked to rate performance of the route for a range of service attributes. On a scale of one (poor) to five (excellent), riders rated frequency at 3.9, while areas served and condition of bus stops both scored 4.0. The highest scores were for driver courtesy (4.6), safety/security (4.5), and overall service (4.4). These scores indicate that riders would benefit most from increased frequency on the route and upgrades to the bus stop infrastructure.
- Riders were also given the opportunity to offer specific, open-ended suggestions about the transit improvements they would most like to see. Numbers in parentheses indicate the number of responses:
 - More frequent service (19)
 - Longer service spans (18)
 - Sunday service (7)
 - Other infrequently mentioned open-ended comments included requests for better reliability and cleaner buses

Candidate Service Improvements

Options for changes to Route 20 are presented below. They include upgrading the frequency and span of service on the existing route as well as extending the route to central Lincoln that could include converting Route 70 to a Dial-A-Ride zone. Additional routing changes are possible if RapidLink becomes a permanent fixture in the network.

Improve Weekday Headways from 60 to 30 Minutes Between 8:00 AM and 6:00 PM

Responses from the onboard survey indicate that more frequent service is most important to riders. Adding two additional buses for a total of four would allow the existing 60-minute headway to be improved to every 30 minutes. This would enhance the attractiveness of the route, especially for passengers who transfer to another fixed route and/or on-demand service or use the route for shorter, occasional trips. As shown in Table 20, this change would increase ridership, with an estimated ridership

effectiveness close to the FY 2022-2023 existing urban/suburban fixed route average of 6.5 boardings per vehicle service hour.

Table 20. Route 20 Operating Requirements and Performance – 30-Minute Weekday Headways Between 8:00 AM and 6:00 PM

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
20	5,060	86,020	\$597,419

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
30,512	6.0	0.35	\$19.58

Note: Shaded bold cells meet or exceed the respective performance standard.

While this improvement has ridership benefits, it is also relatively expensive. Less costly options include improving weekday headways during the afternoon when ridership is higher. This would still require two additional buses on the route for that time but would have a lower overall increase in operating costs. Table 21 shows the estimated impact of this possibility.

Table 21. Route 20 Operating Requirements and Performance – 30-Minute Weekday Headways Between 12:00 PM and 6:00 PM

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
12	3,036	51,612	\$358,451

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
22,260	7.3	0.43	\$16.10

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze weekday frequency improvements on Route 20 as part of the draft service plan due to high ridership productivity.

Extend Route to Central Lincoln (Walmart) and Replace Route 70 with Enhanced Lincoln Dial-A-Ride Service

Route 70 underperforms relative to the other existing PCT urban/suburban fixed routes in terms of ridership and cost. One potential improvement is to have all trips on Route 20 terminate at the 3rd Street and F Street stop at Walmart. This provides an opportunity to make changes to Route 70, including potentially replacing the route with a Dial-A-Ride zone and adding trips to the existing Route 80.

Table 22 shows the results of this potential extension of Route 20.

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Table 22. Route 20 Operating Requirements and Performance – Extend Route to Central Lincoln

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
20	3,050	25,315	\$289,504

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
15,742	6.2	0.75	\$15.25

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze Route 20 extension to central Lincoln as part of the draft service plan due to high ridership productivity.

Improve Saturday Headways from 60 to 30 Minutes

Another potential improvement is to increase Saturday service from 60-minute to 30-minute headways throughout the service day. Given that Saturday ridership is about half that of weekdays, this improvement is not expected to result in high ridership effectiveness. Table 23 shows the results of improving Saturday headways.

Table 23. Route 20 Operating Requirements and Performance – 30-Minute Saturday Headways

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
20	1,040	17,680	\$122,790

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
3,058	2.9	0.17	\$40.16

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Do not include Saturday frequency improvements on Route 20 in the draft service plan due to low ridership productivity.

Add Sunday Service with 60-Minute Headways

Providing Sunday service ranked second highest among onboard survey respondents behind increased frequency. This would require additional staff hours for dispatching since PCT does not operate on Sundays and could make scheduling driver shifts less efficient due to the added service day.

Table 24 shows the estimated change in service requirements and ridership.

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Table 24. Route 20 Operating Requirements and Performance – Add Sunday Service

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
16	960	16,320	\$127,744

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
6,129	6.4	0.38	\$20.84

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Do not include Sunday service on Route 20 in the draft service plan due to low ridership productivity.

Related Service Options

- Route 70: If Route 70 is converted to an on-demand service, the Route 20 extension could cover parts of the existing Route 70 alignment.
- RapidLink: The RapidLink pilot will connect the Galleria and Lincoln in addition to Route 20 via Sunset Boulevard and Industrial Avenue. Route 20 could continue to provide local access in the corridor while RapidLink would be the express connection between Lincoln and the Galleria.
- Northwest Rocklin: Route 20 could stay east of State Route (SR) 65 north of Sunset Boulevard to serve destinations such as William Jessup University and Whitney High School. Other options that could be considered in the draft service plan include: staying on Sunset Boulevard between Stanford Ranch Road and Whitney Boulevard instead of serving the Galleria if another route connects Lincoln and the Galleria; providing service to Rocklin High School; revising the loop routing between central Rocklin and Sierra College, and converting Route 20 into two separate routes.

Route 30 – Highway 49

Current service on Route 30 is provided via Nevada Street, Grass Valley Highway, and several local route segments on both sides of SR 49 in North Auburn. Departures from Auburn are hourly between 7:00 AM and 9:00 PM on weekdays and between 10:00 AM and 7:00 PM on Saturdays. Departures from North Auburn are between 4:35 AM and 6:00 PM on weekdays, 7:30 AM and 4:00 PM on Saturdays. The route provides transfer connections with Route 10, Route 40, Route 50, Auburn/Highway 49 Dial-A-Ride, and Auburn OnDemand.

Route 30 serves Auburn Station and activity centers along the SR 49 corridor north of the City of Auburn. The southern part of the route provides service along SR 49 south of Atwood Road and on Nevada Street between SR 49 and Auburn Station. SR 49 is a multilane, high-speed, high-volume highway with limited pedestrian crossings and long crossing distances. To the north, the route consists of a series of loops, designed to serve areas along both sides of the highway.

Two buses provide hourly service. Weekday round trip run times are scheduled at 83 minutes with up to 25-minute layovers at Chana Park and 12-minute layovers at Auburn Station.

Table 25 show running times between stops for most weekday trips.

Table 25. Route 30 Weekday Running Times

Direction	Travel Time	Layover	Total
Southbound	48	12	60
Northbound	40*	20*	60

Note: Times include five minutes for the Richardson Drive/Chana Park loop if requested by passengers onboard.

Ridership

Annual ridership in FY 2022-2023 was 30,324 boardings. The route was in service for 6,084 vehicle service hours over that same time, resulting in an average of 5.0 boardings per vehicle service hour. Average weekday ridership in FY 2022-2023 was 105 boardings and the route was in service an average of 19.4 hours on weekdays. This resulted in a weekday average of 5.4 boardings per vehicle service hour. Ridership is fairly constant each weekday, ranging from an average of 95 boardings on Monday to 112 on Wednesday.

Table 26 shows the average weekday and Saturday boardings for Route 30 by hour of the day. During weekdays, the highest number of boardings occurs during the midday, consistent with the high proportion of non-work, non-school trips discussed below. During Saturdays, ridership is highest in the afternoon with fewer boardings in the early morning. Note that these numbers do not account for the restoration of regular service hours for PCT fixed routes as of January 2024.

Table 26. Route 30 Average Boardings by Hour

Hour	Weekday Boardings	Saturday Boardings
7:00 AM	8.6	No service
8:00 AM	2.5	0.0
9:00 AM	9.9	0.0
10:00 AM	18.5	5.1
11:00 AM	7.4	5.1
12:00 PM	11.1	2.5
1:00 PM	9.9	22.9
2:00 PM	11.1	10.2
3:00 PM	13.6	5.1
4:00 PM	9.9	10.2
5:00 PM	2.5	0.0
Total	105	61

Table 27 shows estimated average weekday boardings by stop on Route 30. Auburn Station/Nevada Street is the busiest stop and ridership is spread across the rest of the route, with over a third of passengers using the route for local trips along the corridor that do not travel to or from the station. Also, ridership is generated along each of the diversions off SR 49.

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Table 27. Route 30 Average Boardings by Stop

Stop	Weekday Boardings	Saturday Boardings
Auburn Station/Nevada St	34.6	7.6
Nevada St at Post Office	2.5	2.5
Nevada St at Theatre	0.0	2.5
Northbound Highway 49 at	1.2	0.0
Northbound Highway 49 at	2.5	0.0
Atwood Rd	0.0	0.0
Richardson Dr at B Ave	1.2	2.5
Bell Rd at County Center Dr	1.2	0.0
1 st St at C Ave	9.9	5.1
F Ave at 1 st St	2.5	0.0
Atwood Rd at Corral	7.4	0.0
Bel Air	8.6	12.7
Plaza Dr	2.5	0.0
Target	1.2	7.6
Professional Dr at Bell Rd	2.5	0.0
Education St at Professional Dr	2.5	0.0
Galena at Quartz Dr	6.2	7.6
Sapphire Dr at Garnet Way	3.7	0.0
Chana Park	0.0	0.0
Richardson Dr Chana Park	0.0	2.5
Richardson Dr / Dry Creek	0.0	0.0
Dry Creek Rd at Dry Lake Ln	1.2	0.0
Highway 49 at Dry Creek	2.5	7.6
Highway 49 at Quartz Dr	1.2	0.0
Rite Aid	6.2	2.5
Atwood/Drive In	1.2	0.0
Dewitt – Richardson/B Ave	0.0	N/A
Atwood Park-n-Ride	0.0	0.0
Hwy 49/Luther Rd	0.0	0.0
Hwy 49/Live Oak	0.0	0.0
Nevada Way/Nevada St	2.5	0.0
Total	105	61

Onboard Survey

A total of 23 Route 30 passengers responded to the Fall 2023 Origin/Destination survey. Respondents did not answer all questions, so total respondents for each topic below does not equal 23 in some cases. The following is a summary of the results:

- Fifty-seven percent of respondents indicated that they transfer to complete their trip compared to a fixed route average of 57%. Route 10 was the most common route used for transfer connections with Route 30.
- The main trip purpose was for shopping (30%), followed by work and personal business/other (17% each), recreational/social (13%), and medical/dental (9%).

- Almost all riders (94%) did not have a car available for their trip, indicating that the route is used by riders for basic mobility needs.
- Sunday service was rated as the top service priority by more riders than any other category by the 8 people who answered those questions. On a scale of one (top priority) to six (lowest priority), Sunday service had the best average rating (1.9) followed by more frequent service (2.9), and more Saturday service (3.0). Later evening service (4.0), extended service area (4.25), and improved bus stops (5.0) scored lowest. The request for Sunday service is consistent with the high incidence of shopping, personal business, and recreational trip purposes.
- Areas served, condition of bus stops, on-time performance and frequency were rated below the average of all service attributes.
- Riders were also given the opportunity to offer specific, open-ended suggestions about the transit improvements they would most like to see. Numbers in parentheses indicate the number of responses:
 - Sunday service (11)
 - Later evening service (7)
 - Longer service spans (22)
 - More frequent service, additional Saturday service and more routes/ extended service area (5 each)

Candidate Service Improvements

Extend Route from Auburn Station to Central Auburn

Some of the layover time on Route 30 could be used to extend the route into central Auburn. Specific routing and scheduling would need to be determined based on further study including discussions with stakeholders. In addition, a location at the end of the route for short layovers and restroom facilities could be needed. Several operational issues will need to be addressed including identifying an appropriate route for 35-foot buses to operate due to narrow street widths, a suitable turnaround path in central Auburn, bus stop placement, and layover location. This extension should be assessed following any changes to the Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand zones.

Route 30 could be extended from Auburn Station via Nevada Street, Placer Street, Maple Street, to the vicinity of High Street and Lincoln Way, which results in 3.2 miles and 12 minutes of run time on a round trip. The increase in vehicle service hours would be minimal because those hours are already being used for layover time. Operating costs would increase due primarily to the additional mileage. Increased ridership is estimated to be about 3,700 boardings annually due to the expanded service coverage.

Table 28 shows estimated service requirements and ridership.

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Table 28. Route 30 Operating Requirements and Performance – Route Extension

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
N/A	152.5	9,760	\$37,075

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
5384.5	35.3	0.55	\$6.89

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze extending Route 30 to central Auburn as part of the draft service plan as a phased improvement in coordination with possible changes to the Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand zones.

Improve Weekday Headways from 60 to 30 Minutes Between 8:00 AM and 6:00 PM

More frequent service was identified as an important need by onboard survey respondents. Table 29 and

Table 30 shows the results of this potential improvement.

Table 29. Route 30 Operating Requirements and Performance – Improve Weekday Headways from 60 to 30 Minutes Between 8:00 AM and 6:00 PM

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
20	5,060	32,890	\$456,059

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
15,939	3.2	0.48	\$28.61

Note: Shaded bold cells meet or exceed the respective performance standard.

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Table 30. Route 30 Operating Requirements and Performance – 30-Minute Weekday Headways between 12:00 PM and 5:00 PM

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
10	2,530	16,445	\$228,030

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
8,438	3.3	0.51	\$27.02

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze weekday frequency improvements on Route 30 as part of the draft service plan in conjunction with the potential extension of the route and coordination between the Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand services.

Add Sunday Service with 60-Minute Headways

Onboard survey respondents identified Sunday service as the highest service need. This would require additional staff hours for dispatching since PCT does not operate on Sundays and could make scheduling driver shifts less efficient due to the added service day. Table 31 shows the results of this potential improvement.

Table 31. Route 30 Operating Requirements and Performance – Add Sunday Service

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
16	960	6,240	\$100,925

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
2,803	2.9	0.45	\$36.01

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Do not include Sunday service on Route 30 in draft service plan due to low ridership productivity.

Related Service Options

- Auburn OnDemand and Auburn/Highway 49 Dial-A-Ride: Extending Route 30 to central Auburn could attract some longer on-demand trips between central and North Auburn from on-demand services.
- Route 40: Additional trips on Route 40 would connect with Route 30 at Auburn Station.

Route 40 – Alta/Colfax

Route 40 runs between Auburn Station and Alta Store along I-80 with four intermediate stops (Bowman, Meadow Vista, Weimar, Colfax Depot). Two trips are provided in each direction at 7:00 AM and 3:15 PM from Auburn and at 8:00 AM and 4:15 PM from Alta. Scheduled run times are 60 minutes in each direction. Route 40 buses can deviate off route (approximately three-quarters of a mile on either side) by calling PCT ahead of time for a reservation.

Ridership

Annual ridership in FY 2022-2023 was 3,014 boardings. The route was in service for 1,651 hours, resulting in an average of 1.8 boardings per vehicle service hour. This is about twice the level for Route 50 (0.9), which is the other rural route in the network, and higher than the average for all PCT’s Dial-A-Ride services (1.5).

Table 32 shows the estimated average Route 40 ridership by hour.

Table 32. Route 40 Average Boardings by Hour

Hour	Weekday Boardings
7:00 AM	3.1
8:00 AM	5.7
3:00 PM	1.6
4:00 PM	1.6
Total	12

Table 33 shows the estimated average weekday boardings by stop on Route 40. Ridership to and from Auburn Station is low compared to pre-pandemic levels, reflecting the major decline in commuter ridership. Most of the ridership is from local trips between Alta and Auburn.

Table 33. Route 40 Average Boardings by Stop

Stop	Weekday Boardings
Alta Store	2.1
Dutch Flat (Reservation Only)	0.5
Gold Run (Reservation Only)	0.0
Colfax Amtrak	3.7
Weimar (Reservation Only)	2.6
Applegate (Reservation Only)	0.5
Meadow Vista (Reservation Only)	1.0
Bowman (Reservation Only)	0.0
Elder’s (Reservation Only)	0.5
Auburn Station (Drop Off Only)	0.0
Auburn Station	1.0
Total	12

Onboard Survey Results

A total of 14 Route 40 passengers responded to the Fall 2023 Origin/Destination survey. Respondents did not answer all questions, so total respondents for each topic below is below 14 in some cases. The following is a summary of the results and their implications for service changes.

- Forty-six percent of the respondents (six out of 13 respondents) boarded or alighted in the Auburn area.
- Twenty-three percent of respondents indicated that they transfer to complete their trip compared to a fixed route average of 57%, indicating that most trips on Route 40 are local.
- The main purpose of the trip was or high school (57%), followed by medical (29%), work (14%), and 7% each for shopping and university. This indicates that timing trips for the school bell times should be considered.
- Most riders (92%) did not have a car available for the trip, indicating that the service is used for basic mobility needs.
- On a scale of one (top priority) to six (lowest priority), later evening service had the best average rating (3.0). Other similarly high scoring priorities included more frequent service (3.1) and additional Saturday service and Sunday service (3.3 each). These priorities indicate that more frequency and longer service spans are desired by customers.
- On-time performance was rated lowest when riders were asked to rate performance for a range of service attributes. On a scale of one (poor) to five (excellent), riders rated on-time performance at 3.2, followed by availability of information (3.7), and condition of bus stops (3.9). This indicates that a review of run times should be conducted along with an update to bus stop infrastructure and signage.
- Riders were also given the opportunity to offer specific, open-ended suggestions about the transit improvements they would most like to see. Numbers in parentheses indicate the number of responses:
 - Later evening service (3)
 - Better on-time performance, especially in afternoon (3)
 - Earlier morning service (2)
 - More frequent service (1)

Candidate Service Improvements

Add One Additional Round Trip

The current Route 40 schedule is not conducive to local trips because it requires passengers to spend many hours waiting for a return trip. For example, a person riding the 8:00 AM bus from Alta cannot get back to Alta on Route 40 until the 3:15 PM trip from Auburn. This can be a detriment to ridership among people wishing to make a short trip, such as for shopping or an appointment – particularly among seniors who find a full day of travel to be a challenge. One option is to add one round trip between 8:00 AM and 3:00 PM. Another is to add an earlier round trip (departing Auburn at about 5:00 AM) or a later round trip (departing Auburn at about 5:30 PM). Both options could be operated without increasing the existing number of buses used for the route. Midday service would allow passengers to have shorter wait times for their return trip. Earlier or later trips would respond to customer comments received in the onboard survey. At a minimum, this could be offered one day a week, such as a Tuesday, to facilitate personal business appointments and

shopping trips. Adding this service would not increase the number of buses required. The increase in operating costs could potentially be offset by productivity changes to Route 60 described below.

Table 34 below shows the results of the potential improvement to Route 40.

Table 34. Route 40 Operating Requirements and Performance – One Additional Round Trip

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
2	506	14,927	\$76,570

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
1,017	2.0	0.07	\$75.29

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze adding trips to Route 40 as part of the draft service plan.

Related Service Options

- Route 60: Route 60 trips between Auburn and Colfax could be discontinued.

Route 50 – Taylor Road Shuttle

Current service along Taylor Road is provided by Route 50. One bus provides seven weekday and five Saturday round trips between Auburn Station and Sierra College, including a 17-minute, one-way “Campus Shopping Loop” that travels clockwise from Sierra College along Rocklin Road, Granite Drive, and Sierra College Boulevard. Weekday departures from Auburn Station are every two hours between 6:35 AM and 6:35 PM and from Sierra College between 7:45 AM and 7:45 PM. Saturday departures from Auburn are every two hours between 8:35 AM and 4:35 PM and from Sierra College between 9:45 AM and 5:45 PM. In addition, Route 50 can deviate up to three-quarters of a mile off its fixed route to serve riders. Riders can call PCT to arrange a pickup or tell the driver where they need to be dropped off. Route 50 is presently operated by MV Transportation under contract to PCT and has a cost structure like the Dial-A-Ride services that are also operated by MV Transportation. Costs could change due to the expected transitioning of operations of Dial-A-Ride services to PCT, which will be addressed during development of the SRTP.

Ridership

The low productivity of Route 50 warrants consideration of service changes to improve performance and/or reduce operating costs. As shown in

Table 35, Route 50 performs below Route 40 and well below urban/suburban fixed routes in terms of ridership effectiveness. In addition, ridership growth since the pandemic is the lowest in the system, growing only 5% between FY 2020-2021 and FY 2022-2023 compared to the overall PCT fixed route ridership growth of 53%. Annual ridership on Route 50 in FY 2022-2023 was 3,798 boardings over 4,118 annual vehicle service hours, resulting in an average of 0.9 boardings per vehicle service hour. This is about half the level for Route 40 (1.8) and lower than the average for all PCT Dial-A-Ride services (1.5).

Table 35 shows the estimated average Route 50 ridership by hour. Most weekday ridership is in the afternoon while Saturday ridership is in the morning.

Table 35. Route 50 Average Boardings by Hour

Hour	Weekday Boardings	Saturday Boardings
7:00 AM	0	No Service
8:00 AM	4	3.8
9:00 AM	0.7	0
10:00 AM	0	0
11:00 AM	0	0
12:00 PM	0	1.3
1:00 PM	2.0	0
2:00 PM	2.0	0
3:00 PM	2.0	0
4:00 PM	0.7	0
5:00 PM	0.7	0
6:00 PM	0	No Service
Total	12	5

Table 36 shows estimated average weekday boardings by stop on Route 50. The stops with the most weekday ridership are Taylor Road and King Road in Loomis and Sierra College in Rocklin.

Table 36. Route 50 Average Boardings by Hour

Stop	Weekday Boardings	Saturday Boardings
Sierra College	2.7	0
Granite Dr (Campus Shopping	0.0	0
Rocklin Commons Granite Dr	0.0	0
Rocklin Crossing (Campus	0.0	0
Taylor Rd & Shawn Way	0.0	0
Taylor Rd & Walnut St	1.3	0
Taylor Rd & King Rd	4.0	1.3
Del Oro High School	0.7	0
Taylor Rd & Penryn Rd	1.3	1.3
Taylor Rd & English Colony Way	0.0	0
Newcastle Hwy & Taylor Road	0.0	0
Newcastle Hwy & Taylor Road	0.0	0
Ophir Park and Ride	1.3	1.3
Auburn Station	0.7	1.3
Total	12	5

Onboard Survey Results

A total of 13 Route 50 passengers responded to the Fall 2023 Origin/Destination survey. Respondents did not answer all questions, so total respondents for each topic below is below 13 in some cases. The following is a summary of the results and their implications for service changes:

- Taylor Rd & King Rd in Loomis to Sierra College was the most common trip identified (1/3 of all respondents). This indicates the need to provide a strong connection between Loomis and the college.
- Thirty-three percent of respondents indicated that they transfer to complete their trip compared to a fixed route average of 57%.
- The main trip purposes were for university (46%) and work (38%), followed by social/ recreational (23%) and shopping (8%). This indicates that maintaining the connection to the college and employment opportunities is important.
- Most riders (62%) did not have a car available for the trip, indicating that the route is used by riders for basic mobility needs.
- Sunday service was rated as the top service priority by more riders than any other category by the five people who answered those questions. On a scale of one (top priority) to six (lowest priority), Sunday service had the best average rating (2.6), followed by improved bus stops (2.8) and additional Saturday service (3.0). More frequent service (4.4) and extended service area (5.0) scored lowest.
- Condition of bus stops was rated lowest when riders were asked to rate performance on a range of service attributes. On a scale of one (poor) to five (excellent) riders rated the condition of bus stops at 3.1. Availability of information scored 3.5 and service frequency and areas served scored 3.7. These responses suggest that improving bus stops and providing better customer information or converting the service to be on-demand with customers using an app, like the other Dial-A-Ride services, should be considered.
- Riders could offer open-ended suggestions about the transit improvements they would most like to see. Longer service spans were mentioned by most respondents, followed by more frequent service.
 - Later evening service (4)
 - Sunday service (3)
 - More frequent service (3)
 - Improved bus stops (1)
 - Other open-ended comments included requests for cleaner stops, schedule information at stops, and a web app to request route deviations

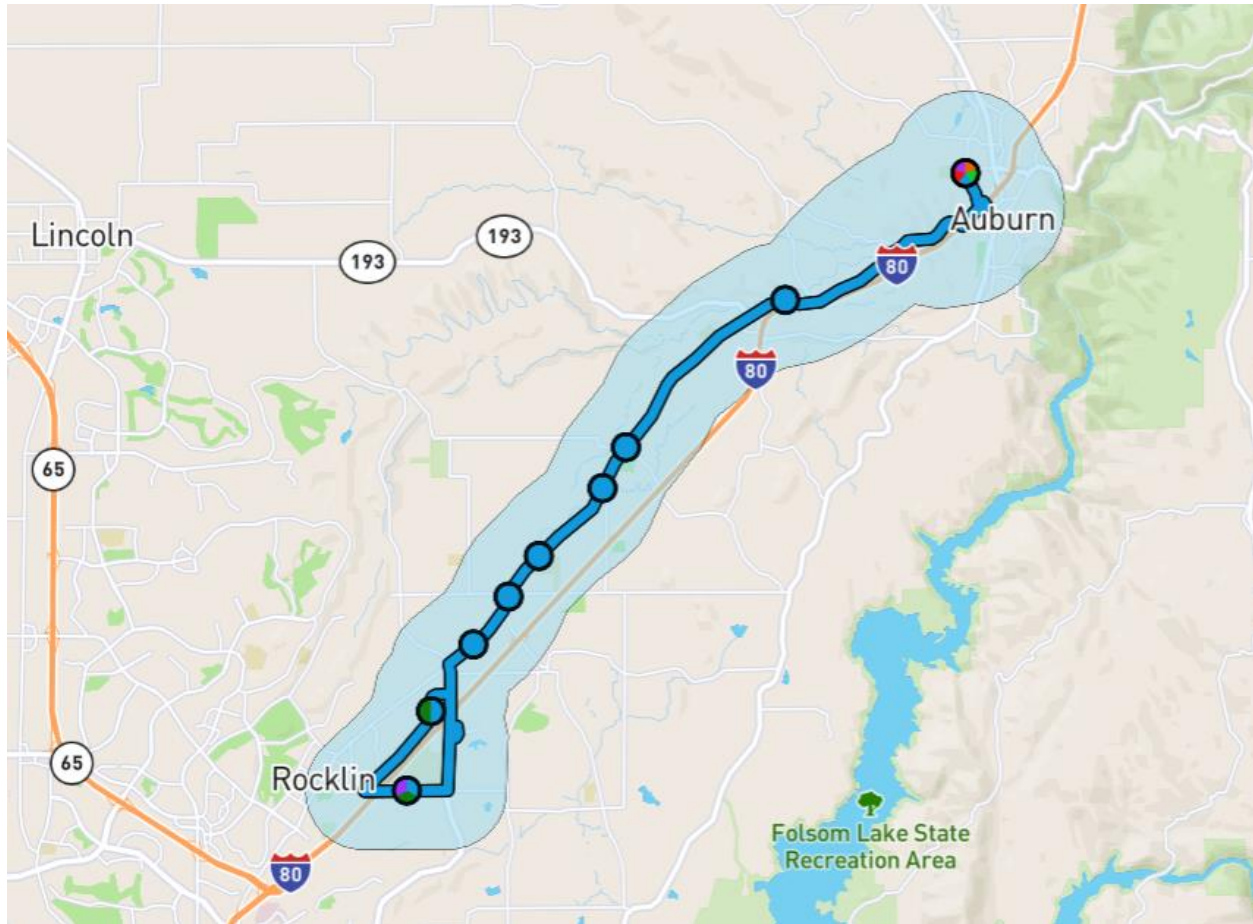
Candidate Service Improvements

Convert Route to a Dial-A-Ride Zone

The lower density land use patterns and limited pedestrian connectivity along parts of the route suggest that an on-demand service could meet riders' needs better than the current service. Ridership levels and patterns on Route 50 are low enough that it is feasible to convert it to Dial-A-Ride service. More detailed ridership counts should be conducted to ensure that Dial-A-Ride can provide adequate passenger capacity.

Figure 2 below shows the existing Route 50 alignment and corresponding route deviation zone. The highest ridership portion of Route 50, from Del Oro High School west, is currently served by the Rocklin-Loomis Dial-A-Ride zone. Ridership at the four stops east of Del Oro (Taylor Rd & Penryn Rd, Taylor Rd & English Colony Way (Penryn), Newcastle Hwy & Taylor Road EB, and Ophir Park and Ride) is very low.

Figure 2. Current Route 50 Alignment and Route Deviation Zone



Conclusion: Continue with further analysis of converting Route 50 to a Dial-A-Ride zone as part of the draft service plan.

Reduce Weekday Service Span from 12 to 8.5 Hours (Assume Route Converted to a Dial-A-Ride Zone)
No ridership was observed on the first weekday round trip (6:35 AM from Auburn) and last weekday round trip (6:35 PM from Auburn). Pending further ridership counts, the new Dial-A-Ride zone could operate from 8:30 AM to 5:00 PM, a shorter service span than that of the current Route 50.

Table 37 shows the results of this potential change.

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Table 37. Route 50 Operating Requirements and Performance – Reduce Weekday Service Span from 12 to 8.5 Hours

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
-4	-1,012	N/A	-\$90,676

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
-253	-0.3	-0.01	-\$358

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze an 8.5-hour span for the Route 50 Dial-A-Ride zone as part of the draft service plan.

Discontinue Saturday Service (Assume Route Converted to a Dial-A-Ride Zone)

In FY 2022-2023, 20 Saturdays had more than five boardings per day and 32 days had five or fewer boardings. Ridership is higher in July and August than the rest of the year. Low ridership indicates this service can be discontinued with the resources invested into services that may receive higher ridership. Table 38 **Error! Reference source not found.** shows the results of this potential change.

Table 38. Route 50 Operating Requirements and Performance – Discontinue Saturday Service

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
-10	-442	N/A	-\$19,612

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
-260	-0.6	-0.03	-\$75

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze discontinuing Saturday service for the Route 50 Dial-A-Ride zone as part of the draft service plan.

Related Service Options

- Other On-Demand Services: This new on-demand zone could be modified from the current route deviation area to fit with other existing zones (Auburn OnDemand, Auburn/Highway 49 Dial-A-Ride, and Rocklin-Loomis Dial-A-Ride) or to serve key areas.

Route 60 – Placer Commuter Express

Route 60 provides two trips in each direction between Colfax and downtown Sacramento with seven stops in Placer County.

Table 39 provides a snapshot of current fixed route commuter service operated by PCT.

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Table 39. Route 60 – Current Commuter Service

One-Way Bus Trips	Average Weekday Boardings (FY 2022-2023)	Average Boardings per AM Trip	Annual Boardings Decrease (FY 2018-2019 to FY 2022-2023)	Boardings Increase since Pandemic (FY2020-2021-FY2022-2023)
4	43	11	-86% (79,095 to 11,037)	+112% (5,203-11,037)

Table 40 shows the average boardings on each trip during the first quarter of 2024 based on farebox counts. The first trip in the morning and particularly the last trip in the afternoon experienced lower ridership.

Table 40. Route 60 Average Boardings per Trip (First Quarter of 2024)

Trip Start Time	Taylor Rd Park and Ride (Sunsplash)	J Street and 4 th Street	Average Weekday Boardings
5:20 AM	6:15 AM	6:50 AM	4
6:00 AM	6:55 AM	7:30 AM	21
4:22 PM	5:17 PM	4:22 PM	21
5:15 PM	6:10 PM	5:15 PM	5
Total			51

Ridership

Table 41 shows FY2022-2023 ridership by day of week. Fridays are the lowest for ridership, while mid-weekdays are the highest. When planning service, ridership for the three mid-weekdays and passenger loads on individual trips will need to be factored in to not underestimate passenger capacity needs.

Table 41. Route 60 Average Boardings by Day of Week

Day of Week	Boardings	Percent of Total Average
Monday	39	89%
Tuesday	54	123%
Wednesday	52	120%
Thursday	50	114%
Friday	25	57%
Average	44	100%

Pre-pandemic ridership counts by stop (Jult-December 2018) are shown in

Table 42. About 85% of passenger activity in Placer County (288 weekday boardings and alightings) is in Roseville and Rocklin.

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Table 42. Route 60 – Pre-Pandemic Boardings and Alightings at Stops

Stop	Boardings and Alightings
Roseville/Taylor Rd (Sunsplash)	52%
Rocklin Station Pacific St/Rocklin Rd	34%
Loomis Station Taylor/Horseshoe Bar Rd	4%
Penryn Park & Ride	4%
Auburn Station at Nevada St	4%
Clipper Gap Park N Ride	1%
Colfax Depot/Main Street	1%
Total	100%

Onboard Survey Results

A total of nine Route 60 passengers responded to the Fall 2023 Origin/Destination survey. Respondents did not answer all questions, so total respondents for each topic below is below nine in some cases. The following is a summary of the results and their implications for service changes:

- Almost all riders (88%) access Route 60 by car (75% drive alone, 13% carpool). The remainder transferred from another bus. None responded that they walked or biked to Route 60.
- Two respondents said they ride five days a week, two said they ride two to three days a week, and one reported riding only one day a week.
- 25% said they would be interested in a vanpool option.
- Only one respondent’s trip began or ended in Rocklin, six in Auburn, and one each in Colfax and Clipper Gap.
- Comfort onboard the bus rated highest when riders were asked to rate performance on a range of service attributes. On a scale of one (poor) to five (excellent) riders rated the comfort at 4.6. Availability of information scored lowest (3.7).

Ridership Demand from Return to Office Patterns

Since the pandemic, a key consideration in transit service planning, especially for systems with a historically high proportion of commuter ridership, is the future of in-person, remote, and hybrid work schedules for jobs that do not physically require in-person attendance. The pandemic triggered a fundamental shift in office worker trips that impacts the need for commuter transit services and associated facilities. Technical Memo #1 includes a discussion about the impact of the pandemic on travel patterns using anonymous cell phone data and data on employee remote work status from the State of California and other sources.

The hybrid work environment mixing virtual and in-person work has emerged as an ongoing condition, but in-office attendance has been increasing as more employers require employees to be in the office for some days of the week. While the number of wholly remote workers has dropped and is expected to continue to drop as more employers require a hybrid work schedule with at least two days in the office, it means that many workers will only travel to or from the office a couple or few days a week, mostly Tuesdays to Thursdays. This suggests that there will be a diminished commute market and that efficiencies and integration of commuter services would provide the most useful service to the public at a

reasonable cost. It also suggests that service levels could be adjusted by day of the week to match demand (e.g., less service on Mondays and Fridays compared to Tuesdays to Thursdays).

Ridership could increase as more people return to in-person work, at least on some days of the week. In addition to travelling between home and office on fewer days of the week, home-based work trip times tend to have more variability throughout the day because some workers can work from home for part of the day in case they need to be home for an appointment or other need. On days that they do work from home, they might make short trips during the day for appointments, meals, or errands.

In Spring 2024, several state agencies began requiring many employees to come into the office at least two days a week with telework available up to three days per week. About half of state workers are eligible for hybrid work or telecommuting work four to five days from home. These are the workers who will be affected by the recent change.

Table 43 shows change in ridership by route since the pandemic. The growth rate for Route 60 is highest in the network reflecting the fact that many office workers have returned to the office for at least some portion of the week (state data shows about half of eligible employees work from home four to five days a week and half work from the office one to three days a week). Ridership demand for Route 60 is projected to increase from 11,037 boardings in FY 2022-2023 to 16,871 boardings. This growth reflects the increased travel from employees who now telecommute four to five days a week but are assumed to travel to and from the office at least two days a week in the future.

Table 43. Route 60 Annual Ridership Post-Pandemic, 2020 – 2023

Route	Ridership FY 2020-21	Ridership FY 2021-22	Ridership FY 2022-23	Change Since Pandemic (FY 2020-2021 to FY 2022-2023)	Percent Change During Pandemic Recovery (FY 2020-2021 to FY 2022-2023)
10	41,471	50,244	61,577	20,106	48%
20	38,258	50,502	57,247	18,989	50%
30	25,172	26,584	30,324	5,152	20%
40	1,880	1,945	3,014	1,134	60%
50	3,622	3,974	3,798	176	5%
70	11,753	17,325	16,007	4,254	36%
80	--	8,527	14,646	--	--
Van Pool	5,253	3,227	2,064	-3,189	-61%
60	5,203	9,326	11,037	5,834	112%

Candidate Service Changes

Discontinue Route Between Auburn and Colfax

Route 60 ridership east of Auburn is very low. Pre-pandemic passenger counts showed only nine boardings for this segment of the route and Fall 2023 boardings show minimal or no ridership at the Colfax Depot or Clipper Gap Park-and-Ride stops.¹ Table 44 shows the results of this potential change.

Table 44. Route 60 Route Operating Requirements and Performance – Discontinue Route Between Auburn and Colfax

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
-4	-565	-18,216	-\$89,621

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
-189	-0.3	-0.01	-\$474

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze discontinuing Route 60 between Auburn and Colfax as part of the draft service plan.

Discontinue One Trip in Each Direction

Ridership on the second AM trip and first PM trip is higher than the first AM trip and second PM trip. Discontinuing the first AM trip and second PM trip would free up resources to be redistributed within the network.

¹ Boardings plus alightings in FY 2016-2017 was 3 at Colfax and 6 at Clipper Gap out of 280 total boardings.

Table 45 shows the result of this change.

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Table 45. Route 60 Operating Requirements and Performance – Discontinue One Trip in Each Direction

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Increase in Annual Marginal Operating Cost
-2	-1,558	-25,420	-\$181,076

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
-5,440	-3.5	-0.21	-\$33

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze discontinuing one trip in each direction on Route 60 as part of the draft service plan.

Coordinate with Roseville Transit for Trips to Rocklin

Roseville commuter routes that end at the Taylor Road Park-and-Ride could be extended east, potentially to Rocklin, under an agreement between PCT and Roseville, if Route 60 only operates during days of the week with higher ridership (e.g., Tuesdays to Thursdays). Current Route 60 riders at that location and Rocklin Station would still be directly served. Riders at Loomis Station and Penryn would have to either use other services to connect to the commuter service or drive to the Taylor Road park-and-ride. Table 46 shows the result of the potential coordination of Route 60 with Roseville Transit commuter service.

Table 46. Route 60 Route Operating Requirements and Performance – Coordinate with Roseville Transit

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
N/A	-1.358	-42,504	-\$211,982

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
-1,280	0.9	0.03	\$166

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to consider and discuss potential partnerships between PCT and Roseville Transit regarding commuter service as part of the draft service plan.

Discontinue Route 60 Entirely

Another option is to discontinue Route 60 and instead improve frequencies on Route 10 for connections with Roseville Transit commuter service at the Taylor Road Park-and-Ride or Galleria and with the SacRT Blue Line at Watt/I-80. Current Route 60 riders from east of the park-and-ride would either have to drive or ride other transit services to/from the park-and-ride.

Table 47 shows the estimated savings from discontinuing Route 60.

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Table 47. Route 60 Operating Requirements and Performance – Discontinue Route 60

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
N/A	-2,634	-55,458	-\$339,425

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
-6,444	2.5	0.12	\$33

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Do not include in the draft service plan due to increasing commuter ridership and TAC member advice.

Related Service Options

- Route 10: Improving frequency on Route 10 would provide an alternative for some Route 60 passengers east of Roseville but would require a transfer for trips to and from Sacramento. An option is to change the alignment of Route 10 to serve the Taylor Road Park-and-Ride so that passengers on Route 10 could also transfer to commuter service to downtown Sacramento.

Route 70 – Lincoln Circulator and Route 80 – Lincoln Circulator Overflow

Route 70 is a circulator route that provides local service around the City of Lincoln. Route 80 has a similar route path but operates on weekdays only during the AM and PM peak periods. Route 70 departures from 3rd Street and F Street are hourly between 6:40 AM and 5:40 PM. Route 80 operates one trip in the morning from Nicolaus Road and Joiner Parkway at 7:00 AM and one in the afternoon from Twelve Bridges Middle School at Wilson Park at 2:25 PM on Mondays and 3:25 PM on Tuesdays to Fridays.

For Route 70, one bus provides hourly service, with end-to-end scheduled running times of 55 minutes and a five-minute layover at 3rd and F streets. Service to several stops (on the loop near the Lincoln Regional Airport, John Adams Academy, Wilson Park) are by request only.

Ridership

Annual ridership in FY 2022-2023 for Route 70 was 16,007 boardings and 14,646 for Route 80. Route 70 was in service for 3,392 hours over that same time, resulting in an average of 4.7 boardings per vehicle service hour. Route 80 was only in service for 424 hours over that time, which resulted in a much higher 34.6 boardings per vehicle service hour.

Table 48 shows the average weekday and Saturday boardings for Route 70 by hour of the day, while Table 49 shows the same results for Route 80.

Table 48. Route 70 Average Boardings by Hour

Hour	Weekday Boardings	Saturday Boardings
7:00 AM	3.7	No service
8:00 AM	5.5	0
9:00 AM	5.5	0

Hour	Weekday Boardings	Saturday Boardings
10:00 AM	3.7	4.0
11:00 AM	4.6	4.0
12:00 PM	5.5	8.0
1:00 PM	12.0	2.7
2:00 PM	1.8	1.3
3:00 PM	10.1	0
4:00 PM	5.5	No service
5:00 PM	0	No service
6:00 PM	0	No service
Total	58	20

Table 49. Route 80 Average Boardings by Hour

Hour	Weekday Boardings
7:00 AM	21.8
3:00 PM	45.2
Total	67

Table 50 shows the estimated average weekday boardings by stop on Route 70 and Table 51 shows the same for Route 80. For Route 70, the highest ridership stops are 3rd St & F St (Walmart) and Twelve Bridges Library (accounting for over 40% of total boardings on the route), while the highest Route 80 ridership stops are Twelve Bridges Middle School and Twelve Bridges High School (accounting for two-thirds of total boardings on the route).

Table 50. Route 70 Average Boardings by Stop

Stop	Weekday Boardings	Saturday Boardings
3 rd St & F St (Walmart)	12.2	4.0
E St & 1 st St	0.8	1.3
Ferrari Ranch Rd & Lincoln Blvd	0.0	0.0
Ferrari Ranch Rd & Danbury Dr	0.0	0.0
Ferrari Ranch Rd & Groveland	0.0	0.0
Twelve Bridges Library (Arrive)	0.8	0.0
Twelve Bridges Library (Depart)	14.5	5.3
Sterling Pkwy & Joiner Pkwy	0.8	0.0
Ferrari Ranch Rd & Groveland W	0.8	0.0
Ferrari Ranch Rd & Sorrento	0.0	0.0
Ferrari Ranch Rd & Caledon Cir	0.0	0.0
Ferrari Ranch Rd & Caledon Cir I	2.3	0.0
Ferrari Ranch Rd & Groveland E	2.3	0.0
Ferrari Ranch Rd & Kensington	1.5	0.0
Lincoln Blvd & Ferrari Ranch Rd	0.0	0.0
Lincoln Blvd & 1st St	0.0	0.0
3rd St and F St (Walmart)	1.5	2.7
1st St & F St	0.0	0.0
1st St & I St	1.5	0.0

Stop	Weekday Boardings	Saturday Boardings
1st St & L St	1.5	0.0
1st St & O St	0.0	0.0
R St & Shamrock Ct	2.3	1.3
3rd St & O St (Senior Complex)	5.3	1.3
Nicolaus and Joiner	0.0	0.0
Foskett Park	0.0	0.0
Venture at Lakeside	0.0	0.0
Lakeside Dr and Cobblestone Dr	0.0	0.0
Lakeside at St Andrews	0.0	2.7
5th St & O St	0.0	0.0
5th St between L St & M St	0.0	0.0
J St & 6th St	2.3	0.0
7th St & J St (High School)	2.3	0.0
7th St & F St	0.0	1.3
7th St & C St	3.8	0.0
¹ 2th St before East Ave	1.5	0.0
East Ave & 6th St	0.0	0.0
McBean Park Dr & A St	0.0	0.0
McBean Park Dr & E St	0.0	0.0
3rd St & F St (across Walmart)	0.0	0.0
Total	58	20

Table 51. Route 80 Average Boardings by Stop

Stop	Weekday Boardings
Nicolaus and Joiner	0.0
Foskett Park	0.0
Venture at Lakeside	0.0
Lakeside Dr and Cobblestone Dr	0.0
Lakeside at St Andrews	0.0
1st St Before I Street	0.0
1st St After L St	0.0
1st St After O Street	0.0
R St After Shamrock Ct	0.0
3rd St Before P St (Lincoln Senior Apts)	1.5
5th Street After O Street	0.7
5th Street After ¹ 4th Alley	0.0
J St Befor ^e 6th St	0.0
7th St After J St	0.0
7th St After F St	0.0
7th St After C St	0.0
12th St Before East Ave	0.0
East Ave Before 6th St	0.0
McBean Park Dr Before A St	0.0
McBean Park Dr After E St	0.0

Stop	Weekday Boardings
3rd St at F St. Walmart	0.0
1st St After F St	0.0
Ferrari Ranch Rd After Lincoln Blvd	0.7
Ferrari Ranch Rd After Danbury Dr	1.5
Ferrari Ranch Rd After Groveland	3.6
Ferrari Ranch Rd after Kensington Ln	0.0
Ferrari Ranch Rd Before Sorrento Pkwy	3.6
Ferrari Ranch Rd at W Calidon Cir	2.2
Ferrari Ranch Rd at E Calidon Cir	8.0
Twelve Bridges Middle School (Wilson Park)	16.0
Twelve Bridges High School at Twelve Bridges	29.1
Kaiser Lincoln Entrance	0.0
Total	67

Onboard Survey Results

A total of 25 Route 70 riders and six Route 80 riders responded to the Fall 2023 Origin/Destination survey. Respondents did not answer all questions, so total respondents for each topic below does not equal 25 or six in some cases. The following is a summary of the results:

- The main trip purposes for Route 70 were for high school (36%), shopping (20%), and university/college (16%). For Route 80, the main trip purposes were for high school (50%) and university/college (33%).
- Most riders (72% for Route 70 and 67% for Route 80) did not have a car available for their trip, indicating that the route is used by riders for basic mobility needs.
- For Route 70, more frequent service was rated as the top service priority by more riders than any other category by the 15 people who answered those questions. On a scale of one (top priority) to six (lowest priority), more frequent service had the best average rating (2.3), followed by later evening service (2.7) and improved bus stops (3.3). Extended service area and additional Saturday service (4.1 each) and Sunday service (4.5) scored lowest. For Route 80, only two people responded to the question, with more frequent service and improved bus stops (1.5 each) scoring the highest.
- For Route 70, the condition of bus stops was rated lowest when riders were asked to rate the performance of the route for a range of service attributes. On a scale of one (poor) to five (excellent), riders rated the condition of bus stops at 3.5, followed by areas served (3.8), and on-time performance and frequency of service (4.0 each). The highest scores were for availability of information, ease of transfers/connections, fares, and overall service (all 4.3). These scores indicate that riders would benefit most from upgrades to the bus stop infrastructure and service area coverage. For Route 80, the lowest scores were for frequency of service (3.0), and availability of information and overall service (3.8 each), indicating a need for shorter wait times between buses and route arrival and map information at the stops.

- Riders were also given the opportunity to offer specific, open-ended suggestions about the transit improvements they would most like to see. Numbers in parentheses indicate the number of responses:
 - Better reliability (4)
 - Expanded coverage to new areas (3)
 - Bus stop improvements (3)

Candidate Service Improvements

Replace with Enhanced Lincoln Dial-A-Ride Service and Add Trips to Route 80

Route 70 performs below the average for PCT urban/suburban routes in ridership and productivity. This is partially due to its circuitous route path with many turns and different stop patterns. Conversely, while only operating two trips per day, Route 80 performs exceptionally well on a per-hour and per-mile basis due to its high student ridership. One option to improve service in this area is to convert Route 70 to a Dial-A-Ride zone and to extend Route 20 from Twelve Bridges Library to central Lincoln. In addition, it might be desirable to add some trips on Route 80 to provide capacity for existing Route 70 riders. Table 52 shows the estimated impact of this possibility. Cost savings are due to the lower hourly marginal costs for Dial-A-Ride service (\$44.37) compared to fixed route (\$72.84) and net savings on mileage on fixed route service.

Table 52. Route 70 Operating Requirements and Performance – Convert Route to a Dial-A-Ride Zone and Add Trips on Route 80

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
N/A	-2,239	-32,461	-\$150,104

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
N/A	N/A	N/A	N/A

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze converting Route 70 to a Dial-A-Ride zone if paired with an extension of Route 20 to central Lincoln as part of the draft service plan.

Related Service Options

- RapidLink: Connections might be possible between local service and the RapidLink’s terminal location in Lincoln.
- Route 20: The option to extend Route 20 to central Lincoln would provide access for many Route 70 riders if Route 70 were to be converted to a Dial-A-Ride zone. The 3rd Street & F Street stop on Route 70 is the second highest ridership stop (behind Twelve Bridges Library). Extending Route 20 to central Lincoln would provide access between central Lincoln and areas such as the Galleria

and Sierra College without requiring a transfer between Dial-A-Ride and fixed route service. New service to Sun City Lincoln Hills could be provided by Route 20.

ON-DEMAND SERVICES

Granite Bay Dial-A-Ride

Candidate Service Improvements

Adjust Service Span and Replace Service with Expanded Arrow Service Through Agreement with Roseville Transit

Granite Bay Dial-A-Ride service operates weekday mornings from 9:00 AM to 11:00 AM and weekday afternoons from 2:00 PM to 4:00 PM. It serves unincorporated Placer County in the area south of Olive Ranch Road to the Sacramento County line, and east of Sierra College Boulevard to Folsom Lake. It also serves part of the City of Roseville along Douglas Boulevard between Sierra College Boulevard and the I-80 interchange.

Ridership effectiveness in FY 2022-2023 was 0.9 boardings per service hour compared to 1.5 boardings per service hour for the other three PCT Dial-A-Ride services. Annual ridership in FY 2022-2023 was 146, an average of fewer than one boarding per weekday. Ridership decreased 50% between FY 2015-2016 and FY 2022-2023 compared to a decline of about 30% on the other Dial-A-Ride services. Roughly 40% of the trips are estimated to be to and from the Douglas Boulevard corridor in Roseville.

Weekday trip patterns for all travel modes based on trips made by cell phone users (Replica data) indicate that trips within Granite Bay and to/from East Roseville are the largest volumes of intra-Placer County trips. This suggests that better connections to Roseville might increase the usefulness of the service and lead to more ridership.

Two options to improve this service are to convert the two-hour peak service periods into one four-hour midday period and to look to Roseville's Arrow service to provide service to this area. Expanding Roseville Transit's Arrow service area to encompass the existing Granite Bay Dial-A-Ride service area could be operated under an agreement by which Placer County compensates the city for the additional service costs. Boardings in Granite Bay would only be available during a four-hour service span, not for the full span of service offered by Arrow in Roseville.

Increased ridership would be from two sources: additional trips between Granite Bay and west Roseville (not currently available on Granite Bay Dial-A-Ride), and more coverage in east Roseville (current Dial-A-Ride coverage is only within a half-mile on either side of Douglas Boulevard between Sierra College Boulevard and the I-80 interchange).

An estimated 60 of the 146 annual Granite Bay Dial-A-Ride boardings (40%) are going to/from east Roseville within the Douglas Boulevard area. The additional coverage in Roseville is assumed to increase current ridership based on the number of jobs in the current Dial-A-Ride zone along Douglas Boulevard to the entire city of Roseville. There are about 17,000 jobs in the Douglas Boulevard corridor within the current Granite Bay Dial-A-Ride zone, while the City of Roseville has about 85,000 total jobs. Applying this ratio of $85,000/17,000 = 5$ to the current 60 boardings yields $5 \times 60 = 300$ total annual boardings due to expanded coverage in Roseville.

The average trip length for this option would increase because Arrow provides service to the entire city of Roseville. Cell phone data for trips by all modes indicates almost three times the volume of person trips by all modes between Granite Bay and west Roseville as between Granite Bay and east Roseville. The current average trip length for Granite Bay Dial-A-Ride is three to four miles. Assuming a six-to-seven-mile trip length would need to be accounted for in this service's cost. Roseville Transit's fleet could accommodate these extra trips in the short run, though the city's fees to the county to could include a proportionate cost for vehicle replacement.

The feasibility of this option could be developed further based on discussions with Roseville Transit. In addition, the impact of other transit network changes in Roseville as part of their COA should be assessed before making this decision.

Conclusion: Continue to analyze Arrow service to Granite Bay as part of the draft service plan including assessment of ridership patterns/volumes and potential operational agreements between PCT and Roseville Transit. Consider phasing based on results from Roseville Transit's COA.

Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand

Candidate Service Improvements

Coordinate Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand Services

The current OnDemand service is more efficient than the former Auburn Loop route. Since the implementation of Auburn's OnDemand service (FY 2021-2022) ridership went up 92% and cost efficiency increased 40% while boardings per vehicle hour experienced a marginal decrease.

Both Auburn Transit's OnDemand and PCT's Auburn/Highway 49 Dial-A-Ride service operate in the Auburn and North Auburn areas which includes the SR 49 corridor, as shown in Figure 3.

Figure 3: Auburn OnDemand and Auburn/Highway 49 Dial-A-Ride Service Zones

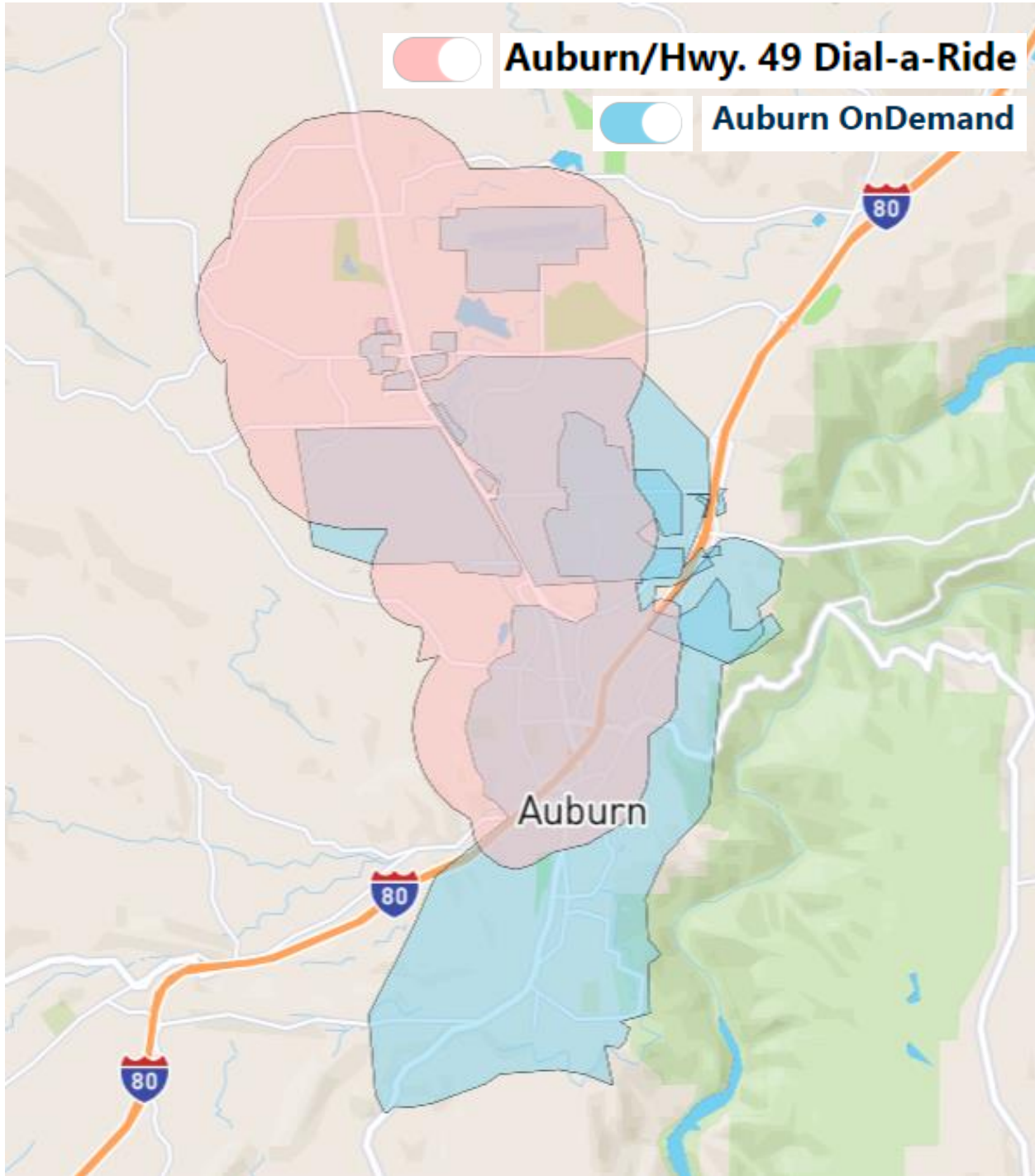


Table 53 highlights some key aspects of each service.

Table 53. Auburn Transit vs. PCT On-Demand Service

Service Attribute	Auburn/Highway 49 Dial-A-Ride	Auburn OnDemand
Periods of Operation	Monday to Friday: 6:00 AM to 7:30 PM Saturday: 8:00 AM to 6:00 PM	Monday to Thursday: 6:00 AM to 8:00 PM Friday to Saturday: 6:00 AM to 11:00 PM
Service Area Population	15,149	13,776
Fare (General Public/Discounted)	\$2.50/\$1.25	\$3.50/\$1.75
Ride App	Spare	TransLoc
Vehicles	Cutaways	Cutaways and sedans
Average Wait Time (minutes)	12	25
Annual Vehicle Service Hours	5,828	10,841
Annual Boardings	8,839	20,552
Boardings per Vehicle Service Hour	1.5	2.5
Marginal Cost per Vehicle Service Hour	\$44.37	\$54.93

To make the services more useful and understandable to the public the following refinements should be considered:

- Clearly convey service area boundaries to the public and limit trips to points within each agency’s respective boundary.
- Identify connection hubs where passengers could transfer between the two on-demand services or PCT fixed routes.
- Explore ways to coordinate the apps used by each agency so that customers are aware of the availability of each service. Potentially include Auburn OnDemand in the GO South Placer app along with Roseville Transit’s Arrow and PCT’s Dial-A-Ride services.
- Discuss potential expansion of on-demand service to the Bowman area (described below) in as part of overall boundary adjustments between the Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand service areas, with Auburn focusing more on areas east of SR 49 and PCT on areas west of SR 49 and outside the Americans with Disabilities Act complementary paratransit boundary.

Conclusion: Continue to analyze changes to on-demand services provided in the Auburn area as part of the draft service plan, including further assessment of on-demand ridership patterns/volumes, other on-demand zone adjustments, and parameters for operational agreements between PCT and Auburn Transit.

Expand On-Demand Service to Bowman Area

The 2018 SRTP included a proposal to expand on-demand service to the Bowman area as a low-cost way to improve basic mobility in the area. That change has not yet been implemented. The expansion would be to the area east of the existing on-demand zones and south of Bell Road (including the Raley’s on

Lincoln Way and the Auburn Interfaith Food Closet on Auburn Ravine Road). Based on ridership estimates and travel times, this area could be accommodated without the need to add many service hours, though additional vehicle miles would be operated. Service to this area could be part of overall boundary adjustments between the Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand service areas, with Auburn focusing more on areas east of SR 49 and PCT on areas west of SR 49 and outside the Americans with Disabilities Act complementary paratransit boundary. Table 54 shows estimates for expansion of Auburn OnDemand service to the Bowman area.

Table 54. Operating Requirements and Performance – Bowman Area On-Demand Service Area Expansion

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
N/A	305	6,405	\$16,754

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
1,518	5.0	0.24	\$11.04

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze potential on-demand service to the Bowman area as part of the draft service plan.

Placer Vineyards and Cook-Riolo/Vineyard Corridor Areas

Candidate Service Improvements

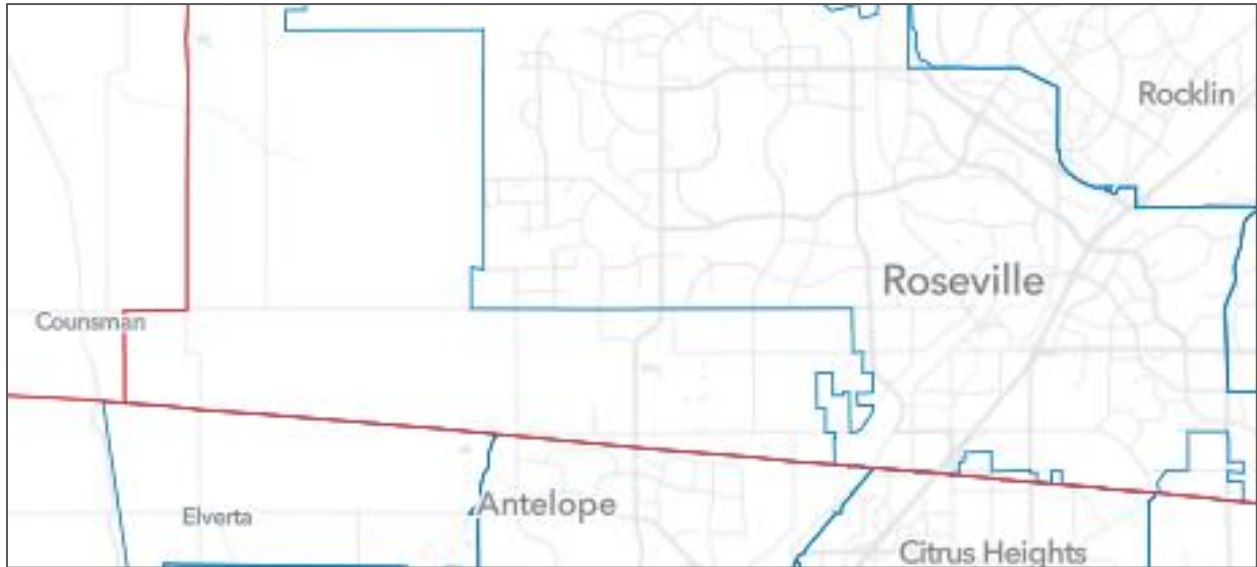
Expand Arrow Service to Placer Vineyards and Cook-Riolo/Vineyard Corridor Areas through Agreement with Roseville Transit

These developments are in an unincorporated portion of Placer County west of Roseville’s city limits, as shown in

Figure 4. The Placer Vineyards project will consist of 14,132 residential units, commercial uses, and schools. The first phase of development will include up to 5,266 residential units. The Placer Vineyards Specific Plan includes transit-related mitigation requirements.

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Figure 4. Placer Vineyards and Cook-Riolo/Vineyard Corridor Areas



Riolo Vineyards is south and east of Placer Vineyards and will consist of 884 single-family residential units and commercial uses. A Transit Zone of Benefit was established by the Placer County Board of Supervisors with homeowners in the development, which will assess a fee in property tax to help fund the future transit service identified in the Placer Vineyards Transit Master Plan.

Initial development is underway on several projects including Heritage Placer Vineyards (400 housing units) and 400 housing units in the Riolo Vineyards area. It is unknown if there will be enough demand to warrant transit services within the five-year planning horizon of this COA and SRTP.

Service to this area could be provided by expanding Roseville Transit's Arrow on-demand service under an agreement by which Placer County compensates the city for the additional service costs. The average trip length for this option would increase because Arrow provides service to the entire City of Roseville. Roseville Transit's fleet might be able to accommodate these extra trips in the short run, though it would be appropriate for the city's fees to the county to include a proportionate cost for vehicle replacement.

Table 55 shows the estimated costs of this potential expansion assuming ten hours of service on weekdays. To meet the performance standards for new on-demand services, a population base of at least 20,000 (comparable to Granite Bay) is needed.

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Table 55. Operating Requirements and Performance – Roseville Transit Arrow On-Demand Service Weekday Expansion to Placer Vineyards and Cook-Riolo/Vineyard Corridor Areas

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
N/A	2,530	N/A	\$174,570

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
TBD	TBD	TBD	TBD

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze service to the Placer Vineyards and Cook-Riolo/Vineyard Corridor areas as part of the draft service plan, including a more detailed assessment of development trends and travel patterns/volumes and potential operational agreements between PCT and Roseville Transit.

Placer One Service

Candidate Service Improvements

Expand Rocklin-Loomis Dial-A-Ride Zone to the Placer One Area

The western boundary of the Rocklin-Loomis Dial-A-Ride area is SR 65 except for areas around the Galleria and Walmart at SR 65 and Pleasant Grove Boulevard. The area along Industrial Avenue is not served, but customers have requested service to this area.

Placer One is a 2,213-acre development in unincorporated northwestern Placer County. Formerly known as Placer Ranch, it is part of the Sunset Area Master Plan. At full buildout, Placer One is planned to include a new university campus (with up to 20,000 individual students), 13,219 residents, and 5.4 million square feet of non-university commercial, employment, and mixed-use development.

Infrastructure work is underway. Housing is expected to begin construction in early 2025 for 143 single-family homes by Roseville-based JMC Homes. The CSU Board of Trustees approved the master plan for the Placer Center campus and the Placer County Board of Supervisors approved \$2.5 million for the Placer County Forensic Sciences Laboratory. The first students could be on site as early as 2028. The entire Phase 1 of the university is planned to accommodate 1,500 full-time equivalent students associated with Sierra College and Sacramento State. Planned buildings include an academic building, library, Sierra College Transfer Center, and the forensic lab.

Ridership demand in this area depends on timing of development within the 2025-2030 timeframe for the COA, particularly for the university, which would generate more trips externally to the local area because students will live in various portions of the greater Sacramento region. Therefore, expanding the existing Rocklin-Loomis Dial-A-Ride zone would be appropriate to serve initial residential developments. Expansion would require the addition of another vehicle to cover the larger area and to maintain reasonable wait times within the existing zone. Fixed route service could be considered for later phases of development. The Placer One Transit Master Plan Final Report (May 2023) proposes transit services needed to meet demand at full buildout.

Table 56 shows the operating cost estimate assuming ten hours of service on weekdays.

Table 56. Operating Requirements and Performance – Extend Weekday Dial-A-Ride Service to Placer One

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
N/A	2,530	N/A	\$112,256

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
TBD	TBD	TBD	TBD

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Do not include service to Placer One in draft service plan. Reassess need for service based on pace of new development over the next few years.

SERVICE COVERAGE AND CONNECTIONS

Northwest Rocklin

Candidate Service Improvements

Reconfigure Route 20 to Operate East of SR 65 and Add New Route to Operate West of SR 65

There are multiple transit generators along either side of SR 65 between the Galleria and Lincoln. Table 57 lists some of the key existing and planned trip generators.

Table 57. Developments Along SR 65

East of SR 65
Twelve Bridges Library on Twelve Bridges Drive
William Jessup University on Sunset Boulevard
Various commercial and residential areas on Sunset Boulevard and Lonetree Boulevard
Planned University of California, Davis hospital, hotel, and other facilities on West Ranch View Drive
Various commercial developments on Fairway Drive and Lonetree Boulevard
Whitney Ranch and Whitney Oaks residential developments
Whitney High School
Terracina at Whitney Ranch and Estia at Rocklin
Senior residential facilities
Rocklin High School

West of SR 65
Santucci Justice Center on Justice Center Drive
Thunder Valley Casino on Athens Drive
Public Defender’s Office on Corporate Drive
Walmart on Pleasant Grove Boulevard

Route 20 could be realigned north of Sunset Boulevard to stay on the east side of SR 65, while the existing Roseville Transit Route S could be replaced by a new route connecting the Galleria with the Twelve

Bridges area via Industrial Avenue. Route 20 could travel from Sunset Boulevard, University Avenue (serving William Jessup University), Whitney Ranch Parkway (serving the Whitney Ranch multifamily area), Wildcat Boulevard (serving Whitney Community Park, Whitney High School, and The Pines senior housing), Joiner Parkway, (serving Wilson Park and Twelve Bridges Middle School), Fieldstone Drive (serving the adjacent commercial center), and Twelve Bridge Drive to the library.

Additionally, Route 20 could stay along Sunset Boulevard between Stanford Ranch Road and Whitney Boulevard instead of serving the Galleria if another route provides service between Lincoln and the Galleria. This would allow Route 20 to provide a faster connection between Lincoln and Sierra College than it does now.

A new route west of SR 65 could travel from the Galleria via Roseville Parkway, Washington Boulevard, Industrial Avenue, Thunder Valley Casino, and Twelve Bridges Library. Fixed route service with passenger stops in the Sunset area along Industrial Drive could also trigger the need for complementary paratransit service.

Further analysis of routing options and associated running times will be part of the COA service plan development including estimates of operating requirements and ridership. There are a multitude of interrelated routing options for current Route 20 and other lines in the area, including service to Rocklin High School and routing in central Rocklin. These changes would need to be assessed in the context of Roseville Transit’s proposed routing in the area and the RapidLink pilot project’s final routing. Part of the route would operate within the City of Roseville now served by Roseville Transit’s Route M and S.

Table 58. Operating Requirements and Performance – New Route West of SR 65 between the Galleria and the Twelve Bridges Area

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
TBD	TBD	TBD	TBD

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
TBD	TBD	TBD	TBD

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Continue to analyze service to northwest Rocklin as part of the draft service plan.

Lifeline Services

Candidate Service Improvements

Add Lifeline Service to Foresthill

Lifeline service to rural communities would provide service one day a week for access to urban services such as shopping, nutrition, medical, and social service programs. Foresthill has about 1,500 residents. A route could operate between the Foresthill Community Center on Main Street and Auburn Station via Foresthill Road and Lincoln Way. Given the dispersed population in the area, service could deviate off route upon request. At a minimum, these services could consist of two round trips in each direction on

one day per week. A morning and afternoon trip allows for midday activities in the Auburn area. Table 59 shows the estimated ridership and minimum costs to provide this service.

Table 59. Operating Requirements and Performance – Lifeline Service to Foresthill One Day per Week

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
4	135	3,037	\$17,880

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
115	0.9	0.04	\$155.55

Note: Shaded bold cells meet or exceed the respective performance standard.

Conclusion: Do not include lifeline service to Foresthill in the draft service plan. Consider options to provide service through Western Placer Consolidated Transportation Services Agency (WPCTSA) and Seniors First Placer Rides.

Add Lifeline Service to Sheridan

Similar to Foresthill, lifeline service to the Sheridan area (population of about 1,400) would provide access one day a week to urban services such as shopping, nutrition, medical and social service programs. At a minimum, these services could consist of two round trips in each direction on one day per week. A morning and afternoon trip allows for midday activities in the Lincoln area and connections to other routes. A route could operate via SR 65 between the area near SR 65 and Riosa Road and a connection point in Lincoln (either the Twelve Bridges area or central Lincoln, depending on the routing of Route 20 and the terminus of the RapidLink service). Table 60 shows the estimated ridership and the minimum costs to provide this service.

Table 60. Operating Requirements and Performance – Lifeline Service to Sheridan One Weekday

Operating Requirements			
Daily One-Way Trips	Annual Vehicle Hours	Annual Vehicle Miles	Annual Marginal Operating Cost
4	100	4,212	\$18,466

Performance			
Annual Boardings	Boardings per Vehicle Service Hour	Boardings per Vehicle Service Mile	Marginal Operating Cost per Boarding
84	0.8	0.02	\$220.90

Conclusion: Do not include lifeline service to Sheridan as part of the draft service plan. Other options include adding a stop in Sheridan to Yuba-Sutter Transit’s planned route between Yuba City and the Galleria. Yuba-Sutter’s NextGen Transit Plan (2023) recommends one trip to be funded by the commuter service consolidation and a second trip if grant funding can be secured. Finally, service could be provided through WPCTSA and Seniors First Placer Rides.

6. SERVICE SCENARIOS

This chapter summarizes the three service scenarios:

- Current Operating Revenue
- Ten Percent Increase in Operating Revenue
- All Candidate Service Improvements

These scenarios include combinations of the candidate service improvements from Chapter 5 based on conclusions about their expected financial and ridership impacts. The scenarios are illustrative packages of improvements for discussion by the TAC. Based on the TAC's advice and further analysis, the revised list of improvements in the Current Operating Revenue Scenario will provide the base for the COA service plan. The service plan will also address improvements in the Ten Percent Increase in Operating Revenue Scenario to show the benefits of service improvements beyond those that are affordable with current operating revenues. In addition, the Short-Range Transit Plan will develop financial forecasts for operating costs and revenues in more detail, which could affect how much service can be provided over the next five years.

SCENARIO DEVELOPMENT

Building the scenarios began with the identification of candidate service improvements. Each improvement was categorized as coverage, frequency, productivity, or span improvement. The productivity improvements address services that perform well below the network averages. Examples of productivity improvements include adjusting frequencies or service spans, restructuring routes in an area, and determining routes or segments of routes that can be replaced with on-demand service or discontinued. The savings from the most beneficial and feasible productivity improvements will then be reinvested back into the network to increase overall ridership.

CURRENT OPERATING REVENUE SCENARIO

This scenario assumes no net increase in operating revenue. It focuses on making the system more productive by reducing underperforming services and reallocating the savings from those services to services with higher ridership potential. This scenario illustrates the basic core service changes to be included in the COA service plan. Figure 5 and Figure 6 are graphics showing the changes in the western and eastern portion of the COA study area, respectively.

Preliminary order-of-magnitude estimates are that the productivity improvements could save about over \$500,000 annually in marginal operating costs. These savings can be reallocated to improve service on other existing lines or provide new service that has higher ridership potential. Ridership for this scenario is estimated to increase by roughly 30,000 annual boardings (12% above PCT plus Auburn Transit FY 2022-23 levels).

Productivity improvements focus on Route 50, Route 60, and Route 70. In this scenario, Route 50 would be converted from a deviated fixed route to an on-demand service and cost savings would come from discontinuing Saturday service and reducing the weekday span of service. Productivity improvements on Route 60 come from discontinuing the route between Auburn and Colfax and reducing service from two

trips to one trip in each direction between Auburn and Sacramento. Other potential service changes to commuter service include coordinating with Roseville Transit to extend a trip between the Taylor Road/I-80 Park-and-Ride and Rocklin. Converting Route 70 to an on-demand service would reduce operating costs but is only feasible if some of the existing ridership could be carried by other fixed routes. Therefore, this change is paired with the extension of Route 20 to central Lincoln and addition of trips to Route 80.

Frequency improvements focus on upgrading Route 10 to run every 30 minutes during a few hours of the weekday that have high existing ridership.

Coverage improvements are included for the Lincoln, Rocklin, and Auburn areas. Extending Route 20 to central Lincoln would improve coverage between the Twelve Bridges area and central Lincoln (currently only a few trips on Route 20 extend to central Lincoln). Rocklin's coverage could be improved by a route change on Route 10 that adds a stop at Rocklin Station. Coverage in the Auburn area would be provided by the extension of Route 30 and expansion of on-demand service to the Bowman area.

Four of the on-demand service changes require more detailed planning during the COA service plan development. These include:

- Ridership estimates for converting Route 50 and Route 70 to Dial-A-Ride zones
- Ridership effects of service changes resulting from coordination between the Auburn OnDemand and Auburn/Highway 49 Dial-A-Ride services
- Operating cost estimates if the Granite Bay Dial-A-Ride service is modified and replaced by Roseville's Arrow service

Table 61 shows cost and performance information for the Current Operating Revenue scenario. Cells shaded in green with bold numbers indicates service that meets or exceed the performance standard for service increases (i.e., that is better than the average for the service category).

Table 61. Current Operating Revenue Scenario

Current Operating Revenue Scenario									
Category	Route	Change	Marginal Annual Operating Cost	Annual Vehicle Hours	Annual Vehicle Miles	Annual Boardings	Boardings per Vehicle Service Hour	Marginal Operating Cost per Boarding	Boardings per Vehicle Service Mile
URBAN/SUBURBAN FIXED ROUTE									
Frequency	10	Improve Weekday Headways from 60 to 30 Minutes Between 9:00 AM and 12:00 PM	\$229,711	1,518	44,781	14,673	9.7	\$15.66	0.33
Coverage	20	Extend Route to Central Lincoln (Walmart) and Replace Route 70 with Enhanced Lincoln Dial-A-Ride Service	\$289,504	3,050	25,315	15,742	6.2	\$15	0.75
Coverage	30	Extend Route from Auburn Station to Central Auburn	\$37,075	153	9,760	5,385	35.3	\$7	0.55
Productivity	60	Discontinue Route Between Auburn and Colfax	(\$89,621)	(565)	(18,216)	(189)	(0.3)	(\$474)	(0.01)
Productivity	60	Discontinue One Trip in Each Direction	(\$181,076)	(1,558)	(25,420)	(5,440)	(3.5)	(\$33)	(0.21)
Productivity	70	Replace with Enhanced Lincoln Dial-A-Ride Service and Add Trips to Route 80	(\$150,104)	(2,239)	(32,461)	TBD	TBD	TBD	TBD
RURAL FIXED ROUTE									
Coverage	50	Convert Route to a Dial-A-Ride Zone	\$0	0	0	TBD	TBD	TBD	TBD
Productivity	50	Reduce Weekday Service Span from 12 to 8.5 Hours (Assume Route Converted to a Dial-A-Ride)	(\$90,676)	(1,012)	N/A	(253)	(0.3)	(\$358)	(0.01)
Productivity	50	Discontinue Saturday Service (Assume Route Converted to a Dial-A-Ride Zone)	(\$19,612)	(442)	N/A	(260)	(0.6)	(\$75)	(0.03)
ON-DEMAND									
Productivity	Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand	Coordinate Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand Services	\$0	0	0	TBD	TBD	TBD	TBD
Productivity Savings			(\$531,089)	(5,815)	(76,097)	(6,142)	1.1	\$86	0.08
Service Increases			\$556,291	4,721	79,856	35,800	7.6	\$16	0.45
Change			\$25,202	-1,095	3,759	29,658	N/A	N/A	N/A

Note: Green shading and bold numbers indicates that serviceimprovement (coverage, frequency, span) exceeds minimum performance standard for service increases.

Figure 5. West County Current Operating Revenue Scenario

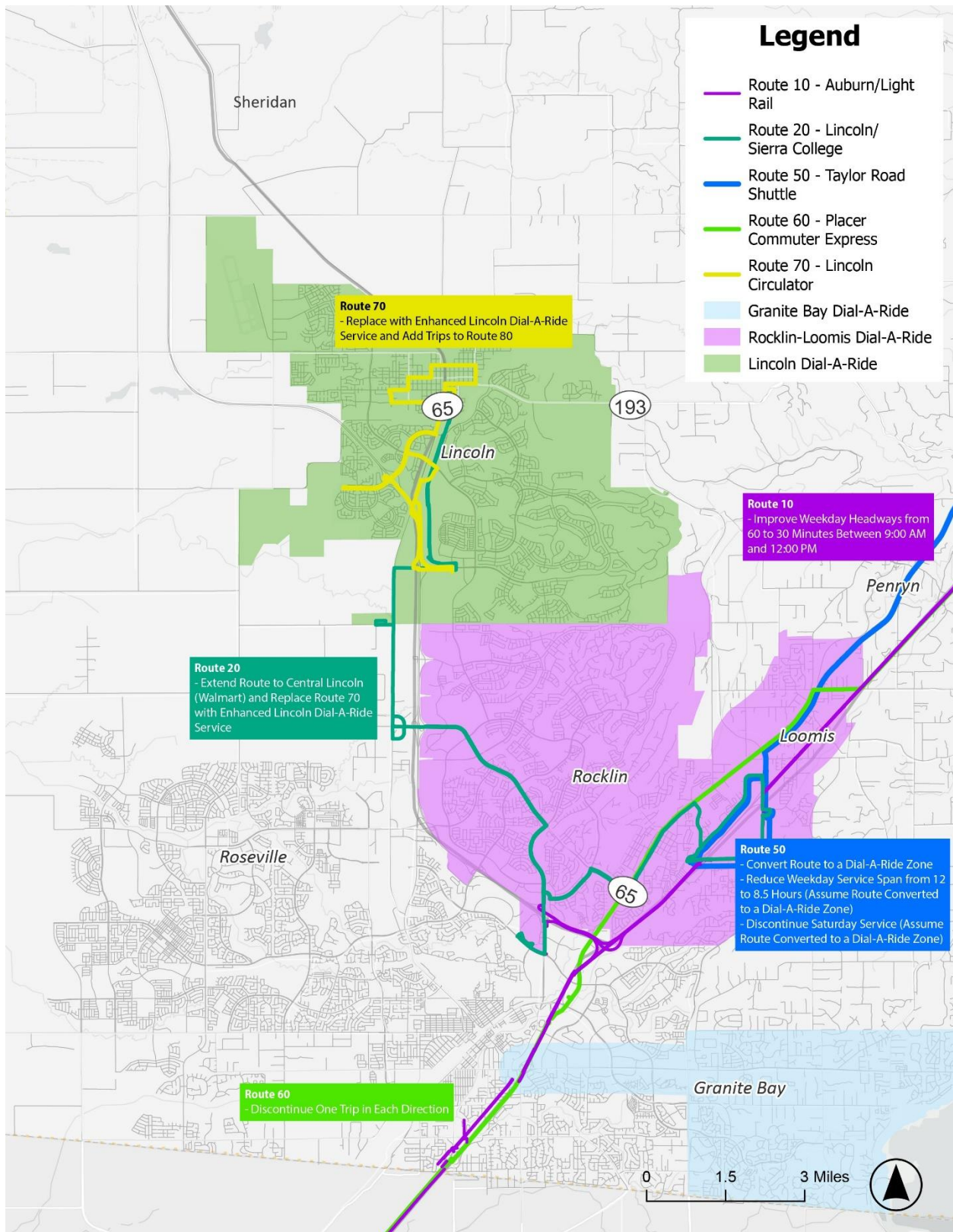
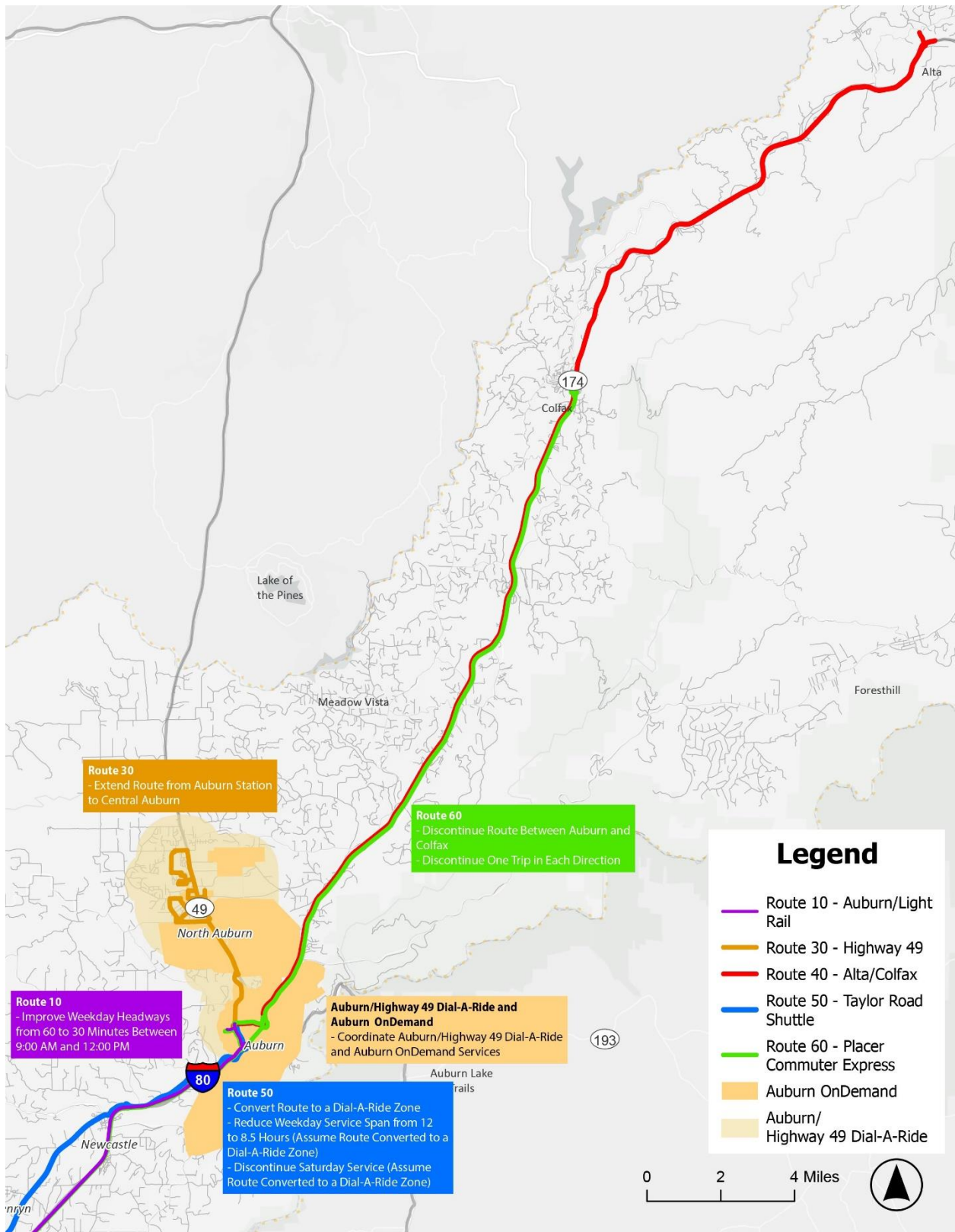


Figure 6. East County Current Operating Revenue Scenario



TEN PERCENT INCREASE IN OPERATING REVENUE SCENARIO

Based on FY 2022-2023 adopted budget operating expenses of \$9,979,968, a ten percent increase in current operating revenue yields about an additional one million dollars of operations funding. This scenario adds service in the form of increased frequencies, longer service spans, and new geographic coverage. The intent of this scenario is to illustrate priorities for improvements that would be possible if additional funding becomes available for transit operations. Figure 7 and Figure 8 are graphics showing the changes in the western and eastern portion of the study area, respectively.

Preliminary order-of-magnitude estimates show an overall ridership increase of about 75,000 annual boardings (31% above PCT plus Auburn Transit FY 2022/2023 levels) with an annual marginal operating cost increase of about one million dollars.

Productivity improvements from the Existing Revenues scenario are included in this scenario. Frequency improvements focus on upgrading Route 10, Route 20, and Route 30 to run every 30 minutes during times of the weekday that have high existing ridership. Coverage improvements beyond those in the Current Operating Revenues scenario include reconfiguring Route 20 in Rocklin so that it runs on the east side of SR 65 and a new route operates west of SR 65. This restructuring would need to be developed in concert with the potential extension of Route 20 to central Lincoln. It could also be impacted if RapidLink service between Galleria and Lincoln becomes permanent.

The other coverage improvements are the extension of on-demand service to the Bowman area (pending further discussions between PCT and Auburn Transit) and the extension of Roseville Arrow service to Granite Bay as a replacement for PCT Dial-A-Ride service (pending further discussions between PCT and Roseville Transit). Service span improvements on Route 40 would add trips after the current morning trip and before the afternoon trip.

Operating cost and ridership estimates for route changes in Northwest Rocklin between the Galleria and Lincoln will be developed as part of the COA service planning because they depend on assumptions about other route changes in the area as part of an interrelated network of routes. They will also involve further coordination with Roseville Transit.

Table 62 shows cost and performance information for the Ten Percent Increase in Operating Revenue scenario. Cells shaded in green with bold numbers indicates service that meets or exceeds the performance standard for service increases.

Table 62. Ten Percent Increase in Operating Revenue Scenario

Ten Percent Increase in Operating Revenue Scenario									
Category	Route	Change	Marginal Annual Operating Cost	Annual Vehicle Hours	Annual Vehicle Miles	Annual Boardings	Boardings per Vehicle Service Hour	Marginal Operating Cost per Boarding	Boardings per Vehicle Service Mile
URBAN/ SUBURBAN FIXED ROUTE									
Frequency	10	Improve Weekday Headways from 60 to 30 Minutes Between 9:00 AM and 5:00 PM	\$612,563	4,048	119,416	27,224	6.7	\$23	0.23
Coverage	20	Extend Route to Central Lincoln (Walmart) and Replace Route 70 with Enhanced Lincoln Dial-A-Ride Service	\$289,504	3,050	25,315	15,742	6.2	\$15	0.75
Frequency	20	Improve Weekday Headways from 60 to 30 Minutes Between 12:00 PM and 6:00 PM	\$358,451	3,036	51,612	22,260	7.3	\$16	0.43
Coverage	30	Extend Route from Auburn Station to Central Auburn	\$37,075	153	9,760	5,385	35.3	\$7	0.55
Frequency	30	Improve Weekday Headways from 60 to 30 Minutes Between 12:00 PM and 5:00 PM	\$228,030	2,530	16,445	8,438	3.3	\$27	0.51
Productivity	60	Discontinue Route Between Auburn and Colfax	(\$89,621)	(565)	(18,216)	(189)	(0.3)	(\$474)	(0.01)
Productivity	60	Discontinue One Trip in Each Direction	(\$181,076)	(1,558)	(25,420)	(5,440)	(3.5)	(\$33)	(0.21)
Productivity	70	Replace with Enhanced Lincoln Dial-A-Ride Service and Add Trips to Route 80	(\$150,104)	(2,239)	(32,461)	TBD	TBD	TBD	TBD
Coverage	N/A	Reconfigure Route 20 to Operate East of SR 65 and Add New Route to Operate West of SR 65	TBD	TBD	TBD	TBD	TBD	TBD	TBD
RURAL FIXED ROUTE									
Span	40	Add One Additional Round Trip	\$76,570	506	14,927	1,017	2.0	\$75	0.07
Productivity	50	Convert Route to a Dial-A-Ride Zone	\$0	0	0	TBD	TBD	TBD	TBD
Productivity	50	Reduce Weekday Service Span from 12 to 8.5 Hours (Assume Route Converted to a Dial-A-Ride Zone)	(\$90,676)	(1,012)	N/A	(253)	(0.3)	(\$358)	(0.01)
Productivity	50	Discontinue Saturday Service (Assume Route Converted to a Dial-A-Ride Zone)	(\$19,612)	(442)	N/A	(260)	(0.6)	(\$75)	(0.03)
ON-DEMAND									
Coverage	Granite Bay Dial-A-Ride	Adjust Service Span and Replace Service with Expanded Arrow Service Through Agreement with Roseville Transit	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Productivity	Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand	Coordinate Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand Services	\$0	0	0	TBD	TBD	TBD	TBD
Coverage	TBD	Expand On-Demand Service to Bowman Area	\$16,754	305	6,405	1,518	5.0	\$11	0.24
		Productivity Savings	(\$531,089)	(5,815)	(76,097)	(6,142)	1.1	\$86	0.08
		Service Increases	\$1,618,949	13,628	243,880	81,584	6.0	\$20	0.33
		Net Change	\$1,087,860	7,812	167,783	75,443	N/A	N/A	N/A

Note: Green shading and bold numbers indicates that service improvement (coverage, frequency, span) exceeds minimum performance standard for service increases.

Figure 7. West County Ten Percent Increase in Operating Revenue Scenario

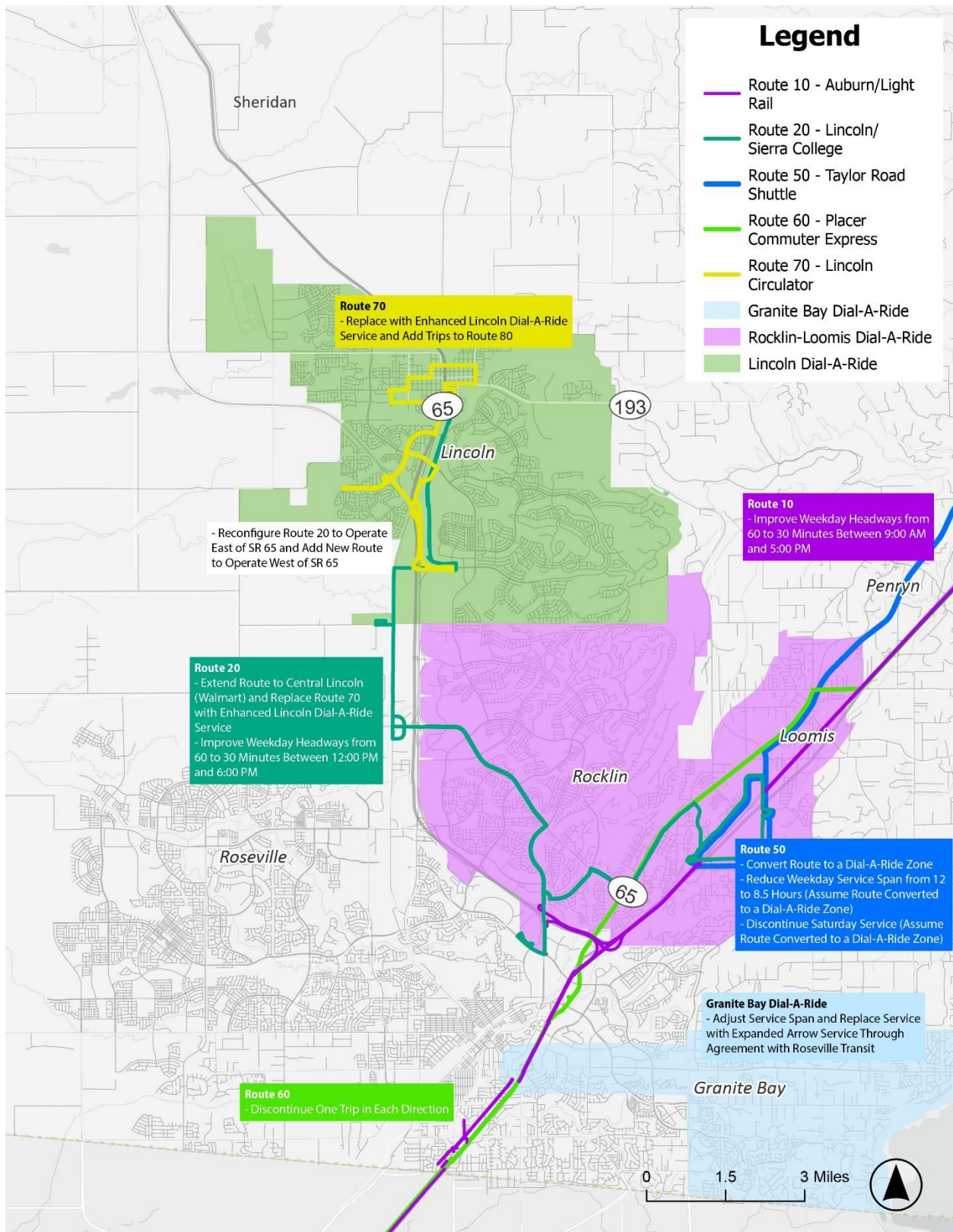
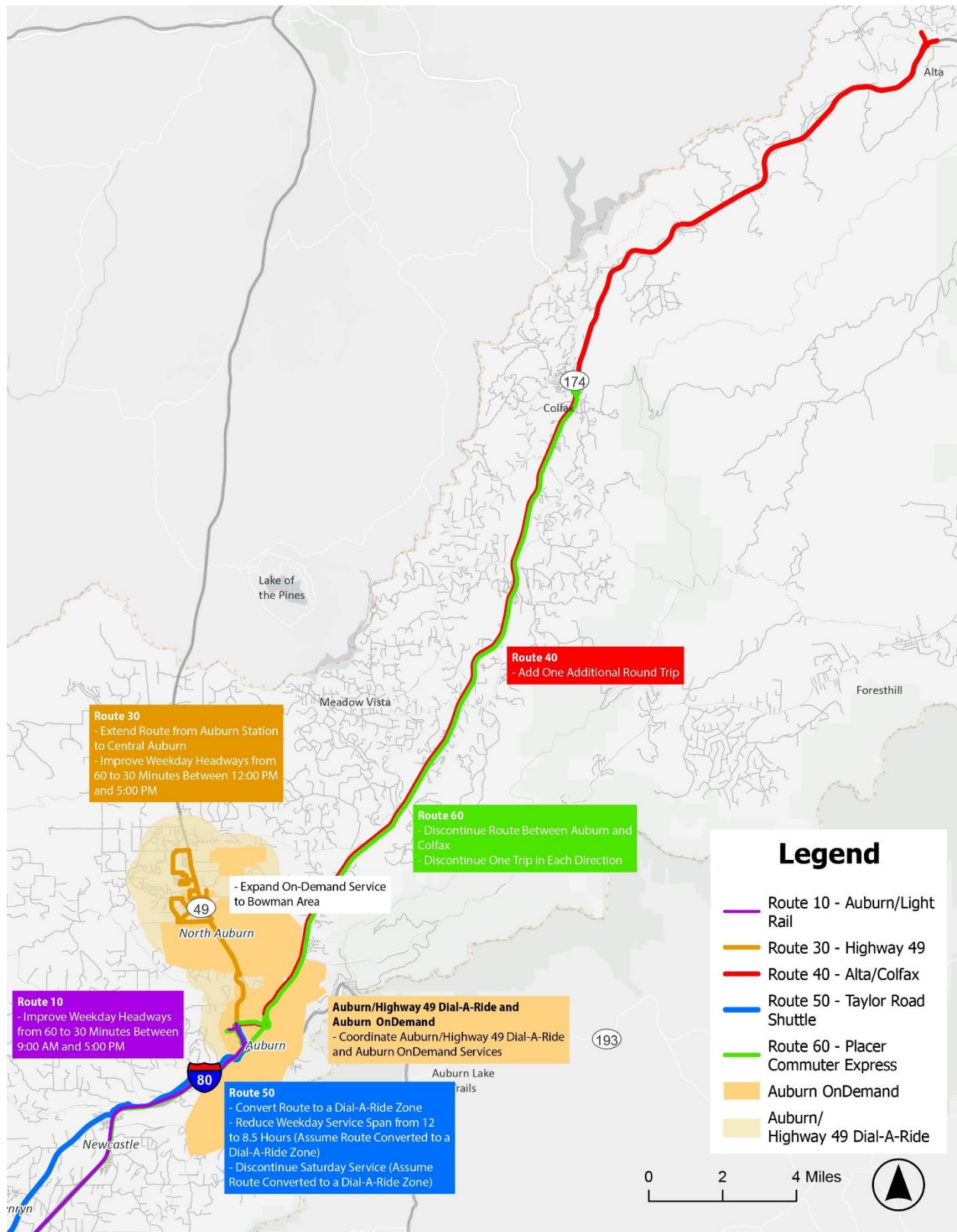


Figure 8. East County Ten Percent Increase in Operating Revenue Scenario



ALL SERVICE IMPROVEMENTS SCENARIO

This scenario includes all candidate service improvements that have been identified in the other two scenarios plus other changes identified by the project team and the TAC. This scenario is not constrained by an expected level of operating revenue as are the other two. The intent of this scenario is to highlight the types of improvements possible with a large increase in operations funding and to serve as an aspirational illustration of a more fully developed transit network for western Placer County. Figure 9 and Figure 10 show maps of the changes in the western and eastern portions of the study area, respectively.

Preliminary order-of-magnitude estimates for this scenario show an increase in annual operating costs of about 2.7 million dollars and an overall increase of about 121,000 annual boardings (roughly 38% increase in combined PCT and Auburn Transit ridership).

Productivity improvements from the other scenarios are included in this scenario. Frequency improvements focus on upgrading Route 10, Route 20, and Route 30 to run every 30 minutes between 8:00 AM and 6:00 PM. Coverage improvements beyond those in the Ten Percent Increase in Operating Revenues scenario include expansion of on-demand service to Placer One, the Vineyards area west of Roseville, and lifeline service to Foresthill and Sheridan. Service span improvements include new Sunday service on Route 10, Route 20, and Route 30 and the additional trips on Route 40.

Table 63 shows cost and performance information for the All Service Improvements scenario. Cells shaded in green with bold numbers indicates service that meets or exceeds the performance standard for service increases.

Table 63. All Service Improvements Scenario

All Improvements Scenario										
Category	Route	Change	Marginal Annual Operating Cost	Annual Vehicle Hours	Annual Vehicle Miles	Annual Boardings	Boardings per Vehicle Service Hour	Marginal Operating Cost per Boarding	Boardings per Vehicle Service Mile	
URBAN/ SUBURBAN FIXED ROUTE										
Frequency	10	Improve Weekday Headways from 60 to 30 Minutes Between 8:00 AM and 6:00 PM	\$765,704	5,060	149,270	32,789	6.5	\$23	0.22	
Frequency	10	Improve Saturday Headways from 60 to 30 Minutes	\$157,378	1,040	30,680	3,370	3.2	\$47	0.11	
Span	10	Add Weekday Evening Service from 7:00 to 9:00 PM with 60-Minute Headways	\$168,321	1,012	29,854	4,638	4.6	\$36	0.16	
Span	10	Add Sunday Service with 60-Minute Headways	\$159,672	960	28,320	4,342	4.5	\$37	0.15	
Coverage	20	Extend Route to Central Lincoln (Walmart) and Replace Route 70 with Enhanced Lincoln Dial-A-Ride Service	\$289,504	3,050	25,315	15,742	6.2	\$15	0.75	
Frequency	20	Improve Weekday Headways from 60 to 30 Minutes Between 8:00 AM and 6:00 PM	\$597,419	5,060	86,020	30,512	6.0	\$20	0.35	
Frequency	20	Improve Saturday Headways from 60 to 30 Minutes	\$122,790	1,040	17,680	3,058	2.9	\$40	0.17	
Span	20	Add Sunday Service with 60-Minute Headways	\$127,744	960	16,320	6,129	6.4	\$21	0.38	
Coverage	30	Extend Route from Auburn Station to Central Auburn	\$37,075	153	9,760	5,385	35.3	\$7	0.55	
Frequency	30	Improve Weekday Headways from 60 to 30 Minutes Between 8:00 AM and 6:00 PM	\$456,059	5,060	32,890	15,939	3.2	\$29	0.48	
Span	30	Add Sunday Service with 60-Minute Headways	\$100,925	960	6,240	2,803	2.9	\$36	0.45	
Productivity	60	Discontinue Route Between Auburn and Colfax	(\$89,621)	(565)	(18,216)	(189)	(0.3)	(\$474)	(0.01)	
Productivity	60	Discontinue One Trip in Each Direction	(\$181,076)	(1,558)	(25,420)	(5,440)	(3.5)	(\$33)	(0.21)	
Productivity	70	Replace with Enhanced Lincoln Dial-A-Ride Service and Add Trips to Route 80	(\$150,104)	(2,239)	(32,461)	TBD	TBD	TBD	TBD	
Coverage	N/A	Reconfigure Route 20 to Operate East of SR 65 and Add New Route to Operate West of SR 65	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
RURAL FIXED ROUTE										
Span	40	Add One Additional Round Trip	\$76,570	506	14,927	1,017	2.0	\$75	0.07	
Productivity	50	Convert Route to a Dial-A-Ride Zone	\$0	0	0	TBD	TBD	TBD	TBD	
Productivity	50	Reduce Weekday Service Span from 12 to 8.5 Hours (Assume Route Converted to a Dial-A-Ride Zone)	(\$90,676)	(1,012)	N/A	(253)	(0.3)	\$358	(0.01)	
Productivity	50	Discontinue Saturday Service (Assume Route Converted to a Dial-A-Ride Zone)	(\$19,612)	(442)	N/A	(260)	(0.6)	\$75	(0.03)	
Coverage	N/A	Add Lifeline Service to Foresthill	\$17,880	135	3,037	115	0.9	\$156	0.04	
Coverage	N/A	Add Lifeline Service to Sheridan	\$18,466	100	4,212	84	0.8	\$221	0.02	
ON-DEMAND										
Coverage	Granite Bay Dial-A-Ride	Adjust Service Span and Replace Service with Expanded Arrow Service Through Agreement with Roseville Transit	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Coverage	N/A	Expand Arrow Service to Placer Vineyards and Cook-Riolo/Vineyard Corridor Areas Through Agreement with Roseville Transit	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Coverage	N/A	Expand Dial-A-Ride to the Placer One Area	\$112,256	2,530	N/A	TBD	TBD	TBD	TBD	
Productivity	Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand	Coordinate Auburn/Highway 49 Dial-A-Ride and Auburn OnDemand Services	\$0	0	0	TBD	TBD	TBD	TBD	
Coverage	TBD	Expand On-Demand Service to Bowman Area	\$16,754	305	6,405	1,518	5.0	\$11	0.24	
		Productivity Savings	(\$531,089)	(5,815)	(76,097)	(6,142)	1.1	\$86	0.08	
		Service Increases	\$3,224,519	\$27,930	\$460,930	\$127,438	4.6	\$25	0.28	
		Net Change	\$2,693,430	22,114	384,832	121,297	N/A	N/A	N/A	

Note: Green shading and bold numbers indicates that service improvement (coverage, frequency, span) exceeds minimum performance standard for service increases.

Figure 9. West County All Candidate Service Improvements Scenario

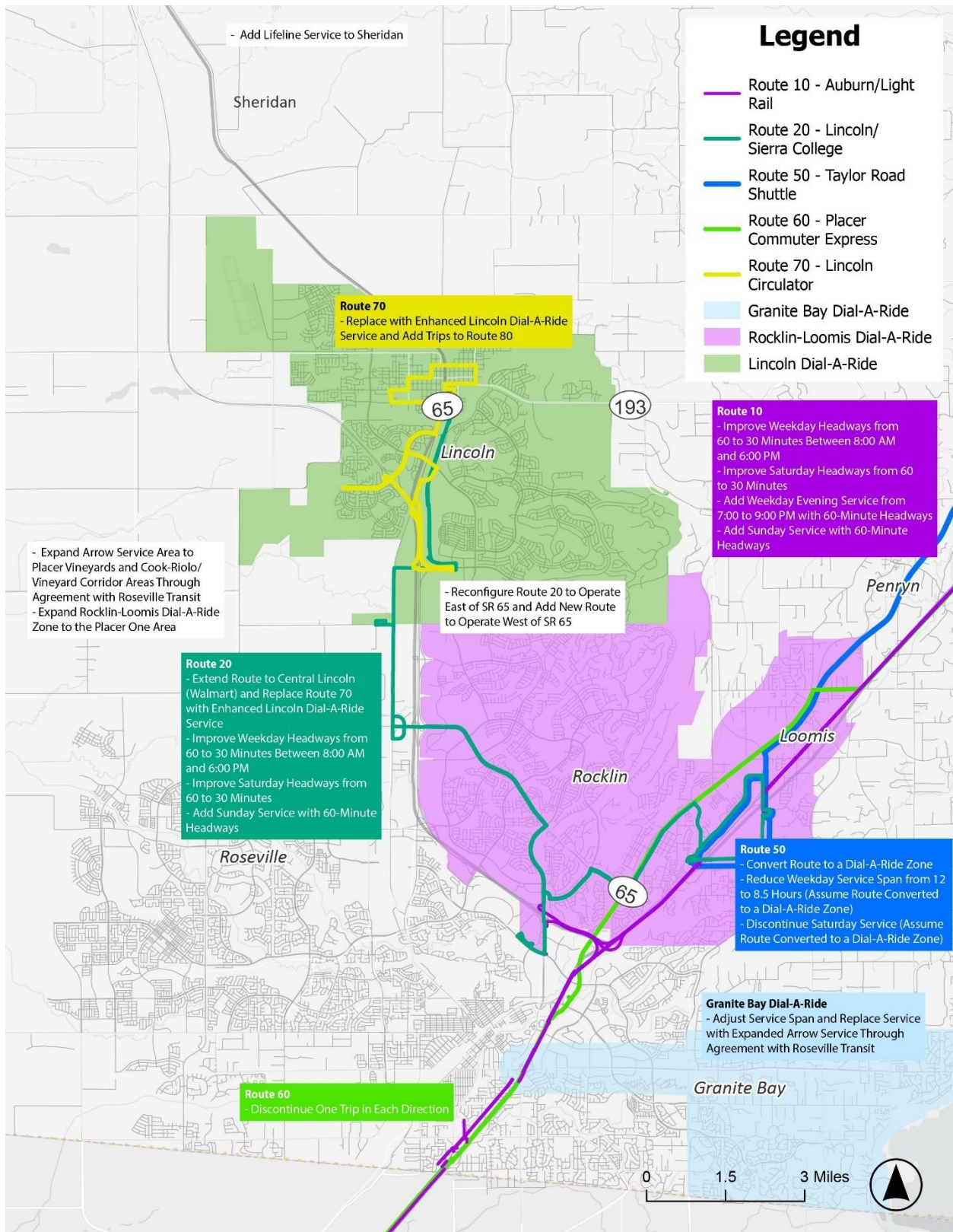
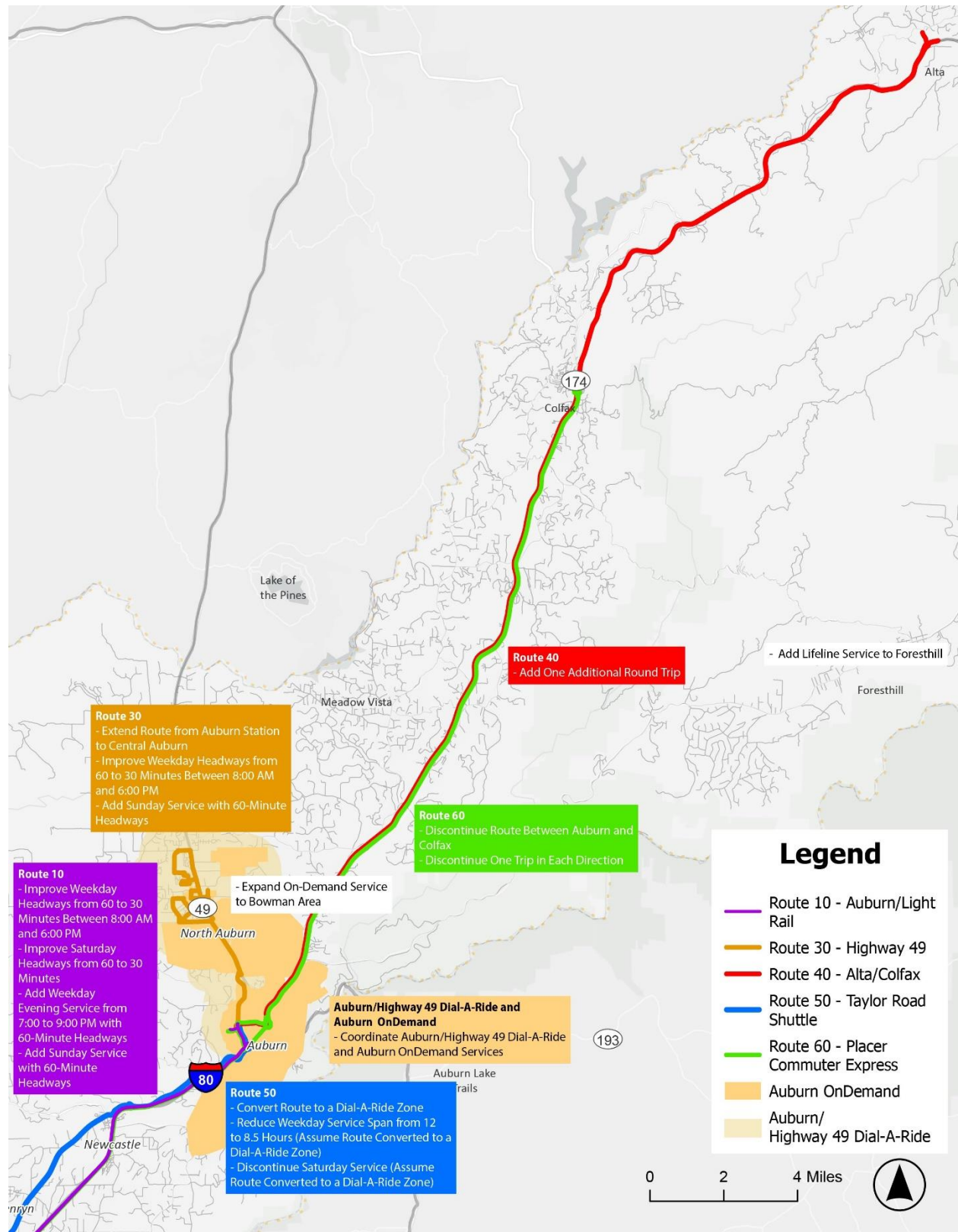


Figure 10. East County All Candidate Service Improvements Scenario



SUMMARY

A summary of the preliminary estimates for ridership and cost impacts of each scenario is in Table 64. These estimates provide a working assumption for TAC discussion and will be updated based on further analysis, TAC review, and discussions with Roseville Transit and Auburn Transit.

Table 64. Preliminary Scenario Summary Table

Scenario	Annual Marginal Operating Cost	Annual Boardings	Marginal Operating Cost per Boarding
Current Operating Revenue	\$25,202	29,658	\$16
Ten Percent Increase in Operating Revenue	\$1,087,860	75,443	\$20
All Candidate Service Improvements	\$2,693,430	121,297	\$26

The table illustrates how ridership can be increased without a large increase in operating costs by reallocating lower productivity services to services with higher ridership potential. The extent of this reallocation should be balanced with the need to provide basic service coverage in areas with lower ridership demand. Looking at the marginal cost per ride for just the service improvements in each scenario shows the diminishing returns as service level increases. The service increases in the Ten Percent Increase in Operating Revenue scenario are estimated to yield about six boardings per vehicle service hour, slightly less than the FY 2022-2023 PCT average of 6.5. The average boardings per vehicle service hour is about 5.0 in the All Service Improvements scenario.

Improvements listed in the Ten Percent Increase in Operating Revenue scenario will be refined based on TAC member comments and results of public outreach. They will then be subject to more detailed service planning work as a basis for their inclusion in the draft service plan.

APPENDIX: RAPIDLINK

RapidLink (formerly referred to as the South Placer Transit Express) is a three-year transit service pilot established to address a mitigation measure identified by the SR 65 widening project's environmental impact report and to assist with implementing a recommended service established in the Placer-Sacramento Gateway Plan. A significant portion of this pilot project is funded with the State's Solutions for Congested Corridors Program, which stipulates the route's general service corridor, limited stop characteristic, and operating frequency.

OVERVIEW

RapidLink would run between Lincoln, Roseville, and the Watt/I-80 Light Rail Station in Sacramento County with a limited number of stops in each direction. RapidLink will supplement the existing network and not replace existing PCT services during the pilot phase. Service would be weekdays-only with buses arriving every 30 minutes. There will be about a seven-minute dwell time in each direction at the Galleria for electric bus charging.

RapidLink will have positive overall effects on ridership in western Placer County. Previous RapidLink ridership projections were based on pre-pandemic travel. Ridership for the existing network has declined as a result of the pandemic (see Technical Memo #1 for more discussion of the pandemic's impact on PCT ridership). Route 10 is comparable to RapidLink in terms of route length, number of stops, the connection with light rail at Watt/I-80, and connections with PCT and Roseville Transit bus routes at the Galleria. FY 2022-2023 ridership on Route 10 is 69% of the pre-pandemic number (89,095 in FY 2018-19 and 61,577 in FY 2022-23).

The pilot has an estimated annual operating cost of about \$1.7 million to \$2 million per year. Operational funding for service beyond the pilot phase is not yet identified.

PCT and Roseville Transit are working to determine additional assumptions for the pilot route. Current working assumptions are:

- The northern terminal of the route will be at the existing park-and-ride lot at the SR 65/Industrial Avenue interchange. Connections between RapidLink and other PCT services at the park-and-ride will be further analyzed.
- In addition to the park-and-ride lot and the Watt/I-80 Light Rail Station, the route will also serve the Galleria, Sutter Roseville Medical Center, and Kaiser Permanente Roseville Medical Center. The specific routing to serve the hospitals in Roseville and between the Galleria and Lincoln is still being discussed.

Key decisions for the conclusion of pilot phase include:

- How will the pilot be evaluated to decide if it should become a permanent fixture in the Placer County transit network?
- If the pilot does become permanent, what routing and level of service will be provided, what funding sources will be used for the service, and what changes to the existing network would occur?

IMPACT OF RAPIDLINK ON ROUTE 10 AND ROUTE 20 RIDERSHIP

While the RapidLink project will increase overall ridership, it will divert some existing trips from Route 10 and Route 20. Therefore, schedules for RapidLink and other routes in the areas where the routes significantly overlap should be coordinated to provide more opportunities for riders to take either service to common destinations such as the Galleria. This section outlines the potential impact of the pilot on Route 10 and 20 ridership.

Some of the passengers now boarding or alighting Route 10 at the Galleria to travel to or from Watt/I-80 might instead use RapidLink since the service will run two trips per hour and Route 10 only has one trip per hour. Based on the Fall 2023 Origin/Destination survey, an estimated 56 weekday boardings on Route 10 (26%) are by passengers travelling in both directions between the Galleria and Watt/I-80. Thirty-eight of these 56 weekday boardings are expected to switch to RapidLink since the service's two trips per hour is two-thirds of the combined three trips per hour on Route 10 and RapidLink. This would reduce Route 10 weekday boardings from 216 to 178 (18%).

Existing Route 20 passengers from Lincoln might instead use RapidLink between Lincoln and the Galleria. There are an estimated 70 weekday boardings plus alightings on Route 20 at Twelve Bridges Library. If two-thirds of these 70 boardings plus alightings switch to RapidLink, the estimated weekday ridership loss on Route 20 would be about 47 boardings (from 201 to 154, or a reduction of 24%).

The following effects are estimated if Route 10 ends at Galleria (rather than continuing to Louis and Orlando and Watt/I-80) and RapidLink is the only service between Galleria and Watt/I-80. Loss of existing weekday ridership on Route 10 would be about 33%, including all weekday trips between Galleria and Louis and Orlando (5%), between Galleria and Watt/I-80 (26%), and between Louis and Orlando and Watt/I-80 (2%). In addition, a portion of the trips from Sierra College and Auburn to Louis and Orlando and Watt/I-80 (24%) would be lost due to the need to transfer at the Galleria. Assuming half of these trips are lost results in a total ridership loss of 45%. If all trips requiring a transfer are lost, the ridership loss on Route 10 is 57%.

If the pilot project becomes a permanent service, there could be opportunities to restructure existing routes to enhance overall transit access in western Placer County and enhance ridership outcomes. There is potential for incorporating RapidLink as part of the network with accurate and timely connections to and from other routes in the network. Coordinating schedules could provide the potential for more riders to use the network if they are able to transfer between services at key areas such as the Galleria to complete their trip.