



Tuolumne County Transit

SHORT-RANGE TRANSIT PLAN

2020-2025



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Chapter 1: Introduction and Context

PURPOSE

The purpose of the Short-Range Transit Plan (SRTP) is to guide the development of public transportation services for Tuolumne County residents and visitors over the next five years, from FY20/21 to FY24/25. More specifically, the SRTP:

- Provides opportunities for public input regarding transportation needs and how Tuolumne County Transit (TCT) might effectively address them
- Conducts market research to determine who is riding Tuolumne County Transit, how they are using the system, how satisfied they are with the services provided, and priorities for improvements
- Evaluates the recent performance of existing services
- Provides priorities for service plan and fare recommendations over the next five years
- Establishes a detailed operating and capital financial plan
- Update on zero emission bus requirements.

COORDINATED PLAN DEVELOPED IN PARALLEL

A Coordinated Public Transit-Human Services Transportation Plan (Coordinated Plan) was developed in parallel with the SRTP. The Coordinated Plan is required by the Federal Transit Administration (FTA) and specifies that projects selected for funding in several grant programs, including FTA Section 5310, be *“included in a locally developed, coordinated public transit-human services transportation plan.”* These plans must be *“developed and approved through a process that included participation by seniors, individuals with disabilities, representatives of public, private and non-profit transportation and human service provider and other members of the public.”* The Coordinated Plan has been developed as a separate volume. A few of the chapters overlap and are repeated in both the SRTP and Coordinated Plan.

COVID-19 UPDATE

Approximately 80% of the work on the first five chapters of the SRTP were completed prior to the shelter in place order from Governor Newsom on March 19, 2020 in response to the COVID-19 crisis. In response to COVID-19, TCT management transitioned to a general public Dial-A-Ride service throughout the service area and suspended all fixed route operations on March 23, 2020. General public Dial-A-Ride has historically been utilized by rural counties throughout the United States to provide mobility services to their residents and employees working in their community. In many communities, the general public Dial-A-Ride service is very much like fixed route service, in that a member of the public calls and asks for a

ride. Policies differ from community to community, with some requiring a 24-hour advance reservation and others allowing same day requests, typically two hours before a ride is needed.

The initial General Public Dial-A-Ride service in Tuolumne County was for essential trips only with no fares being charged. About 70% of the trip requests are made the same day the trip is provided. With schools closed, and discretionary trips eliminated, demand levels started out with reasonable demand, but rapidly increased to a peak of 140 passengers per day. To enforce social distancing, no more than three passengers were being transported at any one time (unless they are a family unit). Typically, four or five Dial-A-Ride vehicles are being operated. However, up to eight vehicles can be operated and on some peak days and times all eight vehicles are being operated to keep up with growing demand. There have been no trip denials. Demand is continuing to grow each week, and it is quite possible that available capacity may be reached, meaning that dispatchers will need to start negotiating with passengers the time when the desired trip can be provided.

On July 1, Route 1 started fixed route service on its normal schedule. No fares are being charged.

There is a great deal of uncertainty on both the short-term and long-term impacts of COVID-19 to Tuolumne County Transit passengers, drivers and management. It is very likely that TCT passenger demand and revenue sources will be significantly impacted in both FY 19/20 and FY 20/21. However, both Federal and California governments have responded to mitigate the initial impacts. In Chapter 5, Service Alternatives, a section has been added on a proposal for TCT service responses and fare policies based on several milestones being reached for easing shelter in place restrictions.

SRTP CHAPTER DESCRIPTIONS

The following is a description of the first five chapters of the SRTP:

Chapter 2: Existing Services and Performance describes existing services, presents recent service level changes, provides basic performance of key performance indicators by route, and summarizes passenger boardings by stop.

Chapter 3: Transit Needs Assessment describes public outreach efforts and methodology, the existing and projected demographics of Tuolumne County, results of the onboard passenger survey, and key themes of the extensive outreach and demographic analysis.

Chapter 4: Performance Data and Trend presents key performance indicators for each of the TCT regular fixed-route and Dial-A-Ride services and describes trends from Fiscal Years 15/16 through 18/19. Internal financial tracking spreadsheets are the data source for the base inputs of ridership, service hours, service miles, operating costs, and fare revenue. The farebox recovery ratio presented at the systemwide-level analysis below factors in revenues that are applicable towards farebox recovery, which are from fares, advertising and a partnership with Columbia College.

Chapter 5: Service and Fare Alternatives Analysis provides an analysis of potential service improvements that can be made within available financial resources, service improvements that would require additional financial resources, a 18-24 month response to COVID-19 based on milestones in easing the shelter in place, essential travel, social distancing restrictions, and associated fare policy responses.

Chapter 6: Operating and Capital Financial Plan provides details on service supply, baseline operating costs, costs for potential service improvements, and baseline operating revenues. The capital cost section provides an inventory of the existing fleet, information on zero emission bus requirements with a comparison of vehicle procurement pricing with internal combustion engines and pricing with electric vehicle procurement. Recommendations are made for vehicle procurement, charging stations, charging infrastructure and bus stop improvements over a five-year period. Finally, capital revenues are reviewed and recommendations are made on how to fund the capital cost procurements over the five-year SRTP planning horizon.

Chapter 2: Existing Services & Performance

OVERVIEW OF TUOLUMNE COUNTY PUBLIC TRANSIT SERVICES

Tuolumne County Transit (TCT) provides a mix of mobility services to residents and employees living and working in Tuolumne County communities. This section describes five fixed routes, Dial-a-Ride service weekdays and on Saturday, and other special services operated by TCT through its contractor Storer Transportation. *These are the services that were provided prior to the COVID-19 shelter in place order implemented in March 2020.* Additional TCT initiatives presented include its technology tools, the volunteer driver mileage reimbursement program, TRIP, and the free fare program for Columbia College students.

Fixed Route

Tuolumne County Transit implemented significant routing changes in November 2017, to serve its new Transit Center in Sonora and to eliminate the poorly performing Route 6, which had connected East Sonora communities (Phoenix Lake, Sonora Meadows, Crystal Falls) with Sonora.

The base fare for a TCT fixed-route trip is \$2 per trip, with fare detail provided in Figure 2. Tuolumne Transit operates an accessible fleet of 20 vehicles on five routes. Figure 3 illustrates the TCT system map.

Route 1 - Sonora Loop

Route 1 travels in and around Sonora Mondays through Fridays, with the first route starting at 6:40 a.m. at the Sonora Post Office. Major destinations along the route include the Sonora High School and Courthouse Park, residential areas at Blackberry Oaks and Greenly road apartment complexes, the Social Services Department (and surrounding residential neighborhoods), Senior Center and Library, Adventist Health Hospital, Timberhills and The Junction shopping centers and Wal-Mart. The route comes through the Transit Center hourly, departing on the half hour between 7:30 a.m. and 6:30 p.m. Various flag stops and on-demand stops can be made along the route. Route 1 was restored on July 1, 2020 with no fares. It is the only fixed route being operated.

Figure 1, Tuolumne County Transit Fares

Fixed Route		Dial-A-Ride	
\$2.00	General	\$3.00	General
\$1.00	Discounted*	\$7.00	Day Pass
\$5.00	Day Pass		
* Veterans, Seniors, Medicare, ADA, Students			
Monthly Passes			
\$60.00	Fixed Route		
\$40.00	FR Discounted		
\$100.00	Dial-A-Ride/All-Services		
Ticket Books (15 per book)			
\$28.00	Fixed Route		
\$14.00	FR Discounted*		
\$45.00	Dial-A-Ride		
* Veterans, Seniors, Medicare, ADA, Students			

Route 2 - Sierra Village/Sonora

Route 2 connects Sierra Village with the Transit Center Mondays through Fridays, providing west bound trips every two hours starting at 6:25 a.m. in Sierra Village and traveling through the communities along Route 108, including Mi-Wuk Village, Sugar Pine, Twain Harte and Soulsbyville into Sonora. Key destinations along the route include the East Sonora businesses and professional offices along Mono Way, The Junction Shopping Center, the Wal-Mart at Crossroads Shopping Center and the Veterans Administration. The first east bound trip leaves the Sonora Transit Center at 7:25 a.m. Various flag stops can be made along the route.

Route 3 - Jamestown/Sonora/Columbia

Route 3 connects Columbia College with Sonora and Jamestown Monday through Friday. Service runs four times a day, leaving the Transit Center at 6:30 a.m. to travel to Jamestown returning to Sonora via Wal-Mart and the Transit Center to Courthouse Park and Sonora High School to arrive at Columbia College by 7:51 a.m. Route 3 leaves Columbia College on three additional runs at 10:51 a.m., 1:51 p.m. and 4:51 p.m. Transfers to Calaveras Connect are possible at Columbia College.

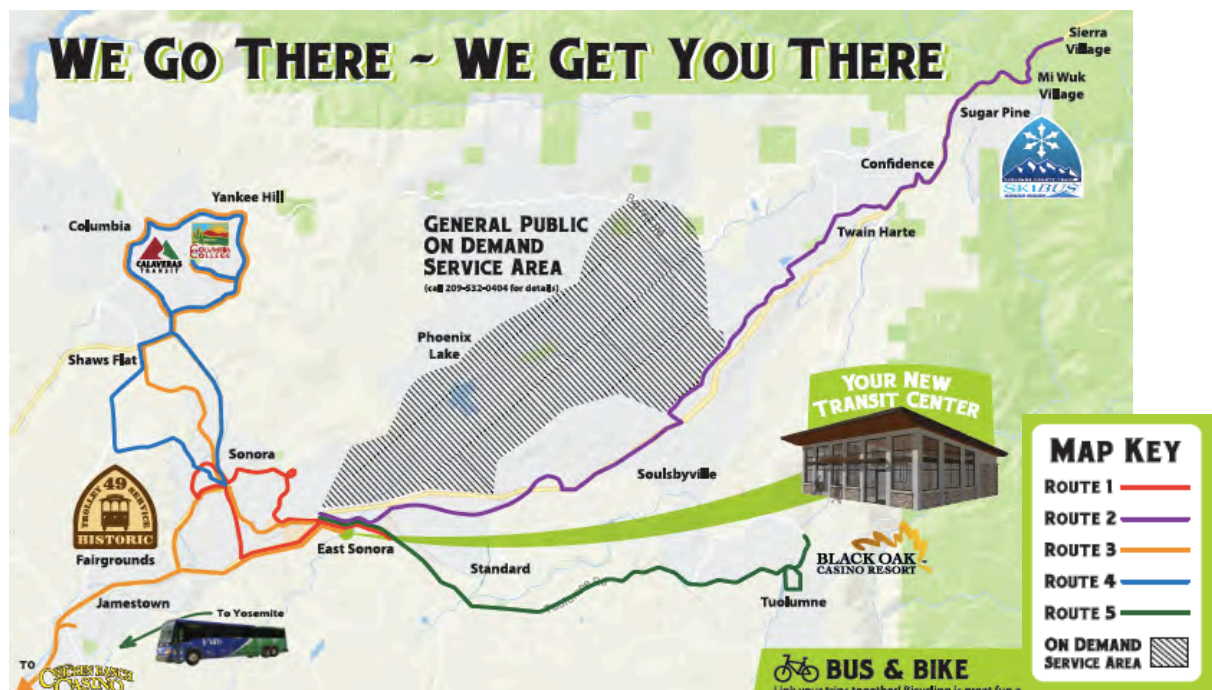
Route 4 - Sonora/Columbia

Route 4 provides a more direct connection with Columbia College, leaving the Transit Center four times daily, beginning at 9:25 a.m. and arriving at Columbia College approximately 30 minutes later, traveling by Courthouse Park, Racetrack Rd and through historic Columbia. The buses leave Columbia College for the return trip at 10:02 a.m., 1:02 p.m., 4:02 p.m. and 7:02 p.m., traveling via Highway 49 and Courthouse Park to the Transit Center. Transfers to Calaveras Connect are possible at Columbia College.

Route 5 - Tuolumne/Sonora

Route 5 connects Tuolumne townsite with the Transit Center, providing six daily round trips. The first bus leaves The Junction Shopping Center at 6:25 a.m. and travels to the Tuolumne Post Office by 6:43 a.m. to Black Oak Casino Resort by 6:49 a.m. and arriving back at The Junction Shopping Center by 7:10 a.m., Wal-Mart by 7:18 a.m. and arriving at the Transit Center by 7:25 a.m. Buses leave the Transit Center at 7:30 a.m., 10:30 a.m., 12:50 p.m., 2 p.m. and 6 p.m. The latest return to the Transit Center is 7 p.m., leaving the Tuolumne Post Office at 6:25 p.m.

Figure 2, Tuolumne County Transit System Map



Tuolumne County Transit Dial-a-Ride

Weekday Service

Tuolumne County Transit Dial-a-Ride accessible services are available **on weekdays** to three groups:

- Older adults (age 60+) and to persons with disabilities
- Americans with Disabilities Act Certified individuals
- General public persons traveling to or from the Phoenix Lake/Crystal Falls area, formerly served by Route 6.

This is an advance-reservation service. Riders must call Tuolumne County Dispatch at (209) 532-0404 to request a trip at least one day in advance, no later than 4 p.m. the day before. On-demand trips will be served to the extent that there is space available in the manifest dispatched to TCT vehicles. Riders are provided with a promised pick-up time and can expect the vehicle within 15 minutes prior to that time and up to 15 minutes after that time, a 30-minute pickup window.

Service is available on weekdays between 6:25 a.m. and 7:25 p.m., the hours during which TCT fixed-route service is available. A one-way trip fare is \$3.00. Tuolumne Transit Dial-a-Ride fleet consists of 10 wheelchair-accessible vehicles.

Weekend Service

On Saturdays the Tuolumne County Transit Dial-a-Ride converts to a general public service and operates for five hours, between 11 a.m. and 4 p.m. Again, this is an advance-reservation service and trip requests must be made at least the day before. Some same-day service may be possible, but on a space-available basis only. Fares for the Saturday Dial-a-Ride are \$3 for a one-way trip.

As explained earlier in Chapter 1, general public dial-a-ride replaced all fixed route services in March 2020. The service is operated six days a week. On July 1, 2020, Route 1 was restored.

Other Special Services

Tuolumne Adventure Trolley - Historic 49

On Saturdays between May and September, the Adventure Trolley provides free trips among Sonora, Columbia and Jamestown via a loop which includes East Sonora to the downtown Sonora Visitors' Center, through to Columbia Airport and Columbia State Historic Park to return back through Jamestown to East Sonora. Its intent is to give visitors a tour of the area via this 90-minute loop, which makes nine daily runs, enabling riders, for example, to get off and enjoy the Columbia State Historic Park and Fallon Theater and return on a later run. It also provides service for local riders travelling between communities.

Dodge Ridge SkiBUS

On weekends and holidays, this Sonora to Dodge Ridge seasonal service operates during ski season, generally from season opening through April, depending upon conditions. The round-trip service costs just \$10 for a trip that leaves downtown Sonora at 7 a.m. and departs from Dodge Ridge at 4:30 p.m., on weekends and holidays. The SkiBUS is outfitted to handle skiers'/riders' gear. Reservations are encouraged, placed through Tuolumne County Transit's main reservations and dispatch number of (209) 532-0404, but not mandatory. Remaining capacity is available on a first come first served basis.

Pinecrest Service

On weekends and holidays, this service connects the Pinecrest Lake recreation area with Sonora between Memorial Day through Labor Day. The bus makes an a.m. trip up from Sonora to Pinecrest, leaving Jamestown at 8 a.m. and arriving at Pinecrest Lake drop area by 9:30 a.m. The bus operates around the Pinecrest Lake at 20-minute intervals throughout the day, before making the return trip to Sonora at 4:00 p.m. for arrival back in Jamestown by 5:30 p.m. The round trip is \$10 with discounts for families. There is some, but limited, space to carry picnic and camping gear. This service may be terminated in 2021 as all Low Carbon Transit Operations program dollars used to fund the program have been expended.

Other TCT Initiatives and Innovations

Opening the Tuolumne Transit Center

At the end of 2017, Tuolumne County Transit opened its new Transit Center at 12879 Justice Center Drive in Sonora. The 1,345-square-foot building and 520-square-foot bus shelter were built using a mix of federal, state and local funds. Various traveler amenities are provided, including air conditioning, wifi, bathrooms and cushioned seats for those who are waiting.

The new transit center is located on the Law and Justice Center campus, which serves as the primary transfer location.

To accommodate the new transit center, TCT routes had to be modified to incorporate the facility. Service changes were implemented in November 2017, bringing the routes into the new transit center with timing that facilitates transfers among all five existing routes.



Route 6 connecting Phoenix Lake-Cedar Ridge with Sonora was eliminated at this time, due to low passenger fare recovery rates, which were well below the state required standards. Route 6 was replaced with weekday general public dial-a-ride service available between 9 a.m. and 4 p.m. Although this is an advance-reservation service, on-demand trips requested may be made, if space is available.

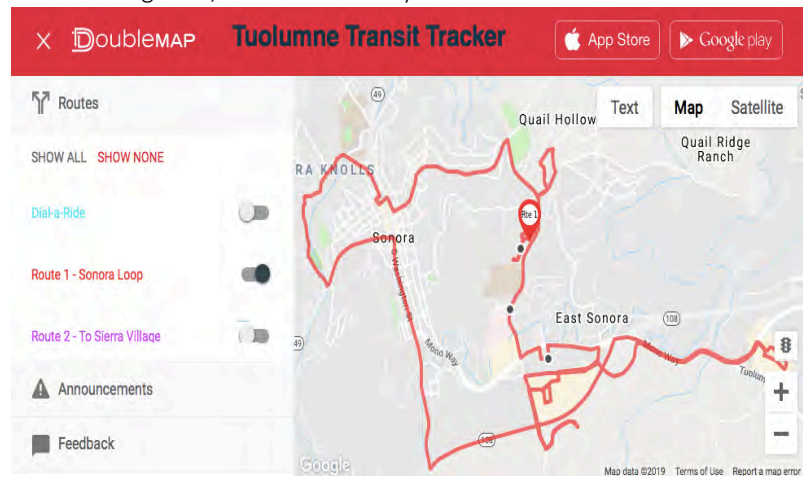
Assisting Tuolumne Transit Riders with Real-Time Bus Information

Tuolumne County Transit provides real-time information through its Tuolumne Transit Tracker. This provides map-based information about where the bus is located to customers on any of the five fixed-routes and on the Dial-a-Ride service. This real-time application works on desktop computers,

smartphones, but can also be used by calling into an automated phone number for predictions of bus arrival times.

The Transit Tracker (Figure 4) shows the rider where the buses are in real-time and provides confidence to the prospective rider as to when to go out to their nearest bus stop. Importantly, this provides information both about TCT's five fixed routes and also for its Dial-a-Ride program, a unique aspect of the Tuolumne Transit Tracker.

Figure 3, Tuolumne County Transit Real Time Tracker



Columbia College Free Fare Program on Tuolumne Transit

Columbia College is an important destination for the two-county area, Tuolumne and Calaveras counties. Tuolumne County Transit established a free-fare opportunity for students during 2018, using funding from Columbia College Foundation, Associated Students and Special Programs.

Students living in Tuolumne County numbered 4,692 during the most recent year, both full-time and part-time. If a student attended both semesters, the student is counted twice in Table 1. Table 1 shows that more than half (53%) of these students live in Sonora. Jamestown contributes about 17% of students while Twain Harte, Columbia, Tuolumne and Soulsbyville are each home to between 4.2% to 6.7% of Columbia College students. Other Tuolumne County communities are home to smaller but still significant numbers of students.

Table 1, Columbia College Students' Home Community in Tuolumne County

95370	2,500	Sonora
95327	811	Jamestown
95383	313	Twain Harte
95310	291	Columbia
95379	287	Tuolumne
95372	197	Soulsbyville
95321	95	Groveland
95329	75	La Grange
95346	50	Mi Wuk Village
95309	22	Chinese Camp
95364	14	Pinecrest
95305	13	Big Oak Flat
95335	13	Long Barn
95373	11	Standard
Total		4,692

Columbia College total fall enrollments averaged about 680 full-time students and 2,275 part-time students over the last three years. Spring enrollments are slightly smaller, averaging 620 full-time students and 2,250 part-time students. Summertime enrollments are dominated by part-time students, averaging 1,175 annually over the last three years and slightly more than 20 full-time students.

Tuolumne TRIP Mileage Reimbursement Program

This special program aims to assist individuals who need transportation and cannot use Tuolumne County Transit. This may be because the fixed route buses or Dial-A-Ride does not come near them or travel to where they need to go, or because they need door-through-door assistance. Both persons and trips taken must meet general eligibility criteria.

Persons are eligible if they cannot be served by an existing transportation program AND are 1) age 60 or older, 2) veterans or 3) low income. Trips are eligible for purposes that may include: healthcare, drug and alcohol rehabilitation, religious activities, personal errands, visiting family and friends, banking, shopping, recreation, volunteering and more.

This program of TCT involves an application process, approval of the individual and of the trips requested, and establishment of a monthly mileage cap for that individual. Generally, that mileage cap is about 300 miles per month and trips are reimbursed based upon actual mileage at \$0.55 per mile. There are some mileage constraints based upon where the applicant lives, whether within Sonora or elsewhere in the County. Changes were made during 2019 to enable agencies to apply to the program on behalf of consumers, where the individual's circumstance or other factors pointed to the needs for agency involvement.

With an initial start-up budget of just \$10,000, the program has not been widely promoted so that expectations would not exceed demand. However, TCT recently developed a new flyer to announce the program and its guidelines and is widely distributing that.



Coordination with YARTS

Another important public transportation service into Tuolumne County is the Yosemite Area Regional Transportation System (YARTS) bus, with which Tuolumne County has partnered to help promote this public transit alternative into Yosemite National Park. Described further in the Inventory tables following, the Sonora to Yosemite Bus Route is one of four routes operated by YARTS. Between May through September, YARTS provides service connecting Sonora with Big Oak Flat/Groveland and on into the Yosemite Valley. On the shoulder months, through May and during September, a single round trip per day is provided. Beginning Memorial Day and continuing until Labor Day, there are three round trips daily between Sonora and the Yosemite Valley Visitor Center. The fare is \$32/\$18 (discounted) per adult (which also includes a child fare) and the Park entrance fee.

HUMAN SERVICE TRANSPORTATION PROVIDERS, NON-PROFIT AND PUBLIC

Tuolumne County has a solid mix of human service agency transportation options of several types:

- Funders of transportation include the **Area Agency on Aging--Board 12** supporting direct operations provided by **Common Ground's Silver Streak** and **Adventist Health Sonora** contracting for transport.
- Non-profit and voluntary agencies providing varying quantities of transportation include **Common Ground's Silver Streak**, **NexSTEP Transportation**, and both **South Side Community Connections/ WHEELS** and **ATCAA's Promotores de Salud** where volunteers use their own vehicles to provide transport. Recently the **WATCH**, **Catholic Charities** and **RideAssist** programs terminated their transportation services.
- County agencies with transportation components include the **Tuolumne County Behavioral Health Services**, **County Public Health** and the **Department of Social Services**, transporting enrolled consumers to agency programs, sometimes with paid drivers and agency vehicles, sometimes with case managers using their own vehicles. The **County Veterans Services** and the **Veterans Administration** collaborate on the Veterans Bus which leaves Sonora very early each weekday morning for VA facilities in the Central Valley and beyond.

Additionally, a small group of regional and county agencies are listed who may purchase transportation bus passes, fund specialized transportation under contract or provide it via staff with staff or agency-owned vehicles.

PRIVATE SECTOR TRANSPORTATION

Private providers include **Blue Mountain Transportation** who provides contracted transportation to clients of **Valley Mountain Regional Center**, for **WATCH** and **Community Compass** programs. Private sector **Frontier Cab** and a handful of **Uber** drivers provide on-demand transportation.

LogistiCare is the commercial provider of **Anthem Blue Cross MediCal** services within Tuolumne County. **LogistiCare** holds contracts for provision of non-emergency medical transportation to **MediCal**-approved recipients for **MediCal**-approved trips. Trips are reimbursed at contractually agreed upon rates which pay only for "live miles", those when the passenger is on-board the vehicle and being transported to or from destinations within or beyond Tuolumne County. **Common Ground's Silver Streak fleet** is vendored by **LogistiCare** to provide Tuolumne County **MediCal** recipients with transportation in selected areas of the County.

Chapter 3: Transit Needs Assessment

This section describes the transit needs of TCT passengers and the larger Tuolumne County community, even if they are not current riders.

A demographic analysis of the County was conducted in order to learn about the County's population and key sub-populations that have a propensity to rely on transit, including older adults, people with a disability, and people living in poverty. In addition, several outreach methods were employed in order to gather input from key stakeholders, current passengers and members of the community, including:

- Demographic Analysis
- Stakeholder Interviews
- E-survey
- Community Workshop
- Onboard Passenger Survey
- Follow-up Interviews

The results of the demographic analysis and each of these outreach methods are presented in this Chapter. The final section contains a summary of key themes that arose from the aforementioned efforts. These key themes supported the formulation of the service delivery alternatives described in Chapter 5: Service Alternatives.

It should be noted that these analysis and outreach activities were conducted prior to COVID-19. An update on COVID-19 is included in the introduction.

DEMOGRAPHIC ANALYSIS

County Population Overview

Table 2 presents a summary of Tuolumne County demographic information about this Plan's targeted populations. Two time periods of 2012 5-Year Estimate and 2017 5-Year Estimate are presented, using the U.S. Census reporting of the American Community Survey, which provides greater detail than does the decennial census. For reference purposes, selected statewide California information is presented.

Table 2, Tuolumne County Target Population Groups and Characteristics

COORDINATED PLAN TARGET POPULATIONS IN TUOLUMNE COUNTY							
Seniors, Persons with Disabilities, Persons of Low Income and Military Veterans							
Target Populations	American Community Survey 2008-2012, 5-Year Estimates		American Community Survey 2013-2017, 5-Year Estimates			American Community Survey 2013-2017, 5-Year Estimates	
	2012 5-Year People Estimate	% of Total County	2017 5-Year People Estimate	% of Total County	% Change 2010-2017	California Statewide Comparison	
Total Population Estimate [1]	55,205	100%	53,899	100%	-2.4%	38,982,847	100%
Median Age [2]	48.0		48.6			36.1	
CHILDREN AND YOUTH ages 0 -17 [1]	9,613	17.4%	9,047	16.8%	-5.9%	9,114,720	23.4%
Children with a Disability, Ages 5 to 17 [4]	269	0.5%	396			279,466	0.7%
% of Children age 17 and under	2.80%		4.4%			3.1%	
Children living in poverty age 17 and under	1,627	2.9%	1,235	2.3%		1,865,225	4.8%
% pf Children living in poverty age 17 and under	16.92%		13.7%				
ADULTS 18-64 [1]	34,177	61.9%	31,878	59.1%	-6.7%	24,719,679	63.4%
Low-income Adults, Ages 18-64 [3] - 100% Federal Poverty	4,506	8.2%	4,435	8.2%	-1.6%	3,390,825	8.7%
% of Adults 18-64	13.2%		13.9%			13.7%	
Disability [4] (non-institutionalized) Ages 18-64 (2014)	4,730	8.6%	4,856	9.0%		1,995,286	5.1%
SENIORS [1]	11,415	20.7%	12,974	24.1%	13.7%	5,148,448	13.2%
Seniors, ages 65-74	6,317		7,578		20.0%	2,946,809	
with % of all seniors	55.3%		58.4%			57.2%	
Seniors, ages 75-84	3,589		3,848		7.2%	1,509,528	
with % of all seniors	31.4%		29.7%			29.3%	
Seniors, ages 85+	1,509		1,548		2.6%	692,111	
with % of all seniors	13.2%		11.9%			13.4%	
Low-Income Seniors, Ages 65+ - 100% Federal Poverty	585	1.1%	1,205		106.0%	517,358	
% of Senior Population	5.1%		9.3%			10.0%	
VETERANS [5]	5,597	10.1%	4,938	9.2%	11.8%	1,661,433	4.3%
Civilian Population 18 years and over	45,592	82.6%	44,852	13.3%		29,740,487	13.3%
Veterans Period of Service							
Gulf War (9/2001 or later) veterans	375		458			280,386	
Gulf War (8/1990 to 2001) veterans	481		459			281,763	
Vietnam era veterans	2,222		2,259			596,130	
Korean War veterans	991		675			174,769	
World War II veterans	700		329			97,626	
Veteran population unemployment rate	18.3%		N/A			N/A	
Veteran population poverty status in the past 12 months	N/A		480	9.7%		1,637,589	
INCOME [6]							
Median Household Income	\$48,169		\$60,636		25.9%	\$67,169	
Per Capita Income - past 12 months			\$29,628				
Total Persons in Poverty [3]	6,718		6,875		2.3%	5,773,408	
Persons age 16+ below 150% of Poverty Levels [3]	11,706		10,988		-6.1%	9,454,218	
EMPLOYMENT [7]							
Population 16 years and over	46,590		46,043		-1.2%	30,910,058	
Population 16 years and over employed	19,987		20,397		2.1%	17,989,654	
Population 16 years and over in labor force	23,854		22,147		-7.2%	19,627,887	
Population 16 years and over unemployment rate	16.2%		7.9%		-51.2%	7.7%	

[1] B01001 Sex by Age, 2012 & 2017 American Community Survey 5-Year Estimates

[2] B01002 Median Age by Sex, 2012 & 2017 American Community Survey 5-Year Estimates

[3] S1701 Poverty Status in the Past 12 Months, 2012 & 2017 American Community Survey 5-Year Estimates

[4] S1810 Disability Characteristics, 2012 & 2017 American Community Survey 5-Year Estimates

[5] S2101 Veteran Status, 2012 & 2017 American Community Survey 5-Year Estimates

[6] S1901 Income in the Past 12 Months, 2012 & 2017 American Community Survey 5-Year Estimates

[7] S2301 Employment Status, 2012 & 2017 American Community Survey 5-Year Estimates

Overall Tuolumne County Demographic Changes

Key changes over the five-year period between 2012 through 2017, as reported via the American Community Survey, include:

- **Overall population** of Tuolumne County of almost 54,000 saw a 2.4% decline over the past five years, losing about 1,300 persons.

Final Draft

- **Children and youth age 17 and under** have declined at a higher rate, falling 5.9%.
- **Working-aged adults, 17 to 64, declined** at a slightly higher rate, a 6.7% decline.
- **Persons with disabilities** include 4% of children and 13% of working-aged adults, the latter group increasing by about 100 individuals.
- **Older adults increased**, totaling almost 13,000 persons, and growing from 20.7% to 24.1% of the County's population; this is almost twice the comparable statewide proportion of 13.7% older adults; there was a resultant increase in the median age from 48.0 to 48.6 years.
- **Veterans decreased** as a proportion of the overall County population, from 10.0% of the County population five years ago to 9.2%. The raw number decreased by 12%, or 659 individuals fewer. However, there were increases in the raw number of younger veterans of Gulf War II and Vietnam era, while Gulf War I, Korean and World War II veterans and older declined in number and proportion.

Income

Income factors show an increase in low-income households among older adults and a decline in children and working-aged adults in low-income households. Low income is defined by household incomes at or less than 100% of federal poverty guidelines:

- Overall, approximately 12.7% of Tuolumne County residents are in households with poverty-level incomes.
- **Children in poverty declined** by 24%, the raw number declining by almost 400 individuals.
- **Working-aged adults in poverty decreased** by 1.6%, or about 100 persons fewer, estimated to be a total of about 4,400 persons.
- **Older adults in poverty increased** by a percent, increasing to 2.2% of the total County population.
- Almost 10% of military veterans are living in poverty, or 480 individuals.
- The **median household income decreased** from \$46,590 to \$46,043, remaining significantly below the statewide median household income of \$67,000.

Employment

- Employment rates, as measured by the American Community Survey between 2012 and 2017, improved significantly with the unemployment rate dropping from 16.2% to 7.9% in Tuolumne County. This is partly the result of a decreased number of working-aged adults. It likely also reflects an improving economy and increases in the number of available jobs. Tuolumne County's 7.9% unemployment rate is just above the statewide 7.7% unemployment rate. In the last two months, the unemployment rate has increased substantially due to the COVID-19 crisis. The degree of the increase is not known at the beginning of May 2020.

Geographic Distribution of Target Populations Across the County

County Population Overview

The following pages contain four maps that show the geographic distribution of the resident population of Tuolumne County, as well as the three target populations: older adults, people with disabilities and persons of low income (people living in poverty). Each map also shows the Tuolumne Transit fixed-route services. The demographic information in the maps is derived from the American Community Survey 2013-2017 5-Year Estimates. It is important to note that there are high margins of error for many variables, including those reported here, for rural geographies, but they still provide useful pictures of the relative distribution of people and key characteristics.

Tuolumne County is bounded by Calaveras County to the northwest, Alpine County to the north, Mono County to the east, Mariposa County to the south and Stanislaus County to the west. State Routes 108, 120 and 49 are the main roads that serve the County. A majority of the County is covered in protected areas, including the Stanislaus National Forest and Yosemite National Park.

The map in Figure 5 shows the estimated number of Tuolumne County's 54,000 residents per U.S. Census block group. The block groups with the most residents (colored in blues) are along the State Highway 49 and State Highway 108 corridors, in the middle northwest quadrant of the County. The two most populous communities are Sonora and Phoenix Lake. The communities of Mono Vista, Columbia, Jamestown, East Sonora and Pine Mountain Lake are also among the most populated areas.

Older Adults

Figure 5, Distribution of Older Adults, contains a map showing concentrations of where adults over the age of 65 live. Overall, about one-quarter (24%) of the County are persons over the age of 65. The proportion (percentage) of older adults of the total resident population of each block group is shown by color scale. Block groups along the mid-northwestern edge of the County have higher proportions of people over the age of 65, around 50% to 60% of the block group population, although the highest concentrations of older adults are in the most populous areas of the County, which are served by Tuolumne County Transit.

People with Disabilities

The U.S. Census American Community Survey asks six questions to determine disability status and type and defines disability status by whether an individual has limitations that hinder participation at school, work, home or in the community. Figure 6 shows where people with self-identified disabilities live in the County. The map shows the approximate count and proportion of the total County's population of people with disabilities that lives in each block group. It should be noted that this is a different way of displaying

the population than the map of older adults, for which the population is displayed as a percentage of each block group.

In Tuolumne County, approximately 14% of people have a disability. Per block group, the range is approximately 60 to 420 residents with disabilities. The block groups with the highest number of people with disabilities are in the same areas that are most populous overall, along the State Highway 49 and 108 corridors.

People Living in Poverty

The national poverty thresholds are defined by the number and age of people living in a household. For example, in 2017, an older adult living alone with an income of less than \$11,756 would be considered to be living in poverty and a household consisting of a single parent with two children would be considered to be living in poverty if their household income were less than \$16,895.

In Tuolumne County, approximately 12.7% of persons are in households with incomes at or below the federal poverty level. Figure 7 shows the distribution of these households. The map shows the approximate count and proportion of the total County's population of households in poverty within each block group. Per block group, the range is approximately 20 to 220 residents with disabilities. The block groups that contain the highest proportions of people living in poverty of the County overall coincide with the areas that are the most populous along the State Highway 49 and 108 corridors.

Figure 4, Distribution of Total Population

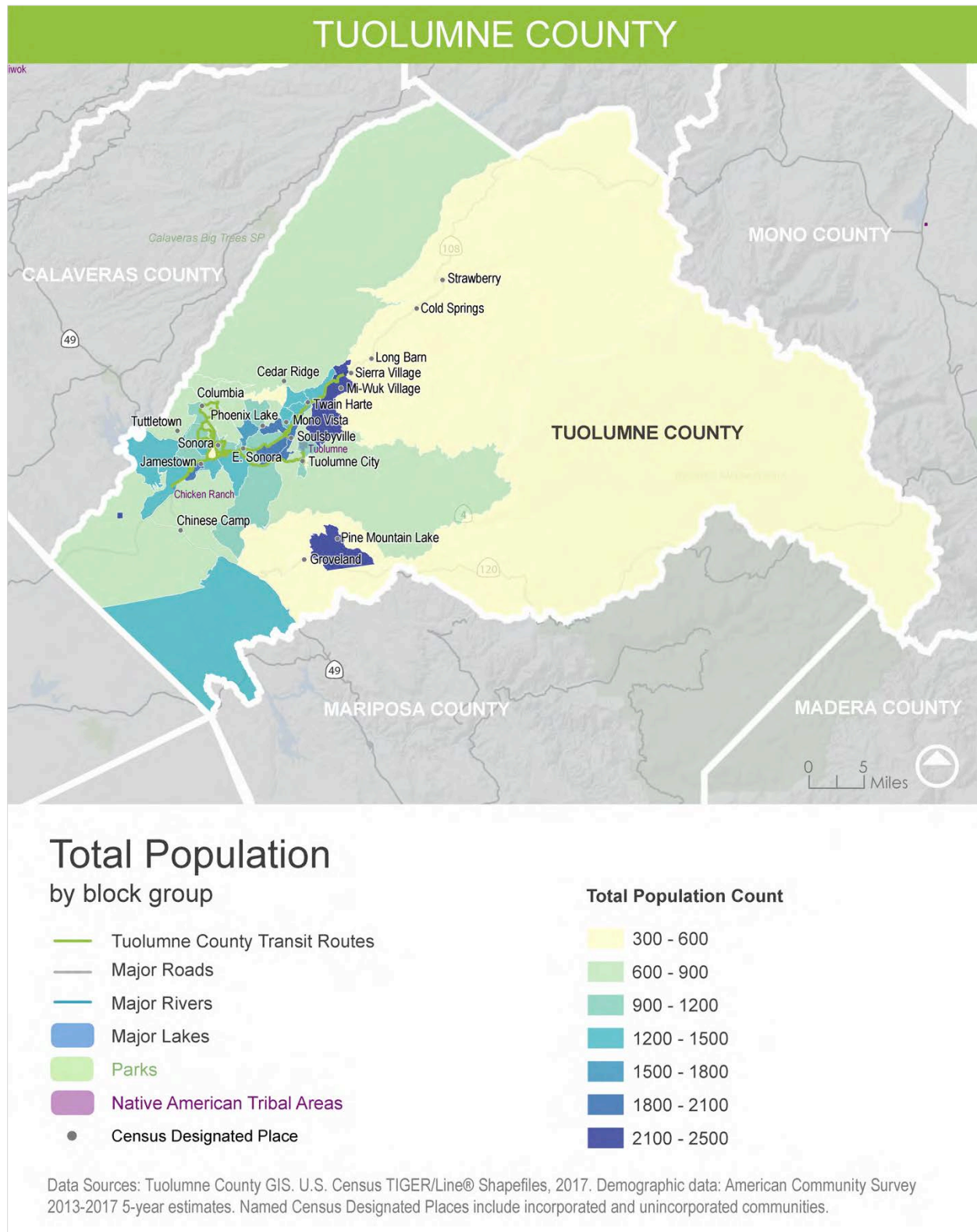


Figure 5, Distribution of Older Adults

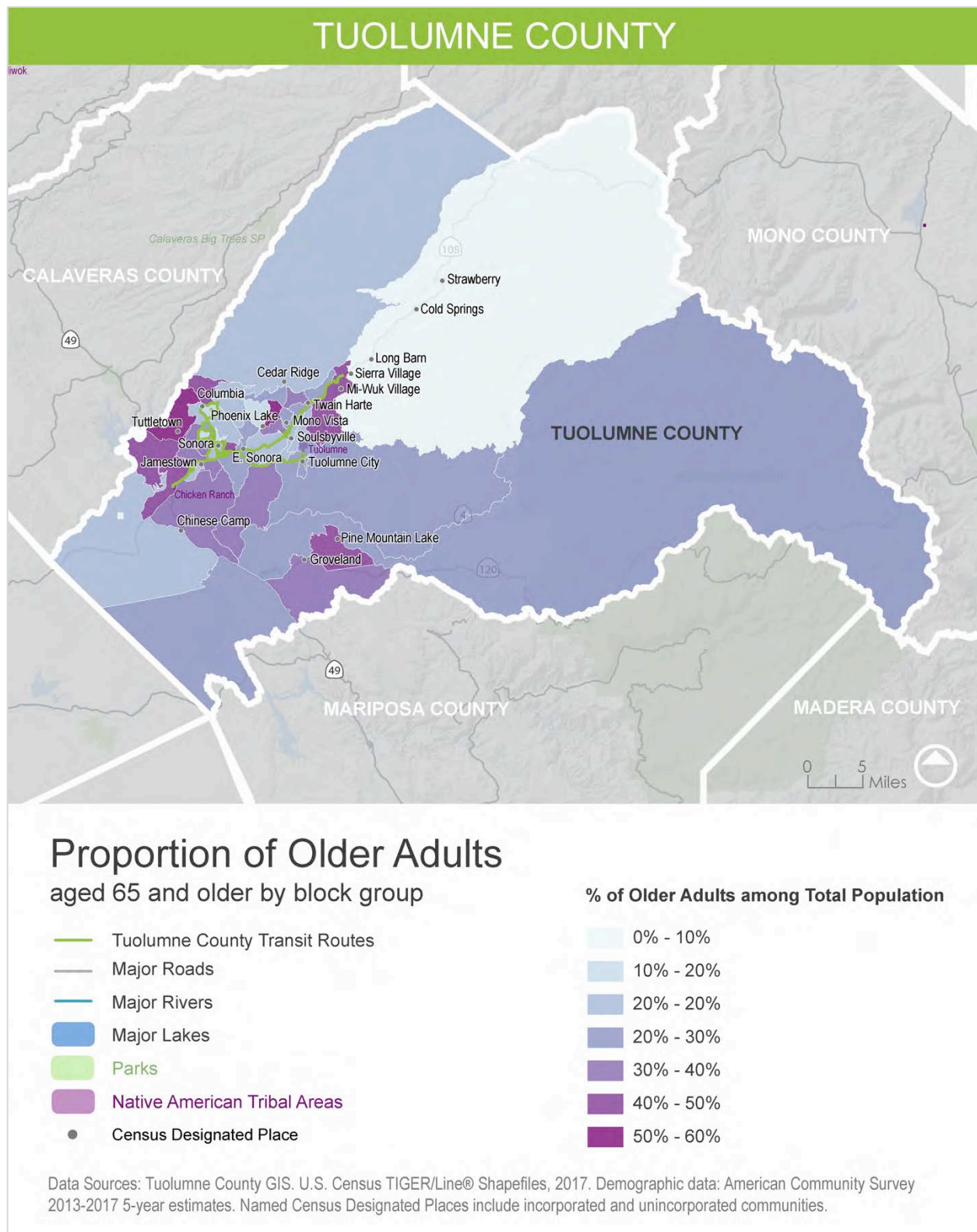


Figure 6, Distribution of People with Disabilities

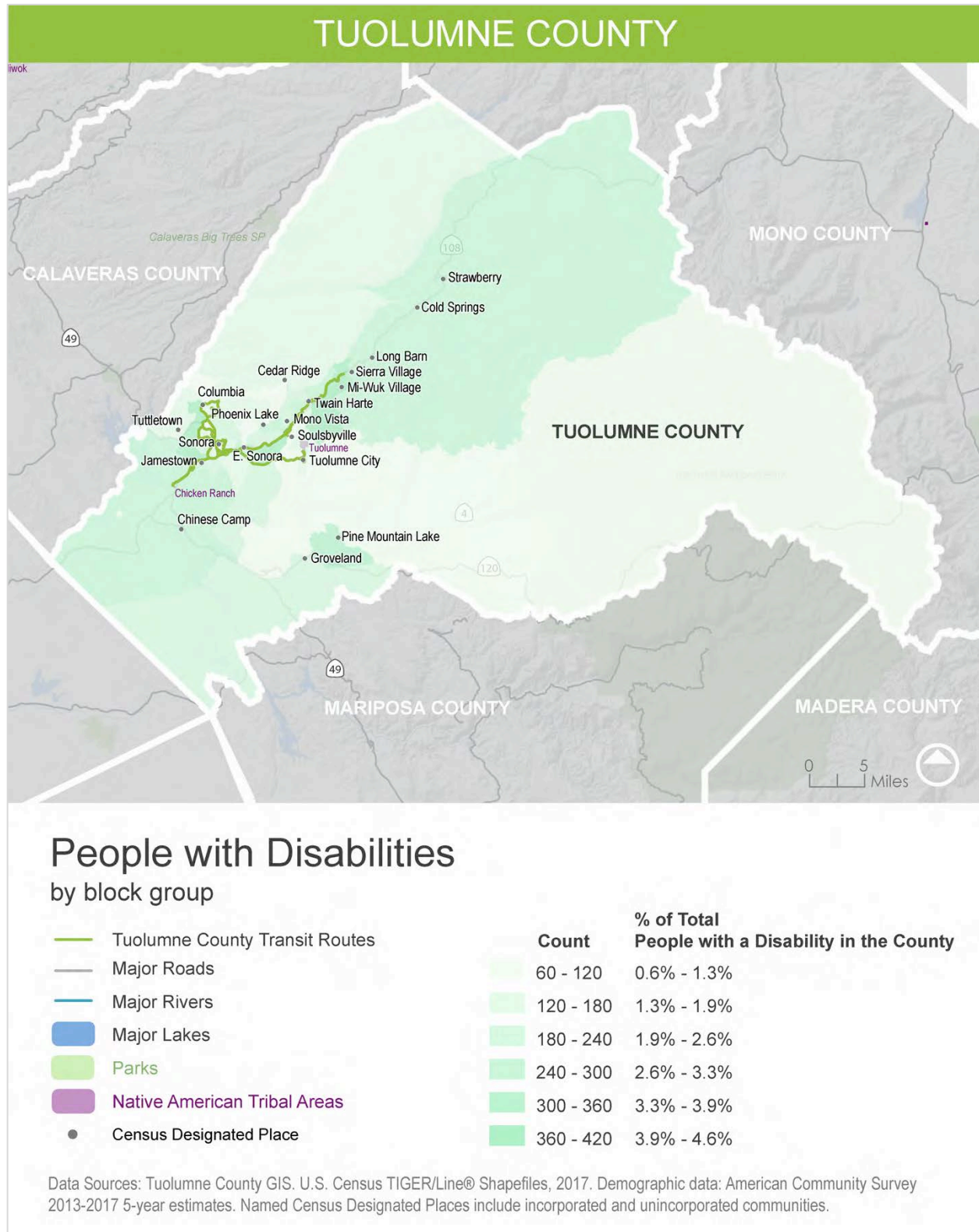
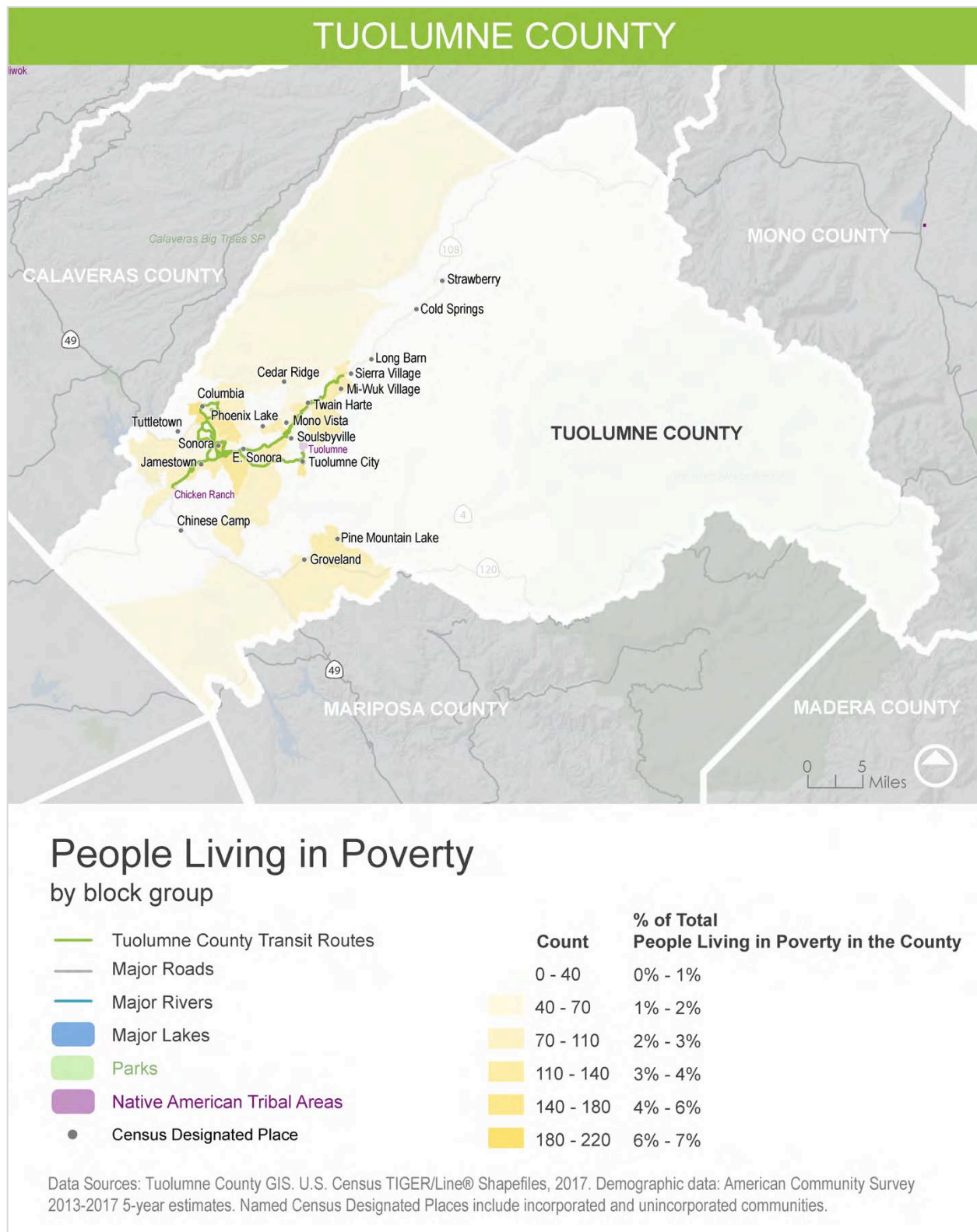


Figure 7, Distribution of People Living in Poverty



STAKEHOLDER INTERVIEWS

Interviews were conducted with key stakeholder agency representatives within Tuolumne County who work with typical transit dependent populations, including older adults, persons with disabilities and persons of low income. These interviews sought to identify critical issues, along with the mobility topics to explore in the countywide e-survey. The Social Service Transportation Advisory Committee (SSTAC) members at the Plan's April 2019 kick-off meeting helped to identify key stakeholders for interviews. The consultant team augmented this list with additional contacts. Stakeholder interviews were conducted during late July 2019, holding 19 meetings that included approximately 50 individuals. The following organizations participated:

- Adventist Hospital and Foundation
 - Area 12 Agency on Aging
 - Columbia College
 - Common Ground/Silver Streak
 - DRAIL
 - Family Resource Center
 - Groveland Advisory Committee
 - Interfaith/Social Services Consortia
 - LogistiCare
 - Mother Lode Job Training Tuolumne
 - Sierra Senior Providers
 - TCTC Social Services Transportation Advisory Committee
 - Tuolumne County Behavioral Health
 - Tuolumne County Enrichment Center
 - Tuolumne County Transit
 - Tuolumne County Veterans Services
 - Southside Community Connections/ WHEELS
 - Valley Mountain Regional Center
- Special meetings were convened by the Social Services Consortia, held at St. Matthew's Church in Sonora on July 25 and by Southside Community Connections, held at the Little House in Groveland on July 26. Multiple agency representatives attended.

Key themes that emerged from the stakeholder interviews include:

1. Opportunities exist to enhance Tuolumne County Transit's service footprint, current service configuration to better meet needs.
2. There is uneven awareness of available transportation programs, including newly available transportation services and transit features.
3. There are in-county trip needs of the Coordinated Plan target populations that are not well-served.
4. Trip needs exist for travel to out-of-county destinations.
5. Multiple specialized transportation programs exist, but some are at capacity, with indications of need that exceed available resources.
6. Transportation challenges to travel to or from the Adventist Hospital Sonora are numerous and suggest some opportunity for coordinated solutions.
7. Sustainability of human service, specialized transportation is a specific challenge.
8. Transit infrastructure needs exist.

E-SURVEY

Following the stakeholder interviews, an online survey was developed to bring back more detail and quantify selected issues raised in stakeholder interviews, the kick-off meeting, and discussions with Tuolumne County Transit and TCTC staff. The survey was designed to invite responses from 1) agency staff and 2) from members of the public. For agency staff, the survey asked about transit-related services provided, county and other locations served, and clients' mobility needs. Through "branching" based on respondents' answers, the survey explored the public's use of transit services and concerns and local and regional mobility needs and challenges.

The E-survey link was widely distributed during October 2019 through stakeholder agencies, TCTC and TCT staff. Selected E-survey findings are reported below with more detailed reports provided in Appendix E of the Coordinated Plan.

A total of 65 agencies responded that either reported serving Tuolumne County and other counties (40 agencies) or only Tuolumne County (25 agencies). Of the agencies serving Tuolumne County, nine operate a transit service; five contracts with another agency to provide transportation; three agencies utilize volunteer drivers; and the largest group - 13 agencies - assist clients with transportation through trip planning and providing information. Nine agencies in Tuolumne County purchase transit passes for clients. Gas cards are provided by three agencies; one reimburses clients for mileage; one subsidizes travel escorts; and one purchases and distributes taxi vouchers to clients.

Tuolumne County agencies reported the most frequent client needs are for local trips: ***transportation to local healthcare destinations*** and ***transportation to local human or social services***. The next most commonly reported challenges are ***transportation for local shopping*** and ***transportation to out-of-county healthcare destinations***.

A total of 23 Tuolumne County community members (not representing agencies) responded to the e-survey. While too small a response level to make definitive statements about consumer needs, key highlights include:

- Respondents had high familiarity with Tuolumne County Transit, although less so with other transportation options, including TCT Dial-a-Ride.
- Top concerns among those who responded included:
 - High level of concern with sidewalks, bike paths and safe path of travel, with 85% of respondents reporting this mobility challenge.
 - 45% reported that transit is not near where they live.
 - A quarter of respondents (25%) reported that TCT trips take too long to reach the individual's destination.

Most **agency respondents** address their clients' mobility challenges through an array of transportation-related programs and functions. These range from providing taxi vouchers to purchasing passes and administering their own transportation programs. These services both support and augment Tuolumne County Transit services. The largest single group, 13 responding human service agencies, played some role in the provision of transportation information.

Both **agency** and **general public survey respondents** are interested in improvements and expansion to existing transportation options, particularly services provided by Tuolumne County Transit. **Agency respondents** report their clients need public transit improvements to support local trips for shopping, to human and social services, and to healthcare destinations. **General public respondents** often report that there is not transit near their home or transit travel times are too long and are much longer than driving.

Other top concerns include obtaining transportation to out-of-county healthcare destinations and improving path of travel for pedestrians and cyclists.

ONBOARD PASSENGER SURVEY

A survey of Tuolumne County Transit passengers was conducted in September on weekdays. Surveys were distributed to and collected from passengers and transit operators by trained surveyor staff onboard the Tuolumne County Transit vehicles. A total of 137 surveys were collected from passengers onboard a Tuolumne County Transit bus or at a transit stop while awaiting a Tuolumne County Transit bus. This section presents key findings from the onboard passenger survey, some of which are incorporated into the Key Findings at the end of this Chapter. The full report of analysis and findings, including a detailed methodology description, is in Appendix A.

How Passengers Use Tuolumne County Transit

- A majority (62%) survey respondents indicated that they had used more than one of the Tuolumne County Transit services in the last 30 days.
- About two thirds of respondents reported that they use transit for all of their trips or most of their trips in an average week.
- Half (52%) of passengers ride TCT regularly, at four, five, or six days per week.
- 27% only ride once or twice a week.
- Most riders have been riding for many years, but a quarter of respondents began riding Tuolumne County Transit in 2019. Nearly half have been riding since 2016 and a third began before 2014.

Transit Dependence

- Most of the survey respondents are dependent on Tuolumne County Transit with 68% of respondents indicating that it is their only form of transportation.
- 45% of respondents reported that they do not have a licensed driver in their household, do not have a vehicle for use in their household, or both. Another 16% live in households with fewer vehicles than drivers. A third of respondents lived in households where there are more adults than licensed drivers.

Origins & Destinations

- The most common origin and destination pair for the trip that respondents were currently on began and ended in Sonora.
- The most common trip origin reported was Sonora (33%), followed by Columbia College (14%), and Jamestown (11%). The most common trip destination was also Sonora (52%), followed by Columbia College (11%), and East Sonora (11%).

Trip Purpose

- The most common trip purpose, which each had about a quarter of responses, were for School/College, Work, and Shopping. Trips for recreation or medical appointments were each the reason for about 8% of trips. Routes 2, 3, and 4 each had high and nearly equal counts of responses for school/college trips.

Fare Payment Method

- Nearly half of respondents paid their fare using cash and another quarter used their Columbia College ID. Ticket and monthly passes were the next most popular methods and the day pass was the least common.
- Occasional riders (1-2 days) were more likely to use cash or day passes and much less likely to use a ticket than passengers who rode more often. Regular riders (3-4 days) were more likely to use tickets. Frequent riders (5-6 days) were less likely to use cash or tickets and more likely to use monthly passes. Use of Columbia College IDs was common among all riders, but slightly higher for frequent riders.
- Passengers with higher incomes (more than \$25,000) were more likely to pay cash fares and less likely to use day or monthly passes than those with lower incomes.

- A high proportion of riders on Routes 4 and 5 used their student ID, which correlates with the high proportion of students on these routes. Routes 1 and 5 had high proportions of passengers who used a monthly pass.

Passenger Characteristics

- A third of survey respondents live in is Sonora, which is in line with the origin and destination results. The remaining respondents were spread among several other communities, including Jamestown (14%), Columbia (11%), and Twain Harte (10%).
- Half of respondents lived in households of only adults (no seniors 65+ or children) and 16% were households of only seniors.
- Surveyed passengers reported very low household incomes. Three-quarters of respondents reported that their approximate annual household income is less than \$25,000 and a third said that it is less than \$10,000. The median household income in Tuolumne County in 2017 was \$54,325, according to the U.S. Census.
- A little over half of respondents are either not employed (30%) or retired (25%). Only 18% are employed full time and 28% are employed part time or seasonally.
- Many of the employed respondents reported that their work hours vary (44%) and 36% said that they work regular hours. Eighteen percent of employed respondents said that they work weekends and 13% answered that they often work later than 7 pm.
- The most common employers for those employed included Walmart (4), Black Oak Casino (4), McDonalds (4), and Columbia College (3). Other employers included major and minor retail stores, grocery stores, and a variety of others.
- Over a third of respondents indicated that they are a student and nearly all of these attend Columbia College full- or part-time. Routes 3 and 4 have the highest proportion of student riders with about 60% and Route 1 has the lowest at 25%.
- Forty five percent of students indicated that they are also employed full- or part-time.
- A large proportion (45%) of the survey respondents were under the age of 25. This correlates to the high number of respondents that identified as students. Twelve percent of respondents were high school aged (14 to 17), 34% were college aged (18 to 24), 15% were aged 25 to 35, 29% were aged 35 to 64, and 11% were aged 65 to 84.
- Nearly a quarter of respondents (24%) reported that they have a disability that impacts their travel.

Passenger Information

- About half responded reported that they first learned about Tuolumne County Transit because they saw the bus. Another quarter learned about it from a friend or family member. Another quarter learned about it from a friend or family member. Newer riders who began riding in 2018 or 2019 were moderately more likely to have learned about the service through advertising or to have heard about the service through friends or family.
- The most common resources for information about TCT routes and schedules reported were the printed passenger guide (35%), website (34%), and displays at bus stops (29%). Google maps, social media, and social service agencies were the least common resources used.
- Newer riders are more likely to get information from the website and at school or college. Seasoned riders are more likely to get information from printed passenger guides and by calling on the phone.
- Older adults' preferences are generally unlike the other age groups. Most rely on the printed passenger guide, calling on the phone, and the bus operators for information and none indicated that they use the website.
- English is the primary language for 97% of respondents.

Use of Technology

- A majority of respondents (78%) reported that they have a smartphone-a mobile phone with internet access.
- Most passengers under the age of 64 own a smartphone, but three quarters of respondents over the age of 65 do not own a smartphone.
- Predictably, passengers with annual household incomes below \$25,000 were less likely to own a smartphone than those with incomes above. However, even passengers with the lowest incomes (below \$15,000) had a high of rate of smartphone ownership at 75%.
- When asked if they would be interested in being able to pay their transit fare with a smartphone, 14% replied "definitely," 40% replied "maybe," and 46% replied "no." Students and non-students were equally likely to select "definitely," but students were more likely "maybe" and non-students were more likely to select "no." Overall, 66% of students and 46% of non-students selected "yes" or "maybe" as their interest level in paying their transit fare with a smartphone.
- Passengers were asked, "Have you used the Wi-fi onboard TCT buses? A quarter responded "yes," 44% said "no," and 30% said they didn't know about it.

Awareness of Services

- Most respondents (81%) were aware that Columbia College students ride free on Tuolumne County Transit and Calaveras Connect with a current college ID.
- One question asked, “In the past month, have you seen/heard any advertising for TCT?” About a third had seen a sign or poster, 17% had heard a radio ad, and 15% had seen/heard a TV commercial.

Passenger Satisfaction & Potential Improvements

- Passengers were asked to rate Tuolumne County Transit on several service factors on a scale of 1 (poor) to 5 (excellent). In general, the service factors were rated very well with average ratings all above 3.5.
- “Courtesy & helpfulness of the bus drivers” was the highest rated factor, followed by “Ease of getting route and schedule information,” and “Cost of bus fares.” “Overall, how would you rate Tuolumne County Transit?” had the fourth highest rating. “How frequently your bus runs” and “Time the bus stops running in the evening” had the lowest average scores.
- When asked, “How difficult is it to get to the bus stop where you board near your home?” three-quarters indicated that it is “not difficult.” Fifteen percent said that it is “difficult because of distance” and 10% said it’s “difficult because of poor path of travel (e.g. no sidewalks).” Route 4 had the highest proportion of respondents who indicated that getting to a stop is difficult because of poor path of travel.
- Passengers were asked to select only one destination in response to the question, “If TCT were to provide out of county bus service, which of these destinations would you use the bus to travel to the most?” Modesto was the most popular destination with 54% of respondents indicating they would use the bus to travel there the most. Oakdale received 17% of responses, Pleasanton/Dublin had 14%, and Sacramento had 7%.
- A year from now, 80% of respondents said that they would still be riding Tuolumne County Transit. Of the 25 passengers who said they would not be riding in the future, 15 said that they expect to be able to have a working car so that they can drive. A couple others were planning to move, and one person was unsure of where they would be attending school.

FOLLOW-UP INTERVIEWS

The onboard survey questionnaire included the question, “If you would be willing to participate in a phone interview for which you would receive a \$20 gift card, please provide your contact information below: name, phone and email address.” Respondents were sent an email or text with interview times

and offer of a \$20 Amazon or \$20 e-Walmart gift card for completion of a 15-20 minute interview on October 15, 16 or 18th. A total of 22 phone interviews were completed. The full report on the follow-up interviews is included as Appendix B.

In discussion with Tuolumne County Transit (TCT) management, the purpose of the phone interviews was to:

- Provide a better understanding of why TCT riders utilize the bus service. Determine if the passenger is riding as often as he or she can
- Determine the improvement necessary for the passenger to consider riding more often
- Explore why passenger service rating were very high or very low
- Further explore awareness of TCT radio and TV advertising, and explore the radio and TV watching habits of respondents
- Determine the passenger's proximity to a bus stop
- Priorities for potential out of county bus service, determination of priority destinations, and potential utilization patterns
- Utilization of Uber and Lyft
- If the passenger could make one change to TCT, what would it be

This section provides highlights from the results of the follow-up interviews, which are also reflected in the Key Themes at the end of this Chapter. Summary highlights from the follow-up interviews include:

- Overall, the interviewees were utilizing TCT out of necessity with 16 of 22 (73%) interviewees said they were planning to utilize TCT a year from now. All were living on the edge of poverty due to various circumstances. Several mentioned being formerly homeless or being in a homeless shelter. Fare affordability came up regularly and is an important factor in how often they utilize TCT.
- Passengers were very appreciative of having TCT available for the trips they need to make. They had distinct difficulties that were explored in context of wanting to have improvements. Even though their trip took much longer than they desired, they all really appreciated the ability to make the trips they needed to make.
- Of those interviewed, most said they would ride Tuolumne County Transit more but the system frequency, connections, hours of operation, and/or fare structure would need to be improved in order for them to ride more often

KEY THEMES

This section explores common themes that arose from the demographic analysis, stakeholder interviews, E-survey, onboard passenger survey, and follow-up interviews to the onboard survey. They are not presented in a hierarchical order of importance.

A Robust Public Transportation Program for Most of the County

To meet the needs of its transit-dependent populations, Tuolumne County Transit has built a robust public transportation network that provides service six-days-a-week across the more densely populated areas of the County. Coverage in and around Sonora is significant, with five routes connecting through the TCT Transit Center. There are eight daily vehicle arrivals and departures, over two routes, into Columbia College where riders can also transfer to Calaveras Connect. In order to ensure continued mobility after the COVID-19 emergency occurred, TCT implemented free general public dial-a-ride for essential trips.

In the *onboard survey*, passengers were asked to rate Tuolumne County Transit on 10 different service factors on a scale of 1 (poor) to 5 (excellent). In general, the service factors were rated very well with average ratings all above 3.5. “Courtesy & helpfulness of the bus drivers” was the highest rated factor, followed by “Ease of getting route and schedule information,” and “Cost of bus fares.” “Overall, how would you rate Tuolumne County Transit?” had the fourth highest rating.

In the *follow up interviews*, passengers were very appreciative of having TCT available for the trips they need to make. They had distinct difficulties that were explored in context of wanting to have improvements. Even though their trip took much longer than they desired, they all really appreciated the ability to make the trips they needed to make. The drivers, in particular, were highlighted as making the overall service a good experience.

TCT has gone beyond the provision of traditional transit services. The TRIP mileage reimbursement program provides an important mobility option for those who need. Additional special services such as the Ski Bus, YARTS, and the Pinecrest summer bus service provide addition non-auto mobility options for recreation. TCT has provided leadership in providing multi-modal options for their rural constituents.

Most TCT passengers are dependent on public transit for transportation and are low-income

The *onboard survey* showed that most passengers are dependent on Tuolumne County Transit with 68% of respondents indicating that it is their only form of transportation. The *follow-up interviews* found that, overall, the interviewees were utilizing TCT out of necessity. All were living on the edge of poverty due to various circumstances. Several mentioned being formerly homeless or being in a homeless shelter. Fare affordability came up regularly and is an important factor in how often they utilize TCT.

In the *onboard survey* results, about two thirds of passengers reported that they use transit for all of their trips or most of their trips in an average week. Half of passengers ride TCT regularly, at four, five, or six days per week and another quarter ride once or twice a week. Over half of passengers had used more than one of TCT's services in the last 30 days. Most riders have been riding for many years, but a quarter of respondents began riding Tuolumne County Transit recently in 2019.

The *onboard survey* also showed that 45% of passengers reported that they do not have a licensed driver in their household, do not have a vehicle for use in their household, or both. Another 16% live in households with fewer vehicles than licensed drivers. A third of respondents lived in households where there are more adults than licensed drivers. A year from now, 80% of respondents said that they would still be riding Tuolumne County Transit. Of the 25 passengers who said they would not be riding in the future, 15 said that they expect to be able to have a working car so that they can drive. Nearly a quarter of respondents (24%) reported that they have a disability that impacts their travel.

Most *onboard survey* respondents also reported very low household incomes. Three-quarters of respondents reported that their approximate annual household income is less than \$25,000 and a third said that it is less than \$10,000. The median household income in Tuolumne County in 2017 was \$54,325 and approximately 12.7% of all Tuolumne County residents are in households with poverty-level incomes according to the U.S. Census. A little over half of respondents are either not employed (30%) or retired (25%). Only 18% are employed full time and 28% are employed part time or seasonally.

In the *follow-up interviews*, inability to afford the transit fare came up often. They expressed that the \$4.00 fare for a round trip is a lot for individuals on a fixed income, especially for shorter trips. If they are travelling with a significant other the cost is \$8.00, which is a big expense to them and constrains the number of rides taken.

Need for more service & length of time to take a trip

The need for more frequent service, later hours, and weekend service was brought up several times. Among the 23 community members that responded to the *E-survey*, 25% reported that TCT trips take too long to reach their destination. There was also interest among some *stakeholders* for expanding weekend service and running somewhat later in the evenings, should resources allow. Among *onboard survey* respondents, "How frequently your bus runs" and "Time the bus stops running in the evening" had the lowest average scores.

In the *follow-up interviews* of passengers, most said they would ride Tuolumne County Transit more but the system frequency, connections, hours of operation, and/or fare structure would need to be improved in order for them to ride more often. The amount of time they need to make for a round trip was the biggest barrier expressed to increased utilization. When asked if they could make one change to TCT, the most common answers among interviewees were improved frequency and weekend service.

The desire for service that runs later into the evening was a common theme among passenger interviewees. Several explained they really cannot utilize TCT to go out for dinner and then return home when they can afford to do so. Interviewees who utilize Routes 2 and 3 both remarked that service essentially is not available past 5 pm and it severely limits how often they can utilize the service. Most interviewees said they would like the buses to run until at least 8 or 9 pm.

In addition, several of the comments for improved weekend service were related to being able to use TCT for work trips. Some riders expressed wanting to be fully employed, but having to rely on Tuolumne County Transit for their commute to and from work was infeasible. They mentioned that many job shifts end later in the evening after TCT stops running and many jobs are on weekends. Most interviewees did not believe they were eligible for Saturday DAR service, and had little knowledge of its availability.

Many of the employed *onboard survey* respondents reported that their work hours vary (44%) and 36% said that they work regular hours. Eighteen percent of employed respondents said that they work weekends and 13% answered that they often work later than 7 pm.

Need for improved connections and transfers

There are four main transfer locations in the TCT system: Transit Center, Junction Shopping Center, Courthouse Park, and Columbia College. The Transit Center is the main transfer hub where all TCT routes stop. Columbia College is an important stop in the TCT system because many of the College's students and some employees rely on the service to access the school. Over a quarter of respondents to the onboard survey are either part-time students, full-time students, and/or employed at Columbia. The Columbia College bus stop is also where passengers can transfer to or from Calaveras Connect for destinations in Calaveras County.

Difficulty with connections between TCT routes and between TCT and Calaveras Connect were two of the most consistently named issues that arose during the outreach process. Connections between Route 1 and other TCT routes came up the most often.

Organizations that responded to the *E-survey* reported that their clients "sometimes" or "often" have difficulty with bus transfers between local routes and bus transfers between County systems. *Stakeholders* also reported that their clients have difficulty with TCT transfer times, specifically between East Sonora and Jamestown.

Passengers that responded to the *onboard survey* rated the "Convenience of connecting between Tuolumne County Transit Routes" the third lowest among 10 TCT service factors. During the *follow-up interviews* with passengers, they felt that connections were problematic and added to the overall sentiment that trips just took too long.

Over 25% of riders are Columbia College students

Over a quarter of respondents to the *onboard survey* are either part-time students, full-time students, and/or employed at Columbia. Accordingly, Columbia College was the second most common trip origin and destination, behind Sonora. Columbia College students are able to ride TCT for free by showing their student ID and awareness of this program among all passengers is high. Forty five percent of students indicated that they are also employed full- or part-time.

The older adults population is increasing, and they will have unique transportation needs

Over the past five years the County population of 54,000 persons is losing small numbers of its residents with a 2% overall population decline, which are largely youth and working- aged adults. There has also been a substantial increase in the proportion of older adults due to the aging of the Baby Boom generation. A quarter (24%) Tuolumne County residents are age 65 and older, or about 13,000 persons. Older adults include the growing proportions of the most elderly, aged 80 and older, whose transportation dependence on non-driving modes tend to increase with time. Among *onboard survey respondents*, 16% were households of only older adults.

The *onboard survey* showed that, in terms of access to information about transportation options, older adult passengers' preferences for how to get information are generally unlike other age groups. Most rely on the printed passenger guide, calling on the phone, and the bus operators for information and none indicated that they use the TCT website. Most passengers under the age of 64 own a smartphone, but three quarters of respondents over the age of 65 do not own a smartphone.

Uneven awareness of available transportation service and how to use them

There is some unawareness or confusion regarding the various TCT services among stakeholders, community members, and passengers. Some *stakeholder* human services organizations are unaware of TCT services or how to inform others about how to use public transit. This is despite the clear customer information tools on its website and printed ride guides TCT has developed. Staff work actively to promote the service and continue to "get out the word." Among the 23 community members that responded to the *E-survey*, most were aware of TCT's fixed-route services, but less so with other transportation options, including TCT Dial-A-Ride.

The *onboard survey* found that:

- About half responded reported that they first learned about Tuolumne County Transit because they saw the bus. Another quarter learned about it from a friend or family member. Another quarter learned about it from a friend or family member. Newer riders who began riding in 2018

or 2019 were moderately more likely to have learned about the service through advertising or to have heard about the service through friends or family.

- About 30% of respondents did not know about the availability of Wi-Fi onboard the bus.
- One question asked, “In the past month, have you seen/heard any advertising for TCT?” About a third had seen a sign or poster, 17% had heard a radio ad, and 15% had seen/heard a TV commercial.

In the *follow-up interviews*, most did not believe they were eligible for Saturday DAR service, and had little knowledge of its availability. In addition, several interviewees were not aware of the Transit Tracker, and they were thrilled to learn about it.

In terms of how people obtain information about TCT, the *onboard survey* revealed the following:

- The most common resources for information about TCT routes and schedules reported were the printed passenger guide (35%), website (34%), and displays at bus stops (29%). Google maps, social media, and social service agencies were the least common resources used.
- Newer riders are more likely to get information from the website and at school or college. Seasoned riders are more likely to get information from printed passenger guides and by calling on the phone.
- Older adults’ preferences are generally unlike the other age groups. Most rely on the printed passenger guide, calling on the phone, and the bus operators for information and none indicated that they use the website.

There are areas of the County that TCT is unable to serve

The County has a richness of transportation services that elude some rural communities, including a mix of public transit, human service transportation, and commercial choices. For most seniors and persons with disabilities, some level of transportation is likely across much of the County. While TCT provides service to many small, isolated communities, there are some that are infeasible to provide with transit service. There are capacity limits that are reflected in long lead times for reservations or limits to what trip types or trip lengths can be served. And for residents of the Groveland/Big Oak Flats areas, as well as other very isolated communities such as north of Sierra Village, there are much more limited options. TCT does not currently serve the Groveland area. It has done so historically, with services in the past not sufficiently used or provided with such limited frequency that steady ridership could not be sustained. While the Tuolumne TRIP has the potential to fill some of these service area gaps, it is not yet widely known. Importantly, it is currently funded modestly - at just \$10,000 annually - a level that cannot readily support substantial demand for its mileage reimbursement.

Among the 23 community members that responded to the E-survey, 45% reported that transit is not available where they live.

There is a need for service to destinations outside of the County

There are limited options for service to destinations outside of Tuolumne County. TCT routes 3 and 4 connect with Calaveras Connect at Columbia College and there is seasonal YARTS service. This makes it difficult to connect to the inter-city Greyhound or other commercial inter-city FlixBus and Megabus buses that serve the central valley cities of Modesto, Stockton and Lodi with considerable regularity. For veterans, the bus into Livermore and over to Palo Alto provides a very important connection. However, one must have transportation to the early 5 a.m. departure and the physical capacity to accommodate a very long travel day - until the post 8 p.m. return. Volunteer-based assistance, as through Veterans Helping Veterans, is likely more limited due to the declining numbers of WWII and Vietnam-era vets who can drive, coupled with increasing numbers of younger vets that may be employed and unable to provide volunteer transportation. As out-of-county trips are long, volunteers are less willing to make these, whether for veterans or for others.

In the *onboard survey*, passengers were asked to select only one destination in response to the question, "If TCT were to provide out of county bus service, which of these destinations would you use the bus to travel to the most?" Modesto was the most popular destination with 54% of respondents indicating they would use the bus to travel there the most. Oakdale received 17% of responses, Pleasanton/Dublin had 14%, and Sacramento had 7%.

In the *follow-up interviews*, nearly all wanted service to Modesto as their top priority. The majority wanted service on weekdays, but many also wanted service at least on Saturdays. Almost all interviewees cited that the preferred destination was to the Modesto Mall, but also to the Amtrak/Greyhound station and several for medical trips in the Modesto Memorial Hospital area.

Opportunities for mobility management and partnerships with human service organizations

Tuolumne County does not have a formal mobility management function, although TCT does fund the TRIP volunteer driver program and has partnerships with human service organizations to provide TCT passes for their clients. The mobility management information role was noted by agency personnel in the *stakeholder interviews* as being of value to them. Such a role could include regular and continuing outreach and education to human services personnel, travel training activities and ongoing participation in human services gatherings, such as the Interfaith Social Services Consortia meetings.

Actively securing funding to ensure sustainable human service transportation is critical, whether through FTA Section 5310 or continuing LogistiCare vendorization for reimbursement of MediCal-eligible trips.

Final Draft

Also important are other kinds of cost-sharing opportunities, such as shared vehicle maintenance or out-stationed vehicles. The decision by the WATCH organization to terminate its transportation program and the difficulties reported by several agencies in securing sufficient volunteers both point to the importance of strong partnerships between public transit and the human services. These partnerships can help to build long-term, sustained specialized transportation. Exploring new cost-sharing opportunities, for example, with the Adventist Hospital and its Foundation, may well be an avenue for developing sustainable specialized transportation.

Chapter 4: Performance Data & Trends

This chapter presents key performance indicators for each of the TCT regular fixed-route and Dial-A-Ride services and describes trends from Fiscal Years 15/16 through 18/19. Internal financial tracking spreadsheets are the data source for the base inputs of ridership, service hours, service miles, operating costs, and fare revenue.

The farebox recovery ratio presented at the systemwide-level analysis below factors in revenues that are applicable towards farebox recovery, which are from an interior/exterior advertising program offered by TCTA and a partnership with Columbia College. All other presentation and analysis of farebox recovery ratios include only revenue directly generated by passenger fare purchase.

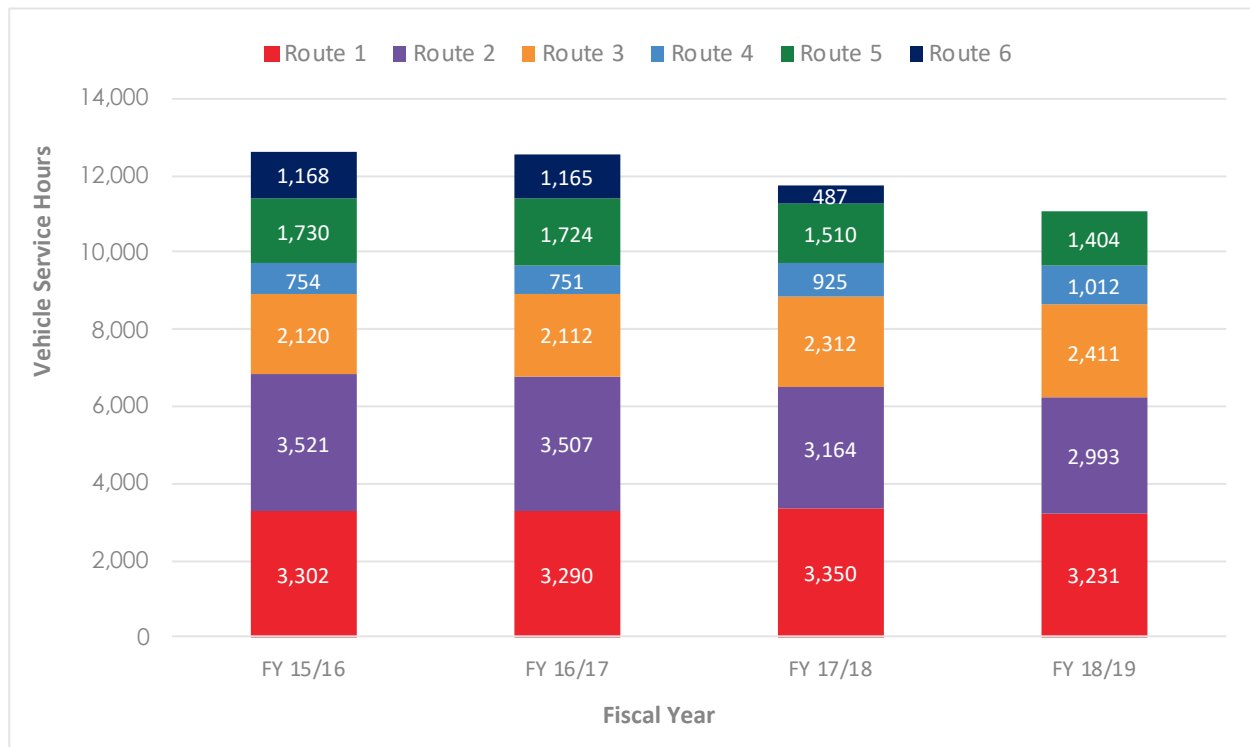
SERVICE CHANGES

Figure 8 shows the vehicle service hours by route for Fiscal Years 15/16 through 18/19. In November 2017 (FY17/18) TCT reduced services in response to an increase in operating costs coupled with ridership drops due to population decline, low fuel costs and significant declines in enrollment in Columbia College. A run on each of Routes 1 through Route 5 were eliminated. Route 6 was discontinued due to especially low passenger fare recovery rates, which were well below the state required standards. Route 6 was replaced with weekday general public dial-a-ride service available between 9 am and 4 pm, which is open to the general public.

Fares were increased in November 2016 (FY16/17). The general public fare for fixed-routes was increased from \$1.50 to \$2. The monthly passes and tickets books each increased as well.

In August 2018 TCT began a partnership with Columbia College to provide free rides for the College's students. Columbia College pays TCT a flat annual fee of \$15,000 for the free rides. This revenue is accounted for in the systemwide farebox recovery ratio, but not in the individual routes' farebox recovery ratios in this analysis.














Figure 8, Service Hours by Fixed-Routes



SYSTEMWIDE

Table 3 shows the performance indicators for all of the TCT fixed-routes combined, including Routes 1 through 5 and Route 6 until it was discontinued in FY 17/18, and the weekday and Saturday Dial-A-Ride. Seasonal and special event services, including the SkiBUS, Pinecrest, and Adventure Trolley, are not included.

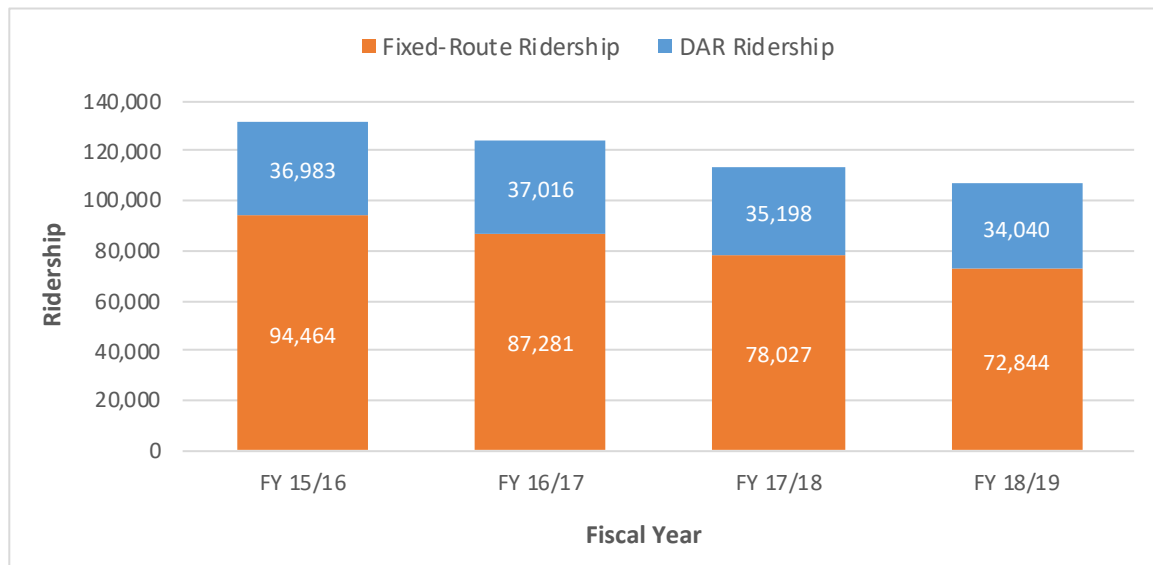
Table 3, Performance - Systemwide

Systemwide							
	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Trend	Change FY16 - FY19	% change FY16 - FY19
Ridership	131,447	124,297	113,225	106,884		-24,563	-18.7%
Service Hours	20,791	20,670	20,145	19,955		-836	-4.0%
Service Miles	335,429	328,548	314,978	309,737		-25,692	-7.7%
Operating Costs	\$1,919,140	\$1,958,278	\$2,014,347	\$2,079,668		\$160,528	8.4%
Fare Revenue	\$183,641	\$202,018	\$193,934	\$179,208		-\$4,433	-2.4%
Passengers/Service Hour	6.32	6.01	5.62	5.36		-0.97	-15.3%
Passengers/Service Mile	0.39	0.38	0.36	0.35		-0.05	-11.9%
Average Fare/Passenger	\$1.40	\$1.63	\$1.71	\$1.68		\$0.28	20.0%
Farebox Recovery	10.7%	10.6%	11.5%	11.5%		0.8%	7.5%
Cost/Service Hour	\$92.31	\$94.74	\$99.99	\$104.22		\$11.91	12.9%
Cost/Service Mile	\$5.72	\$5.96	\$6.40	\$6.71		\$0.99	17.4%
Cost/Passenger Trip	\$14.60	\$15.75	\$17.79	\$19.46		\$4.86	33.3%
Subsidy/Passenger Trip	\$13.20	\$14.13	\$16.08	\$17.78		\$4.58	34.7%

Key performance indicators and trends for the system as a whole include:

- Overall ridership fell steadily, with a drop of 18.7% and a loss of 24,563 annual boardings between FY16 and FY19.
- Fixed-route ridership fell by 22.9%, yet Dial-A-Ride fell by only 8%.
- Overall service hours decreased by 4%, yet operating costs increased by 8.4%.
- Fixed-route ridership has consistently accounted for about 70% of overall ridership (Figure 9).
- The systemwide farebox recovery ratio was 11.5% in FY19, up from 10.7% in FY16. This factors in applicable revenue from the partnership with Columbia College and advertising.

Figure 9, System Ridership FY16 to FY19



FIXED-ROUTES

Fixed-Routes - Ridership Compared Among Routes

Key performance indicators and trends for the fixed-routes compared to each other include (Figure 10 and Figure 11):

- Route 1, the Sonora Loop, has the highest ridership among the five fixed-routes and has consistently accounted for nearly half of total fixed-route ridership. Route 3 to Jamestown has consistently held about 20% of ridership.
- Route 2 to Sierra Village and Route 5 to Tuolumne saw the largest decreases in ridership proportionate to their ridership, with losses of 31.9% and 29.3%, respectively. These two routes also decreased slightly as a proportion of total fixed-route ridership.
- Route 4 saw a 14.9% increase in ridership and was the only route to have a ridership increase between FY16 and FY19. The increase is due to a jump in ridership between FY17/18 and FY18/19, whereas the first three years were fairly even.

Figure 10, Ridership by Fixed-Routes

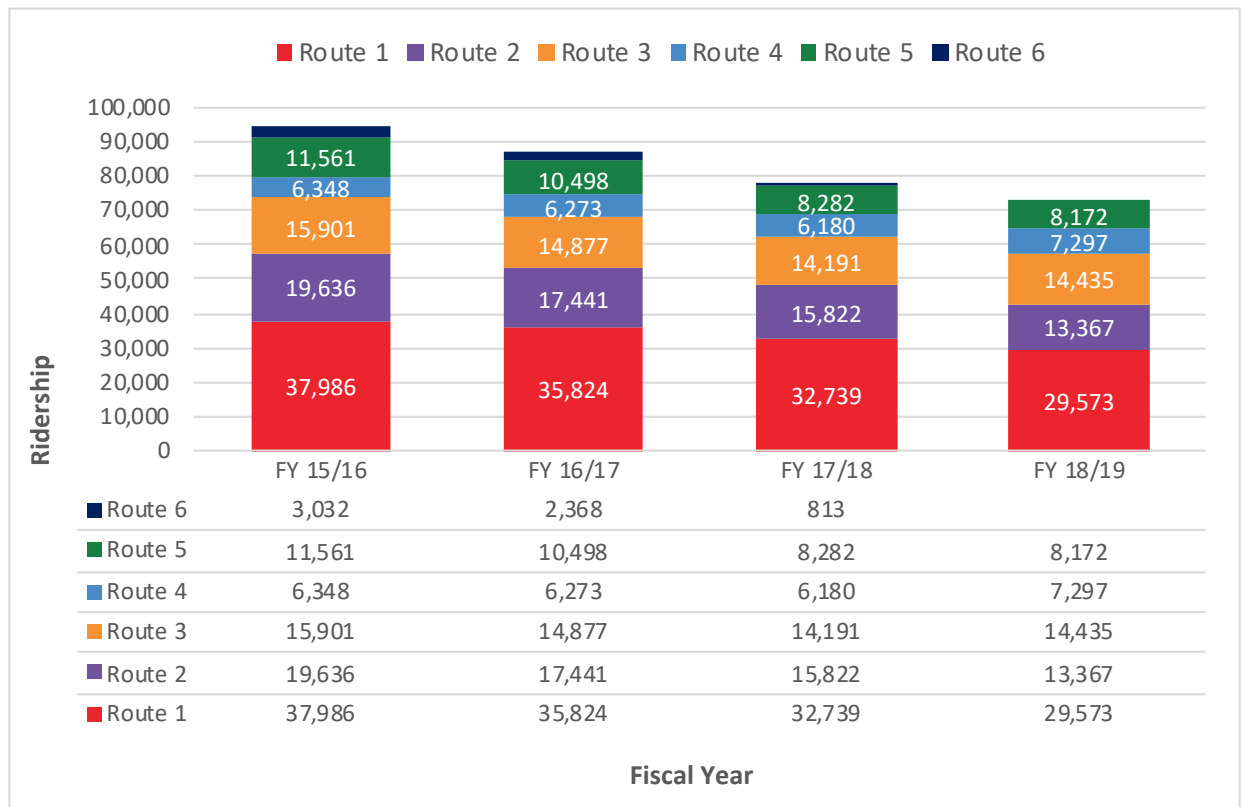
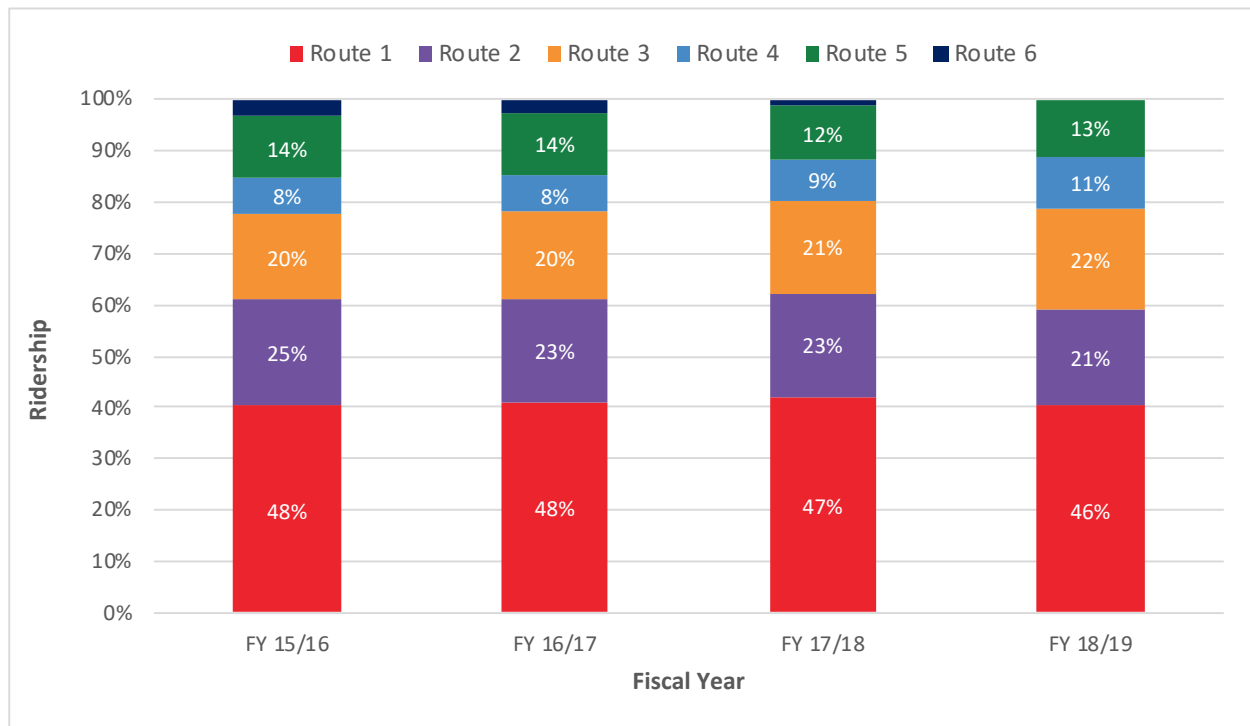


Figure 11, Fixed-Route Ridership as Percentage of Whole
















Fixed-Routes - Combined Performance

Table 4 shows the performance indicators for all of the TCT fixed-routes combined, including Routes 1 through 5 and Route 6, until it was discontinued in FY 17/18. Key performance indicators and trends for the fixed-routes combined include:

- Overall, ridership, service hours, and service miles have decreased, while operating costs held relatively steady between FY15/16 and FY18/19, resulting in increases in the average cost per hour, mile, and passenger trip.
- Ridership fell steadily, with an overall drop of 22.9% and a loss of 21,620 annual boardings between FY15/16 and FY18/19.
- Fare revenue increased slightly to 9.1% in FY16/17 due to the fare increase in FY15/16, but then fell again to 7.9% in FY19. Note that the farebox recovery ratio for individual routes does not include revenues that are applicable towards farebox recovery. Average fare per passenger also increased to \$1.24.
- The loss in ridership outran the reduction in service hours and service miles, which resulted in a reduction of 12.1% to 6.59 passengers per service hour and a reduction of 10.8% to 0.41 passengers per service mile.

Table 4, Performance - Fixed-Routes Combined

Fixed-Routes Combined							
	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Trend	Change FY16 - FY19	% change FY16 - FY19
Ridership	94,464	87,281	78,027	72,844		-21,620	-22.9%
Service Hours	12,595	12,548	11,748	11,051		-1,544	-12.3%
Service Miles	206,885	206,090	189,557	178,855		-28,030	-13.5%
Operating Costs	\$1,138,547	\$1,157,327	\$1,147,477	\$1,134,844		-\$3,703	-0.3%
Fare Revenue	\$84,099	\$105,045	\$99,271	\$90,000		\$5,901	7.0%
Passengers/Service Hour	7.50	6.96	6.64	6.59		-0.91	-12.1%
Passengers/Service Mile	0.46	0.42	0.41	0.41		-0.05	-10.8%
Average Fare/Passenger	\$0.89	\$1.20	\$1.27	\$1.24		\$0.35	38.8%
Farebox Recovery	7.4%	9.1%	8.7%	7.9%		0.5%	7.4%
Cost/Service Hour	\$90.39	\$92.23	\$97.68	\$102.69		\$12.30	13.6%
Cost/Service Mile	\$5.50	\$5.62	\$6.05	\$6.35		\$0.84	15.3%
Cost/Passenger Trip	\$12.05	\$13.26	\$14.71	\$15.58		\$3.53	29.3%
Subsidy/Passenger Trip	\$11.16	\$12.06	\$13.43	\$14.34		\$3.18	28.5%














Route 1 - Sonora Loop

Table 5 shows the performance indicators for Route 1 from FY15/16 through FY18/19.

Key performance indicators and trends for Route 1 include:

- Route 1 has the highest ridership among the five fixed-routes and has consistently accounted for a little less than half of the ridership among the fixed-routes (Figure 11).
- Ridership dropped in similar proportion to overall fixed-route ridership at a drop of 22.1%, or 8,413 boardings, between FY15/16 and FY18/19.
- Fare revenue increased by 23.4% and the average fare per passenger increased by 58.5% to \$1.46 in FY19. Farebox recovery increased to 13.6% in FY18/19.

Table 5, Performance - Route 1














Route 1							
	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Trend	Change FY16 - FY19	% change FY16 - FY19
Ridership	37,986	35,824	32,739	29,573		-8,413	-22.1%
Service Hours	3,302	3,290	3,350	3,231		-72	-2.2%
Service Miles	35,209	35,082	34,753	37,390		2,181	6.2%
Operating Costs	\$289,656	\$290,807	\$315,060	\$318,537		\$28,881	10.0%
Fare Revenue	\$34,989	\$47,738	\$47,605	\$43,170		\$8,181	23.4%
Passengers/Service Hour	11.50	10.89	9.77	9.15		-2.35	-20.4%
Passengers/Service Mile	1.079	1.021	0.942	0.791		-0.29	-26.7%
Average Fare/Passenger	\$0.92	\$1.33	\$1.45	\$1.46		\$0.54	58.5%
Farebox Recovery	12.1%	16.4%	15.1%	13.6%		1.5%	12.2%
Cost/Service Hour	\$87.71	\$88.40	\$94.06	\$98.59		\$10.88	12.4%
Cost/Service Mile	\$8.23	\$8.29	\$9.07	\$8.52		\$0.29	3.6%
Cost/Passenger Trip	\$7.63	\$8.12	\$9.62	\$10.77		\$3.15	41.3%
Subsidy/Passenger Trip	\$6.70	\$6.79	\$8.17	\$9.31		\$2.61	38.9%

Route 2 - Sierra Village/Sonora

Table 6 shows the performance indicators for Route 2 from FY15/16 through FY18/19. Key performance indicators and trends for Route 2 include:

- Ridership decreased by 31.9%.
- Operating costs held somewhat steady, despite a relatively sizeable reduction in service hours and miles. Due to this, the average cost per hour, mile, and passenger increased.
- The proportionate reductions in service hours and miles were less than the proportionate reduction in ridership and so the average passengers per hour and passengers per mile both decreased.
- Farebox recovery rose in FY16/17 due to the fair increase, but then dropped again due to loss of ridership and increasing costs.

Table 6, Performance - Route 2

Route 2							
	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Trend	Change FY16 - FY19	% change FY16 - FY19
Ridership	19,636	17,441	15,822	13,367		-6,269	-31.9%
Service Hours	3,521	3,507	3,164	2,993		-528	-15.0%
Service Miles	64,250	64,000	55,557	51,274		-12,976	-20.2%
Operating Costs	\$320,293	\$327,053	\$317,550	\$313,926		-\$6,367	-2.0%
Fare Revenue	\$18,347	\$21,182	\$19,794	\$17,300		-\$1,047	-5.7%
Passengers/Service Hour	5.58	4.97	5.00	4.47		-1.11	-19.9%
Passengers/Service Mile	0.306	0.273	0.285	0.261		-0.04	-14.7%
Average Fare/Passenger	\$0.93	\$1.21	\$1.25	\$1.29		\$0.36	38.5%
Farebox Recovery	5.7%	6.5%	6.2%	5.5%		-0.2%	-3.8%
Cost/Service Hour	\$90.97	\$93.25	\$100.37	\$104.89		\$13.92	15.3%
Cost/Service Mile	\$4.99	\$5.11	\$5.72	\$6.12		\$1.14	22.8%
Cost/Passenger Trip	\$16.31	\$18.75	\$20.07	\$23.49		\$7.17	44.0%
Subsidy/Passenger Trip	\$15.38	\$17.54	\$18.82	\$22.19		\$6.81	44.3%

Route 3 - Jamestown/Sonora/Columbia

Table 7 shows the performance indicators for Route 3 from FY16 through FY19. Key performance indicators and trends for Route 3 include:

- Ridership decreased by 1,466 boardings (9.2%) overall, but increased by 244 between FY17/18 and FY18/19.
- Service miles increased by 40.8% and hours by 13.7%. This is due to the extension of the route out to Chicken Ranch Casino and the surrounding subdivision.
- Operating costs increased by 28.6%, which resulted in a 41.6% increase in cost per passenger trip from \$12.04 to \$17.06.
- Fare revenue decreased due to the loss in ridership and farebox recovery dropped from 7.1% to just 5.2% in FY18/19.

Table 7, Performance - Route 3









Route 3							
	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Trend	Change FY16 - FY19	% change FY16 - FY19
Ridership	15,901	14,877	14,191	14,435		-1,466	-9.2%
Service Hours	2,120	2,112	2,312	2,411		291	13.7%
Service Miles	28,527	28,416	37,666	40,156		11,629	40.8%
Operating Costs	\$191,556	\$196,410	\$228,485	\$246,277		\$54,722	28.6%
Fare Revenue	\$13,682	\$15,108	\$14,980	\$12,924		-\$758	-5.5%
Passengers/Service Hour	7.50	7.04	6.14	5.99		-1.51	-20.2%
Passengers/Service Mile	0.557	0.524	0.377	0.359		-0.20	-35.5%
Average Fare/Passenger	\$0.86	\$1.02	\$1.06	\$0.90		\$0.03	4.1%
Farebox Recovery	7.1%	7.7%	6.6%	5.2%		-1.9%	-26.5%
Cost/Service Hour	\$90.35	\$93.00	\$98.83	\$102.14		\$11.80	13.1%
Cost/Service Mile	\$6.71	\$6.91	\$6.07	\$6.13		-\$0.58	-8.7%
Cost/Passenger Trip	\$12.05	\$13.20	\$16.10	\$17.06		\$5.01	41.6%
Subsidy/Passenger Trip	\$11.19	\$12.19	\$15.05	\$16.17		\$4.98	44.5%

Route 4 - Sonora/Columbia

Table 8 shows the performance indicators for Route 4 from FY15/16 through FY18/19. Key performance indicators and trends for Route 4 include:

- Ridership held steady until there was a 18% increase between FY17/18 and FY18/19.
- Service hours increased between FY16/17, FY17/18, and FY18/19 by 35%, or 261 hours.
- The increase in ridership was not proportionate to the increase in service hours and so the average number of passengers per hour decreased from 8.42 to 7.21.
- Operating costs increased by 53.3% from \$69,042 to 105,846.

Table 8, Performance - Route 4











Route 4							
	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Trend	Change FY16 - FY19	% change FY16 - FY19
Ridership	6,348	6,273	6,180	7,297		949	14.9%
Service Hours	754	751	925	1,012		258	34.2%
Service Miles	12,336	12,288	15,572	17,187		4,851	39.3%
Operating Costs	\$69,042	\$72,593	\$93,803	\$105,846		\$36,803	53.3%
Fare Revenue	\$5,012	\$5,697	\$5,948	\$5,868		\$856	17.1%
Passengers/Service Hour	8.42	8.35	6.68	7.21		-1.21	-14.4%
Passengers/Service Mile	0.515	0.510	0.397	0.425		-0.09	-17.5%
Average Fare/Passenger	\$0.79	\$0.91	\$0.96	\$0.80		\$0.01	1.9%
Farebox Recovery	7.3%	7.8%	6.3%	5.5%		-1.7%	-23.6%
Cost/Service Hour	\$91.58	\$96.67	\$101.37	\$104.59		\$13.01	14.2%
Cost/Service Mile	\$5.60	\$5.91	\$6.02	\$6.16		\$0.56	10.0%
Cost/Passenger Trip	\$10.88	\$11.57	\$15.18	\$14.51		\$3.63	33.4%
Subsidy/Passenger Trip	\$10.09	\$10.66	\$14.22	\$13.70		\$3.61	35.8%

Route 5 - Tuolumne/Sonora

Table 9 shows the performance indicators for Route 5 from FY15/16 through FY18/19. Key performance indicators and trends for Route 5 include:

- Ridership declined by 29.3% from 11,561 in FY16 to 8,172 in FY18/19.
- Service hours were decreased between FY16/17 and FY18/19, but the decrease in ridership was more dramatic and the average number of passengers per hour decreased to 5.82.
- Fare revenue increased, as did the farebox recovery ratio.

Table 9, Performance - Route 5

Route 5							
	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Trend	Change FY16 - FY19	% change FY16 - FY19
Ridership	11,561	10,498	8,282	8,172		-3,389	-29.3%
Service Hours	1,730	1,724	1,510	1,404		-326	-18.9%
Service Miles	42,919	42,752	36,165	32,848		-10,071	-23.5%
Operating Costs	\$161,533	\$163,520	\$154,727	\$150,258		-\$11,275	-7.0%
Fare Revenue	\$9,122	\$12,059	\$9,845	\$10,737		\$1,615	17.7%
Passengers/Service Hour	6.68	6.09	5.48	5.82		-0.86	-12.9%
Passengers/Service Mile	0.269	0.246	0.229	0.249		-0.02	-7.6%
Average Fare/Passenger	\$0.79	\$1.15	\$1.19	\$1.31		\$0.52	66.5%
Farebox Recovery	5.6%	7.4%	6.4%	7.1%		1.5%	26.5%
Cost/Service Hour	\$93.35	\$94.86	\$102.45	\$107.01		\$13.66	14.6%
Cost/Service Mile	\$3.76	\$3.82	\$4.28	\$4.57		\$0.81	21.5%
Cost/Passenger Trip	\$13.97	\$15.58	\$18.68	\$18.39		\$4.41	31.6%
Subsidy/Passenger Trip	\$13.18	\$14.43	\$17.49	\$17.07		\$3.89	29.5%

Route 6 - Sonora/Crystal Falls

Table 10 shows the performance indicators for Route 6 from FY16 through FY17/18. Route 6 was discontinued as of November 2017 due to low passenger fare recovery rates, therefore FY17/18 in the table below contains only 4 months of service.

Route 6 was replaced with weekday general public dial-a-ride service available between 9 am and 4 pm, which is technically open to the general public. However, in October 2019 there were approximately 226 trips to or from the Phoenix Lake Dial-A-Ride service area, none of which were general public riders, according to contractor operations staff.

Table 10, Performance - Route 6

Route 6			
	FY 15/16	FY 16/17	FY 17/18
Ridership	3,032	2,368	813
Service Hours	1,168	1,165	487
Service Miles	23,644	23,552	9,844
Operating Costs	\$106,466	\$106,943	\$37,852
Fare Revenue	\$2,947	\$3,261	\$1,099
Passengers/Service Hour	2.60	2.03	1.67
Passengers/Service Mile	0.128	0.101	0.083
Average Fare/Passenger	\$0.97	\$1.38	\$1.35
Farebox Recovery	2.8%	3.0%	2.9%
Cost/Service Hour	\$91.19	\$91.81	\$77.75
Cost/Service Mile	\$4.50	\$4.54	\$3.85
Cost/Passenger Trip	\$35.11	\$45.16	\$46.56
Subsidy/Passenger Trip	\$34.14	\$43.78	\$45.21














DIAL-A-RIDE

Weekday Dial-A-Ride

Table 11 shows the performance indicators for Dial-A-Ride on weekdays from FY16 through FY19. Key performance indicators and trends include:

- Ridership decreased by 9.9%, or 3,595 between FY15/16 and FY18/19, while service
- Service hours and service miles decreased between FY15/16 and FY16/17, but then increased between FY16/17 and FY18/19, resulting in an overall decrease in the average passengers per hour and passengers per mile.
- Operating costs increased by 18%, which resulted in an increase in cost per hour, mile, and passenger trip. The average cost per passenger is \$27.62.
- Passenger revenue fell along with ridership and the farebox recovery decreased to 9.5% in FY18/19.

Table 11, Performance - DAR Weekday














DAR - Weekday							
	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Trend	Change FY16 - FY19	% change FY16 - FY19
Ridership	36,173	36,264	34,009	32,578		-3,595	-9.9%
Service Hours	8,009	7,926	8,065	8,493		484	6.0%
Service Miles	125,854	119,876	120,490	124,681		-1,173	-0.9%
Operating Costs	\$762,381	\$781,274	\$831,845	\$899,663		\$137,282	18.0%
Fare Revenue	\$97,290	\$94,830	\$91,376	\$85,273		-\$12,017	-12.4%
Passengers/Service Hour	4.52	4.58	4.22	3.84		-0.68	-15.1%
Passengers/Service Mile	0.287	0.303	0.282	0.261		-0.03	-9.1%
Average Fare/Passenger	\$2.69	\$2.62	\$2.69	\$2.62		-\$0.07	-2.7%
Farebox Recovery	12.8%	12.1%	11.0%	9.5%		-3.3%	-25.7%
Cost/Service Hour	\$95.19	\$98.57	\$103.14	\$105.93		\$10.74	11.3%
Cost/Service Mile	\$6.06	\$6.52	\$6.90	\$7.22		\$1.16	19.1%
Cost/Passenger Trip	\$21.08	\$21.54	\$24.46	\$27.62		\$6.54	31.0%
Subsidy/Passenger Trip	\$18.39	\$18.93	\$21.77	\$25.00		\$6.61	36.0%

Saturday Dial-A-Ride

Table 12 shows the performance for Dial-A-Ride service on Saturdays from FY15/16 through FY18/19. Key performance indicators and trends include:

- Ridership grew by 80%, from 810 passengers in FY16 to 1,462 passengers in FY18/19. Consequently, service hours, miles, and operating costs each increased by 120% to 148%
- Nearly all of the passengers (88%) in FY18/19 were older adults and/or disabled.
- The average passengers per service mile and service hour both decreased.
- The cost per passenger trip increased to \$30.89 in FY18/19.
- Fare revenue increased in proportion to ridership. The farebox recover ratio was 8.7% in FY18/19.

Table 12, Performance - DAR Saturday

DAR - Saturday							
	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Trend	Change FY16 - FY19	% change FY16 - FY19
Ridership	810	752	1,189	1,462		652	80.5%
Service Hours	186	196	332	411		225	120.6%
Service Miles	2,690	2,582	4,931	6,201		3,511	130.5%
Operating Costs	\$18,212	\$19,676	\$35,025	\$45,161		\$26,949	148.0%
Fare Revenue	\$2,253	\$2,142	\$3,286	\$3,936		\$1,683	74.7%
Passengers/Service Hour	4.35	3.84	3.58	3.56		-0.79	-18.2%
Passengers/Service Mile	0.301	0.291	0.241	0.236		-0.07	-21.7%
Average Fare/Passenger	\$2.78	\$2.85	\$2.76	\$2.69		-\$0.09	-3.2%
Farebox Recovery	12.4%	10.9%	9.4%	8.7%		-3.7%	-29.5%
Cost/Service Hour	\$97.80	\$100.46	\$105.50	\$109.96		\$12.15	12.4%
Cost/Service Mile	\$6.77	\$7.62	\$7.10	\$7.28		\$0.51	7.6%
Cost/Passenger Trip	\$22.48	\$26.17	\$29.46	\$30.89		\$8.41	37.4%
Subsidy/Passenger Trip	\$19.70	\$23.32	\$26.69	\$28.20		\$8.50	43.1%

Chapter 5: Service Alternatives

INTRODUCTION

This Chapter first provides the cost methodology for analyzing the cost implications implementing the alternative being analyzed. Based on the public participation efforts such as the onboard survey, a long list of potential service alternatives was reviewed TCT staff to determine which alternative go forward with more detailed analysis. This work was most done before the COVID-19 crisis, and TCT and consulting staff soon realized that the first two years of the SRTP would be very different. Therefore, in consultation, the next section provides the proposed response to COVID-19 based on several milestones that are projected to occur as shelter in place restricted are eased.

The next sections several actions that are feasible but will need to have sufficient financial resources to implement. These actions include:

- Sonora to Modesto transit service one to two days a week.
- The addition of another bus running in the opposite direction of the current service on Route 1

The next two sections were developed before COVID-19 crisis. These actions will be important to consider, if and when, TCT re-implements a network of fixed route services and goes back to dial-a-ride services for seniors and the disabled. These include:

- Improve Connections at Key Transfer Locations
- Improve Saturday Dial-A-Ride for the General Public

The final section is an exploration how a general public dial-a-ride service that allows passengers to book trips on app was explored. Such as service is typically called “microtransit”. This work was also completed prior to the COVID-19 crisis. It was decided not to pursue an independent microtransit service, but to explore elements of microtransit with the current general public dial-a-ride that is now available during the COVID-19 shelter in place era.

COST METHODOLOGY

One of the key considerations of the alternatives is the annual cost of service provision. The methodology used for estimating costs is based on the same methodology that TCT utilizes for determining the annual costs by route. The following are the cost elements included in the cost estimation for FY 2019/20:

- Contractor cost per vehicle revenue hour for FY 2019/20: contracted rate between TCT and Storer Transportation, \$71.39 per vehicle revenue hour. This rate is multiplied by number of vehicle revenue hours of the improvement.

- Fuel cost per total mile: \$0.49 is derived from the full year of FY 2018/19 actuals for total fuels costs divided by total miles operated by TCT plus 3% inflation for FY 2019/20. This rate is applied to the estimated total miles of the service improvement.
- Administrative cost per vehicle revenue hour: this is the share of administrative costs (\$601,570) for TCT from the 2019/20 performance worksheet divided by the total vehicle revenue hours operated projected in 2019/20 (20,379) plus the operating revenue hours of the alternative. The administrative cost per vehicle revenue hour is applied to the number of vehicle revenue hours provided in the service improvement.

The resulting cost is the projected cost based on information from the 2019/20 TCT performance worksheet. Of course, future costs of actual implementation would be affected by significant changes in fuels costs and/or administrative costs.

COVID-19 RESPONSE AND BEYOND

In response to COVID-19, Tuolumne County Transit (TCT) management transitioned to a general public Dial-A-Ride service throughout the service area and suspended all fixed route operations on March 23, 2020. General public Dial-A-Ride has historically been utilized by rural counties throughout the United States to provide mobility services to their residents and employees working in their community. In many communities, the general public Dial-A-Ride service is very much like fixed route service, in that a member of the public calls and asks for a ride. Policies differ from community to community, with some requiring a 24-hour advance reservation and others allowing same day requests, typically two hours before a ride is needed.

The current General Public Dial-A-Ride service in Tuolumne County is for essential trips only with no fares being charged. However, in practice, the use for essential trips is self-enforcement by the passengers. About 70% of the trip requests are made the same day the trip is provided. Storer, the operations and maintenance contractor for TCT, cannot ask passengers for their trip purpose and make decisions as to what is and what isn't an essential trip. With schools closed, and discretionary trips eliminated, demand levels started out with reasonable demand, but rapidly increased to a recent peak of 140 passengers per day. To encourage social distancing, no more than three passengers are being transported at any one time. Typically, four or five Dial-A-Ride vehicles are being operated. However, up to eight vehicles can be operated and on some peak days and times all eight vehicles are being operated to keep up with growing demand. There have been no trip denials. Demand is continuing to grow each week, and it is quite possible that by mid-May available capacity will be reached, meaning that dispatchers may need to start negotiating with passengers the time when the desired trip can be provided.

It is widely expected that the transition from sheltering in place and social distancing to more normal social and business operations will be phased. While the plans at this writing are being formulated, it is

very likely full normalcy will not return until there is a vaccine and the general population is fully inoculated. Most experts project that this could take 12 to 18 months from March 2020.

Even after government officials decide to relax restrictions over the next 18 months, it must be stressed that the use of public transportation as we knew it before COVID-19 may very likely change. The utilization for most transit trips will only be made if the passengers utilizing the service perceive the trip is safe from potential COVID-19 infection spread. For purposes here, it is assumed there will be a two-year phase-in period when full reopening of the economy is made and the need for social distancing is eliminated. Therefore, we may see more of a “plural transportation” than the more commonly used mass transportation service. For purposes here, “plural” transportation can mean a handful or less passengers on a bus, increased ridesharing with families, or trusted friends, in addition to general public Dial-A-Ride services, and moderate levels of fixed route transit with social distancing practices.

The following is a progression of recommended operational steps and options for this transition period, broken down into:

- “Immediate actions” while the full shelter in place order remains in place.
- “Initial Reopening Action” when shelter in place restrictions are lifted in phases.
- “Secondary Reopening Actions”
- “Full Reopening”

Immediate Actions

The current general public Dial-A-Ride service for essential services is currently operating more like a taxi service to ensure social distancing practices. The StrataGen dispatching software that Storer is utilizing is designed for ADA Paratransit service where passengers are registered and have been certified. Before COVID-19, the Dial-A-Ride service required seniors 60 and older and persons with disabilities to register with Storer before riding. The StrataGen software requires a customer ID number for each passenger. When the transition began, there was no time to fully register passengers with the three phone lines that Storer has. Passenger information instead was included as a note in a generic passenger entry. The registration process is not long but was not feasible during the rapid start-up. One of the **recommend first immediate steps** should be the requirement to have each passenger wanting free transportation to register so that individual passenger ID numbers can be used. Storer may need to ask passengers to call during what they consider non-peak times. Having this in place will enable better grouping of trips when restrictions are eased.

In discussions with Storer management, TCTA, and the software provider that Storer utilizes for Dial-A-Ride dispatching, a need was identified for upgrading the dispatching software to the most current version. A **second immediate recommendation** is that Storer upgrade its dispatching software to the most

current version. This will make dispatching more efficient and enable the addition of other phased-in features.

A **third recommended immediate action** is to expand the number of vehicles in general public Dial-A-Ride from eight to ten cutaways vehicles when demand warrants. This will enable Storer to provide service with social distancing without having to deny important essential trips. As demand grows, it will be important to have at least a couple of buses dedicated to vulnerable populations such as seniors to have even fewer passengers on board for safety and security reasons.

The Tuolumne TRIP volunteer driver reimbursement program should be actively promoted in conjunction with human service agencies to provide alternatives for essential trips that cannot be served by the General Public Dial-A-Ride service. A **fourth recommended immediate action** is to allocate additional dollars from the first phase of CARE Act funding for this purpose as needed.

The **fifth recommended immediate action** is to make arrangements with human service agency partners to implement an updated Ride for All transit pass program when fares are re-instituted in the “Reopening” phase of the transition, described below.

Tuolumne County Transit should receive its allocation of the first phase of CARES Act federal funding in the next few weeks, according to an April 22nd webinar with Caltrans and the Federal Transit Administration, sponsored by CalACT. The first phase funding for Tuolumne County Transit will be \$351,289 from CARES Act according to the April 10, 2020 correspondence from Caltrans. This money can be utilized for any purpose allowed by FTA 5311 programs but is limited to operating expenses. It is 100% funding that can be utilized for all operations from January 20th. The **sixth recommended immediate action** is to submit an invoice to Caltrans for all operating and administrative expenses through April 30th up to the maximum of \$351,289. This allocation is based on a 30% allocation of statewide CARES Act funding for FTA 5311 services. This will allow Tuolumne County Transit to save other revenue sources for later use this fiscal year and rollover significant amounts of LTF and STA funding for use in FY 20/21. It should be noted that a second allocation will be made of CARES Act funding later this summer representing 70% of the allocation of CARES Act funding. The exact amount of the future allocation is not known as it theoretically could be as high at \$700,000, but will depend on several factors including additional 5311 recipients, the amount of utilization of first phase funding by grantees, etc. It should be noted that several recommended actions could be funded with CARES Act funding, but this at the discretion of TCTA management. CARES Act funding has significant flexibility and can be utilized to offset lost farebox revenues, likely reductions in Local Transportation Funding that is derived from sales tax revenues or anticipated reductions in State Transit Assistance funding, derived from diesel fuel tax revenues.

Initial Reopening Actions

Governor Gavin Newsom has provided six key criteria including significantly more testing before shelter in place restrictions are officially lifted. The words “officially lifted” are utilized because there is increasing evidence based on increasing traffic levels, that many Californians are beginning to make non-essential trips for a variety of reasons. Given the normal range of human behavior, it is very likely that more and more individuals will take advantage of the free general public Dial-A-Ride service for both essential and an increasing number of non-essential trips. It is not known what the sequence of reopening steps will be, but most health officials anticipate it will be slow sequential re-opening. In order to plan accordingly, we are suggesting a sequence of major milestones that will need to trigger certain actions by TCT. Admittedly, this likely is a starter list and TCT will need to adapt to unanticipated milestones during the COVID-19 era.

The first milestone is when demand levels exceed what can be delivered with ten vehicles in operation at peak, the **first initial reopening recommended action** will be to implement fares. Because general public Dial-A-Ride is a substitute for fixed route service for many passengers, the recommended fares are \$2.00 regular fare and \$1.00 discounted fare. It is also recommended that monthly passes be at the same price as \$60 regular/\$40 discounted be available for general public Dial-A-Ride. Ticket books for Dial-A-Ride should be honored, but new ticket books for Dial-A-Ride should be at the same price as the fixed route ticket books at \$28/\$14. As discussed above, human service agencies should be able to provide free ticket books to their most vulnerable clients when fares are implemented.

A second major milestone is when restrictions are lifted and groups of developmentally disabled can resume trips. Storer drivers often transport 12-20 passengers at a time. These trips during pre-COVID-19 times required significant Dial-A-Ride resources during peak periods. If these trips continued as business as usual, it would not allow Storer to provide high quality general public Dial-A-Ride. According to the Storer lead dispatcher these higher occupancy trips are on a regular route and schedule. The **second initial recommended reopening action** is to make these trips scheduled fixed route tripper routes with larger fixed route buses, and not part of the general public Dial-A-Ride service. The tripper routes are similar to a school bus route on a set schedule with designated stops based on actual passenger locations. Since TCT utilizes Federal funding, these tripper fixed routes must be published as a regular fixed route and open to the general public but designed to serve the need of the developmentally disabled community.

A third major milestone is when social service agency offices, government offices, shopping center stores other than grocery stores begin to re-open even if there are still social distancing guidelines in place. When this occurs, the **third recommended reopening action** is to re-open Route 1 on the same schedule as pre-COVID-19, limiting the number of passengers to maintain social distancing requirements at the time. Passengers should be seated one per row, and staggered with one passenger one side, and then a second passenger on the other side two rows back (skipping a row with no passengers). In order to

provide sufficient capacity, it may be necessary to add a second bus in the opposite direction in order to limit the number of people on the bus. The cost for adding a second bus could be paid for with CARES Act funding if needed. When Sonora High school re-opens, the On-Demand stop would be added back into the service. The recommended base fare for Route 1 is \$1.00/\$0.50 in order to provide an incentive for those who can utilize fixed route to do so. Passes and ticket books good for the general public Dial-A-Ride would also be good on fixed route services.

Since Route 1 will be the only fixed route operating, there will undoubtedly be requests for use of Route 1 for part of a trip and then general public Dial-A-Ride for trips to their final destination. This would not be an efficient or a wise use of resources. It should be made clear to Route 1 passengers that they should only use Route 1 if their origin and destination is on Route 1. For a destination not served by Route 1, passengers should be instructed to book a trip on the general public Dial-A-Ride service.

A fourth major milestone is when Columbia College re-opens. At some community colleges in California it has already been announced that most Fall 2020 classes will be taught online. A search of the Columbia College website notes that Summer 2020 classes will be taught online, but no announcement has been made for Fall 2020 classes.

During the pre-COVID-19 era, the overall ridership for FY 2019/20 had exhibited significant Columbia College ridership declines the first six months of the fiscal year, even with the free transit pass program. If Fall 2020 classes open for face-to-face learning, there will likely be a significant increase in community college enrollment if patterns follow other recessionary times. However, it is not known what the new normal will be at Columbia College, and what percentage of classes will be taught online. Even if face-to-face classes are enabled, it is very likely that in both Fall 2020 and Spring 2020 some level of social distancing will still be required. The following is the recommended progression of actions from Columbia College:

1. Columbia College students should be able to make subscription trips on general public Dial-A-Ride. Therefore, if a student has classes on Tuesdays and Thursdays, and needs to arrive at 10 am and 3 pm, then the dispatcher would make a standing order to pick up and drop off passengers in order to accommodate the above pattern. It would be the responsibility of the student to cancel the subscription trip if they are unable to make a particular trip. On the second no-show, the student would then need to make a reservation for a pick-up and drop-off on each day.
2. TCT and Storer should monitor the trip patterns and capacity of the General Public Dial-A-Ride in accommodating trips to and from Columbia College. If there is a way to accommodate five or more trips at the same time along a particular corridor then TCT should consider running a tripper service for that run. This tripper route would be run in a checkpoint demand response mode. Let's say that there are six students living in Sierra Village, Mi-Wuk Village, Twain Harte and Sonora who have classes that start at either 10 or 11 am. Then each passenger would be given a time to be at the bus stop nearest their home with the understanding there could be a

fifteen-minute wait. The bus would follow a route starting at Sierra Village and pick up students along the way at each of the designated bus stops. If bus capacity is available while maintaining social distancing protocols, then dispatchers could make arrangement to add trips from the general public Dial-A-Ride, and transfers from Route 1 at the new Stockton/Washington stop (or Courthouse Park in the interim if not completed). The bus would be scheduled to arrive at Columbia College at 9:45 am. The same scheduled tripper route in the opposite direction would be made only if there are five or more passengers that could be served along the corridor.

Secondary Reopening Actions

During the above initial reopening period, plans would be initiated for an online survey of passengers using the general public Dial-A-Ride, by sending a text with a link to a Survey Monkey site. The survey will ask general public Dial-A-Ride passengers who have used the service in the past month if being able to book trips online from the internet would be desirable and add convenience for the passenger. A second question would determine if an app were available, would they consider utilizing the app to book the trip. The online survey would gather information on who is using the general public Dial-A-Ride service, and how satisfied they are with the service, and issues they are having.

In discussions with the StrataGen Account Manager, the online booking feature is currently available, and the app-based service is launching in June 2020. The online interface would cost in the \$4,000-\$6,000 range, with an additional cost for the app-based application. StrataGen has not worked out the pricing for the app. Regardless, the costs could be paid for with the second phase CARES Act funding. If the online survey results are positive, then the **first recommended secondary reopening action** would be to implement the online booking by the internet and/or app.

It must be stressed that passengers could still book the trip with a phone call, just as they are doing today. The benefit of online or app reservation is customer convenience and less calls to the dispatching center.

A second secondary reopening action is for TCT to monitor and analyze the general public Dial-A-Ride, subscription Dial-A-Ride, tripper route(s), and Route 1 origins and destinations in order to plan for the adjustments to services during the period when social distancing is still required and when they are fully lifted. The Double Map vehicle tracking system shows much of the data but would likely need to be supplemented with an online survey of Route 1 passengers. TCT could conduct this ongoing analysis with its own staff or contract with a consulting firm to collect and analyze this data to make recommendations.

Full Reopening

After all shelter in place and social distancing have been removed, the decision to return to Routes 2, 3, 4, and 5 should only be made after the origin and destination data, passenger volumes, and financial availability are determined. There are too many unknowns now in how transit passenger demand will be

affected by COVID-19. In other words, the full reopening should be data driven based on the data collected and analyzed as described in more detail above.

SONORA TO MODESTO INTERCITY SERVICE

Background

In the onboard survey, passengers were asked to select only one destination in response to the question, “If TCT were to provide out of county bus service, which of these destinations would you use the bus to travel to the most?” Modesto was the most popular destination with 54% of respondents indicating they would use the bus to travel there the most. Oakdale received 17% of responses, Pleasanton/Dublin had 14%, and Sacramento had 7%.

In a preliminary list of potential alternatives, the potential for a service to Oakdale was included in the longer list of potential alternatives. However, in discussions with TCTA staff, it was concluded that since the follow-up interviews had indicated that most of the demand was to the Vintage Fair Mall, Amtrak station and medical facilities in Modesto, that direct service to Modesto one or two days a week was the most viable service delivery alternative.

Service Options

Two options are provided for consideration here. One is service on a weekday from Sonora to Amtrak, medical centers, and terminating at the Village Faire Mall in Modesto. The second alternative is one day of weekday and one day of Saturday service each weekday. For both weekday and weekend service, there would be two round trips per day.

Weekday service

The following is the essential scheduling framework with associated connections to and from Amtrak on two round trips on the scheduled weekday. For service to the Vintage Faire Mall, the primary destination mentioned for follow-up interviews with TCT passengers, respondents said they would like to be at the mall for 3 to 4 hours. Therefore, the route and schedule framework are designed primarily to meet the needs of the Amtrak train connections and allowing mall passengers to have sufficient time at the mall. Times are estimated and would need to be field tested before an actual schedule is developed.

The first run would leave about 10:30 am from the Transit Center which provides opportunities for transfers from Routes 1, 2, 3, 4 and 5. It leave early enough to connect to arrive at 11:30 at the Amtrak station, with a train departing at 11:56 southbound to destinations along the Joaquin route to Bakersfield or 12:03 pm departure to Oakland, Stockton, or Sacramento. The bus would serve the Sutter Health and Doctors Medical Center before arriving at Vintage Faire at 12:10 pm. It would then depart and arrive back at the Amtrak Station about 12:40 pm to pick up Amtrak passengers from the 11:54 train from

Oakland and the 12:03 northbound train from Bakersfield and the 12:05 train from Sacramento for the eastbound trip to the Sonora Transit Center, arriving about 1:45 pm at the Transit Center. Because the transfers are not good at the Transit Center at this time, the bus could terminate at the new Stockton/Washington transfer location where there are more options for passengers.

A second round trip would begin after a driver meal break at 2:30 pm, after the 2:26 Route 1 bus arrives. Unfortunately, the wait times for connections from Routes 2, 3, 4, and 5 are between 35 and 55 minutes. The second bus would arrive at the Amtrak station about 3:30 pm, in time for the 3:56 pm train to destinations between Modesto and Bakersfield and the 4:03 pm Amtrak train to Oakland/Stockton/Sacramento. The bus would depart for the Village Faire Mall arriving at 4 pm, picking up passengers who arrived at the mall earlier at 12:10. On the return trip eastbound, stops would be made to pick up riders at the Doctors Medical Center and Sutter Health Medical Center who were dropped off from the first run before Noon. It should be noted, there is good bus service from the Doctors Medical Center and Sutter Health Medical Center, and riders with medical appointments would have the options of taking a MAX bus to Vintage Faire Mall after their medical appointments are completed.

Saturday service

Under the current configuration of Saturday Dial-A-Ride, service is only available from 11 am to 4 pm. This constrained schedule would not enable passengers to utilize both Saturday DAR and the Sonora/Modesto Intercity service for a round-trip. A service alternative that expands the hours of operation for Saturday service is one of the service alternatives being considered. If the Saturday span of service program were expanded, only then would Saturday option for the Sonora/Modesto service be viable for connections to areas not served by fixed route.

Annual Cost Estimate

The annual cost for a single weekday trip between Sonora and Modesto is estimated at \$47,281 per year. Adding an additional weekday or Saturday service would be double the cost or \$94,562 per year.

Annual Revenue Hrs.	Annual Total Miles	Contractor Cost	Admin. Share	Fuel Cost	Total Cost
416	11,440	\$ 29,698	\$ 11,833	\$ 5,750	\$ 47,281

Ridership Potential

The pilot program would be operated for a one-year period. There are a number of considerations in what the ridership potential might be.

The demand for local trips between Sonora and Modesto had high interest among TCT passengers. However, based on recent intercity service pilot program operated by Calaveras Transit to Stockton, for example, the actual ridership response is often much lower than perceived interest. Given the demographics of existing ridership, the price of the service would be one key factor. Keeping the fares to the general public fixed route fare of \$2.00 and \$1.00 for seniors, honoring day passes, and monthly passes, would encourage more ridership during the pilot program. In this ridership scenario, daily ridership would likely be in the 12 to 24 passengers per day category, on average, with an estimated annual ridership of approximately 950 annual passengers.

Service during the time period when YARTS is operating would enable some passengers to stay overnight in Sonora and catch a bus to Yosemite. However, unless the service was operated at least two days a week, returning passengers would have to wait an entire week for the return trip to the Modesto Amtrak station but these passengers could return to Merced for the return trip home. It is very difficult to know how many passengers might utilize the service for combining it with a YARTS trip to and from Yosemite. Given the limited service compared to a Merced Amtrak option, the number would likely be low, unless it was combined with a special promotion to Black Oak Casino Resort, for example.

CLOCKWISE AND COUNTERCLOCKWISE ROUTE 1 SERVICE

Background

Route 1-Sonora Loop is Tuolumne County Transit's core route is a one-way loop serving these primary destinations in Sonora every hour in a clockwise manner:

- Transit Center
- Sonora Post Office
- Courthouse Park
- Greenly Rd. Apartments
- Social Services/Qual Hollow
- Library/Senior Center
- Sonora Regional Medical Center
- Timberhills Shopping Center
- Crossroads Shopping Center
- Return to Transit Center

Route 1 has the highest ridership of any of the TCT routes with a three year average of 32,712 annual rides. It has more than double the ridership of the next closest route, Route 2, with 13,367 boardings in FY18/19. Route 1 has a three-year average farebox recovery ratio (fare revenues collected/costs to operate the route) of 15%, with the next highest route, Route 5, having a three-year average of 6.9%.

With a minimum farebox recovery of 10%, Route 1 is the most productive and cost effective route of the system.

A primary reason that Route 1 is so productive is that it operates every hour on what is called “clock headways”. This means that the bus stops at a particular destination at the same time each hour. At the Greenly Rd. apartments, residents know a bus will show up at :01 after the hour from 8 am to 7 pm. For the most part, this route connects major origins and destinations in a convenient manner.

However, for some passengers, the long way routing requires going around the hour-long loop in a very indirect manner. For example, if you live at the Greenly Rd. apartments and want to go to Courthouse Park, the Courthouse Park is just 6 minutes away by bus, but the clockwise route requires passenger to travel around the entire loop or 54 minutes to get from the Greenly Apartments to Courthouse.

This was a primary reason that adding a counter-clockwise bus to Route 1 was a recommendation in the 2011 SRTP:

“To meet the demand for increased frequency, identified as a critical weakness in the On-Board rider survey, while still fulfilling the other key Plan criteria, **a double loop is recommended for Route 1.**

Under this option, a second bus, designated Route 1B, will run the reverse loop of the basic Route 1 service profile previously detailed.”

Counterclockwise Route 1 Bus

Route and Schedule Description

This alternative is the same as the 2011 SRTP recommendation. A second bus would operate the same hours as the existing Route 1 bus, but in a counterclockwise manner. The schedules would be offset by one-half hour. Therefore, utilizing the Greenly Rd. apartments example again, the clockwise bus would arrive at :01 after the hour, and the counterclockwise bus would arrive at :31 after the hour.

Annual Cost Estimate

Based on actual FY 2018/19 figures from the TCT performance, the annual cost in FY 2018/19 was \$318,537. The table below provides the base year actual costs of providing a second counterclockwise bus on Route 1. The projected cost of \$336,069 in FY 2019/20 is slightly higher due to adjustments to the contractor and administrative share costs.

Annual Revenue Hrs.	Annual Total Miles	Contractor Cost	Admin. Share	Fuel Cost	Total Cost
3,282	38,807	\$ 234,336	\$ 82,228	\$ 19,506	\$ 336,069

Ridership Potential

The net effect of adding a second counterclockwise bus is that it adds general frequency to the service. In rural areas, based on national research is that adding the second bus would increase ridership on Route 1 by 13,000 to 18,000 annual passengers. However, local circumstances and the current decline in ridership could potentially result in lower ridership than what might be expected. Follow-up interviews with existing transit passengers found that while they complain about the single direction of travel, they utilize existing Route 1 because it's mostly very convenient. In general, many passengers are living on the edge, which means that unless they have a monthly pass, increase in their transit use is constrained by the money they have. Given the demographics of the current and potential rider, in the consultants' professional judgement the ridership increase will likely be towards the lower end of the ridership range if not lower after two full years of implementation. Nevertheless, this second bus would likely generate about the same ridership as Route 2, the second highest ridership route for Tuolumne County Transit.

RESTORE OLD ROUTE 2 FROM SIERRA VILLAGE TO COLUMBIA COLLEGE

Background

Prior to COVID-19 restriction, Route 2 was routed between Sierra Village and the Transit Center. Route 2 used to be extended to Columbia College, and had some of its highest ridership and service productivity. In FY 2007/08, the productivity of Route 2 with service to Columbia College was 17.5 passengers per hour compared to just 4.4 passenger per hour in FY 2018/19.

Route and Schedule Description

This alternative would restore service on Route 2 with a single route from Sierra Village to Columbia College. For the route segment from the Transit Center to Columbia College essentially following the route of existing Route 3 from the Transit Center to Columbia College. In order to provide service to Columbia College, while maintaining the same cost structure, the service level would decrease from service every two hours to service every three hours, similar to the schedule in FY 2007/08.

Implementation Prerequisites

There are two very important prerequisites that should be considered before this alternative is implemented. The first is the degree is how much demand is generated at Columbia College after the COVID-19 era. There was a trend of distance learning at community college before COVID-19, and this trend could accelerate after students have experienced distance learning during the shelter in place restrictions. The Tuolumne County Transit Agency should closely monitor the degree of in-person at Columbia College before implementation of this alternative is considered.

The second key indicator should be the number of general public dial-a-ride trips along the Sierra Village-Transit Center-Columbia College corridor. If there are not a significant number of general public dial-ride trips with origins and destinations along this corridor, especially with subscription trips (regular occurring advanced reservations), then the prospects for a fixed route service is diminished. A detailed analysis of origin-destination pairs of general public dial-a-ride trips should be an important input to the decision-making process for implementation of this restructured Route 2.

Annual Cost Estimate

The annual cost of having one bus operate along the restructured Route 2 every three hours between Sierra Village and Columbia College would be approximately \$328,347.

Description	Annual Revenue Hrs.	Annual Total Miles	Contractor Cost	Admin. Share	Fuel Cost	Total Cost
Route 2: Sierra Village to Columbia College: 1 bus	3,315	72,930	\$ 241,398	\$ 49,224	\$37,725	\$328,347

IMPROVE CONNECTIONS AT KEY TRANSFER LOCATIONS

This section examines the connections at four key TCT transfer locations, including Columbia College, the Transit Center, Junction Shopping Center, and Courthouse Park. Potential adjustments to improve connections are presented and the final section provides recommendations.

Background

Difficulty with connections between TCT routes and between TCT and Calaveras Connect were two of the most consistently named issues that arose during the outreach process. Organizations that responded to the E-survey that answered that their clients “sometimes” or “often” have difficulty with bus transfers between local routes, and bus transfers between County systems. Stakeholders also reported that their clients have difficulty with TCT transfer times, specifically between East Sonora and Jamestown.

Passengers that responded to the onboard survey rated the “Convenience of connecting between Tuolumne County Transit Routes” the third lowest among 10 service factors. Additionally, during the follow-up interviews with passengers, they provided several anecdotal examples that made connections difficult, including:

- Route 1 with hourly frequencies makes connecting to other routes with two and three hour frequencies difficult.
- For a Twain Harte resident: “It takes me a whole day to get to and from doctor’s appointment. The connections don’t work.”

- A Tuolumne resident said the connections she needed were at the Courthouse, but she first had to wait for a bus at the new Transit Center and made trips very time consuming.
- Several passengers said they hate having to wait at the Transit Center, because it's isolated and there is literally nothing to do.
- Two different passengers remarked that on Route 2 that they had to wait for 30 minutes at the Transit Center before continuing up the hill. Both expressed a desire for the bus to wait at Walmart stop which would give them time to do some quick shopping.
- Transferring from Route 1 to Route 3. If route 3 was every 90 minutes, they would be able to use more.
- A Mi-Wuk Village resident is part-time student of Columbia College and a long time rider. She said the time she has to wait at Columbia College before her class starts is too long and that she doesn't use TCT to the college. Her class is at 11:20 am and the connection from Route 2 and Route 5 at 9:25 am get her to the college on Route 4 at 9:58, but she has to wait one hour and 20 minutes for her class to start.
- A Full-time 29 year old student could take more classes in the evening, but the last bus arrives at 6 pm. Classes last until 9:05 and 9:35 pm and there is no way home...she lives in East Sonora.
- One part-time 29 year old student works at the Columbia College Day Care Center and also goes to school, Route 3 works well, but connections to Calaveras County do not work well.

TCT considers a bus to be on time if it departs within four minutes of the scheduled time. This analysis includes actual departure time data for the month of October 2019.

Columbia College

Columbia College is an important stop in the TCT system because many of the College's students and some employees rely on the service to access the school. Over a quarter of respondents to the onboard survey are either part-time students, full-time students, and/or employed at Columbia. Columbia College students are able to ride TCT for free by showing their student ID and awareness of this program among all passengers is high.

The Columbia College bus stop is also where passengers can transfer to or from Calaveras Connect for destinations in Calaveras County.

TCT Route 3 from Jamestown and Sonora serves Columbia College four times each weekday, as

ROUTE 3 - JAMESTOWN/SONORA/COLUMBIA					
Service Monday - Friday Saturday DAR Only					
Transit Center R1, R2, R3, R4, R5	010	6:30	9:30	12:30	3:30
5th/Willow	305	6:40	9:40	12:40	3:40

Figure 12, Route 3 Schedule

Food Bank/Humane Society	x	OD	OD	OD	OD
Chicken Ranch	320	6:55	9:55	12:55	3:55
Jamestown Post Office	325	7:03	10:03	1:03	4:03
Mono Way/Fir Drive	330	FLAG	FLAG	FLAG	FLAG
Walmart (Crossroads Shopping Center)	001	7:15	10:15	1:15	4:15
Transit Center Arrive R1, R2, R3, R4, R5	010	7:20	10:20	1:20	4:20
Transit Center Depart R1, R2, R3, R4, R5	010	7:25	10:25	1:25	4:25
Courthouse Park	003	7:33	10:33	1:33	4:33
Sonora High School	335	7:36	10:36	1:36	4:36
Shaws Flat/Mt Brow	340	FLAG	FLAG	FLAG	FLAG
Columbia College	004	7:51	10:51	1:51	4:51
Calaveras Transit	x	7:55/8:50	10:50	1:55/3:00	5:30
Columbia College	004	7:55	10:55	1:55	4:55
Yankee Hill Rd/Big Hill Rd	345	7:59	10:59	1:59	4:59
Yankee Hill Rd/Columbia Vista	350	FLAG	FLAG	FLAG	FLAG
Gold St/Jackson St	x	OD	OD	OD	OD
Columbia State Park	355	8:05	11:05	2:05	5:05
Columbia Airport	x	OD	OD	OD	OD
Parrotts Ferry Rd @ Gold Rush MHP	360	FLAG	FLAG	FLAG	FLAG
Parrotts Ferry Rd @ Columbia Village	365	FLAG	FLAG	FLAG	FLAG
Shaws Flat Rd/Mt Brow	340	FLAG	FLAG	FLAG	FLAG
Sonora High School	335	8:17	11:17	2:17	5:17
Courthouse Park R1	003	8:22	11:22	2:22	5:22
5th/Willow	305	8:32	11:32	2:32	5:32
Preston Lane Apts	315	8:35	11:35	2:35	5:35
Jamestown Post Office	325	8:38	11:38	2:38	5:38
Stockton Rd/Fairgrounds	332	FLAG	FLAG	FLAG	FLAG
Mono Way	x	FLAG	FLAG	FLAG	FLAG
Transit Center R1, R2, R3, R4, R5	010	8:53	11:53	2:53	5:53

shown in Figure 12. Route 4 from Sonora also serves the College four times each weekday, as shown in Figure 13.

Connections with Columbia College

Many Columbia College classes start at 8 am and so the arrival of Route 3 at 7:51 am is ideal. However, Route 4 does not arrive until 9:58 and so people living along that Route cannot use TCT to attend 8 am classes, nor the several classes that start at 9:40 am.

Several classes start at 1:00 pm, but TCT Route 4 arrives at 12:58 pm, leaving only two minutes to get to class. One passenger noted that they have to run to class to make it on time. They transfer from Route 5 to Route 4 at the Transit Center, but they arrive at 11:34 am at the Transit Center and then have to wait until 12:25 pm for Route 4 to depart. This person also noted that they are planning to get a car soon and stop riding TCT.

Figure 13, Route 4 Schedule

ROUTE 4 - SONORA/COLUMBIA		Service Monday - Friday Saturday DAR Only				
Transit Center R1, R2, R3, R4, R5	010	9:25	12:25	3:25	6:25	
Courthouse Park	003	9:35	12:35	3:35	6:35	
Racetrack/Jamestown Rd	405	9:41	12:41	3:41	6:41	
Columbia Mobile Home Park	410	9:47	12:47	3:47	6:47	
Columbia State Park	415	9:50	12:50	3:50	6:50	
Gold/Jackson	x	OD	OD	OD	OD	
Columbia College (arrive)	004	9:58	12:58	3:58	6:58	
Calaveras Transit	x	7:15/8:50	10:50	1:35/3:00	5:30	
Columbia College (depart)	004	10:02	1:02	4:02	7:02	
Day Reporting Center (Hwy 49)	425	FLAG	FLAG	FLAG	FLAG	
Courthouse Park	003	10:15	1:15	4:15	7:15	
Transit Center R1, R2, R3, R4, R5	010	10:25	1:25	4:25	7:25	

Another common class time is 2:40 pm. Student wishing to take classes at this time would need to arrive on Route 3 at 1:51 pm, which is somewhat early.

There are several classes that are held from 6:00 pm to 7:25 pm or 8:00 pm, but the latest TCT bus that serves the College is Route 4, which departs the school at 7:02 pm. Any student enrolled in an evening class would not be able to use TCT to get home after. One passenger interviewed noted that this prohibited them from taking more classes.

Connections with Calaveras Connect at Columbia College

TCT Routes 3 and 4 connect with the Red Line run by Calaveras Connect at Columbia College. This allows passengers to travel between the two counties.

Table 13 shows the scheduled arrival and departure times for all through routes with well-timed transfers highlighted in green and moderately-timed where transfers could occur within 60 minutes highlighted in yellow. All four departure times for Route 3 at the College are timed well with the Calaveras Connect Red Line so that passengers can transfer immediately to/from the other system.

The Calaveras Connect Red Line and TCT Route 4 are not as conveniently timed for transfers. Passengers traveling southwest from the Calaveras Connect Red Line to TCT Route 4 would need to wait approximately 40 minutes at the College. In the opposite direction, passengers traveling on Route 4 to the Red Line have to wait about 45 minutes.

Table 13, TCT Connections with Calaveras Connect at Columbia College

Hour	Calaveras		Tuolumne			
	Red Line	Red Line	Route 3	Route 3	Route 4	Route 4
	Arrive	Depart	Arrive	Depart	Arrive	Depart
7 AM	7:45 AM	7:55 AM	7:51 AM	7:55 AM		
8						
9	9:15 AM	9:20 AM			9:58 AM	
10	10:45 AM	10:55 AM	10:51 AM	10:55 AM		10:02 AM
11						
12 PM	12:15 PM	12:20 PM			12:58 PM	
1	1:45 PM	1:55 PM	1:51 PM	1:55 PM		1:02 PM
2						
3	3:15 PM	3:20 PM			3:58 PM	
4	4:45 PM	4:55 PM	4:51 PM	4:55 PM		4:02 PM
5						
6	6:15 PM	6:20 PM			6:58 PM	
7 PM						7:02 PM
Legend:	Well-timed Transfer		40-60 minute wait to transfer			

Scheduled vs. Actual Times

In October 2019, Route 3 arrived at Columbia College on time, with an average arrival of one minute after the scheduled time. Late arrivals that did occur happened only on the last two trips of the day which arrive at 1:51 pm and 4:51 pm. Departures were also on time, with an average actual departure time of 1.7 minutes past the scheduled time. Route 4 was also generally on time, with an average departure time of 3.3 minutes after the scheduled departure time. The Calaveras Connect Red Line was also usually on time.

Potential Adjustments

This adjustment would only be considered when Columbia College returns fully to in-person classes and Tuolumne Transit decides to return to implementation of both Routes 3 and 4. Since Route 3 and Route 4 generally arrive and depart the College on time, attention should be paid to how well the scheduled

stops are working. Adjusting all four Route 4 arrivals to :15 after would improve alignment to Columbia College common class times and transfers to/from Calaveras Connect, including:

- The first trip on Route 4 would arrive at 9:15 am (currently 9:58 am) and would align with the 9:40 am classes. This would also improve the connection with the Calaveras Connect Red Line, which arrives at 9:15 pm and departs at 9:20 pm.
- The second trip on Route 4 would arrive at 12:15 pm (currently 12:58 pm) and would align with 1:00 pm class times. This would also improve the connection with the Calaveras Connect Red Line, which arrives at 12:15 pm and departs at 12:20 pm. This would only be implemented if there is demonstrated demand for transfer to Calaveras Connect.
- Changing the last two arrivals of Route 4 at the College to 3:15 pm (currently 3:58 pm) and 6:15 pm (currently 6:58 pm) would allow people to transfer to and from Calaveras Connect, which would double the number of timed transfers from four to eight per day.

Transit Center

The TCT Transit Center at 12879 Justice Center Drive in Sonoma is a key transfer location for all five TCT routes. To accommodate the new transit center, TCT routes had to be somewhat restructured in December 2017. The new transit center is located near the new Law and Justice Center, which replaces the Courthouse Square as the primary transfer location. Wal-Mart, an important node for transit, is in the vicinity of the Transit Center. Various traveler amenities are provided in the 1,345-square-foot building and 520-square-foot bus shelter, including air conditioning, bathrooms, and cushioned seats for those who are waiting. All five TCT routes include a stop at the Transit Center.

Route 1 to/from Other Routes

Route 1 operates hourly in a clockwise loop, departing from the Transit Center at :30 after the hour (Figure 14). All other TCT routes operate less often, with up to three hours between trip departures from the Transit Center.

Figure 14, Route 1 Schedule

ROUTE 1 - SONORA LOOP			Service Monday - Friday Saturday DAR Only												
Transit Center R1, R2, R3, R4, R5	010		7:30	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30	4:30	5:30	6:30	
Veterans Administration	005		FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
Junction Shopping Center	002		7:38	8:38	9:38	10:38	11:38	12:38	1:38	2:38	3:38	4:38	5:38	6:38	
Sonora Post Office	105	6:40	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
Stockton Rd (near Save Mart)	107	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
Son. Comm. Estates/Dragon Gulch/Rotary Park	110	6:45	7:50	8:50	9:50	10:50	11:50	12:50	1:50	2:50	3:50	4:50	5:50	6:50	
Sonora High School	x	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD
Courthouse Park R3, R4	003	6:50	7:55	8:55	9:55	10:55	11:55	12:55	1:55	2:55	3:55	4:55	5:55	6:55	
Blackberry Oaks	x	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD	OD
Greenly Road- Sonora Terrace Apts	115	6:56	8:01	9:01	10:01	11:01	12:01	1:01	2:01	3:01	4:01	5:01	6:01	7:01	
Social Services/Quail Hollow Apartments	120	6:58	8:03	9:03	10:03	11:03	12:03	1:03	2:03	3:03	4:03	5:03	6:03	7:03	
Skate Park/Library/Senior Center	125	7:03	8:08	9:08	10:08	11:08	12:08	1:08	2:08	3:08	4:08	5:08	6:08	7:08	
Sonora Regional Medical Center (Adventist Health)	130	7:06	8:11	9:11	10:11	11:11	12:11	1:11	2:11	3:11	4:11	5:11	6:11	7:11	
Timberhills Shopping Center (upper Save Mart)	135	7:10	8:15	9:15	10:15	11:15	12:15	1:15	2:15	3:15	4:15	5:15	6:15	7:15	
Walmart (Crossroads Shopping Center)	001	7:16	8:21	9:21	10:21	11:21	12:21	1:21	2:21	3:21	4:21	5:21	6:21	7:21	
Transit Center R1, R2, R3, R4, R5	010	7:20	8:26	9:26	10:26	11:26	12:26	1:26	2:26	3:26	4:26	5:26	6:26	7:26	

The outreach process showed that people have difficulty with TCT transfers between Route 1 and other TCT routes. Stakeholders reported that their constituents have some difficulty transferring between East Sonora (Route 1) and the Jamestown route (Route 3). In the follow-up interviews to the onboard survey, passengers reported that the difference in trip frequencies between Route 1 and other routes, particularly Route 2, means that they have to wait at the Transit Center for long lengths of time. Furthermore, several passengers expressed that the isolated location of the Transit Center makes waiting there unpleasant because of lack access to shopping and other amenities.

Table 14 shows the scheduled arrival and departure times for each route at the Transit Center. For the scheduled arrivals, the following scheduled arrivals and departures are incongruent:

- Some Route 2 trips arrive proximate with Route 1 departures, but every other trip on Route 1 arrives at the Transit Center about an hour before Route 2 departs.
- Four trips on Route 3 arrive at the Transit Center 37 minutes before they can depart on Route 1 (highlighted in yellow in Table 14).
- Five trips on Route 5 arrive 52 minutes before Route 1 departs (highlighted in yellow in Table 14).

Table 14, Transit Center Scheduled Departures

Transit Center										
Hour	Route 1		Route 2	Route 3		to:	Route 4		Route 5	
	Arrive	Depart	Depart	Arrive	Depart		Arrive	Depart	Arrive	Depart
6 AM					6:30 AM	J				
7	7:20 AM	7:30 AM	7:25 AM	7:20 AM	7:25 AM	C			7:25 AM	7:30 AM
8	8:26 AM	8:30 AM		8:53 AM					8:34 AM	
9	9:26 AM	9:30 AM	9:25 AM		9:30 AM	J		9:25 AM		
10	10:26 AM	10:30 AM		10:20 AM	10:25 AM	C	10:25 AM			10:30 AM
11	11:26 AM	11:30 AM	11:25 AM	11:53 AM					11:34 AM	
12 PM	12:26 PM	12:30 PM			12:30 PM	J		12:25 PM		12:50 PM
1	1:26 PM	1:30 PM	1:25 PM	1:20 PM	1:25 PM	C	1:25 PM		1:55 PM	
2	2:26 PM	2:30 PM		2:53 PM						2:00 PM
3	3:26 PM	3:30 PM	3:25 PM		3:30 PM	J		3:25 PM	3:05 PM	
4	4:26 PM	4:30 PM		4:20 PM	4:25 PM	C	4:25 PM			
5	5:26 PM	5:30 PM	5:25 PM	5:53 AM						
6	6:26 PM	6:30 PM						6:25 PM		6:00 PM
7 PM	7:26 PM						7:25 PM		7:05 PM	
Legend:	Misaligned to Route 1					J: Rt. 3 to Jamestown C: Rt 3 to Columbia				

Another issue is that Routes 2 and 4 are scheduled to depart right before scheduled Route 1 departure times. This requires drivers to communicate with one another regarding passengers intending to transfer, potentially delaying the departure from the scheduled time(s). This is shown in purple highlight in Table 14. Contractor staff report that, in order to accommodate passenger transfers from Route 1, Routes 2 and 4 will wait for passengers to arrive on Route 1 at the Transit Center. They also report that Route 2 will pick up transfers from Route 1 at the Rite-Aid instead on Route 1's trip in towards the Transit Center and Route 2's trip outbound from the Transit Center, especially for Route 2's trips that are set to leave at 1:25. On-time performance data shows that this appears to be working for keeping the 1:25 trip on time, but the 3:25 trip tends to leave the Transit Center at 3:32 on average, which is six minutes late. This may indicate that Route 2 is waiting for Route 1 at the Transit Center some of the time, or there are other causes of delay. Earlier trips on Route 2 are also leaving the Transit Center, on average, at :30 after. By early afternoon Route 1 tends to fall behind a bit and starts to depart the Transit Center 4-6 minutes after the scheduled time. If Routes 2 and 4 are already waiting for Route 1, this puts them even more behind schedule.

Routes 3, 4, and 5 generally leave within 2-4 minutes of their scheduled departure times from the Transit Center.

Potential Adjustments

One option is to adjust the schedule to allow for a 7-10 minute window of time where transfers can occur between multiple routes, perhaps from :25 to :35 after. This would improve transfers between Routes 1 and all trips on Route 2. All arrivals and departures on Route 4, all departures and half of arrivals on Route 3, and all departures on Route 5 would be aligned with Route 1.

Consideration could also be given to improving alignment with arrivals on Routes 3 and 5 with other routes, including Route 1, so that people arriving from outer areas can continue on Route 1 to destinations within the Sonora area. This is discussed further in the Recommendations section.

Junction Shopping Center

Routes 1, 2, and 5 each stop at the Junction Shopping Center, which includes the VA clinic, grocery store, CVS, restaurants, and retail.

Analysis of scheduled departure times for each route at the Junction Shopping Center and actual departure times in October 2019 produced the following findings:

- Route 1 departs the Junction Shopping Center an average of 7-8 minutes late in the afternoon/evening, including the scheduled 2:38 trip departure and all following trips (shown bordered in orange in Table 15).
- Contractor staff noted that Route 5's last loop inbound from Tuolumne is scheduled to arrive at the Junction Shopping Center at 6:52 pm. Route 1 is scheduled to arrive at 6:38, but if they do not wait for transfer from Route 5, those passengers have no way to get back downtown. This aligns with the late actual departures of Route 1 in the evening. These two scheduled stops are shown highlighted in blue in Table 15.
- Route 2 outbound trips to Sierra Village that are scheduled to depart at 1:35 pm and 3:35 pm are 6-7 minutes late on average (shown bordered in orange in Table 15).
- The first outbound trip to Tuolumne on Route 5 scheduled at 6:25 and the third outbound trip scheduled at 10:37 depart the shopping center 5-6 minutes after the scheduled time on average (shown bordered in orange in Table 15).
- Route 2 inbound trips from Sierra Village and Route 5 inbound trips from Tuolumne consistently depart the Junction Shopping Center on time.

If connections are improved at the Transit Center, there would be less of a need to have timed connections at the Junction Shopping Center. This is discussed in more detail in the Recommendations section.

Table 15, Junction Shopping Center Scheduled Departures

Junction Shopping Center					
Hour	Route 1	Route 2	Route 2	Route 5	Route 5
		IB	OB	IB	OB
6 AM					6:25 AM
7	7:38 AM	7:08 AM	7:35 AM	7:10 AM	7:37 AM
8	8:38 AM			8:29 AM	
9	9:38 AM	9:08 AM	9:35 AM		
10	10:38 AM				10:37 AM
11	11:38 AM	11:08 AM	11:35 AM	11:21 AM	
12 PM	12:38 PM				12:57 PM
1	1:38 PM	1:08 PM	1:35 PM	1:42 PM	
2	2:38 PM			2:52 PM	2:07 PM
3	3:38 PM	3:08 PM	3:35 PM		
4	4:38 PM				
5	5:38 PM	5:08 PM			
6	6:38 PM		6:10 PM	6:52 PM	6:07 PM
7 PM					
Legend:	Late				

Courthouse Park

Routes 1, 3, and 4 stop at the Courthouse Park in downtown Sonora. Route 3 travels south to Jamestown from the Transit Center, comes back north to the Transit Center, and then heads north to Columbia College, stopping at Courthouse Park in both directions to the College. Route 4 starts and ends at the Transit Center and goes north to Columbia College, stopping at Courthouse Park in both directions. Route 1 stops at Courthouse Park mid-route.

No stops are perfectly timed for transfers between routes at the Courthouse (Table 16). Passengers traveling inbound from Route 3 would need to wait 23 minutes for a transfer to Route 1 and people traveling inbound on Route 4 would need to wait 40 minutes. People traveling outbound to Columbia and transferring from Route 1 have longer waits. They would need to wait 38-43 minutes for Route 3 or 40 minutes for Route 4.

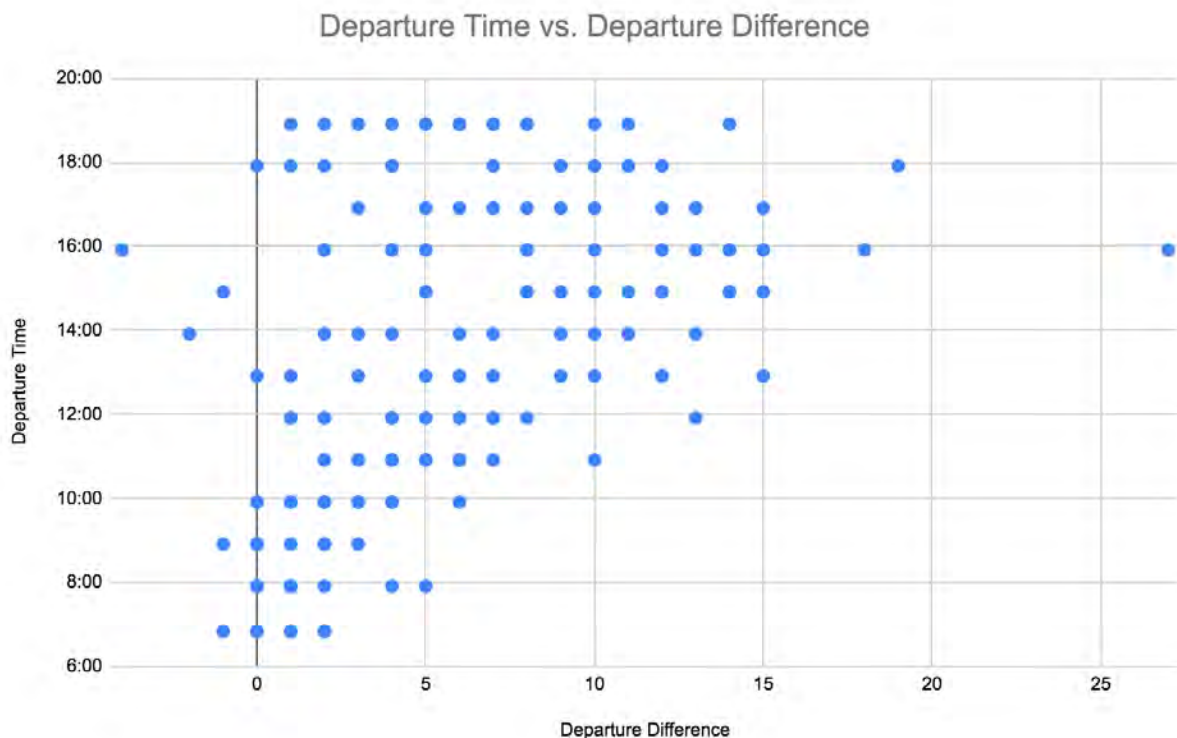
The Courthouse Park stop is going to be discontinued and replaced with a stop at Stockton Street (Hwy 49) and South Washington Street, three blocks away, but still in downtown Sonora. This new stop could be the secondary timed transfer location between Routes 1, 3 and 4, after the Transit Center.

Table 16, Courthouse Park Scheduled Departures

Hour	Courthouse Park				
	Route 1	Route 3		Route 4	
		OB	IB	OB	IB
6 AM	6:50 AM				
7	7:55 AM	7:33 AM			
8	8:55 AM		8:22 AM		
9	9:55 AM			9:35 AM	
10	10:55 AM	10:33 AM			10:15 AM
11	11:55 AM		11:22 AM		
12 PM	12:55 PM			12:35 PM	
1	1:55 PM	1:33 AM			1:15 PM
2	2:55 PM		2:22 PM		
3	3:55 PM			3:35 PM	
4	4:55 PM	4:33 PM			4:15 PM
5	5:55 PM		5:22 PM		
6	6:55 PM			6:35 PM	
7 PM					7:15 PM

Early Route 1 departures are generally on time, but as with other stops, Route 1 starts to run behind around early afternoon. On average, the 12:55 and 1:55 pm departures are 5-6 minutes late and the 2:55, 3:55, and 4:55 departures are 8-9 minutes late. However, the Route 1 afternoon and evening departure times are very inconsistent, with some on-time, some more than 10 minutes late, and some in-between (Figure 15).

Figure 15, Route 1 Scheduled Departure Times vs. Actual Departure Time Difference, October 2019



On Route 3, the outbound 1:33 pm and 4:33 pm departures are 5-8 minutes late, on average, but as with Route 1, vary widely. Inbound departure times on Route 3 at Courthouse Park are not available. Route 4 is generally on-time, both in-bound and out-bound.

Recommendations

Move to a Pulse System at the Transit Center

This recommendation was formulated prior to the March 2020 shelter in place order. It is only relevant sometime in the future if Tuolumne Transit implements three or more fixed routes.

Significant investment has been made in the new Tuolumne Transit Center, but connections between routes at this key transfer location could use improvement (Table 14 on page 69). Many rural systems operate on a pulse system where buses on all, or most, routes arrive and depart together at the main transit hub. This enables passengers to smoothly transfer between routes and is easy to understand.

The main recommendation of this analysis is that TCT rewrite the schedule so that the buses come together at the Transit Center at the same time. The standard window of time for transfers is 10 minutes from arrival to departure, which allows for 2-5 minutes of allowance for late arrivals. Pulse systems are often organized around a main transit line, which would be Route 1 for TCT. Route 1 is more time

sensitive and so the other routes could arrive a few minutes before Route 1 and leave a few minutes after, which would allow Route 1 to dwell at the Transit Center for less time.

The predictability and straightforwardness of pulse systems can make up for low frequencies. Even though Route 1 operates on hourly frequencies and the other routes operate less often, having timed connections at the Transit Center would allow existing and new passengers to more easily plan their trips. For example, passengers transferring from Route 5 to Route 1 would know that any inbound Route 5 trip will connect with Route 1. Conversely, they would be able to easily read a schedule to know which trip on Route 1 will connect them back with Route 5.

Provide a Secondary Timed Transfer at Stockton/Washington

The Courthouse Park stop is going to be discontinued and replaced with a stop at Stockton Street (Hwy 49) and South Washington Street, three blocks away, but still in downtown Sonora. This new stop could be the secondary timed transfer location between Routes 1, 3 and 4, after the Transit Center. It's particularly important to have good connections between Routes 1 and 3 and Routes 1 and 4 since this enables students and workers living in the Sonora and East Sonora areas to get to Columbia College.

In July 2020, only Route 1 was re-established. It is not known if and when a second fixed route will be re-established. If a second route is implemented, it is recommended that the schedule be written such that a timed transfer be also provided at Stockton/Washington if feasible.

Improve Connections at Columbia College

Adjusting all four Route 4 arrivals to :15 after would improve alignment to Columbia College common class times and transfers to/from Calaveras Connect. This should be considered when redesigning the schedule to a pulse system.

IMPROVE SATURDAY DIAL-A-RIDE FOR THE GENERAL PUBLIC

This alternative explores options for improving the current Saturday Dial-A-Ride service so that it is a reliable and viable mobility option for the general public, as well as older adults and people with disabilities. This alternative was developed prior to the COVID-19 and consideration of this alternative assumes levels return to the pre-COVID-19 mix of fixed route and Dial-a-Ride services.

Background

TCT's weekday Dial-A-Ride service is available for older adults and people with disabilities as a complement to weekday regular fixed-route service. TCT provides weekend service exclusively through Dial-A-Ride on Saturdays, which is technically open to the general public. However, the Saturday Dial-A-Ride service is mainly being utilized by the same population of older adults and people with disabilities

who ride Dial-A-Ride on weekdays. Most weekend Dial-A-Ride trips (91%) made from July to January in Fiscal Year 2019/20 were taken by older adults or people with disabilities, only 6% were general public, and 3% were Columbia College students.

Many stakeholder organizations interviewed during the outreach process were not aware of the Saturday general public Dial-A-Ride. Only 4% of fixed-route passengers that responded to the onboard survey had used Saturday Dial-A-Ride in the past 30 days. During the follow-up interviews to the onboard survey, most interviewees did not think they were eligible for Saturday Dial-A-Ride service, because they did not have a disability, and had little knowledge of the service. One interviewee noted that they had tried the Saturday Dial-A-Ride, but that the need to pre-schedule trips was a prohibiting factor. There was also the perception that Saturday Dial-A-Ride is always booked up.

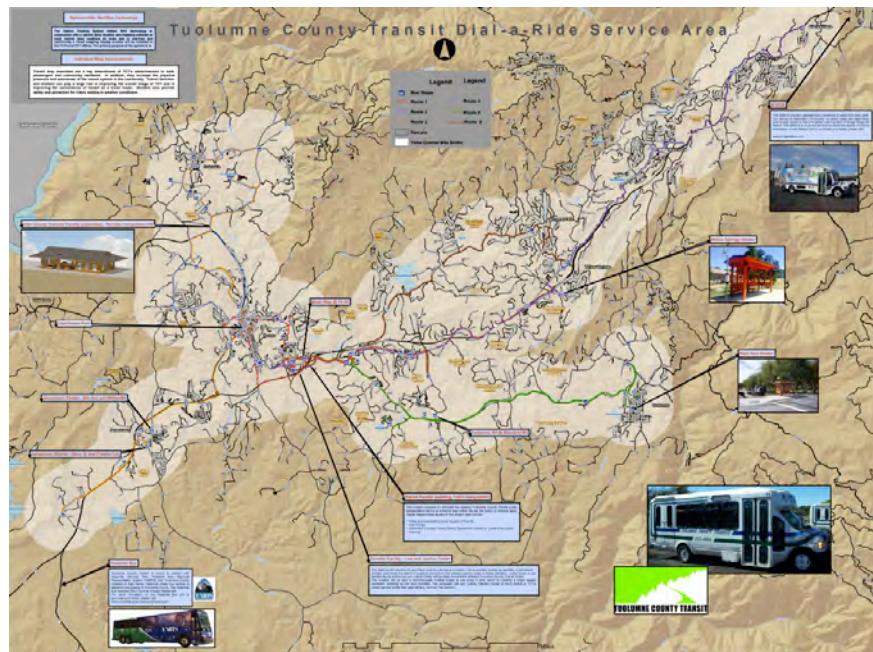
The need for improved weekend service was a common theme that surfaced from the stakeholder interviews, E-survey, and follow-up interviews. 45% of the human service agencies that responded to the E-survey said that their clients “often” or “sometimes” have challenges relating to trips on Saturdays. 18% of respondents to the onboard survey who were employed full- or part-time said that they work weekends.

TCT’s large, low-density service area is difficult to serve well with scheduled, fixed-route transit. This is recognized with the expansive Phoenix Lake general public demand-responsive service area that replaced fixed-route, scheduled service. The idea behind offering Dial-A-Ride open to the general public on Saturdays in place of fixed-route service follows the same reasoning. However, as evidenced above, the general public are largely unaware of the service and not utilizing it.

Existing Conditions Prior to COVID 19 Shelter in Place

Tuolumne County Transit (TCT) currently operates general public Dial-A-Ride service on Saturdays from 11 am to 4 pm. Reservations must be made at least one day in advance, no later than 4 pm. The service area, shown in Figure 16 below, encompasses $\frac{3}{4}$ of a mile on either side of a TCT fixed route. Same day (on-demand) trips can be accommodated if there is space and minimal impact on the TCT manifest. Riders are provided with a pick-up time and can expect the vehicle within 15 minutes prior to that time and up to 15 minutes after that time, which is a 30-minute pick-up window. The total TCT Dial-A-Ride fleet consists of ten wheelchair accessible vehicles, most of which have capacity for 24 passengers and two wheelchairs.

Figure 16, Saturday Dial-a-Ride Service Area



There is a significantly lower level of service offered on Saturdays compared to weekdays for Dial-A-Ride. From July 2019 through January of 2020, there were an average of 7.4 vehicle revenue hours per day on Saturdays, compared to 28 vehicle revenue hours per day on weekdays (Table 17). Weekday Dial-A-Ride needs to be offered during the same service span as the fixed-routes, which is 6:25 am - 7:25 pm, but the Saturday Dial-A-Ride is not held to this requirement and operates from 11 am to 4 pm.

There was an average of 24 trips per day on Saturdays and 3.3 passenger trips per vehicle revenue hour, compared to 105 trips per day and 3.7 passenger trips on weekdays.

Table 17, Dial-a-Ride Performance Statistics - July 2019 through Jan 2020

Month	Days of Service	Revenue Hours	Avg. Daily Revenue Hours	Total Boardings	Average Daily Boardings	Avg. Boardings/ Service Hour
Saturday DAR						
July	4	32.1	8.0	107	27	3.3
Aug	5	37.7	7.5	121	24	3.2
Sept	4	29.3	7.3	91	23	3.1
Oct	4	27.3	6.8	81	20	3.0
Nov	5	38.2	7.6	143	29	3.7
Dec	4	27.9	7.0	87	22	3.1
Jan	4	30.7	7.7	98	25	3.2
Total (Avg.)	30	223.1	7.4	728	24	3.3
Weekday DAR						
Total (Avg.)	168	4702.2	28.0	17,583	105	3.7

A majority of Saturday Dial-A-Ride passengers (70%) were people with disabilities, 20% were seniors, 6% were general public riders, and 3% were Columbia College students. Overall, 7% of passengers boarded with a wheelchair and one with a bike.

Dial-A-Ride fares are the same on weekdays and Saturdays. The fare for a one-way trip on Dial-A-Ride is \$3 paid by cash or pre-purchased ticket. A day pass is \$7 and a monthly pass, which includes fixed-route services, is \$100. The Dial-A-Ride fare is already discounted and so no further discounts are offered.

Cash is a much more common form of fare payment and monthly passes are less common on Saturdays than weekdays. On Saturdays, 44% of passengers paid with cash and 29% used a monthly pass, compared to weekdays where only 11% of passengers used cash and 54% used a monthly pass (Table 18). This indicates that there is a higher proportion of occasional riders on Saturdays than weekdays. Tickets and day passes were slightly more likely to be used on weekdays than Saturdays. Personal care assistants, who ride for free, were slightly more likely to ride on Saturdays.

Table 18, Saturday Dial-a-Ride Trips by Fare Type - July 2019 through Jan 2020

Period	Cash	Tickets	Day Pass	Monthly Pass	Total Revenue Trips	College Free	PCAs	Total
Saturday DAR	44%	16%	0.4%	29%	89%	3%	8%	100%
Weekday DAR	11%	22%	2%	54%	90%	4%	5%	100%

The average fare per passenger is slightly below \$3 on both Saturdays and weekdays (Table 19). The average operating cost per trip was \$35.88 on Saturdays, which is higher than the cost of \$30.52 per trip on weekdays. The average farebox recovery ratio was on Saturdays 7.3%, which is slightly lower than 8.6% on weekdays.

Table 19, Dial-a-Ride Cost Statistics - July 2019 through Jan 2020

	Operating Cost/ Rev. Hour	Operating Cost/ Rev. Mile	Operating Cost/ Trip	Average Fare Paid	Farebox Recovery Ratio
Saturday DAR	\$ 117.06	\$ 5.03	\$ 35.88	\$ 2.96	7.3%
Weekday DAR	\$ 114.13	\$ 8.03	\$ 30.52	\$ 2.90	8.6%

Alternatives

This section explores two alternatives aimed at improving the availability and awareness of Saturday Dial-A-Ride for the general public. The alternatives build on the current service scenario on Saturdays. Each alternative includes a marketing effort to increase awareness of the service among the general public, including existing fixed-route riders. They both also include an increase in vehicle service hours operated that would be needed in order to meet the assumed increase in demand as a result of the marketing efforts. Alternative A assumes a modest increase in ridership, the same span of service, and the current fare. Alternative B assumes a larger increase in ridership, an expanded span, and a reduced fare to match weekday fixed-route fares. The basic parameters are as follows:

Alternative A: Enhanced Status Quo

- Marketing of service to the general public
- Provide additional vehicle service hours to meet **moderate increase** in demand
- Same service span (11 am to 4 pm)
- Same base fare of \$3 per trip

Alternative B: Transition to General Public Dial-A-Ride

- Marketing of service to the general public
- Provide additional vehicle service hours to meet **larger increase** in demand
- Expanded service span (9 am to 4 pm)
- **Reduce fares** to match weekday fixed-route fares (\$2 general public, \$1 discounted)

Marketing

The outreach process showed that awareness of general public Dial-A-Ride on Saturdays is very low, even among organizations that work with transit dependent populations and current fixed-route passengers.

There is also the perception that the Saturday service is only available for older adults and people with disabilities.

Both Alternatives A and B should include, at their core, include a robust outreach and marketing effort to increase awareness of the Saturday Dial-A-Ride service and educate the community. An outreach and marketing strategy should be developed prior to implementation of any changes in service and/or fare policy.

In general, enhancing communications and active promotion of public transit services are low-cost means of increasing mobility among a community. Strategies 3.1 and 3.2 in the Coordinated Plan outline steps to increase coordination among service providers, including social services, and active outreach to gatekeepers to support the goal of having an integrated transportation information network. Relevant activities include, but are not limited to:

- Educate managers and frontline staff at social service agencies, employment services, veteran's organizations, faith-based organizations, and education institutions since these people play an important role in promoting transit services among their constituents
- Promoting passenger information tools (brochures, posters, displays, etc.)
- Establishing multiple modes of communication
- Maintain a database of contacts for all relevant stakeholders that can be used to email out information
- An annual expanded coordination effort to involve broader audiences of social service providers and share information

In the onboard survey, current fixed-route passengers reported that the most common ways that they get information about TCT routes and schedules are from the printed passenger guide (35%), the TCT website (34%), and displays at bus stops (29%). Newer fixed-route riders were more likely to have first learned about the service through advertising and they are more likely to get information through the website or at school. Seasoned riders are more likely to get information from printed passenger guides and by calling on the phone. Older adults were much more likely to rely on the printed passenger guide, calling on the phone, and the bus operators for information and none indicated that they use the website.

In addition to outreach to service providers and gatekeepers, marketing activities of the service could include:

Printed Passenger Guide - The current information about Saturday general public Dial-A-Ride is confusing and seems to pertain only to the Phoenix Lake area. There is no mention of general public Dial-A-Ride service on Saturdays for the larger service area. Furthermore, the hours for Saturday are listed as 9 am to 4 pm, not 11 am to 4 pm.

A recommendation is to specifically call out the Saturday Dial-a-Ride service independent of the Phoenix general public Dial-A-Ride area on the passenger guide. The service area should also be shown on the system map.

TCT Website - The Dial-A-Ride page on the website shows the eligibility for general public riders on Saturday. However, general public riders are unlikely to view this page since it is listed under the “Resources” menu and Dial-A-Ride services are generally viewed as only for older adults and people with disabilities. Suggested improvements include:

- Create a page dedicated to “Saturday Service” and place it under the “Routes and Schedules” menu
- Further call out the availability of the service for the general public on Saturdays on the existing Dial-A-Ride page. Provide a link to the “Saturday Service” page.
- Create an announcement on the home page under “Service Alerts and Updates”

Flier or Brochure - Develop informational materials, such as fliers, brochures, info cards, and posters, that promoting and describing the service and can be printed and shared electronically. This material can then be distributed through the following methods:

- Post onboard all buses to inform current passengers
- Post at stores, post offices, senior centers, visitor centers, hotels, and libraries
- Email to service providers and gatekeepers for further dissemination and posting on their organizations’ message boards
- Post at bus stops, including key transfer locations

Increased Vehicle Service Hours

From July 2019 through January 2020, Saturday Dial-A-Ride had an average of 24 boardings per day, 1-2 of which were general public riders. One can reasonably assume that Saturday ridership will increase, particularly among the general public, due to increased awareness and understanding as a result of successful marketing and outreach activities. In order to provide Saturday service that is a reliable and viable mobility option, the number of available vehicle service hours would need to be increased to meet the higher demand.

TCT’s regular fixed-routes saw an average of 234 boardings per day. In general, fixed-routes on Saturdays usually have about 60% to 75% of regular weekday ridership, which would be 140 to 175 boardings. Since this is a Dial-A-Ride service, rather than fixed-route, and that the service area is fairly large, this analysis estimates a moderate increase would be 75 boardings per day (Alternative A) and a larger increase would be 140 boardings per day (Alternative B). This equals an increase of 51 and 116 boardings, respectively (Table 20).

During this same period, Saturday Dial-A-Ride had an average of 3.3 passengers per vehicle service hour. Table 20 shows the expected increase in vehicle service hours that would be needed to accommodate the increase in ridership. If the number of passengers increased to 75 per day, approximately 15.5 additional vehicle hours per day would be required to meet demand and 35.2 would be needed if boardings increased to 140 per day.

Saturday Dial-A-Ride trips are on average 5.3 total vehicle miles in length. If the number of passengers increased to 75 per day, approximately 271 additional vehicle hours per day would be required to meet demand and 616 would be needed if boardings increased to 140 per day.

Table 20, Potential Increase in Vehicle Service Hours and Vehicle Service Miles

	Increase to 75 Passengers/Day	Increase to 140 Passengers/Day
Current Average Daily Passengers	24	24
Net Passenger Increase - per Day	51	116
Net Passenger Increase - Annual	2,652	6,032
Added Vehicle Service Hours - per Day	15.5	35.2
Added Vehicle Service Hours - Annual	804	1,828
Added Total Vehicle Miles - per Day	271	616
Added Total Vehicle Miles - Annual	14,073	32,008

Span of Service

The Saturday Dial-A-Ride currently runs for five hours from 11 am to 4 pm. These are fairly limited hours, even for a rural system, and when compared to the weekday service which runs from about 6:25 am to 7:25 pm.

Alternative B involves expanding the span of service to accommodate passengers with transportation needs outside of this narrow window. Dispatch is already available on Saturdays from 9 am to 4 pm and so Saturday Dial-A-Ride service could be provided earlier without an impact on the cost of dispatcher time.

Another service alternative explored in this Short-range Transit Plan is the potential to provide service to Modesto on one weekday and Saturdays. If this were to be implemented, many transit-dependent passengers would need a way to get between their homes and the transfer location to the Modesto service. Given the length of time it will take to travel by bus from the Sonora area to Modesto, the hours of operation will most likely exceed those of the current Saturday Dial-A-Ride service.

Fares

Saturday Dial-A-Ride is the only transit service available on weekends and therefore functions as a replacement for regular fixed-route service. However, the current fare for a Dial-A-Ride trip on Saturday is the same as the fare for Dial-A-Ride on weekdays, which is \$3 per trip. The general public base fare for fixed-route services is \$2 and discounts are offered for veterans, older adults, Medicare recipients, people with disabilities, and students. Day passes, ticket books, and monthly passes are available for both fixed-route and Dial-A-Ride (Table 21).

Table 21, Current Dial-a-Ride and Fixed-Route Fares

	Dial-a-Ride	Fixed-Route	Fixed-Route Discounted
Base Fare: 1-way trip	\$3.00	\$2.00	\$1.00
Day pass	\$7.00	\$5.00	
Ticket book (15 trips)	\$45.00	\$28.00	\$14.00
Monthly	100.00*	\$60.00	\$40.00

* Includes fixed-routes

The onboard passenger survey and follow-up interviews showed that most of TCT's fixed-route riders are low income and that even the fixed-route base fare of \$2 can be an inhibiting factor to their ability to use TCT. One option (Alternative B) to increase general public ridership on Saturday Dial-A-Ride is to lower the fare to match that of fixed-route services. This would include lowering the base fare to \$2 and allowing fixed-route ticket books and fixed-route monthly passes to be used on Saturdays.

Table 22 shows the difference in fare revenue if fares were decreased to the average fixed-route fares and ridership increased. The average fare paid per passenger on Saturday Dial-A-Ride is \$2.96 and the average fare paid per passenger on fixed-route services is \$1.67. If the fare were to be reduced and ridership increased to 75 boardings per day, the net increase in revenue is \$54 per day, or \$2,819 per year. If the fare were to be reduced and ridership increased to 140 boardings per day, the net increase in revenue is \$163 per day, or \$8,464 per year.

Table 22, Potential Fare Revenue from Fare Reduction and Ridership Increase

	Increase to 75 Passengers/Day	Increase to 140 Passengers/Day
Loss of \$2.96 average fare for 24 passengers	(\$71)	(\$71)
Addition of \$1.67 average fare per passenger	\$125	\$234
Net difference - Per Day	\$54	\$163
Net difference - Annual (52 days of service)	\$2,819	\$8,464

Alternatives Summary & Cost Estimates

Table 23 shows a summary of the two alternatives and their estimated annual costs. The estimated net annual cost of Alternative A is \$79,043 and Alternative B is \$186,857. The increases in ridership, fare revenue, vehicle service hours, and vehicle miles are based on a net increase from the current average ridership of 24 passengers per Saturday. The estimated net cost increases (highlighted in green in the table) are for the additional service hours, miles (fuel), and admin time that would be needed to accommodate the additional ridership, using the current average of 3.3 trips per revenue hour and 5.3 miles per trip for 52 days of service. The net increase in fare revenue for Alternative B assumes a loss of the current fare (average \$2.96) for 24 passengers and an addition in revenue from 140 passengers paying the average fare paid for fixed-route (\$1.67). The costs of Saturday Dial-A-Ride in FY 18/19 was \$45,161. This figure is used as the estimated cost of providing the current level of service (Status Quo). The total cost for Alternative A, which includes the current service levels, is \$124,204 and Alternative B is \$232,018.

Table 23, Dial-A-Ride Service Alternatives Summary & Cost Estimates

	Alternative A	Alternative B
Assumed Ridership per Day	75	140
Service Span	No change (11am-4pm)	Expanded (9am-4pm)
Fare	No change (\$2.96 avg.)	Reduced (\$1.67 avg.)
Net Ridership Increase (from 24/day) - per Day	51	116
Net Passenger Increase - Annual	2,652	6,032
Net Increase Fare Revenue - per Day	\$54	\$163
Net Increase Fare Revenue - Annual	\$7,850	\$8,464
Added Vehicle Service Hours - per Day	15.5	35.2
Added Vehicle Service Hours - Annual	804	1,828
Added Total Vehicle Miles - per Day	271	616
Added Total Vehicle Miles - Annual	14,073	32,008
ESTIMATED ANNUAL COSTS		
Net Estimated Total Cost	\$86,893	\$195,321
Net fare revenue	\$7,850	\$8,464
Net Cost Increase	\$79,043	\$186,857
FY 18/19 cost Saturday DAR (Status Quo)	\$45,161	\$45,161
Total Estimated Costs, including current service	\$124,204	\$232,018

MICROTRANSIT EXPLORATION

One option that was explored for improving the current Saturday Dial-A-Ride service and build general public ridership was to replace it with an app-based on-demand service, also known as micro-transit. Rural micro-transit services are not yet common, more likely seen in urban areas, such as Denver, Oakland, Los Angeles, and Sacramento, and are often used to connect with regional commuter rail services. These services are typified by smartphone-based apps that enable the user to order the trip, within a reasonable pick-up time window, and where the transit provider has sufficient capacity to ensure a reasonable level of responsiveness to customer trip requests. These are generally low-productivity services where three to five passengers per revenue hour may be the goal but are often not attained, due to large service areas and longer passenger trips.

Micro-transit service may have some potential to reach new transit users and so the consultant team explored the feasibility of using a micro-transit module offered by an existing vendor. In the follow up interviews to the onboard survey, three passengers were asked about the potential option of on demand Uber-like service with the use of TCT bus and the service was explained. The interviewees thought the conceptual service would be preferable to fixed-route buses that come every three hours. Some interviewees were also asked about having the option of paying their fare with a mobile app. Most interviewees had a smart phone, and a few were interested without reservation. However, many were hesitant because they didn't have a credit card or were skeptical about security or didn't trust technology. These concerns were expressed by a majority of the 10 interviewees with whom mobile app fare payment was discussed. One interviewee summed it up well, "I just don't have much cash in the bank."

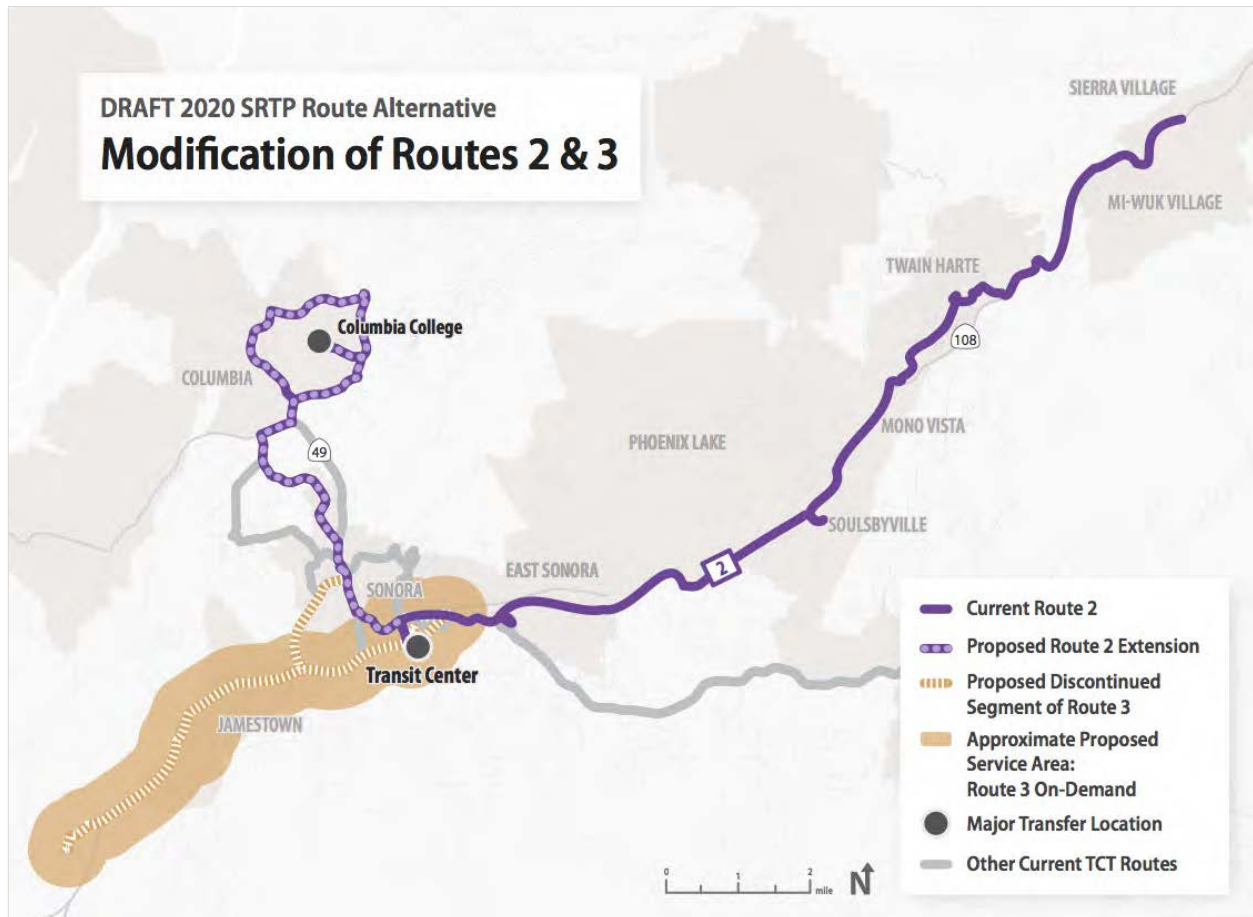
A micro-transit module would enable passengers to request scheduled and same-day trips through an app, which are then auto-assigned to drivers' itineraries. Several aspects of the potential micro-transit service were explored, including but not limited to how trips are assigned, hardware, how passengers book trips, fares, span, and cost.

The main determinants of the feasibility of micro-transit for TCT are what levels of service could be afforded that would match demand and provide a reasonable level of service. Ultimately, the cost of providing micro-transit at a reasonable level of service to meet even modest demand estimates was deemed to be outside of TCT's financial feasibility.

The company that currently operates the transit tracking software used for the TCT's fixed-routes also offers two different micro-transit platforms. They ran two simulations, one to determine the potential for providing micro-transit on Saturdays and another to look at replacing a portion of the Jamestown route with micro-transit. The annual cost of feasible scenarios for Saturday micro-transit for the entire current Dial-A-Ride area ranged from about \$138,000 to \$211,000 for the contractor costs alone, not including administrative or fuel costs. The most feasible scenario for the Jamestown route replacement was \$222,000 for the annual contractor cost alone.

Additional applications for micro-transit service that could be explored down the line were the financial conditions to improve include expansion of evening service and provision of service in additional areas with demand insufficient to support fixed-route service.

Figure 17, Map - Modification of Routes 2 & 3



6. OPERATING AND CAPITAL FINANCIAL PLAN

INTRODUCTION

The financial plan provides the details of the operating and capital costs and revenues from FY20/21 to FY24/25, based on the recommendations in the previous chapters. The financial plan is founded both on known facts and projections based on historical precedence. Since the last Short-Range Transit Development Plan (2011), there have been not only major fluctuations in transit revenue sources, but also the elimination and sunseting of capital revenue sources including PTMISEA. New funding sources became available to Tuolumne Transit Agency, including LCTOP and State of Good Repair funding. The future of public transportation funding continues to contain a great deal of uncertainty. Therefore, the plan is based on what is known in 2020, with key assumptions stated in the relevant sections below.

This chapter is broken into four sections over a five-year period:

- Operating Costs
- Operating Revenues
- Capital Expenditures
- Capital Revenues

OPERATING COSTS

As was discussed earlier, the March 2020 shelter in place order and the implementation of general public dial-a-ride systemwide has significantly changed the cost structure for Tuolumne Transit with only Route 1 currently providing fixed route service.

It is not known what the effects of COVID-19 will be on several important revenue sources. There is currently an economic turndown, but it also not known how severe of a recession Tuolumne County will be facing and what the timing of the economic recovery will be. Therefore, the baseline operating costs are presented on what is known in 2020. The incremental costs of service improvements presented in Chapter 5 will be provided. The ability of Tuolumne County Transit Agency to implement these service improvements cannot be determined until there is a more certain forecast of key revenue sources for Tuolumne Transit.

Baseline Service Supply

Table 24 provides a summary of the budgeted service supply in vehicle revenue hours and miles for Fiscal Year 2020/21. This service supply is based on Tuolumne County Transit Agency's response to COVID-19 and transitioning to more general public dial-a-ride utilizing smaller buses, with more targeted service delivery based on demonstrated demand.

Table 24 compares the service supply in FY 2018/19, the year before COVID-19 with the 2020/21 budgeted service supply. There are several important changes to the service supply distribution starting FY 2020/21.

- The elimination of fixed routes 2,3,4, 5, as well as the Pinecrest and Adventure Trolley routes.
- Implementation of general public dial-a-ride six days a week throughout the Tuolumne County Transit service area with small buses.
- A tripper program designed to provide group transportation to developmentally disabled and Columbia College students as demand warrants.

Table 24, Service Supply

Service Type	FY 2018/19				FY 2020/21			
	Vehicle Svc. Hours	Total Hours	Vehicle Svc. Miles	Total Miles	Vehicle Svc. Hours	Total Hours	Vehicle Svc. Miles	Total Miles
Route 1	3,231	3,265	37,390	38,149	3,231	3,265	37,390	38,149
Route 2	2,993	3,406	51,274	58,092				
Route3	2,411	2,546	40,156	42,180				
Route 4	1,012	1,147	17,187	19,211				
Route 5	1,404	1,573	32,848	35,378				
DAR	8,493	8,810	124,681	137,186	11,985	12,432	175,945	193,592
Weekend	411	429	6,201	7,014	676	705	10,207	11,545
Ski Bus	216	248	3,721	4,053	253	291	4,358	4,747
Pinecrest	65	74	1,820	2,120				
Adventure	284	285	5,082	5,145				
Tripper					2,228	2,451	28,964	31,860
Total	20,519	21,782	320,360	348,528	18,373	19,143	256,864	279,893

Baseline Operating Costs

Table 25 shows the baseline operating cost between FY 18/19 and FY 24/25. The baseline costs are based on what is known in August 2020 without any further service improvements. FY 18/19 costs are actual costs. FY 19-20 is an estimate and FY 20-21 are adjusted budgeted costs. Adjustments have been made to the FY 20-21 as new information on service levels for FY 20-21 became available.

The estimated cost in FY 2019-20 is \$2,190,677. The budgeted cost for FY 2020/21 is slightly lower at \$2,119,876. This is due to fewer vehicle service hours being operated, but with normal cost increases due to increases in contractors costs and increase in salaries and benefits.

Overall, baseline operating costs are expected to increase from \$2,119,876 in FY 20/21 to \$2,421,140 in FY 24/25. The baseline operating cost assume a flat service supply 18,373 hours.

Table 25, Base Operating Expenses

	FY 18-19 Actuals	FY 19-20 Estimate	FY 20-21 Budgeted	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected
Salary and Benefits	\$266,323	\$300,189	\$335,321	\$345,381	\$355,742	\$366,414	\$377,407
Contractor Costs							
Fixed Route	\$785,312	\$646,129	\$237,127	\$248,983	\$253,963	\$259,042	\$264,223
Dial-A-Ride	\$642,609	\$747,604	\$872,748	\$916,385	\$934,713	\$953,407	\$972,476
Tripper			\$162,220	\$162,220	\$162,220	\$162,220	\$162,220
Weekend DAR	\$28,949	\$30,555	\$49,226	\$51,687	\$52,721	\$53,775	\$54,851
SkiBus	\$27,292	\$19,900	\$18,423	\$18,791	\$18,791	\$19,167	\$19,551
Pinecrest/ Trolley	\$26,088	\$15,000		\$44,100	\$44,982	\$45,882	\$46,799
Fuel	\$166,738	\$164,871	\$165,000	\$173,250	\$176,715	\$180,249	\$183,854
Building Lease/ Repeaters	\$83,874	\$96,912	\$89,130	\$101,758	\$103,793	\$105,869	\$107,986
Technology Annual Fees	\$25,189	\$22,926	\$23,102	\$24,257	\$25,470	\$26,743	\$28,081
Marketing	\$52,161	\$50,000	\$50,000	\$52,500	\$55,125	\$57,881	\$60,775
Facilities Management	\$7,457	\$9,000	\$7,000	\$7,350	\$7,718	\$8,103	\$8,509
Non-Capital Equip.	\$1,301	\$10,000	\$20,000	\$21,000	\$22,050	\$23,153	\$24,310
A-87, Department Exp.	\$61,753	\$27,252	\$20,000	\$21,000	\$22,050	\$23,153	\$24,310
Professional Services	\$4,230	\$6,700	\$16,700	\$107,535	\$21,000	\$22,050	\$23,153
Other Admin.*	\$17,631	\$43,639	\$53,879	\$56,573	\$59,402	\$62,372	\$65,490
Totals	\$2,196,907	\$2,190,677	\$2,119,876	\$2,352,771	\$2,316,454	\$2,369,481	\$2,423,994

Potential Service Improvement Costs

Table 26 is an estimate of potential service improvements described earlier in Chapter 5. The feasibility and timing of these potential service improvements will be dependent on how long the COVID-19 crisis lasts, and when sufficient revenues are available to make the service improvement sustainable during the SRTP five-year planning horizon. The two highest cost options would be adding a second bus to Route 1 and implementing a service between Sierra Village and Columbia College, a former Route 2 alignment.

Table 26, Potential Service Improvements

Description	Annual Revenue Hrs.	Annual Total Miles	Contractor Cost	Admin. Share	Fuel Cost	Total Cost
1. Additional Counter-clockwise Route 1 bus	3,257	38,505	\$237,170	\$48,491	\$19,918	\$305,578
2. One weekday/week Sonora to Modesto	416	11,440	\$30,293	\$7,129	\$5,918	\$43,340
3. One weekday and one Saturday Sonora to Modesto	832	22,880	\$60,586	\$13,949	\$11,835	\$86,371
4. Route 2: Sierra Village to Columbia College 1 bus	3,315	72,930	\$241,398	\$49,224	\$37,725	\$328,347
5. One day a week lifeline Groveland and Sonora	416	12,064	\$30,293	\$6,649	\$6,240	\$43,183
6. Two day a week lifeline Groveland and Sonora	832	24,128	\$60,586	\$13,299	\$12,481	\$86,366

OPERATING REVENUES

Operating Revenues by Source

In this section, the available operating revenues for Tuolumne County Transit are reviewed. The sources are defined, and the recent history of revenues utilized is provided.

Farebox Revenues and Farebox Recovery Ratio

Financial audits for FY 18/19, and FY 19/20 have not been completed and therefore audited farebox revenues are not available. However, a performance audit through FY 18/19 was just completed and unaudited fare revenue and local contributions are included as operating revenues. However, the contract with Columbia College and Interest Income are eligible local contributions and can be applied to the farebox recovery calculations.

Tuolumne County Transit is subject to the California Transportation Development Act requirements for achieving a 10% farebox recovery ratio (for rural areas). In FY 18/19, the performance calculates a farebox recovery ratio of 11.47%, including the use of advertising revenue. If interest income and the fare agreement with Columbia College is included, the farebox recovery ratio would improve to 13.7%. It is expected that these eligible local contribution revenue sources will be included when the FY 18/19 audit is completed.

Tuolumne County Transit Agency implemented increased fares in November 2017. There is normally a drop in ridership but an increase in fare revenues. According to the performance audit, fare revenues were \$203,087 in FY 16/17, and increased to \$222,203 in FY 17-18, the fiscal year of the fare increase.

However, in FY 18/19 farebox revenues dropped by 8.6% while ridership dropped by 4.8%. *The fact that the decline in farebox revenues was double the decline in ridership is likely due to the implementation of the agreement with Columbia College for free fares for students with a valid Columbia College ID.* The Columbia College revenues currently are not included as farebox revenues, but they should be included as local contributions.

Tuolumne County Transit went to free fares in March 2020 in response to COVID-19, and there are no current plans to re-institute fares. During this period of no fares, Low Carbon Transit Operations Program funds are being used to cover the cost of passenger fares. For planning purposes, it is assumed that fares are resumed on April 1, 2021.

As described earlier in Chapter 5 under the Tuolumne County Transit Response to COVID-19, the implementation of general public dial-a-ride is a substitute for several fixed routes. Therefore, the fares for general public dial-a-ride should be reduced from \$3.00 to \$2.00 to be equivalent to the fixed route fares some passengers had paid in the past. The fare equivalent for ticket books should be reduced to \$1.50 or \$22.50 for a 15 ride ticket book. For seniors and disabled individuals, the cash fare should also be set at \$1.50 per ride. This gives an incentive to ride Route 1 whenever possible with discounted fixed route fares at \$1.00 per ride. The monthly pass should also be reduced to be equivalent to the fixed route bus pass of \$60.00 per month. Therefore a single monthly pass for all riders would be set at \$60.00 per month. This provides an appropriate incentive for all riders to purchase a monthly pass. No other changes to the fare structure are made.

Local Transportation Fund

The Local Transportation Fund (LTF) is part of the funds received from Transportation Development Act (TDA) monies. TDA funds are derived from the state sales tax and are earmarked for public transportation purposes. The law (SB 325, enacted in 1971) created a local transportation fund (LTF) in each county that is funded from ¼ cent of the base statewide six-cent retail sales tax collected in each county.

\$1,326,926 in Local Transportation Funds (LTF) were utilized In FY 18/19 and represented 54.5% of total revenues for Tuolumne County Transit. It is the most important funding source of Tuolumne Transit. In FY 20/21, sales tax revenues for Tuolumne County are expected to drop substantially, resulting in a budgeted estimate of LTF funding of \$998,847, a 24% reduction from FY 18/19. It should be stressed that while LTF funds is the most important funding source for Tuolumne Transit, there is a great deal of uncertainty on how severe the expected economic turndown will be and how much overall sales tax revenues will drop. There is also a great deal of uncertainty on how fast sales tax revenues will rebound. For planning purposes, a slower recovery is forecast, similar to sales tax recovery after the Great Recession in 2008/09. It is assumed that LTF funds are utilized to fill the gap between operating costs and the sum of all other available operating revenues. In fact, although Tuolumne County Transit Agency has budgeted \$998,847 in LTF funds, it is projected after all other operating funding is accounted for,

that \$740,568 in LTF funding will be needed for FY 20/21. If a normal economic recovery occurs, Tuolumne Transit could have additional Local Transportation Funds available to implement several of the service improvements described above. This will need to be a decision made in FY 22/23 after the impacts of COVID-19 on sales tax revenues is better understood.

State Transit Assistance Funding

The second source of TDA funding is State Transit Assistance (STA) Funds. STA was originally derived from the statewide sales tax on gasoline and diesel fuel. On March 22, 2010, STA funds were restored under a new legislative package known as the “gas tax swap.” Designed to be revenue neutral, the tax swap replaces the sales tax on gasoline and increases the sales tax on diesel fuel to partially supplement STA funds. Now, STA funds come solely from the statewide sales tax on diesel fuel. Therefore, STA revenue to the region depends on diesel fuel prices and diesel consumption. Availability of STA funding has varied substantially over the past ten years.

STA funds can be utilized for either operating or capital purposes. However, STA funds can only be utilized for operating purposes, if the operator’s average total operating cost per revenue hour in the latest three years does not exceed the Consumer Price Index for that three year period.

Tuolumne County Transit Agency has historically utilized STA funding for operating purposes. In FY 2019/20, it is estimated that 626,541 in STA funds were utilized for operating purposes. The budget for this fiscal year is \$504,700, accounting for an projected drop in diesel sales tax revenue statewide. If the recovery follows the pattern of the Great Recession, the revenue source will recovery slowly and is forecast to increase 3% per year. It is not known if the existing TDA restrictions on the utilization for operating funds will remain during and after the COVID-19 crisis.

Low Carbon Transit Operations Program

The Low Carbon Transit Operations Program (LCTOP) is one of several programs in the Transit, Affordable Housing, and Sustainable Communities Program established by the California Legislature in 2014 by Senate Bill 862. LCTOP was created to provide operating and capital assistance for transit agencies to reduce greenhouse gas emissions and improve mobility with a priority on serving disadvantaged communities. The program is administered by Caltrans.

LCTOP is allocated based on population and percentage of local transit agency fare revenues to all transit fare revenues in the state. Caltrans approves the use of LCTOP funds for programs that contain a component to reduce greenhouse gas emissions. Tuolumne County Transit Agency has utilized LCTOP funding for the summer Pinecrest and Adventure Trolley services. Since these services are not being operated this summer, the funding is being carried over to subsequent fiscal years. For planning purposes, the Adventure Trolley service is expected to resume in the Spring/Summer of 2021.

Federal Transit Administration 5311

Section 5311 is a non-urbanized area formula funding program. This federal grant program provides funding for public transit in non-urbanized areas with a population under 50,000 as designated by the Bureau of the Census. FTA apportions funds to states for rural areas and Caltrans administers the funds in California. FTA 5311 funds can be utilized for either operating or capital purposes. Tuolumne Transit has been utilizing FTA 5311 to support operating expenses. In FY 20/21, Tuolumne Transit is budgeting \$335,169 in regular FTA 5311 allocations.

As part of the CARES Act, public transportation has received additional funding due to the pandemic. For rural areas like Tuolumne County, the funding is allocated by Caltrans as additional FTA 5311 funding. The CARES Act funding has been allocated in two phases. The first phase funding was \$351,289 and was utilized to offset expenses in FY 19/20. A second phase of funding of \$673,00 will be allocated equally this fiscal year and next to help offset the decreases in LTF and STA funding.

Table 27 provides a summary of the baseline operating revenues for Tuolumne Transit over the next five years with the above assumptions incorporated.

Table 27, Summary of Baseline Operating Revenues

	FY 18-19 Projected	FY 19-20 Estimates	FY 20-21 Budget Adjusted	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected
Fare Revenues							
Fixed Route	\$95,281	\$65,332	\$10,792.50	\$32,377.50	\$33,348.83	\$34,349.29	\$35,379.77
Dial-A-Ride	\$77,826	\$65,227	\$19,456.50	\$48,920.30	\$50,387.90	\$51,899.50	\$53,456.50
Ticket/Pass Sales	\$2,099	\$3,177	\$500				
Weekend DAR	\$4,021	\$2,525	\$700	\$2,000	\$2,500	\$3,000	\$3,500
Trippler Program			\$4,000	\$16,000	\$16,480	\$16,974	\$17,484
Ski Bus	\$9,008	\$3,000	\$ -	\$6,000	\$6,500	\$7,000	\$8,000
Other Fare Revenues	\$14,936						
Total Fare Revenues	\$203,171	\$139,261	\$35,449	\$105,298	\$109,217	\$113,223	\$117,820
Local Contributions*							
Columbia College	\$15,000	\$15,000	\$ -		\$15,000	\$16,000	\$17,000
Bus Advertising	\$39,071	\$44,600	\$24,000	\$45,000	\$45,000	\$45,000	\$45,000
Interest Income	\$44,441	\$30,100	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Sale of Fixed Assets	\$ -						
Total Local	\$98,512	\$89,700	\$54,000	\$75,000	\$90,000	\$91,000	\$92,000
State Revenue							
LCTOP, non-fare	\$71,179	\$104,670		\$111,044	\$114,375	\$117,807	\$121,341
LCTOP, carryover		\$62,807	\$50,000				
Local Transportation	\$1,326,926	\$1,357,743	\$740,568	\$863,726	\$1,118,727	\$1,140,279	\$1,162,002
State Transit Assistance	\$429,134	\$626,541	\$504,700	\$519,841	\$535,436	\$551,499	\$568,044
Total State Revenues	\$1,827,239	\$2,151,761	\$1,295,268	\$1,494,611	\$1,768,539	\$1,809,585	\$1,851,387
Federal Revenue							
FTA 5310			\$63,000				
FTA 5311	\$305,527	\$305,527	\$335,159	\$341,862	\$348,699	\$355,673	\$362,787
FTA 5311 Cares Act		\$351,289	\$337,000	\$336,000			
Total Federal Revenues	\$305,527	\$656,816	\$735,159	\$677,862	\$348,699	\$355,673	\$362,787
Total Revenue	\$2,434,449	\$3,037,538	\$2,119,876	\$2,352,771	\$2,316,455	\$2,369,481	\$2,423,994
Total Costs	\$2,196,907	\$2,190,677	\$2,119,876	\$2,352,771	\$2,316,454	\$2,369,481	\$2,423,994
Net Costs-Revenues	\$237,542	\$846,861	\$ -	\$ -	\$ -	\$ -	\$ -

CAPITAL COSTS

For Tuolumne County Transit, there are just three categories of capital expenditures over the five-year period covered in the Short Range Transit Plan.

- Vehicle procurements
- Charging Equipment
- Charging Infrastructure
- Bus stop improvements

Current Tuolumne Transit Fleet

Tuolumne has a current fleet of 21 vehicles, which includes a mix of trolleys, medium duty buses and small cutaways as shown in Table 28. All vehicles are wheelchair accessible to comply with the Americans with Disabilities Act (ADA).

Table 28, Existing Vehicle Inventory

ID	Year	Make	Body	Age	Mileage	Length (ft)	Seats	W/C	Use
038	2005	Chevy	Mini Van	15	72,211	10	5	1	DAR
044	2009	Supreme	Trolley	11	115,442	31	26	2	FR
045	2009	Supreme	Trolley	11	108,410	31	26	2	FR
046	2010	Supreme	Trolley	10	172,055	30	26	2	FR
047	2011	Ford Type III	Gavel	9	174,806	26	20	2	FR
048	2011	Ford Type III/C	Gavel	9	182,188	26	20	2	FR
049	2013	Allstar, E-450	Starcraft	7	176,514	30	18	2	DAR
050	2013	Starcraft	Starcraft	7	59,291	22	8	2	DAR
051	2013	Starcraft	Starcraft	7	145,181	30	18	2	DAR
052	2013	Supreme	Trolley	7	104,320	30	22	2	FR
053	2013	Supreme	Trolley	7	104,320	30	26	2	FR
054	2014	Glaval	Freightliner	6	122,643	32	26	2	Ski
055	2014	Glaval	Ford, Type C	6	155,712	25	20	2	FR/DAR
056	2014	Glaval	Ford, Type C	6	127,100	25	20	2	FR/DAR
057	2014	Glaval	Ford, Type C	6	148,454	25	20	2	FR/DAR
058	2014	Glaval	Ford, Type C	6	134,674	25	20	2	FR/DAR
059	2016	Glaval	Type C	4	97,032	32	20	2	FR/DAR
060	2016	Glaval	Type C	4	91,700	25	20	2	FR/DAR
061	2016	Glavel	Type C	4	89,950	25	20	2	DR/DAR
062	2016	Freightliner	Type E	4	80,200	25	26	2	FR
063	2016	Freightliner	Type E	4	72,980	25	26	2	FR

Before discussing the planned vehicle procurement, it is important to discuss a new requirement for zero emission buses.

Transition to Zero Emission Buses

In December 2018, the California Air Resources Board (CARB) approved the Innovative Clean Transit (ICT) regulation that outlines the requirements for transit agencies to gradually transition to a 100 percent zero emission vehicle fleet.

This assessment of zero-emission vehicle and infrastructure is intended to provide Tuolumne County Transit Agency with a planning tool to prepare for requirements set forth in Innovative Clean Transit (ICT) regulation by outlining the potential capital costs of converting its conventional internal combustion engine (ICE) vehicle fleet to zero-emission buses (ZEB). This also provides context for the development of a full ZEB Rollout Plan that must be developed by July 1, 2023 and highlights potential funding sources to support the transition to a full ZEB fleet.

CARB Regulations

A revised version of the ICT was approved by the Office of Administrative Law (OAL) on August 13, 2019 and made effective October 1, 2019. The ICT outlines the requirements for both Large and Small transit operators, including the procurement guidelines for transit operators and the timeline for full compliance. By the definitions set forth in the ICT, Tuolumne Transit is classified as a small operator.

ZEB Rollout Plans

California transit agencies are required to develop and submit a ZEB Rollout Plan that demonstrates how the agency will meet a goal of full transition to ZEBs by 2040 and identifies the type of zero-emission technology the agency will deploy. The rollout plan must also include schedules for construction of ZEB infrastructure and bus purchases or the conversion of combustion engine vehicles to zero-emission buses. Transit agencies must also demonstrate how it proposes to deploy ZEBs in disadvantaged communities and identify potential funding sources for the purchase of ZEB vehicles, equipment and infrastructure. ***Small transit agencies must submit ZEB Rollout Plans by July 1, 2023 but are not required to begin purchase of ZEB vehicles until 2026.*** Tuolumne Transit would like to begin the purchase of electric buses sooner than the 2026 requirement. The Short Range Transit Plan has a planning horizon through FY 2024/25. As provided in more detail, four electric buses are scheduled for procurement over the next five years. The ZEB Rollout Plan will provide a longer range plan between 2025 and 2040 for achieving the ICT requirements.

ZEB Rollout Plans must include the following elements to meet ICT requirements:

- A plan for full transition to ZEB vehicles by 2040 that avoids the early retirement of ICE vehicles
- Details of the ZEB vehicles, equipment and infrastructure the agency is planning to deploy

Final Draft

- Schedule for the construction or upgrades of facilities to charge and maintain ZEB vehicles
- Schedule for the purchase or lease of ZEB vehicles, or the conversion of existing ICE vehicles to ZEB vehicles
- A deployment plan for ZEB vehicles in disadvantaged communities
- A training plan for ZEB bus operators and maintenance personnel
- Identification of potential funding source to support the Zeb transition plan

In its classification as a small operator, Tuolumne Transit is required to adhere to the following ICT requirements to transition to a ZEB fleet:

1. Starting January 1, 2026, twenty-five percent of the total number of new bus purchases in each calendar year must be zero-emission buses (ZEB); and
2. Starting January 1, 2029, all new bus purchases must be zero-emission buses (ZEB).

Tuolumne Transit is encouraged to seek the assistance of an experienced consulting firm to develop the ZEB Rollout Plan. Costs for completion of the Rollout Plan are included in the operating cost section of financial plan as “professional services” in FY 21/22 to give ample time for completion by July 1, 2023.

ICT Exemptions

Recognizing that transit operators may face many obstacles in transitioning to ZEB fleets, the ICT outlines the criteria for exemption requests where an operator might be adversely affected by compliance. A request for exemption must be submitted by November 30 of each calendar year and must demonstrate that one of the following circumstances exist:

1. Delay in bus delivery is caused by setback of construction of infrastructure needed for the zero-emission bus. An exemption may be requested if a transit agency cannot finalize the ZEB infrastructure within two years of the initial bus purchase and in time to operate the purchased buses due to circumstances beyond the transit agency’s control.
2. When available ZEB buses cannot meet a transit agency’s daily mileage needs. An exemption may be requested if no battery electric bus can meet the daily mileage or operational needs of any similar bus type in the fleet.
3. If available ZEB buses do not have adequate gradeability performance to meet the transit agency’s daily needs for any bus in its fleet. The agency must show that no other buses in the fleet can meet the transit agency’s gradeability requirements and that the available ZEB buses of that bus type cannot be placed into service anywhere else in the fleet.
4. When a required ZEB bus type for the applicable weight class based on gross vehicle weight rating (GVWR) is unavailable for purchase.
5. When a required ZEB bus type cannot be purchased by a transit agency due to financial hardship. An exemption may be requested if a fiscal emergency is declared under a resolution by a transit agency’s governing body following a public hearing and the transit agency can demonstrate that it cannot offset the incremental cost of purchasing all available ZEB buses when compared to the cost of the same type of conventional bus, or cannot offset the managed, net electricity cost for

depot charging battery electric buses when compared to the fuel cost of the same type of conventional internal combustion engine buses.

Based on the topography of Tuolumne County and the longer distances of many of Tuolumne Transit's transit routes, a thorough assessment of ZEB applicability should be conducted before new vehicles are procured. Many ZEB dealers offer battery upgrades to extend the range of ZEB performance. ZEB chargers and charging stations vary in charge time and the number of vehicles that can be charged simultaneously. Transit agencies must consider the runtime of potential ZEB vehicles and battery configurations while also considering the length of time required to recharge a vehicle and the opportunities for down time to perform a charge. These considerations should part of the scope of work for the FY 21-22 ZEB Rollout Plan.

Zero-Emission Mobility Option

The ICT offers an alternative method to meet the required minimum number of zero-emission buses through the Zero-Emission Mobility Option, where a transit agency may choose provide zero-emission mobility services by using bicycles, scooters, or other zero-emission vehicles with a GVWR of 14,000 pounds or less. The mobility service must be directly operated by the transit or by an entity contracted to provide the service on the agency's behalf. The transit agency must track and record zero-emission passenger miles for each zero-emission vehicle and achieve at least 180,000 zero-emission passenger miles per year to be eligible to receive each mobility credit.

Tuolumne Transit has been a leader in providing a wide array of mobility options for Tuolumne County residents including the TRIP volunteer driver program, the Pinecrest summer service, Ski Bus, and Adventure Trolley. In the ZEB Rollout Plan Study, consideration should be given to having a Tuolumne Transit sponsored E-Bike Bikeshare program as a means of providing an zero-emission mobility option.

Comparison of Internal Combustion Engine and Electric Vehicle Replacement Costs

Replacement costs for existing vehicle are shown in Table 29 and are reflective of the current 2020 vehicle pricing offered through the CalACT/MBTA (Morongo Basin Transit Authority) Vehicle Purchasing Cooperative and presents both Conventional Internal Combustion Engine (ICE) vehicle and ZEB Equivalent pre-tax pricing. The cooperative provides a federal, California state and ADA compliant purchasing menu for a variety of transit vehicles. Vehicle costs are presented as like-for-like replacements for both ICE and Zeb vehicles. Both sets of potential vehicle replacements include additional costs for purchase options towards vehicle amenities and upgrades consistent with the vehicles being replaced.

As shown, ZEB vehicles are generally two and half times that of conventional ICE vehicles. Currently, there are no available ZEB equivalent for the Supreme trolleys or Freightliner vehicles, providing a ZEB replacement exemption opportunity until a replacement becomes available. Due to the low mileage

accumulated on the trolleys, it might be more economical to refurbish or rebuild these vehicles as needed.

Table 29, Comparison of ICE and Electric Vehicle Replacement Costs

			Combustion Equivalent	Combustion Price	ZEB Equivalent	Electric Price
ID	Year	Make		ICE 2020 Price*	CalACT-MBTA Vehicle Class/Mfrs	ZEB 2020 **
038	2005	Chevy	Chrysler Pacifica Van	\$48,616.00	Z-1, Driverge/NorCal/Sunset	\$189,821.00
044	2009	Supreme	Hometown Trolley	\$245,131.00	Exempt/No Available ZEB Equivalent	Exempt
045	2009	Supreme	Hometown	\$245,131.00	Exempt/No Available ZEB Equivalent	Exempt
046	2010	Supreme	Hometown Trolley	\$245,131.00	Exempt/No Available ZEB Equivalent	Exempt
047	2011	Ford Type III	Glavel	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
048	2011	Ford Type III/C	Glavel	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
049	2013	Allstar, E-450	Starcraft	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
050	2013	Starcraft	Starcraft	\$91,464.00	Z-2, StarCraft/Phoenix	\$266,152.00
051	2013	Starcraft	Starcraft	\$91,464.00	Z-2, StarCraft/Phoenix	\$266,152.00
052	2013	Supreme	Hometown Trolley	\$245,131.00	Exempt/No Available ZEB Equivalent	Exempt
053	2013	Supreme	Hometown Trolley	\$245,131.00	Exempt/No Available ZEB Equivalent	Exempt
054	2014	Glaval	Freightliner	\$138,626.00	Exempt/No Available ZEB Equivalent	Exempt
055	2014	Glaval	Glaval	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
056	2014	Glaval	Glaval	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
057	2014	Glaval	Glaval	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
058	2014	Glaval	Glaval	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
059	2016	Glaval	Glaval	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
060	2016	Glaval	Glaval	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
061	2016	Glavel	Glavel	\$98,915.00	Z-2, StarCraft/Phoenix	\$266,152.00
062	2016	Freightliner	Freightliner	\$138,626.00	Exempt/No Available ZEB Equivalent	Exempt
063	2016	Freightliner	Freightliner	\$138,626.00	Exempt/No Available ZEB Equivalent	Exempt
				*PreTax price		**PreTax price

Tuolumne County Transit Agency follows FTA guidelines for the replacement of service vehicles. The FTA identifies the useful life schedule based on the age and mileage of each vehicle class. The planned replacement year as the useful life mileage benchmark as a target, based on each vehicle's current mileage, average service mileage per year and the estimated time it will take to reach the benchmark. In many cases for Tuolumne Transit, the mileage milestone will not be reached for replacing the vehicle for several years after the useful life term has been reached.

As ZEB technology continues to evolve and improved, it is recommended that Tuolumne Transit implements a vehicle replacement schedule that adheres to ICT requirements but will also benefit from expected advancements in ZEB performance. Improvements in vehicle performance, battery range and charging time have expanded the utility of ZEB vehicles for transit, but in some environments ZEB vehicle performance and the necessary infrastructure for vehicle charging still present a barrier in some settings. Table X will need to be updated based on the ZEB Rollout Plan development in FY 21-22.

Vehicle Procurement Schedule

Over the next five years, TCTA is scheduled to replace nine buses. The plan includes the purchase of smaller transit vans for demand response service with a seating capacity of six ambulatory passengers and two wheelchair passengers. They will replace the cutaway buses that typically carry 16 passengers and two wheelchair passengers. The Ford Transit 350 is rated at 14 miles per gallon, whereas most cutaway buses typically average 6-8 miles per gallon. The plan also includes the replacement of two 18-20 passenger Starcraft cutaway buses. One of the replacement cutaway buses will be an internal combustion engine and the other will be an electric bus.

The recommended procurement plan includes the procurement of four electric vehicles into the fleet, starting in FY 21/22 when Ford Transit makes the Ford Transit 350 available as an electric vehicle. A second electric Ford Transit 350 is scheduled for FY 22/23. This will enable Tuolumne Transit to have some operating experience with electric small passenger vans while the ZEB Rollout Plan is being developed. The ZEB Rollout Plan may adjust the procurement schedule for FY 23/24 and FY 24/25. The ZEB Rollout Plan will make recommendations on the procurement of additional electric buses after the end of the SRTP planning horizon of FY 24/25.

It should be noted that the Ford Transit 350 is expected to be about 2.5 times the price of the internal combustion engine version. The procurement schedule anticipates the utilization of CMAQ monies available to Tuolumne County to provide what should be considered a pilot program to transition the Tuolumne Transit fleet from internal combustion engines to electric vehicles. Table 30 provides the five-year vehicle procurement plan for Tuolumne Transit.

It should also be noted that Tuolumne County Transit currently uses five trolley vehicles. With the new service plan there will be fewer fixed routes, and the need for Trolley buses will be a maximum of three. Over the next five years, all five Trolleys will be rotated into fixed route and tripper services. Therefore, none of the trolley vehicles will be replaced during the planning horizon of the SRTP. The ZEB Rollout Plan conducted in FY 21/22 will determine if the trolleys can be replaced with electric vehicles. At present, there are no ZEB equivalent vehicles to replace the trolleys.

Table 30, Five-Year Vehicle Procurement Plan

			Planned Replacement Year	Replacement Type	Replacement Vehicle	Replacement Cost (2020)	Actual Replacement Cost (w/ Inflation)
ID	Year	Make					
048	2011	Ford Type	FY 20/21	ICE	Ford Transit 350	\$69,000	\$71,760
049	2013	Allstar, E-450	FY 21/22	ZEB	Z-1 Ford Transit 350	\$174,071	\$187,997
047	2011	Ford Type III	FY 21/22	ICE	Ford Transit 350	\$69,000	\$74,520
055	2014	Glaval	FY 22/23	ZEB	Z-1 Ford Transit 350	\$174,071	\$194,960
057	2014	Glaval	FY 22/23	ICE	Ford Transit 350	\$98,915	\$110,785
051	2013	Starcraft	FY 23/24	ZEB	Z-2, StarCraft/Phoenix	\$266,152	\$308,736
058	2014	Glaval	FY 23/24	ICE	StarCraft/Allstar 450	\$98,915	\$114,741
056	2014	Glaval	FY 23/24	ZEB	Z-1 Ford Transit 350	\$174,071	\$201,922
059	2016	Glaval	FY 24/25	ICE	Ford Transit 350	\$69,000	\$82,800

Charging Equipment

Charging infrastructure is a crucial part of the zero-emission system that must be factored into the transition of transit fleets to ZEB propulsion. ZEB vehicles typically have a range of about 150 miles that can fluctuate depending on vehicle size, battery specifications, vehicle load and the grade of streets and highways. For small transit properties, plug-in charges are the most economical choice to support smaller fleets. Planning for ZEB charging equipment requires a strategic approach that assesses the charge time of ZEB vehicle batteries, configuration of transit facilities or charging sites and the number of current and future vehicles in the ZEB fleet.

The associated costs for site construction to upgrade the delivery of electricity is also a significant factor in planning for charging systems. Smaller plug-in charges can operate on existing 220V infrastructure but take much longer to charge a vehicle. More appropriate charging equipment suitable for transit demand require 480V infrastructure which will require typically require power upgrades from the utility provider to deliver enough power to support faster charging as well as site construction to accommodate adequate power delivery to the charging system.



The CalACT/MBTA Vehicle Purchasing Cooperative offers two version of the Proterra Energy Charging System that operate on 480V. Both charging systems are capable of charging a single standard ZEB vehicle battery in approximately three hours and can support up to four additional charging dispensers to charge additional vehicles simultaneously, however, charging multiple vehicles at the same time increases overall charging time. Proterra charger pricing is presented in Table 31 below. Charger purchases should begin in FY23-24 in anticipation of the procurement of the first ZEB vehicles and the purchase of an additional in FY 25-26 to support charging capabilities towards the delivery of future ZEB vehicles.

Table 31, Charging Equipment Costs

Power (kW)	Charger Model	Price
60	Proterra Universal Plug-In Charger (Depot) with Single Dispenser	\$50,250
125	Proterra Universal Plug-In Charger (Depot) with Single Dispenser	\$67,750
125	Proterra Universal Plug-In Charger (Depot) with Two Dispensers	\$82,525
Purchase Schedule		
FY 2023-24	Proterra Universal Plug-In Charger (Depot) with Two Dispensers	\$96,543
FY 2025-26	Proterra Universal Plug-In Charger (Depot) with Two Dispensers	\$104,420

Charging Site Infrastructure

To support charging capabilities for ZEB vehicles, Tuolumne County Transit Agency must first determine the infrastructure requirements of its charging site. Based on the desired ZEB vehicles and charging equipment the ZEB Rollout Plan must analyze how much energy is needed and when and how quickly the vehicles will need to be charged. Construction may be required for the installation of vehicles charges and related platforms and for electrical upgrades to the existing power system to deliver adequate power to ZEB vehicle charges. Tuolumne Transit is currently leasing the property that houses its transit yard. It is expected that any new construction or upgrades to the property to support ZEB charging will need to be negotiated with the current owner or the agency may explore options to purchase the current property or a new location for a new facility.

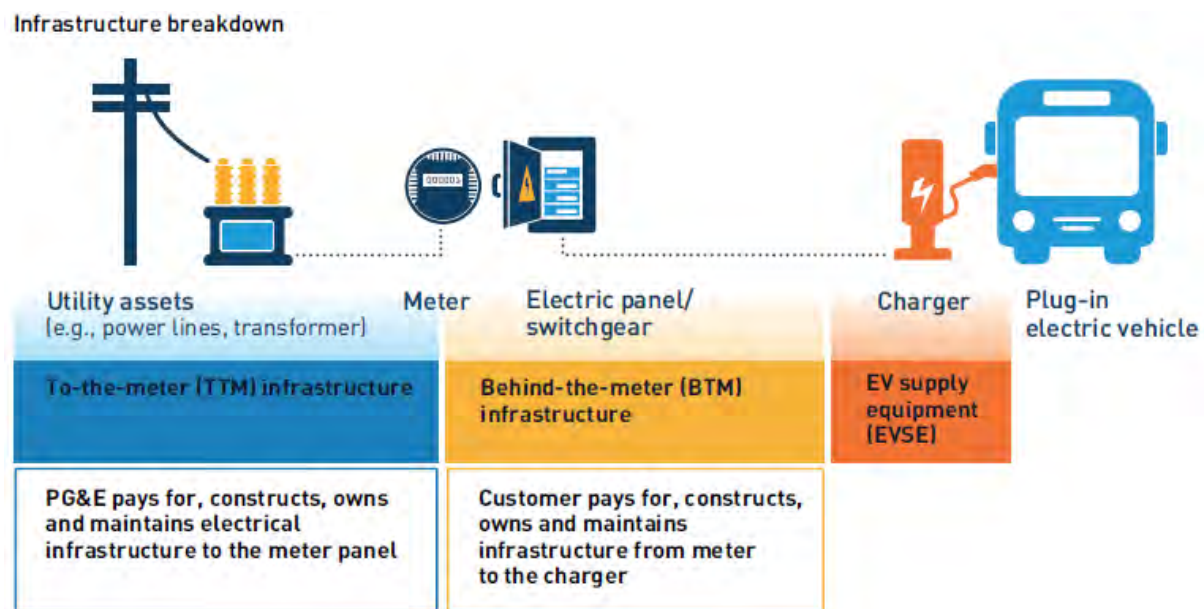
Pacific Gas and Electric Company (PG&E) as the electricity provider for Tuolumne County, will play a crucial role in the assessment of the charging site. PG&E Electric Vehicle Fleet specialists can make recommendations towards the appropriate vehicle and chargers, reviewing logistical considerations and assisting electrical contractors with site design.

Initial site assessment should consider vehicle entry and parking locations, potential charging surfaces, and locations of existing electrical equipment. Using existing surfaces can reduce capital costs by eliminating the need for additional surface construction and in-ground wiring.

In addition to planning assistance, PG&E also offers some financial support in converting existing transit centers to include ZEB charging capability. Once it is determined how much energy is needed to support ZEB vehicle charging, PG&E will can determine whether the existing electricity deliver is sufficient for the Tuolumne Transit’s needs.

PG&E will pay for the cost of construction upgrades from the power transformer to the transit center’s electricity meter (To-the-meter (TTM)). Tuolumne Transit will be required to select an electrical contractor to design the behind-the-meter (BTM) infrastructure and is responsible for all costs from the meter to the ZEB vehicle charger.

Figure 18, Charging Infrastructure Responsibilities



Recognizing that upfront costs for ZEB vehicle charging infrastructure can be significant, PG&E is attempting to establish new commercial electric vehicle charging rates and charging equipment rebates to help drive more rapid customer adoption and progress California’s climate and emissions goals. Under the existing rate structure, high-power electric vehicle chargers on business electric rates can incur demand charges based on the peak electricity usage during a billing period. New PG&E rates would replace demand charges with subscription billing, allowing customers to choose the amount of power they need for their charging stations, resulting in lower and more predictable energy costs.

Electricity rebates on charging equipment are also available for shuttle bus fleets that operate in disadvantaged communities, that suffer from a combination of economic, health, and environmental impacts. The proposed rebate amount is determined by the ZEB vehicle charging equipment’s power output:

- Up to 50kW is eligible for a rebate up to \$15,000 per charger

- 50.1kW to 150kW is eligible for a rebate up to \$25,000 per charger
- 150.1kW and above is eligible for a rebate up to \$42,000 per charger.

Additionally, PG&E offers infrastructure incentives for each electric vehicle in its fleet. The incentive for transit buses can range between \$4,000 and \$9,000 based on vehicles size, up to 25 vehicles.

Tuolumne Transit can also offset its electricity load through solar energy generation. Installation of solar equipment can be expensive, but the California Public Utilities Commission (CPUC) allows businesses to install solar to support power generation up to 110% of their usage which can offset the expected increases in power usage to charge electric vehicles. PG&E can work with the agency to develop a solar plan based on projected power needs.

Bus Stop Improvements

The final category of expected capital expenditures over the next five years is bus stop improvements. The FY 2020/21 budget includes \$1,127,271 for the Stockton/Washington bus stop improvement program. This is a major streetscape improvement plan with new bus stop amenities and bus only pullout lanes on opposite sides of Stockton St.

For subsequent plan years \$50,000 per year is programmed for bus stop accessibility and amenity improvements as the need for improvement arises.

Summary of Capital Expenditures

Table 32 is a summary of capital expenditures between FY 20/21 and FY 24/25. Over the five-year period, a total of \$3,041, 912 in capital expenditures are planned between now and July 1, 2025.

Table 32, Summary of Capital Expenditures

	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	5-Year Total
Vehicle Procurements	\$71,760	\$262,517	\$305,744	\$423,478	\$284,722	\$1,348,221
Charging Equipment		\$96,543	\$104,420			\$200,963
Charging Infrastructure		\$50,000	\$25,000			\$75,000
Bus Stop Improvements	\$1,127,271	\$51,500	\$53,045	\$54,636	\$56,275	\$1,342,728
Total Capital Expenditures	\$1,199,031	\$460,560	\$488,209	\$478,114	\$340,998	\$2,966,912

CAPITAL REVENUES

The following are capital revenue sources that Tuolumne Transit has historically utilized:

Local Transportation Funds (LTF)

The source of this funding sources was described in detail in the operating revenue section. This ¼ cent sales tax has been a primary source for bus replacements historically. Tuolumne Transit has typically set aside \$80,000 per year in LTF funding for vehicle replacements.

Proposition 1B PTMISEA

As approved by California voters in the November 2006 general election, Proposition 1B enacts the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006. Statewide, this is a \$19.925 billion state general obligation bond that is meant to fund high priority projects. There are 16 different programs under Proposition 1B. The first is the Public Transportation Modernization, Improvement, and Service Enhancement Account Program (PTMISEA), with \$3.6 billion allocated statewide for transit rehabilitation, safety or modernization improvements, capital service enhancements, or expansions, including bus procurements. While most of these funds have been allocated, the 2019 Budget Act (SB 840) re-appropriated the remaining PTMISEA funds and extended the deadline for allocation until June 30, 2020. In FY 20/21, Tuolumne Transit is planning to utilize \$1,127, 271 in PTMISEA funds to finish the Stockton/Washington Bus Stop Improvement Project.

State of Good Repair (SB1)

Approved as part of SB1, the State of Good Repair (SGR) funds transit vehicle and infrastructure repair and replacement as well as service improvements. For transit, Tuolumne Transit is eligible for a formula share of this program if they submit nominated projects to the Caltrans Division of Rail and Mass Transportation for approval to be funded by using SGR funds. In FY 2019/20, Tuolumne County Transportation Council had \$76,612 approved by Caltrans for “Transit Maintenance, Rehabilitation and Capital Projects.” This should be a continued source of capital funding over the next five years.

Congestion Mitigation and Air Quality Improvement (CMAQ) Program

The FAST Act authorizes funding to the CMAQ program for apportionment to the states. States, local governments, and transit agencies can use these funds to invest in transportation project that support the Clean Air Act. Project eligible for the funds include “alternative fuel vehicles and infrastructure.” A project supported by CMAQ funds must demonstrate that the project reduces emissions, is located in or benefits an EPA designated nonattainment or maintenance areas and is a transportation project. According to EPA, Tuolumne County is designated nonattainment area for 8-hour ozone.

Tuolumne County has CMAQ funding available that can pay for the difference between internal combustion engines buses and electric buses. This is the primary utilization of the CMAQ funding for the Short Range Transit Plan.

Federal Transit Administration Section 5339 (Bus and Bus Facilities Program)

The Federal Transit Administration (FTA) Section 5339 (Bus and Bus Facilities Program) provides funding for capital projects to replace, rehabilitate, and purchase buses and bus-related equipment and to construct bus-related facilities. This program was established under Moving Ahead for Progress in the 21st Century (MAP-21), replacing the previous Section 5309 discretionary program established under the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). It was reauthorized as part of the Fixing America's Surface Transportation (FAST) Act in Section 3017 in 2015, with authorizations from federal fiscal years 2016 through 2020. For rural areas like Tuolumne County, the Caltrans Division of Rail and Mass Transportation (DRMT) administers a discretionary grant program. DRMT administers these funding components to eligible sub-recipients, including public agencies and private nonprofit organizations engaged in public transportation.

In order to receive Section 5339 funding, projects must have a significant impact on desirable long-term outcomes for improving and maintaining California's buses and bus facilities to keep the State's public transportation systems in good physical condition and successfully accomplishing their performance objectives. According to Caltrans, the current guidelines for selecting discretionary applications is based on vehicle age and mileage. Tuolumne County should score well in applications for FTA 5339 funding starting in FY 21/22. However, such funding applications are discretionary and if not approved, there should be back-up or contingency funding.

State Transit Assistance (STA)

The State Transit Assistance funding source can be utilized for either operating or capital purposes. Due to the sunset of the PTMISEA program, many rural transit agencies are utilizing STA funds for capital purposes. It is recommended that STA funds be utilized for capital purposes only if FTA 5339 grant applications are not approved. Alternatively, Tuolumne Transit could increase LTF funds by a similar amount to full fund capital expenditures.

Summary of Capital Revenues

Table 33 is a summary of capital revenues that are recommended to fund the capital expenditures itemized earlier. A total of \$3,042,774 will be utilized over the next five years.

Table 33, Capital Revenue Summary

	FY 20-21 Budget	FY 21-22 Projected	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected	5-Year Total
Local Transportation Fund	\$71,760	\$80,000	\$80,000	\$80,000	\$80,000	\$391,760
PTMISEA	\$1,127,271					\$1,127,271
State of Good Repair (SB1)	\$75,862	\$77,379	\$78,927	\$80,505	\$82,115	\$394,789
CMAQ		\$113,477	\$117,680	\$193,995	\$119,122	\$544,273
FTA 5339 / STA contingency		\$189,704	\$211,603	\$123,614	\$59,760	\$584,680
Total	\$1,274,893	\$460,560	\$488,209	\$478,114	\$340,998	\$3,042,774

Appendix A - Onboard Survey Report

Tuolumne County Transit 2019 Onboard Survey Report

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Methodology

A survey of Tuolumne County Transit passengers was conducted in September on weekdays. Surveys were distributed to and collected from passengers by trained surveyor staff onboard the Tuolumne County Transit vehicles the week of September 9th. Surveys were distributed to passengers by the transit operators the week of September 16th.

Survey staff were trained to ask every rider who appeared over the age of 16 to complete the paper questionnaire. They briefly explained the purpose of the survey, offered a pencil, and were available to answer questions and assist as needed. Survey staff wore smocks identifying them as part of the transit survey team. Passengers were asked only to complete one questionnaire during the survey effort.

The survey questionnaire was distributed on letter-sized cardstock with questions on both sides, and was available in English and Spanish. The formatted survey is shown in Appendix A.

The survey included both questions where respondents were instructed to select only one answer and also questions where the respondent was instructed to select all answers that apply to themselves, which are labeled as “select all that apply.”

All weekday driver shifts were surveyed; therefore, each route was surveyed in the same proportion of vehicle service hours that they operate per weekday, which is a total of 50 hours. In addition, operators distributed surveys to passengers on other days.

Table 1 shows the count and proportion of surveys collected per route alongside the overall ridership counts and proportions for the month of September 2019. There is a lower proportion of surveys from Route 1 than the proportion of overall ridership (under-sampled) and Route 4 has a higher proportion of surveys than ridership (oversampled). However, those disproportions are unlikely to have much effect on the overall results.

How Passengers Use Tuolumne County Transit

Routes & Services

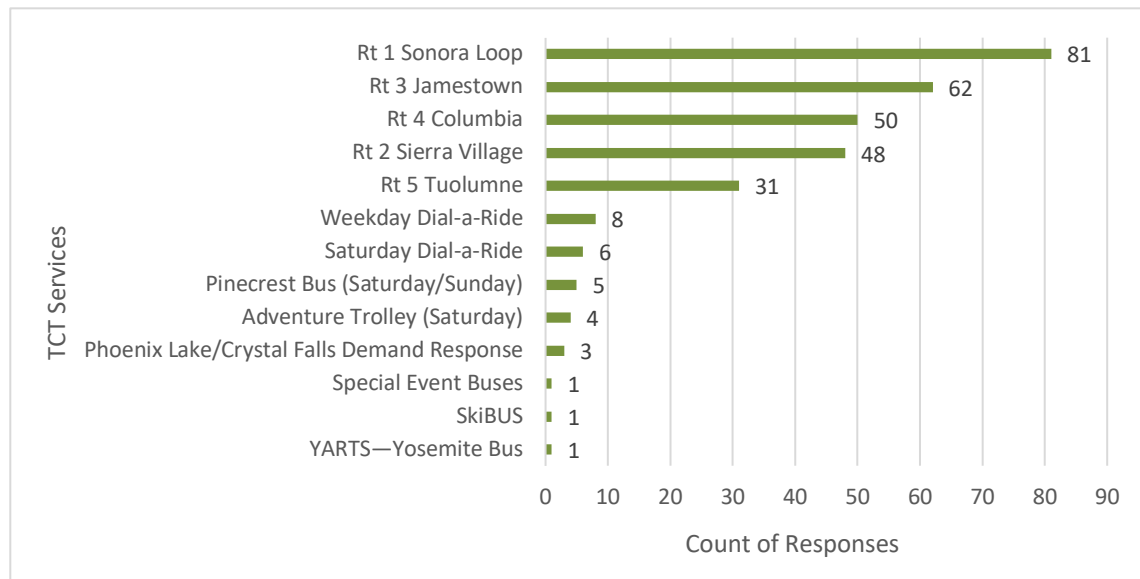
A total of 137 surveys were collected from passengers onboard a Tuolumne County Transit bus or at a transit stop while awaiting a Tuolumne County Transit bus. The route on which the passenger was on while they took the survey was recorded on their respective surveys. The route is unknown for two of the survey respondents.

Table 1: Surveys Collected per Route and September 2019 Ridership per Route

Route	Surveys Collected	% of Total Surveys Collected	Sept. 2019 Ridership	% of Sept. '19 Ridership per Route*
1	23	17%	1997	39%
2	35	26%	975	19%
3	30	22%	987	19%
4	35	26%	555	11%
5	12	9%	560	11%
Unknown	2	1%		
TOTAL	137		5074	100%

Respondents were asked to select all of the Tuolumne County Transit routes and services that they've used in the past 30 days. The most common service that respondents had used was Route 1 (81), followed by Route 3 (62), Route 4 (50), Route 2 (48), and Route 5 (31). Sixty-two percent of survey respondents selected more than one of the Tuolumne County Transit services that they had used in the last 30 days and 34% had used three or more.

Figure 1: Which Tuolumne County Transit services have you used in the past 30 days?



Respondents were asked to “check all that apply”

Frequency & Length of Time Riding

Passengers were asked, “In the past seven days, how many days have you ridden Tuolumne County Transit?” Twenty-seven percent indicated that they had ridden only once or twice in the past seven days, indicating that they are more occasional riders (Figure 2). Fifty-two percent of respondents had ridden four, five, or six times, which suggests that they rely on Tuolumne County Transit for transportation more regularly.

Most riders have been riding for many years, but a quarter of respondents began riding Tuolumne County Transit recently in 2019 (Figure 3). Nearly half have been riding since 2016 and a third began before 2014.

Figure 2: In the past seven days, how many days have you ridden Tuolumne County Transit?

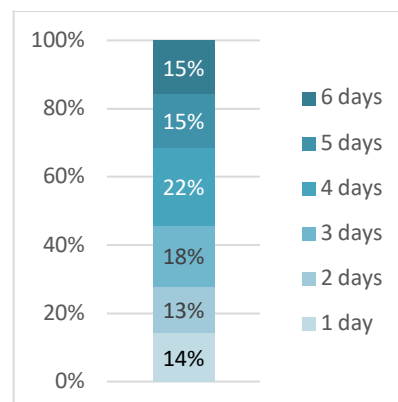
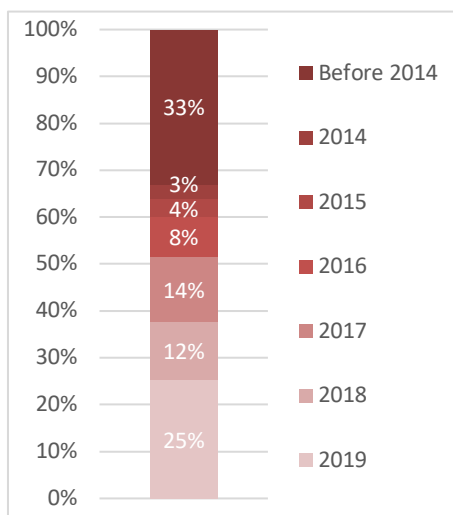


Figure 3: What year did you begin riding Tuolumne County Transit?



About two thirds of respondents reported that they use transit for all of their trips or most of their trips in an average week (Table 2).

Table 2: For how many of the trips you make in an average week do you use transit?

Response	Count	%
All of my trips	44	33%
Most of my trips	41	31%
About half of my trips	20	15%
Less than half of my trips	27	20%
Total	132	100%

Transit Dependence

Most of the survey respondents are dependent on Tuolumne County Transit. They were asked, “What is the one main reason you ride Tuolumne County Transit?” and a majority selected, “It is my only transportation.” (Table 3) The second most common answer was that it’s less expensive than driving and that they don’t like asking for rides.

Table 3: What is the one main reason you ride Tuolumne County Transit?

Response	Count	%
It is my only transportation	88	68%
It’s less expensive than driving	15	12%
I don’t like asking for rides	14	11%
It’s better for the environment	1	1%
I enjoy the time to read, relax or socialize on the bus	4	3%
Other	8	6%
Total	130	100%

Over a quarter of respondents reported that they do not have a licensed driver in their household (Figure 5) and 42% do not have a vehicle for use in their household (Figure 4). About a third of respondents said that other members of their household ride TCT.

Figure 5: How many of the people in your household are licensed drivers?

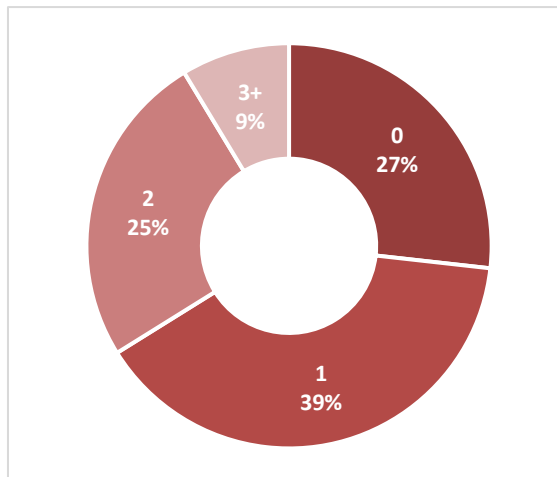


Figure 4: How many working vehicles are available for use by your household?

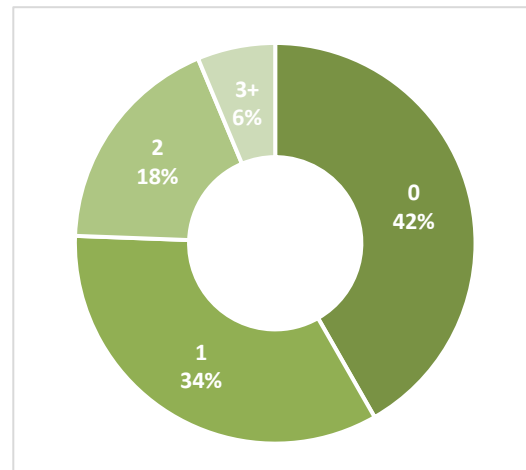


Table 4 compares the number of vehicles available to number of licensed drivers. The passengers who either do not have a drivers’ license or no vehicles available represent 45% of respondents (highlighted in blue). These passengers are likely to be the most dependent on transit. Another 16% live in households with fewer vehicles than drivers (highlighted in purple). Presumably, these households share vehicles and so the option to drive exists, but not for all. A third of respondents lived in households where there are more adults than licensed drivers.

Table 4: Vehicles Available by Licensed Drivers in Household

Vehicles Available	Licensed Drivers				Total
	0	1	2	3+	
0	24%	15%	2%	1%	42%
1	2%	20%	11%	0%	33%
2	1%	2%	10%	5%	18%
3+	1%	2%	1%	3%	6%
Total	27%	39%	24%	9%	

Origins & Destinations

Survey respondents were asked, “Where did you begin the one-way trip you are currently making?” and “Where is your final destination for this one-way trip?” The most common trip origin reported was Sonora (33%), followed by Columbia College (14%), and Jamestown (11%). The most common trip destination was also Sonora (52%), followed by Columbia College (11%), and East Sonora (11%).

Table 5 shows the array of origin and destination pairs, which varied greatly. Respondents’ trips beginning and ending in Sonora represented the most common origin and destination pair (20), followed by trips between Columbia College and Sonora (19), and trips between Tuolumne and Sonora (12).

Table 5: Origins and Destinations

		DESTINATION of One-Way Trip												
		Columbia	Columbia College	East Sonora	Jamestown	Mi Wuk Village	Shaws Flat	Sierra Village	Sonora	Tuolumne	Twain Harte	Another town in Tuolumne County	Origin Totals	%
ORIGIN of One-Way Trip	Columbia	1	3	3					4	1			12	9%
	Columbia College	1	2		2				11	1	1		18	14%
	East Sonora		1	1	1				4				7	5%
	Jamestown			4	2				7			1	14	11%
	Mi Wuk Village			2					4		1		7	5%
	Shaws Flat											1	1	1%
	Sierra Village							1	3		1	1	6	5%
	Sonora	3	8	2	3	1	1		20	4	1		43	33%
	Tuolumne			1					8	2			11	8%
	Twain Harte			2					6	1			9	7%
	Another town in Tuolumne County	1	1						1				3	2%
	Outside of Tuolumne County								1				1	1%
Destination Totals		6	15	15	8	1	1	1	69	9	4	3	132	
%		5%	11%	11%	6%	1%	1%	1%	52%	7%	3%	2%		

Trip Purpose

Survey respondents were asked to pick one main purpose for the bus trip they were currently on. The most common reasons, which each had about a quarter of responses, were School/College, Work, and Shopping. Trips for recreation or medical appointments were each the reason for about 8% of trips.

Figure 7 shows the trip purpose broken down by the route the survey respondent was on at the time. Routes 2, 3, and 4 each had nearly equal counts of responses for school/college trips. Routes 2 and 5 did not have any trips for medical appointments.

Figure 6: What is the one main purpose of this trip today?

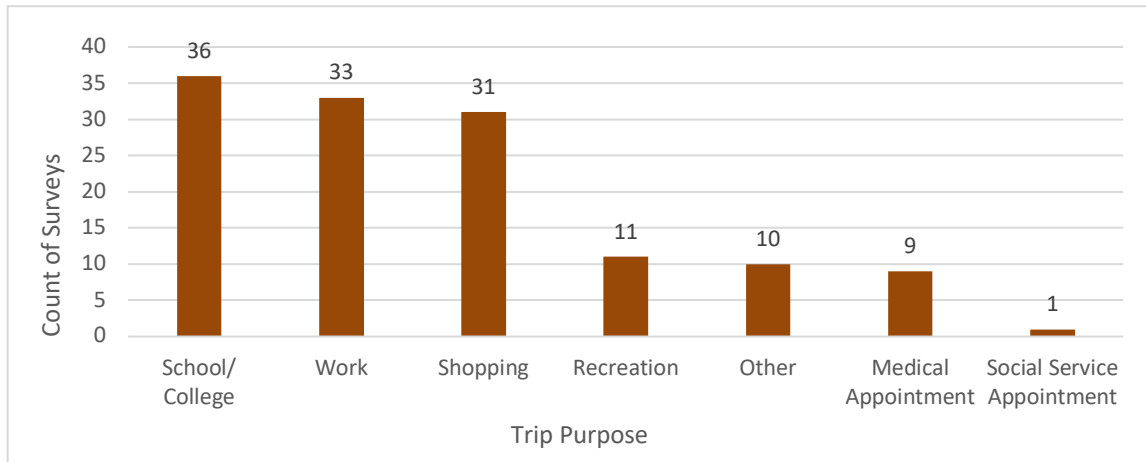
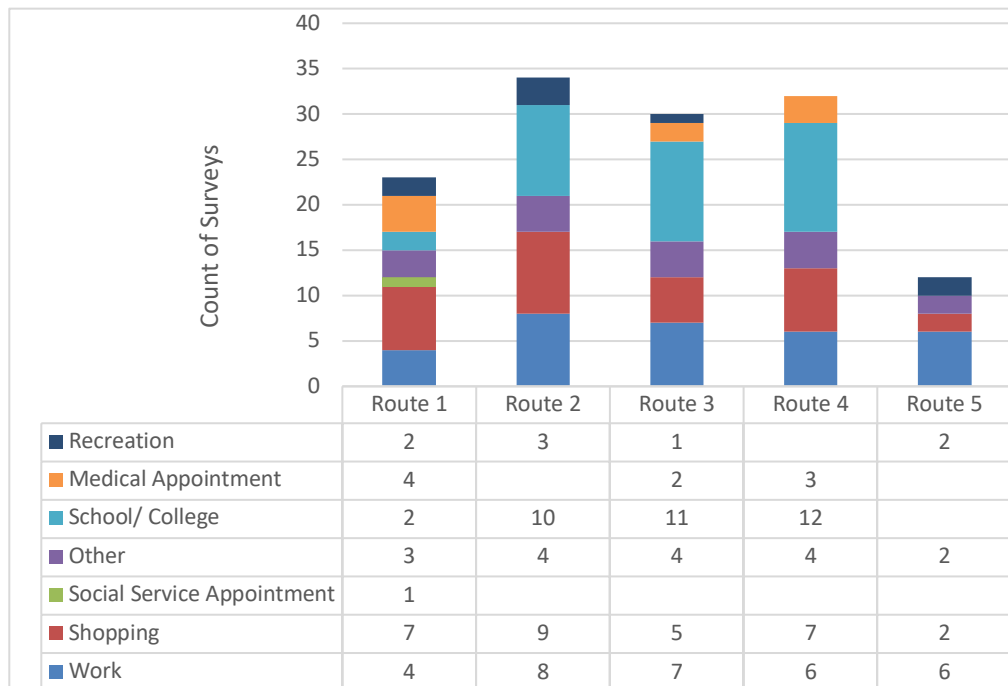


Figure 7: Trip Purpose by Route



Fare Payment Method

Respondents were asked to indicate their method of payment for the bus fare on their trip that day. Nearly half paid using cash and another quarter used their Columbia College ID. Ticket and monthly passes were the next most popular methods and the day pass was the least common.

Figure 8: How did you pay your fare for this trip?

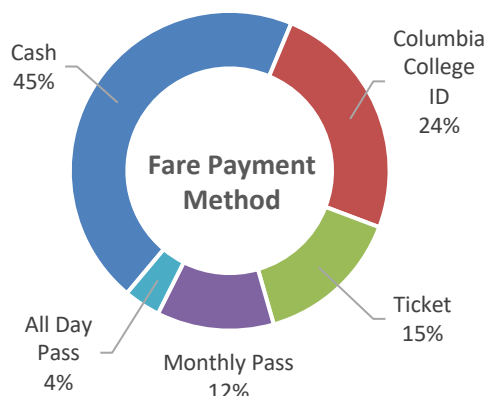


Figure 9 shows the fare payment method broken down by the number of times the passenger had ridden Tuolumne County Transit in the last seven days. Occasional riders (1-2 days) were more likely to use cash or day passes and much less likely to use a ticket than passengers who rode more often. Regular riders (3-4 days) were more likely to use tickets. Frequent riders (5-6 days) were less likely to use cash or tickets and more likely to use monthly passes. Use of Columbia College IDs was common among all riders, but slightly higher for frequent riders.

Figure 9: Fare Payment Method by Frequency Riding

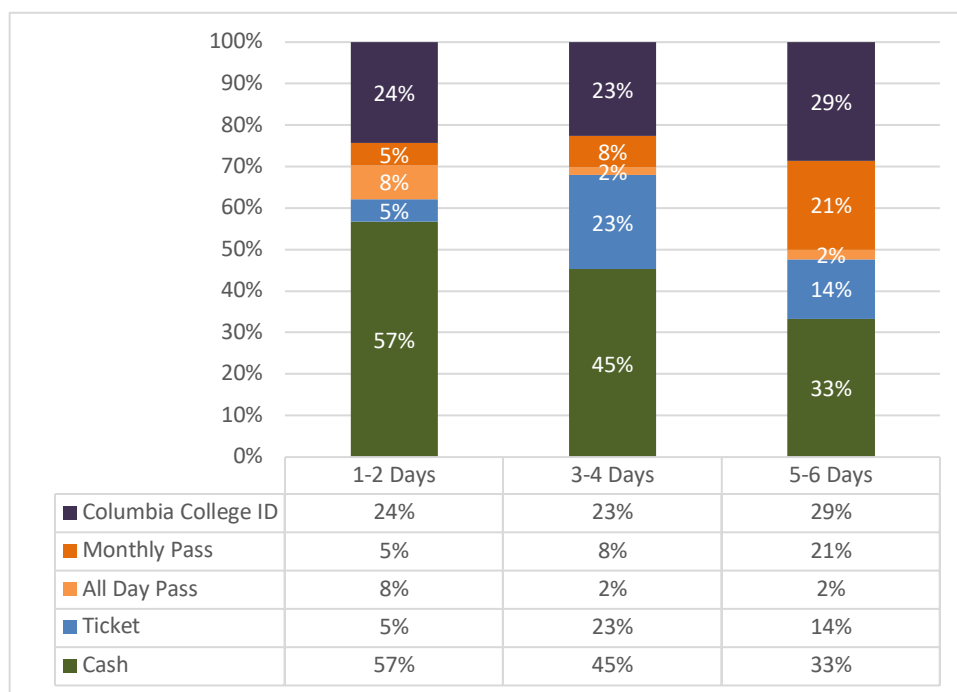
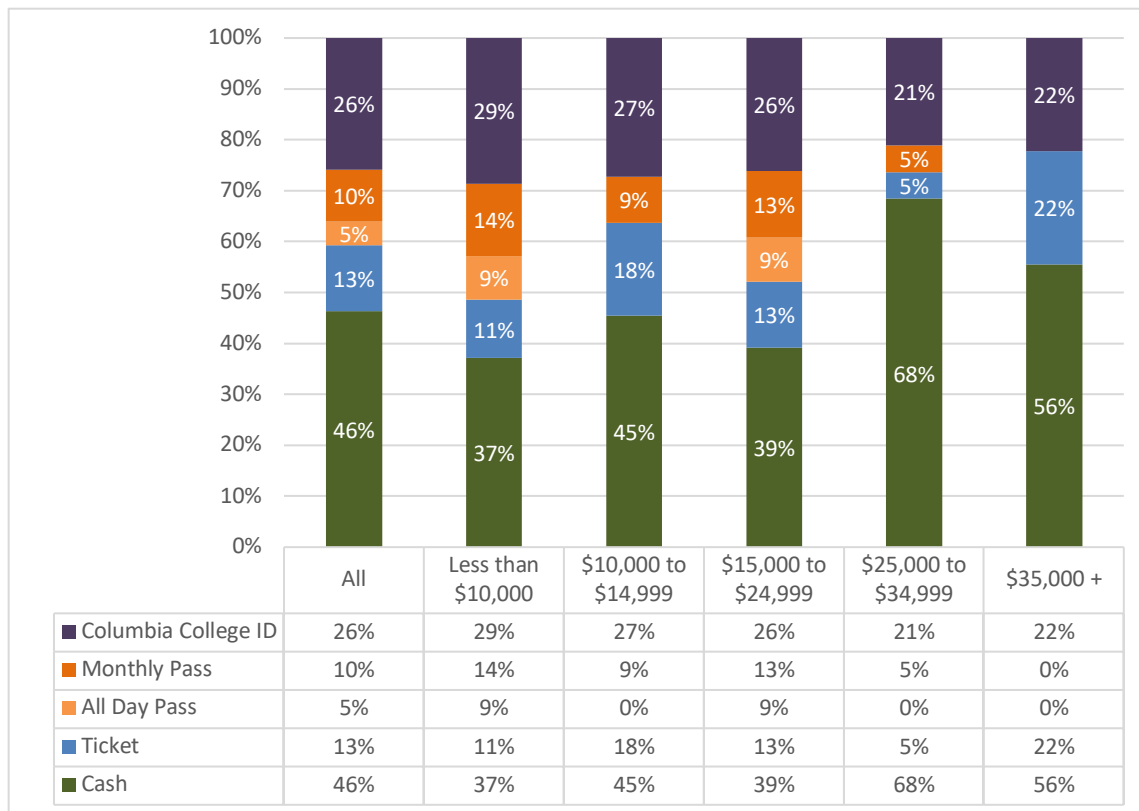


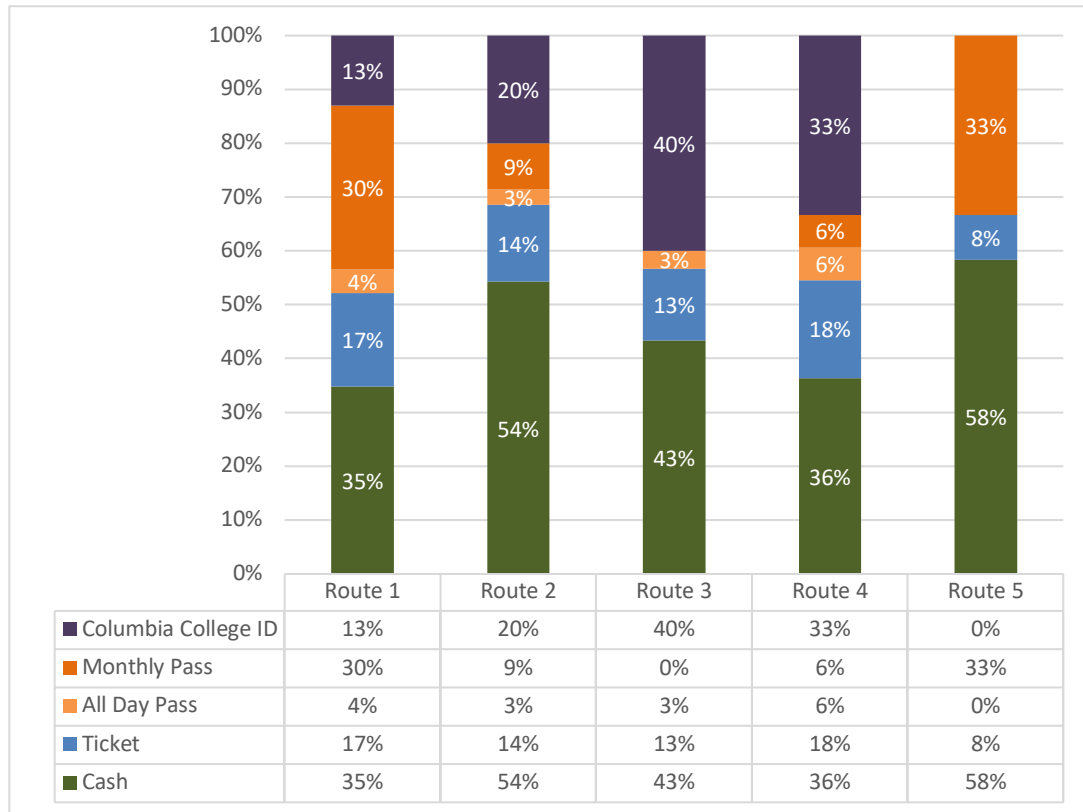
Figure 10 shows the fare payment method broken down by income. Overall, most passengers have very low household incomes and about 75% of respondents reported that their approximate annual household income is less than \$25,000. Passengers with household incomes under \$10,000 and between \$15,000 to \$24,999 are more likely to use monthly passes than the other income groups. Passengers with incomes between \$10,000 and \$14,999 were more likely to use tickets. Passengers with higher incomes (more than \$25,000) were more likely to pay cash fares and less likely to use day or monthly passes than those with lower incomes.

Figure 10: Fare Payment Method by Income



The fare payment method by route is shown in Figure 11. A high proportion of riders on Routes 4 and 5 used their student ID, which correlates with the high proportion of students on these routes. Routes 1 and 5 had high proportions of passengers who used a monthly pass.

Figure 11: Fare Payment Method by Route

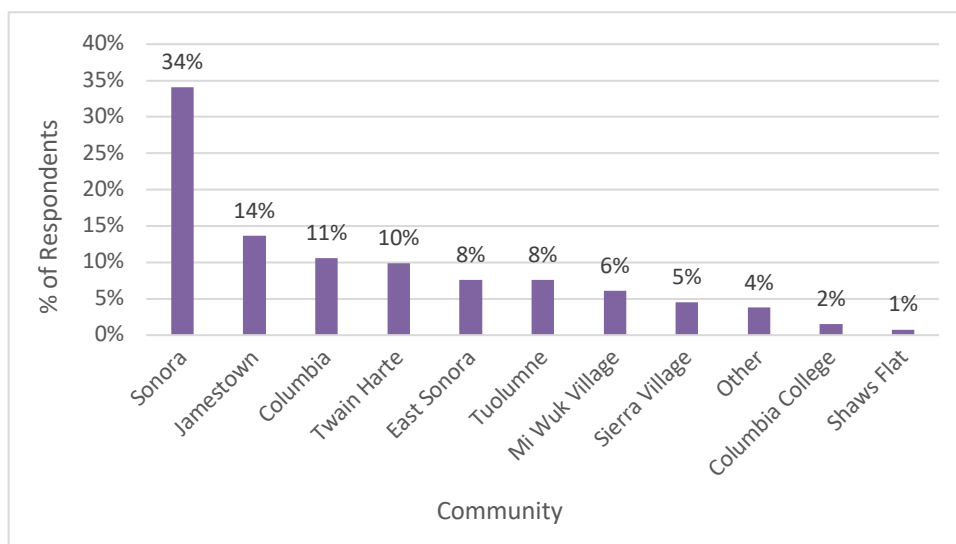


Passenger Characteristics

Household

A third of survey respondents live in Sonora, which is in line with the responses to the origin and destination questions (Figure 12). The remaining respondents were spread among several other communities, including Jamestown (14%), Columbia (11%), and Twain Harte (10%).

Figure 12: In what community do you live?



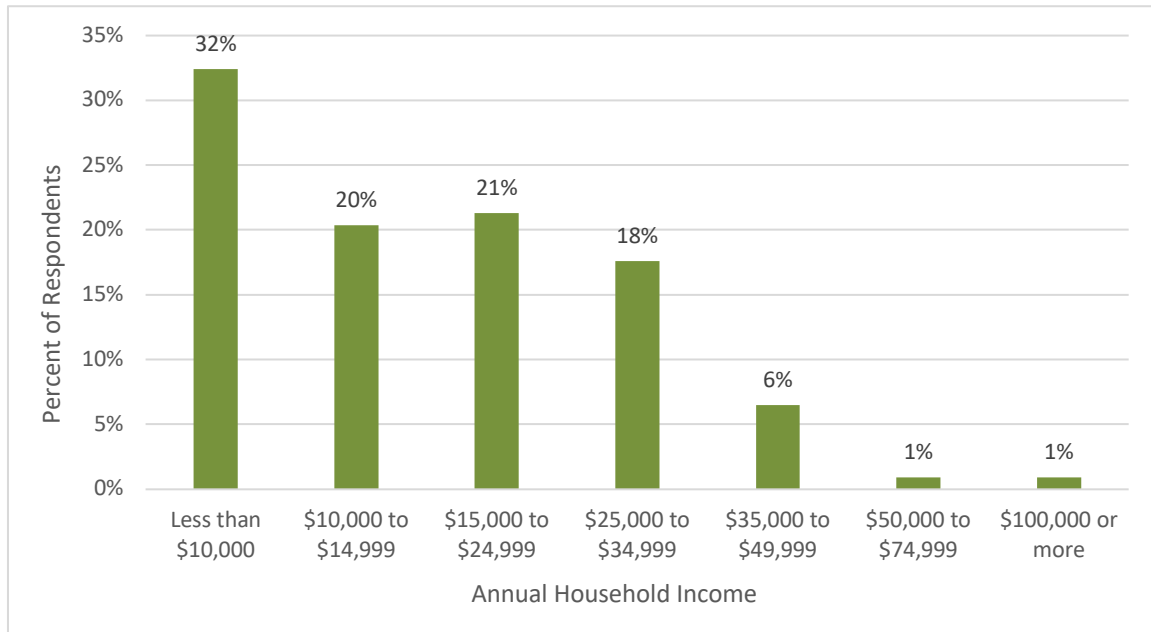
Passengers were asked how many adults (aged 18 to 64), children (under 18), and older adults/senior (65 and older) live in their household (Table 6). Half of respondents lived in households of only adults (no seniors or children) and 16% were households of only seniors. Nearly a quarter live alone and 34% live in households of four or more people. A third of households included children.

Table 6: Household Size

Total People in Household	Count	%
1	29	23%
2	32	26%
3	21	17%
4	19	15%
5	11	9%
6+	12	10%
	124	100%

Surveyed passengers reported very low household incomes. Three-quarters of respondents reported that their approximate annual household income is less than \$25,000 (Figure 13) and a third said that it is less than \$10,000. The median household income in Tuolumne County in 2017 was \$54,325, according to the U.S. Census.

Figure 13: What is your approximate annual household income?



Employment & Education

A little over half of respondents are either not employed (30%) or retired (25%). Only 18% are employed full time and 28% are employed part time or seasonally (Figure 14).

Many of the employed respondents reported that their work hours vary (44%) and 36% said that they work regular hours (Figure 15). Eighteen percent of employed respondents said that they work weekends and 13% answered that they often work later than 7 pm.

Thirty-four respondents answered a question asking where they work. The most common employers included Walmart (4), Black Oak Casino (4), McDonalds (4), and Columbia College (3). The list included major and minor retail stores, grocery stores, and a variety of others.

Figure 14: Employment Status

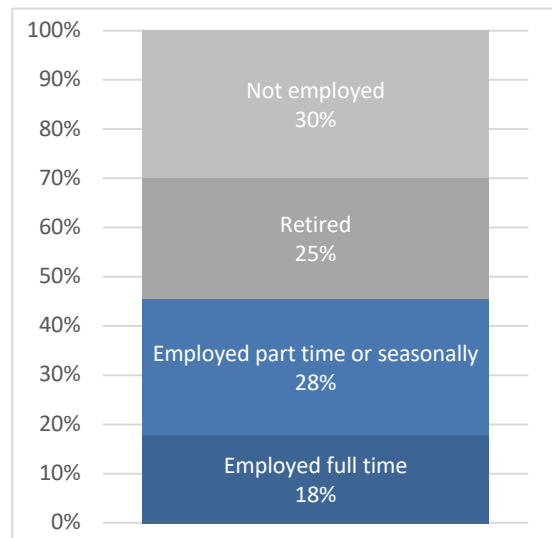


Figure 15: If employed, which of these describe your job?



Respondents were asked to “check all that apply”

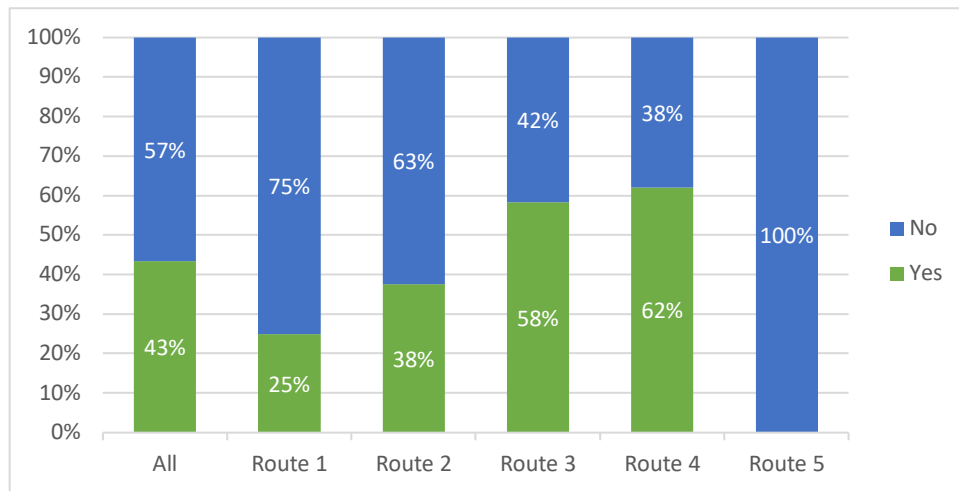
Over a third of respondents indicated that they are a student and nearly all of these attend Columbia College full- or part-time (Table 7). Routes 3 and 4 have the highest proportion of student riders with about 60% and Route 1 has the lowest at 25% (Figure 16).

Columbia College students ride Tuolumne County Transit free with their student ID, which likely explains the high proportion of student riders. Forty five percent of students indicated that they are also employed full- or part-time.

Table 7: Student Passengers and their Schools

Are you a student?	Count	%
Yes	49	43%
No	66	57%
No response	22	
If you are a student, where do you attend school or college?		
Columbia College—full time	25	
Columbia College—part time	14	
Gold Rush Charter	3	
Other High School	2	

Figure 16: Students by Route



Age & Disability

A large proportion (45%) of the survey respondents were under the age of 25 (Figure 17). This correlates to the high number of respondents that identified as students. Twelve percent of respondents were high school aged (14 to 17), 34% were college aged (18 to 24), 15% were aged 25 to 35, 29% were aged 35 to 64, and 11% were aged 65 to 84.

Figure 18 shows the proportion of the age of respondents by route. No passengers under the age of 18 filled out the survey on Routes 1 and 5. Route 5 had a higher proportion of older adult respondents than the other routes.

Nearly a quarter of respondents (24%) reported that they have a disability that impacts their travel.

Figure 17: Age of Respondents

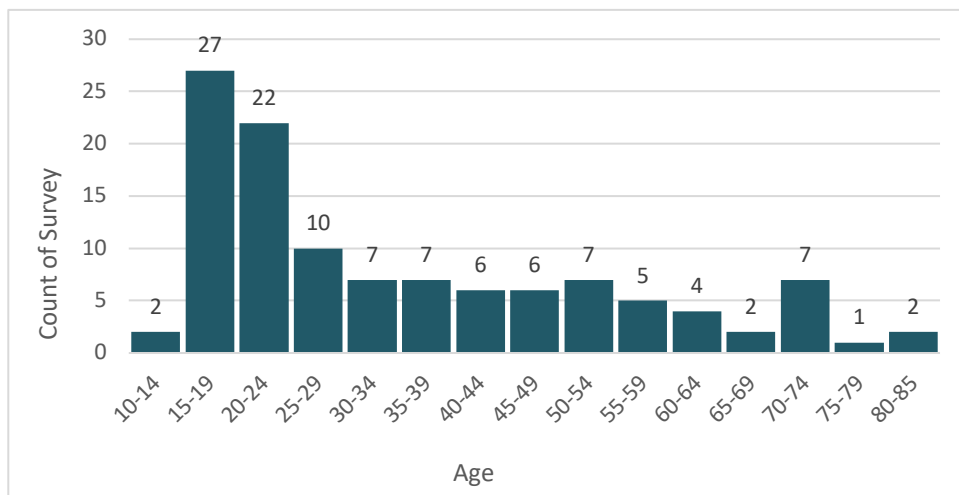
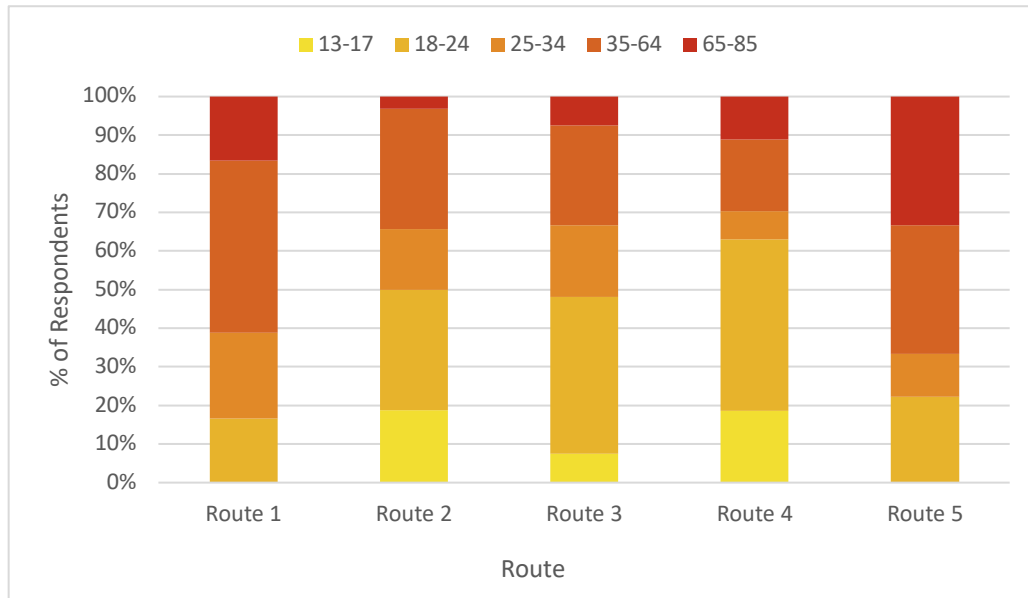


Figure 18: Age of Survey Respondent by Route



Passenger Information

The survey included questions to determine how passengers get information about Tuolumne County Transit and their awareness level of certain services.

Information Resources

Passengers were asked, “How did you first learn about Tuolumne County Transit?” About half responded that they saw the bus (Table 8). Another quarter learned about it from a friend or family member. Common responses for “Other” ways they first learned about the service included the website and that they have lived in the area a long time. Newer riders who began riding in 2018 or 2019 were moderately more likely to have learned about the service through advertising or to have heard about the service through friends or family. Passengers who began riding in 2017 or earlier were somewhat more likely to have first learned about it by seeing a bus.

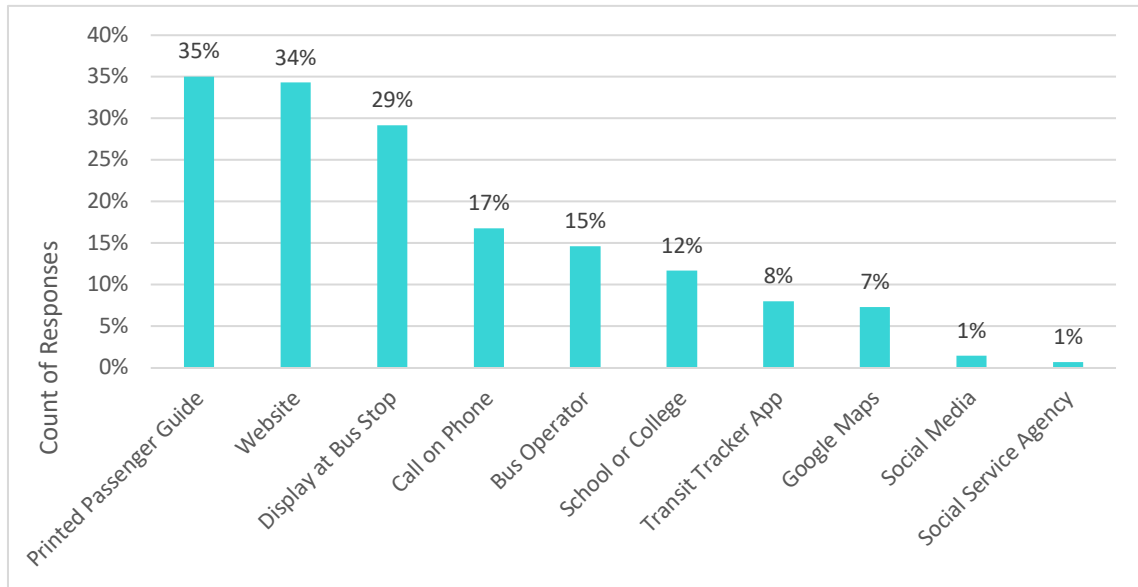
Table 8: How did you first learn about Tuolumne County Transit?

Response	Count	%
I saw the bus	63	49%
Friend or family told me about it	34	26%
Other	14	11%
Learned about TCT from a social service agency, school or employer	8	6%
I saw advertising for TCT	5	4%
I saw a brochure or map	5	4%
Total	129	100%

Respondents were asked to identify all the ways in which they get information about Tuolumne County Transit routes and schedules (Figure 19). The most common resources are the printed passenger guide (35%), website (34%), and displays at bus stops (29%). Google maps, social media, and social service agencies were the least common resources used.

English is the primary language for 97% of respondents.

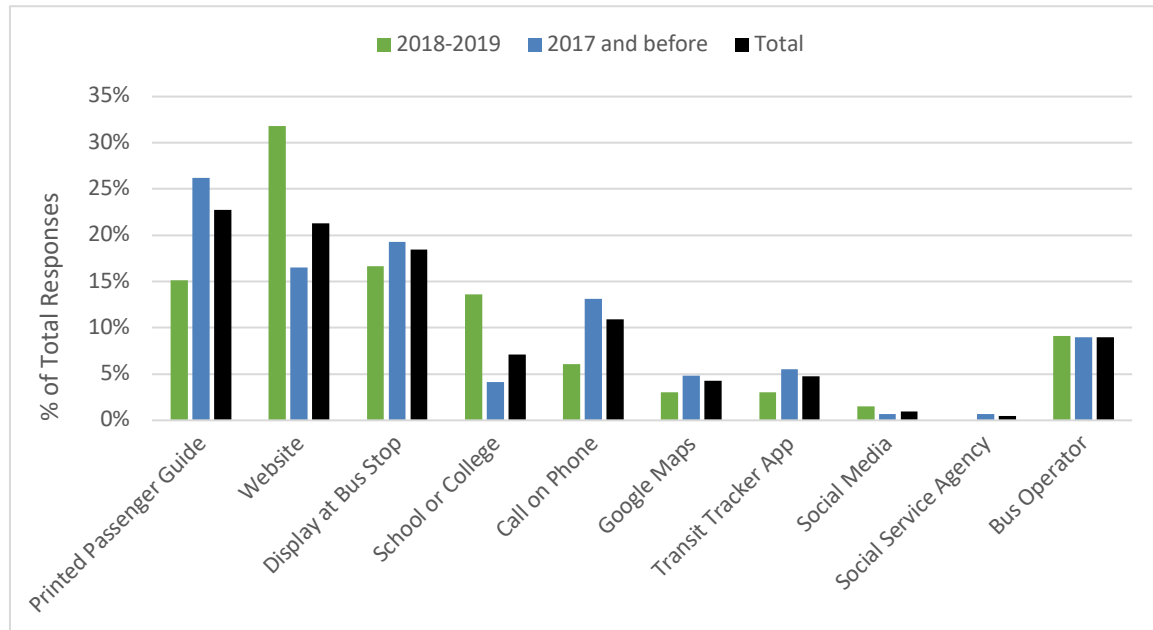
Figure 19: How do you get information about Tuolumne County Transit routes and schedules?



Respondents were asked to “check all that apply.” Percentages are of total survey respondents and so do not add up to 100%.

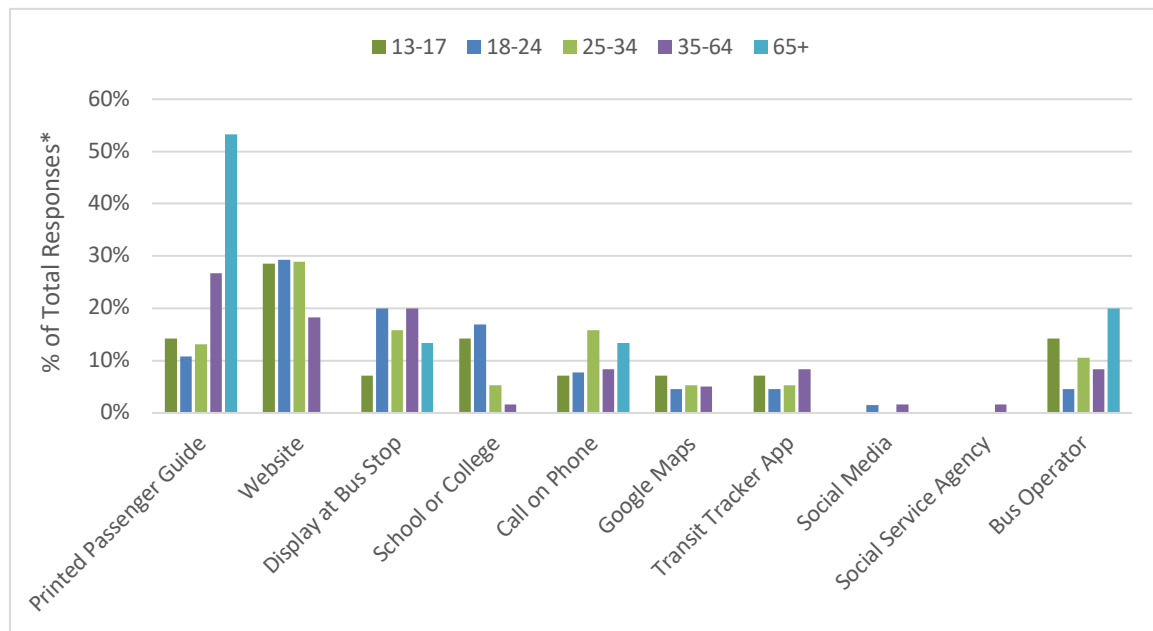
Figure 20 shows the information resources used by passenger to get information about Tuolumne County Transit broken down by whether they are a relatively new rider (began in 2018 or 2019) or a seasoned rider (began in 2017 or earlier). Newer riders are more likely to get information from the website and at school or college. Seasoned riders are more likely to get information from printed passenger guides and by calling on the phone.

Figure 20: Information Resource by Longevity Riding



Percentages are of are the total responses to the question, not the total survey respondents.

Figure 21: Information Resource by Age



*Percentages are of the total responses to the question, not the total survey respondents.

Figure 21 shows the information resources selected by the age of the respondent. Older adults' preferences are generally unlike the other age groups. Most rely on the printed passenger guide, calling on the phone, and the bus operators for information and none indicated that they use the website. People in the 35 to 64 category also tend to use the passenger guide more and the website less, but otherwise track with the other age groups.

Use of Technology

A majority of respondents (78%) reported that they have a smartphone—a mobile phone with internet access (Figure 22). Most passengers under the age of 64 own a smartphone, but three quarters of respondents over the age of 65 do not own a smartphone (Figure 23). Predictably, passengers with annual household incomes below \$25,000 were less likely to own a smartphone than those with incomes above. However, even passengers with the lowest incomes (below \$15,000) had a high rate of smartphone ownership at 75%.

Figure 22: Do you have a Smartphone—a mobile phone with internet access?

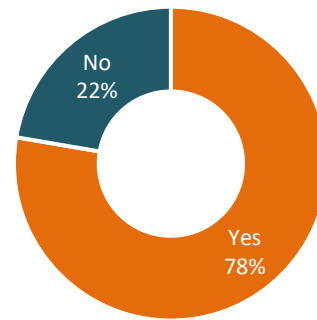
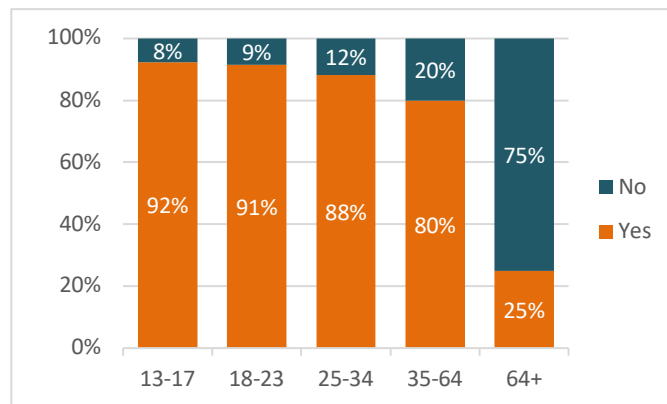
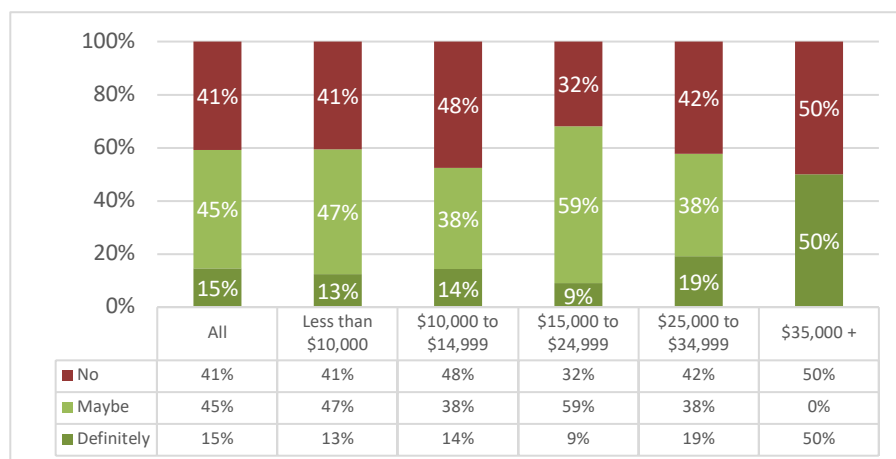


Figure 23: Smartphone Ownership by Age



When asked if they would be interested in being able to pay their transit fare with a smartphone, 14% replied “definitely,” 40% replied “maybe,” and 46% replied “no.” Figure 24 shows the responses to this question broken down by income. Those with incomes of \$25,000 and above were more likely to answer “definitely,” which makes sense since these respondents had a higher rate of smartphone ownership. Respondents in the \$15,000 to \$24,999 range were most likely to answer “definitely” or “maybe.” Students and non-students were equally likely to select “definitely,” but students were more likely “maybe” and non-students were more likely to select “no.” Overall, 66% of students and 46% of non-students selected “yes” or “maybe” as their interest level in paying their transit fare with a smartphone.

Figure 24: Smartphone Payment Interest by Income



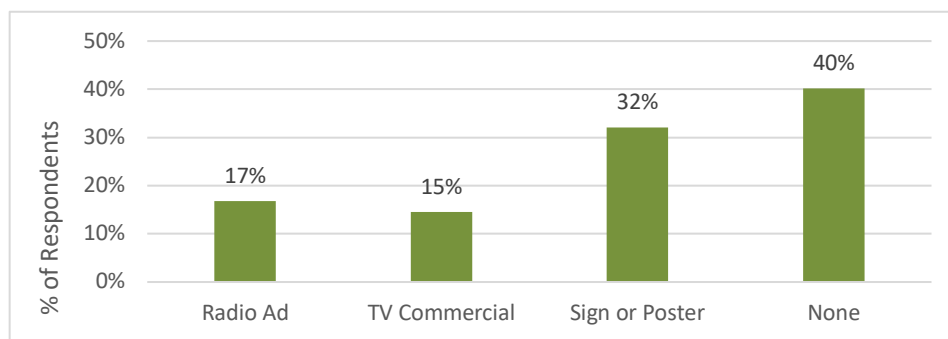
Passengers were asked, “Have you used the Wi-fi onboard TCT buses? A quarter responded “yes,” 44% said “no,” and 30% said they didn’t know about it.

Awareness of Services

Most respondents (81%) were aware that Columbia College students ride free on Tuolumne County Transit and Calaveras Connect with a current college ID.

One question asked, “In the past month, have you seen/heard any advertising for TCT?” (Figure 25) About a third had seen a sign or poster, 17% had heard a radio ad, and 15% had seen/heard a TV commercial.

Figure 25: In the past month, have you seen/heard any advertising for TCT?



Respondents were asked to “check all that apply”

Passenger Satisfaction & Potential Improvements

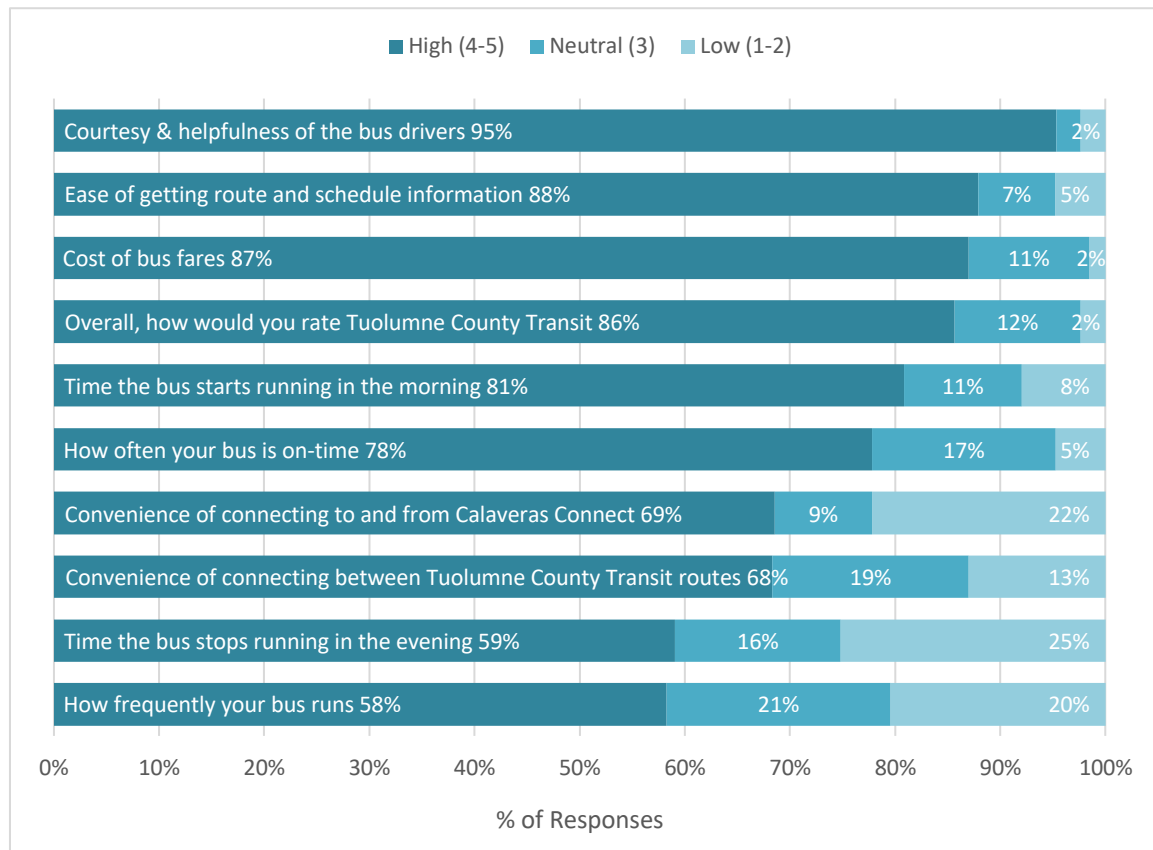
Passengers were asked to rate Tuolumne County Transit on several service factors on a scale of 1 (poor) to 5 (excellent). In general, the service factors were rated very well and all of the average ratings, shown in Table 9, are between 3 and 5. “Courtesy & helpfulness of the bus drivers” was the highest rated factor, followed by “Ease of getting route and schedule information,” and “Cost of bus fares.” “Overall, how would you rate Tuolumne County Transit?” had the fourth highest rating. Figure 26 shows the proportion of high (ratings of 4 and 5), neutral (rating of 3), and low (ratings of 1 and 2) ratings for each service factor. The same service factors that received the highest average ratings also received the highest proportion of high ratings.

“How frequently your bus runs” and “Time the bus stops running in the evening” had the lowest average scores. “Convenience of connecting to and from Calaveras Connect” had the second highest proportion of low ratings, but about half of respondents selected the “haven’t tried” option, which was unique to this factor.

Table 9: Average Rating of Tuolumne County Transit Service Factors

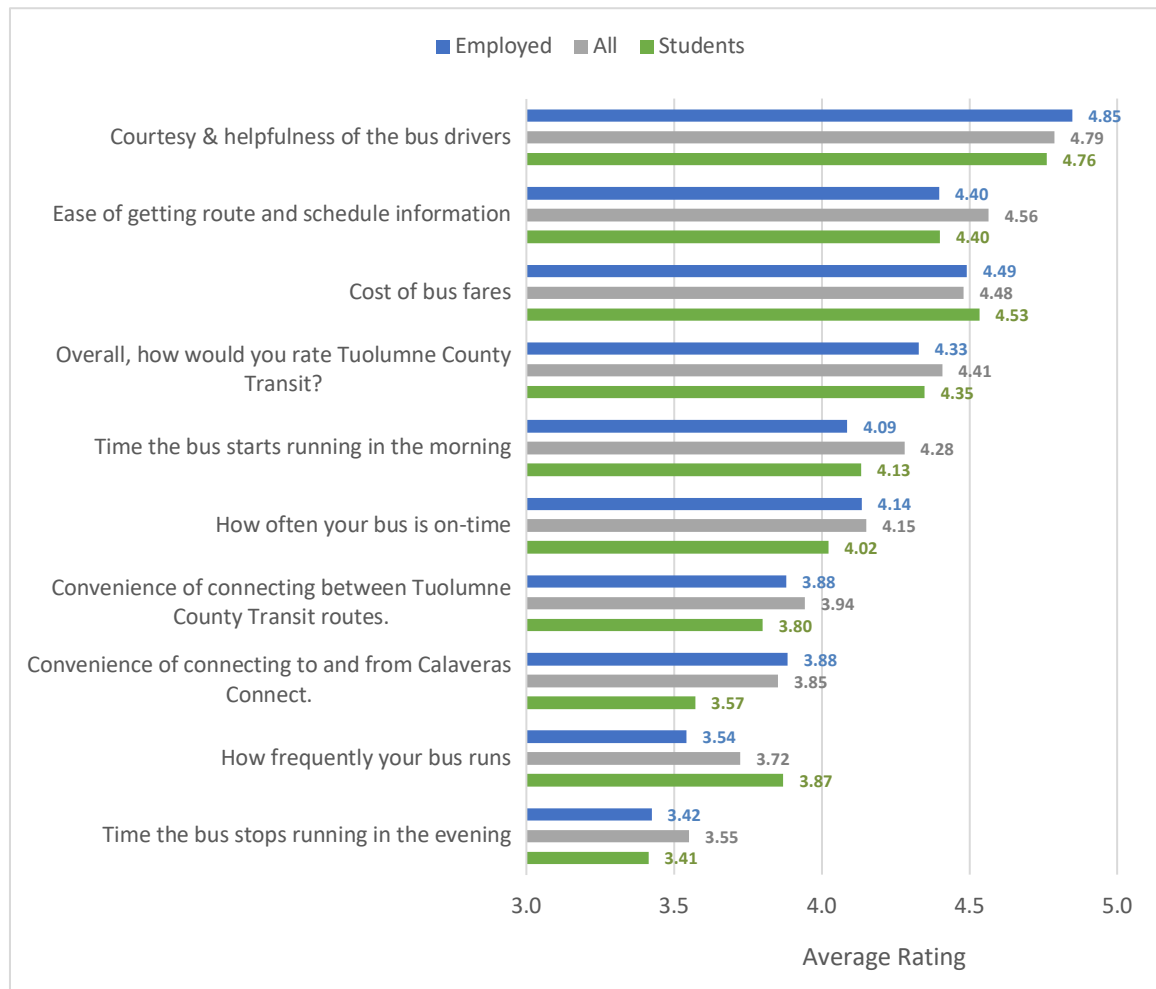
Service Factor	Average Rating
Courtesy & helpfulness of the bus drivers	4.79
Ease of getting route and schedule information	4.56
Cost of bus fares	4.48
Overall, how would you rate Tuolumne County Transit?	4.41
Time the bus starts running in the morning	4.28
How often your bus is on-time	4.15
Convenience of connecting between Tuolumne County Transit routes.	3.94
Convenience of connecting to and from Calaveras Connect.	3.85
How frequently your bus runs	3.72
Time the bus stops running in the evening	3.55

Figure 26: Service Factor Ratings



The average rating per service factor for students, those who are employed full or part time, and all passengers are shown in Figure 27. The differences between the three categories are subtle and it should be noted that nearly half of students are also employed. In general, students rated the service factors lower than the overall average, with the exception of “the cost of the bus fare” and “how frequently your bus runs.” Employed passengers also rated many of the factors lower than the overall average, including “how frequently your bus runs” lower than the overall average.

Figure 27: Service Factor Average Rating for Students and Employed Persons



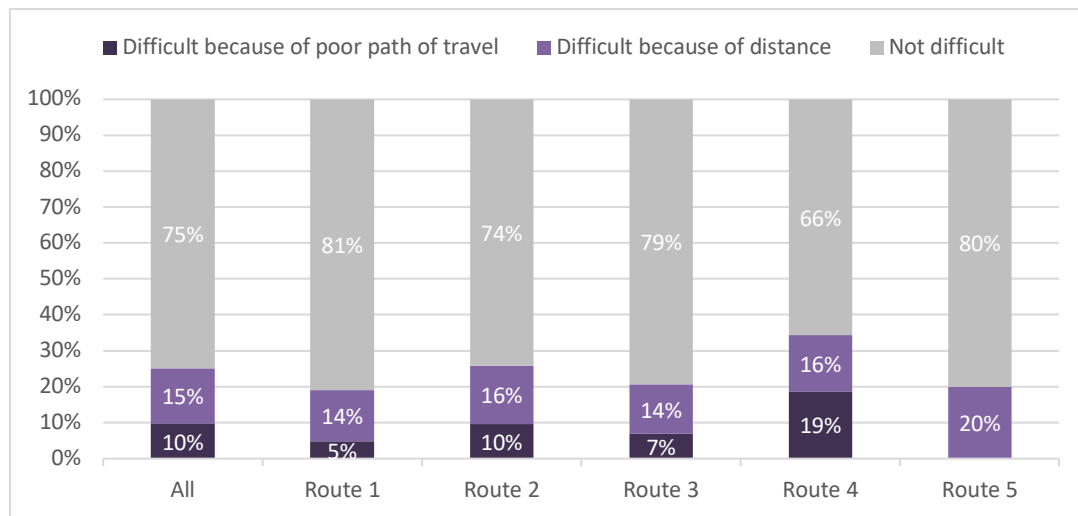
The average ratings broken down by route are shown in Table 10. For each service factor, the average rating shown in green is the high value and the average rating shown in red is the low. In general, Route 5 had the most high ratings and Route 2 had the most low ratings. Route 1 was generally somewhere in the middle. This corresponds to the average ratings for each route in response to “Overall, how would you rate Calaveras Connect?” in the last row. Although, there are exceptions.

Table 10: Average Service Ratings by Route

Service Factor	Route				
	1	2	3	4	5
Courtesy & helpfulness of the bus drivers	4.55	4.69	4.97	4.81	5.00
How often your bus is on-time	4.05	4.07	4.38	3.97	4.36
How frequently your bus runs	4.00	3.16	3.86	4.03	3.64
Time the bus starts running in the morning	4.41	4.23	4.66	3.84	4.45
Time the bus stops running in the evening	3.73	3.13	3.83	3.47	3.91
Convenience of connecting between Tuolumne County Transit routes	4.00	3.68	4.18	3.84	4.33
Convenience of connecting to and from Calaveras Connect	3.89	3.64	3.80	3.78	4.40
Cost of bus fares	4.36	4.24	4.52	4.55	5.00
Ease of getting route and schedule information	4.68	4.30	4.79	4.39	4.90
Overall, how would you rate Tuolumne County Transit?	4.64	4.17	4.45	4.28	4.80

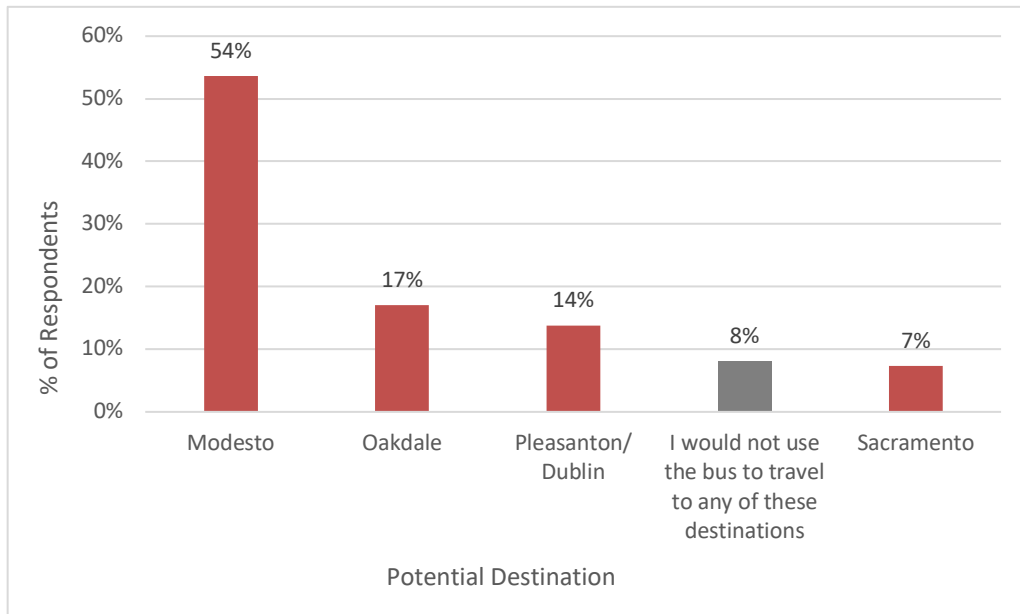
When asked, “How difficult is it to get to the bus stop where you board near your home?” three-quarters indicated that it is “not difficult.” Fifteen percent said that it is “difficult because of distance” and 10% said it’s “difficult because of poor path of travel (e.g. no sidewalks).” The answers to this question are broken down by route in Figure 28. Route 4 had the highest proportion of respondents who indicated that getting to a stop is difficult because of poor path of travel and Route 5 had zero respondents indicate that this was an issue. Difficulty getting to a stop because of distance was fairly even among routes, but slightly higher for Route 5.

Figure 28: Access to Bus Stops by Route



Passengers were asked to select only one destination in response to the question, “If TCT were to provide out of county bus service, which of these destinations would you use the bus to travel to the most?” Modesto was the most popular destination with 54% of respondents indicating they would use the bus to travel there the most. Oakdale received 17% of responses, Pleasanton/Dublin had 14%, and Sacramento had 7%.

Figure 29: If TCT were to provide out of county bus service, which of these destinations would you use the bus to travel to the most?



A year from now, 80% of respondents said that they would still be riding Tuolumne County Transit. Of the 25 passengers who said they would not be riding in the future, 15 said that they expect to be able to have a working car so that they can drive. A couple others were planning to move and one person was unsure of where they would be attending school.

Appendix A: Questionnaire

TUOLUMNE COUNTY TRANSIT PASSENGER SURVEY

Please help us improve transit service by completing this survey. Circle, check or PRINT your answers.



1. In the past seven days, how many days have you ridden Tuolumne County Transit?

1 2 3 4 5 6

2. What year did you begin riding Tuolumne County Transit?

2019 2018 2017 2016 2015 2014 Before 2014

3. Which TCT services have you used in the past 30 days? (*Check all that apply*)

- | | |
|--|--|
| <input type="checkbox"/> 1 Rt 1 Sonora Loop | <input type="checkbox"/> 7 Phoenix Lake/Crystal Falls Demand Response |
| <input type="checkbox"/> 2 Rt 2 Sierra Village | <input type="checkbox"/> 8 Saturday Dial-a-Ride |
| <input type="checkbox"/> 3 Rt 3 Jamestown | <input type="checkbox"/> 9 Adventure Trolley (Saturday) |
| <input type="checkbox"/> 4 Rt 4 Columbia | <input type="checkbox"/> 10 Pinecrest Bus (Saturday/Sunday) |
| <input type="checkbox"/> 5 Rt 5 Tuolumne | <input type="checkbox"/> 11 YARTS—Yosemite Bus |
| <input type="checkbox"/> 6 Weekday Dial-a-Ride | <input type="checkbox"/> 12 SkiBUS <input type="checkbox"/> 13 Special Event Buses |

4. Where did you begin the one-way trip you are currently making? (*Choose ONE*)

- | | | |
|---|---|---|
| <input type="checkbox"/> 1 Columbia | <input type="checkbox"/> 5 Mi Wuk Village | <input type="checkbox"/> 9 Sonora |
| <input type="checkbox"/> 2 Columbia College | <input type="checkbox"/> 6 Phoenix Lake | <input type="checkbox"/> 10 Tuolumne |
| <input type="checkbox"/> 3 East Sonora | <input type="checkbox"/> 7 Shaws Flat | <input type="checkbox"/> 11 Twain Harte |
| <input type="checkbox"/> 4 Jamestown | <input type="checkbox"/> 8 Sierra Village | <input type="checkbox"/> 12 Yankee Hill |
| <input type="checkbox"/> 13 Another town in Tuolumne County _____ | | |
| <input type="checkbox"/> 14 Outside of Tuolumne County _____ | | |

5. Where is your final destination for this one-way trip? (*Choose ONE*)

- | | | |
|---|---|---|
| <input type="checkbox"/> 1 Columbia | <input type="checkbox"/> 5 Mi Wuk Village | <input type="checkbox"/> 9 Sonora |
| <input type="checkbox"/> 2 Columbia College | <input type="checkbox"/> 6 Phoenix Lake | <input type="checkbox"/> 10 Tuolumne |
| <input type="checkbox"/> 3 East Sonora | <input type="checkbox"/> 7 Shaws Flat | <input type="checkbox"/> 11 Twain Harte |
| <input type="checkbox"/> 4 Jamestown | <input type="checkbox"/> 8 Sierra Village | <input type="checkbox"/> 12 Yankee Hill |
| <input type="checkbox"/> 13 Another town in Tuolumne County _____ | | |
| <input type="checkbox"/> 14 Outside of Tuolumne County _____ | | |

6. What is the one main purpose of this trip today?

- | | |
|---|--|
| <input type="checkbox"/> 1 Work | <input type="checkbox"/> 5 School/College |
| <input type="checkbox"/> 2 Shopping | <input type="checkbox"/> 6 Medical Appointment |
| <input type="checkbox"/> 3 Social Service Appointment | <input type="checkbox"/> 7 Recreation |
| <input type="checkbox"/> 4 Other _____ | |

7. How did you pay your fare for this trip? (*Choose ONE*)

- | | | |
|-----------------------------------|---|---|
| <input type="checkbox"/> 1 Cash | <input type="checkbox"/> 3 All Day Pass | <input type="checkbox"/> 5 Columbia College ID |
| <input type="checkbox"/> 2 Ticket | <input type="checkbox"/> 4 Monthly Pass | <input type="checkbox"/> 6 Social Service Program |

Tell us about yourself (strictly confidential)

8. In what community do you live?

- | | | |
|---|---|---|
| <input type="checkbox"/> 1 Columbia | <input type="checkbox"/> 5 Mi Wuk Village | <input type="checkbox"/> 9 Sonora |
| <input type="checkbox"/> 2 Columbia College | <input type="checkbox"/> 6 Phoenix Lake | <input type="checkbox"/> 10 Tuolumne |
| <input type="checkbox"/> 3 East Sonora | <input type="checkbox"/> 7 Shaws Flat | <input type="checkbox"/> 11 Twain Harte |
| <input type="checkbox"/> 4 Jamestown | <input type="checkbox"/> 8 Sierra Village | <input type="checkbox"/> 12 Yankee Hill |
| <input type="checkbox"/> 13 Other _____ | | |

9. Which best describes you? (*Choose One*)

- | | |
|---|---|
| <input type="checkbox"/> 1 Employed full time | <input type="checkbox"/> 3 Retired |
| <input type="checkbox"/> 2 Employed part time or seasonally | <input type="checkbox"/> 4 Not employed |

10. **If employed**, which of these describe your job? (*check all that apply*)

- | | |
|--|---|
| <input type="checkbox"/> 1 My work hours vary | <input type="checkbox"/> 3 I work weekends |
| <input type="checkbox"/> 2 I work regular hours (for example: 8 am-5 pm) | <input type="checkbox"/> 4 I often work later than 7 PM |

10 A. Where do you work? _____

11. Are you a student? ☐1 Yes ☐2 No

12. **If you are a student**, where do you attend school or college?

- | | |
|---|---|
| <input type="checkbox"/> 1 Columbia College— <u>full time</u> | <input type="checkbox"/> 4 Summerville Union High School |
| <input type="checkbox"/> 2 Columbia College— <u>part time</u> | <input type="checkbox"/> 5 Elementary School (Grades K-8) |
| <input type="checkbox"/> 3 Sonora High School | <input type="checkbox"/> 6 Other _____ |

13. How old are you? _____

14. Do you have a disability that impacts your travel?

- ☐1 Yes ☐2 No

15. How many people live in your household?

_____adults (18-64) _____children (under 18) _____seniors (65+)

16. How many of the people in your household are licensed drivers? _____

17. How many working vehicle are available for use by your household? _____

18. Do other members of your household ride TCT? ☐1 Yes ☐2 No

19. What is your approximate annual household income?

- | | | |
|---|---|---|
| <input type="checkbox"/> 1 Less than \$10,000 | <input type="checkbox"/> 4 \$25,000 to \$34,999 | <input type="checkbox"/> 7 \$75,000 to \$99,999 |
| <input type="checkbox"/> 2 \$10,000 to \$14,999 | <input type="checkbox"/> 5 \$35,000 to \$49,999 | <input type="checkbox"/> 8 \$100,000 or more |
| <input type="checkbox"/> 3 \$15,000 to \$24,999 | <input type="checkbox"/> 6 \$50,000 to \$74,999 | |

Continue on back

20. What is the one main reason you ride Tuolumne County Transit?
- ☐₁ It is my only transportation ☐₃ I don't like asking for rides
☐₂ It's less expensive than driving ☐₄ It's better for the environment
☐₅ I enjoy the time to read, relax or socialize on the bus
☐₆ Other _____
21. For how many of the trips you make in an average week do you use transit?
- ☐₁ All of my trips ☐₃ About half of my trips
☐₂ Most of my trips ☐₄ Less than half of my trips
22. How did you first learn about Tuolumne County Transit?
- ☐₁ I saw the bus ☐₃ I saw a brochure or map
☐₂ I saw advertising for TCT ☐₄ Friend or family told me about it
☐₅ Learned about TCT from a social service agency, school or employer
☐₆ Other _____
23. How do you get information about TCT routes and schedules? (*Check all that apply*)
- ☐₁ Printed Passenger Guide ☐₆ Google Maps
☐₂ Website ☐₇ Transit Tracker App (Double Map)
☐₃ Display at Bus Stop ☐₈ Social Media
☐₄ School or College ☐₉ Social Service Agency
☐₅ Call on Phone ☐₁₀ Bus Operator
☐₁₁ Other _____
24. What is the primary language that you speak at home?
- ☐₁ English ☐₂ Spanish ☐₃ Other _____
25. Do you have a Smartphone—a mobile phone with internet access?
- ☐₁ Yes ☐₁ No
26. Did you know that Columbia College students ride free on Tuolumne County Transit and Calaveras Connect with a current college ID? ☐₁ Yes ☐₂ No
27. Have you used the WiFi onboard TCT buses?
- ☐₁ Yes ☐₂ No ☐₃ Didn't know about it
28. Would you be interested in being able to pay your transit fare with a Smartphone app? ☐₁ Definitely ☐₂ Maybe ☐₃ No
29. In the past month, have you seen/heard any advertising for TCT? *Check all that apply*
- ☐₁ Radio Ad ☐₂ TV Commercial ☐₃ Sign or Poster ☐₄ None

30. Please RATE TCT on each of the following factors.	⊗ 1=Poor				5=Excellent ☺
A. Courtesy & helpfulness of the bus drivers	1	2	3	4	5
B. How often your bus is on-time	1	2	3	4	5
C. How frequently your bus runs	1	2	3	4	5
D. Time the bus starts running in the morning.	1	2	3	4	5
E. Time the bus stops running in the evening.	1	2	3	4	5
G. Convenience of connecting between Tuolumne County Transit routes.	1	2	3	4	5
H. Convenience of connecting to and from Calaveras Connect.	1	2	3	4	5 Haven't Tried
I. Cost of bus fares	1	2	3	4	5
J. Ease of getting route and schedule information	1	2	3	4	5
K. Overall, how would you rate Tuolumne County Transit?	1	2	3	4	5

31. How difficult is it to get to the bus stop where you board near your home?
- ☐₁ Not difficult ☐₂ Difficult because of distance
☐₃ Difficult because of poor path of travel (e.g. no sidewalks)
32. If TCT were to provide out of county bus service, which of these destinations would you use the bus to travel to the most? (*Select ONLY one*)
- ☐₁ Oakdale ☐₂ Modesto ☐₃ Sacramento ☐₄ Pleasanton/Dublin
☐₄ I would not use the bus to travel to any of these destinations
33. A year from now, do you expect to still be riding TCT? ☐₁ Yes ☐₂ No ↓
 If NO, why? _____

If you would be willing to participate in a follow-up phone interview for which you would receive a \$20 gift card, please provide your contact info here:

Name: _____ Phone: _____

E-mail: _____

Please return the questionnaire to the surveyor before you get off the bus. THANK YOU!

Appendix B - Follow-up Interview Report

To: Tyler Summersett
From: Cliff Chambers
Date: October 28, 2019
Subject: Results of the follow-up interviews with TCT riders

Purpose

The purpose of this memo is to report on the results of the follow-up interviews with passengers who completed an onboard survey in September 2019 and who completed the questionnaire section that stated: "If you would be willing to participate in a phone interview for which you would receive a \$20 gift card, please provide your contact information below: name, phone and email address."

In discussion with Tuolumne County Transit (TCT) management, the purpose of the phone interviews was to:

- Provide a better understanding of why TCT riders utilize the bus service. Determine if the passenger is riding as often as he or she can.
- Determine the improvement necessary for the passenger to consider riding more often
- Explore why passenger service ratings were very high or very low
- Further explore awareness of TCT radio and TV advertising, and explore the radio and TV watching habits of respondents.
- Determine the passenger's proximity to a bus stop
- Priorities for potential out of county bus service, determination of priority destinations, and potential utilization patterns
- Utilization of Uber and Lyft
- If the passenger could make one change to TCT, what would it be.

Methodology

There were 68 TCT onboard questionnaire respondents who provided their name and/or email address and phone number. Respondents were sent an email or text with interview times and offer of a \$20 Amazon or \$20 e-Walmart gift card for completion of a 15-20 minute interview on October 15, 16 or 18th. Non-respondents were then contacted again for additional interview times on October 22nd and October 24th. When respondents affirmed an interview date and time, they were called at the specified time. The first week, about 50% of the respondents were no shows to the agreed to time and were offered the ability to reschedule at a mutually convenient time. Several followed up to be rescheduled, but many were re-contacted with no response. Most of the non-respondents the first week, were contacted an additional second and third time. A total of 22 phone interviews were completed. After the successful interview, the \$20 e-gift cards of their choice were sent, with five being mailed due to the lack of an email address. Follow-up emails were sent to confirm receipt of the gift cards.

The number of successful interviews would have been over 30 had there not been the significant number of no-shows at the designated interview times. In conducting interviews of the rescheduled no-shows, a couple simply missed the call, several forgot, one overslept, and one had something come up at the last moment.

Primary reason for utilizing TCT

All of the respondents with whom I talked responded to Q. 20 What is the main reason you ride Tuolumne County Transit as “It’s my only transportation” and/or “I don’t like asking for rides.” My sense from interviewees, including one homeless individual with a college degree, is that they are all living on the edge due to various circumstances. Several mentioned being formerly homeless or being in a homeless shelter. Fare affordability came up regularly and is important factor in how often they utilize TCT. There was a family of 4 (two kids) who moved to Twain Harte for a change in lifestyle with no car or TV, but they were the only interviewee who seemed to be utilizing TCT by choice. Overall, the interviewees were utilizing TCT out of necessity with 16 of 22 (73%) interviewees said they were planning to utilize TCT a year from now.

Obviously, a sample of 22 is a small number and comments are somewhat correlated to where they live:

Sonora: 5
Twain Harte: 4
Jamestown: 3
East Sonora: 2
Columbia: 2
East Sonora: 2
Mi Wuk Village: 2
Tuolumne: 1
Willow Springs: 1

Passengers were very appreciative of having TCT available for the trips they need to make. They had distinct difficulties that were explored in context of wanting to have improvements. Even though trip took way longer than they desired, they all really appreciated the ability to make the trips they needed to make. The drivers, in particular, were highlighted as making the overall service a good experience, as I’m sure will be reflected in the overall ratings of TCT in Q. 30 on the questionnaire. This is important context, because after I explored why they were riding TCT, I asked them if their improvements that could be made to increase their utilization of TCT.

Are riders utilizing Tuolumne County Transit as often as they can; and if not, what steps could TCT take that would enable them to ride more often.

This line of questioning provided the most valuable input from riders. Of those interviewed, most said they would ride Tuolumne County Transit more but the system frequency,

connections, hours of operation, and/or fare structure would need to be improved in order for them to ride more often: (the order is not in order of importance, but captures the wide range of improvements that would increase ridership utilization)

1. More frequency

The amount of time passengers need to make for a round trip was the biggest barrier expressed to increased utilization:

- “I’d use the bus much more often if it was just faster (clarified that he meant more frequency on Route 3 and 5). There isn’t much improvement needed other than improving how often the bus comes.”
- Frustration in transfer from Route 1 to Route 3. Long waits for Route 3 bus to come. If frequency of Route 3 was every 90 minutes she might be able to utilize more. Was only on the bus for the survey because her car broke down.
- Columbia resident: “If the bus came more often than every three hours, I’d use it more often. Even every two hours would be better.”
- One respondent had a proactive suggestion. This man with a family of 2 adults and 2 children living in Twain Harte, said even if there is hourly service on Route 2 during a period of the day, say between 2 and 5 pm, he could schedule trips for errands and the travel time would be much more reasonable.

2. Better Transfer Connections

Some passenger pointed felt connections were problematic and added to the overall sentiment that trips just took too long. Part of the issue was explained in the representative comment above, where Route 1 with hourly frequencies is connecting to other routes with two and three hour frequencies.

- For a 1 pm class, a Tuolumne resident catch Route 5 at 10:55 am that gets them to Transit Center at 11:34 but they need to wait for Route 4 at the Transit Center until 12:25 and they have to run to class to make it on time. To this student, this wait time is unreasonable, but she has no other choice. She repeated her response to q.33 that she will soon have a car and will not ride the bus to Columbia College.
- For a Twain Harte resident: “It takes me a whole day to get to and from doctor’s appointment. The connections don’t work.”
- A Tuolumne resident said the connections she needed were at the Courthouse, but she first had to wait for a bus at the new transit center and made trips very time consuming.
- Several passengers said they hate having to wait at the transit center, because it’s isolated and there is literally nothing to do.

- Two different passengers remarked that on Route 2 that they had to wait for 30 minutes at the Transfer Center before continuing up the hill. Both expressed a desire for the bus to wait at Walmart stop which would give them time to some quick shopping.

3. Make the bus more conducive for work trips.

Some of the most compelling discussions were those of riders wanting to be fully employed but having to rely on Tuolumne County Transit for their commute to and from work. Example:

- 26 year old woman with a job at Dollar Tree. She can get there on TCT, but store closes between 8 and 9 pm. She often has to turn down shifts because she cannot arrange a ride home.
- Former homeless man works at a hotel front desk in Sonora and works from 5 pm to midnight. He understood he has to find a ride home at night, but really appreciated being able to utilize TCT to get to work on weekdays. He wished service was available on weekends and was not aware of Saturday DAR.
- A 50 year old resident of Twain Harte is unemployed and says jobs are available at the Black Oak Casino in Tuolumne, they would want him to work weekends and TCT is not available then.
- A few interviewees work at Walmart. One 45 year old woman has to rely on her son to take her to work when she starts at 6 am, which is most often. When her shift starts at 9 am, TCT works well.
- Twain Harte resident works in East Sonora and says, “every job has weekend shifts” and TCT doesn’t operate on weekends. Would utilize much more if weekend service was offered. Tried Saturday DAR, but they were booked once, and another time said they could not get her to work at 9 am because service didn’t start until 11 am.
- “I use Route 3 to work four days a week, but the bus ends too early to utilize it for my trip home.”

4. Extend service on all routes to 8 or 9 pm

Interviewees who utilize Routes 2 and 3 both remarked that service essentially is not available past 5 pm and it severely limits how often they can utilize the service.

The desire for later service was a common theme for increased utilization beyond the need for extended hours to make TCT more conducive for work trips as explained above. Several explained they really cannot utilize TCT to go out for dinner and then return home when they can afford to do so. Most respondents said they would like the buses to run until at least 8 or 9 pm.

5. Improve schedules to Columbia College

Interviewed 3 full-time and 3 part-time Columbia College students. They were EXTREMELY appreciative of free fare program. However, there were several issues that made riding to Columbia College difficult

- A 30 year Mi-Wuk Village resident is part-time student of Columbia College and a long time rider, and the time she has to wait at Columbia College before her class starts that she doesn't use TCT to the college. Said the schedules from 2011-12 were much better. Her class is at 11:20 am and the connection from Route 2 and Route 5 at 9:25 am get her to the college on Route 4 at 9:58, but she has to wait one hour and 20 minutes for her class to start. (in further questioning, she is a highly functional regional center client, and utilizes TCT for a lot of other trips)
- "Really liked the older schedules that served Columbia College." This a 43 year old full-time Columbia College student who has ridden since before 2014. However, she utilizes the service to Columbia College five days a week, has gotten used to the current schedule, loves the free fares, and just wants to keep everything the same now that she has gotten used to the schedule.
- Full-time 18 year old student. Has 8 am classes and cannot get to the College from her Columbia home on Route 4 in time for her early class. She is able to utilize it two days a week for later classes. Would utilize more if schedules allowed her to take 8 am classes.
- Full-time 29 year old student could take more classes in the evening, but the last bus arrives at 6 pm. Classes last until 9:05 and 9:35 pm and there is no way home...she lives in East Sonora.
- One part-time 29 year old student works at the Columbia College Day Care Center and also goes to school, Route 3 works well, but connections to Calaveras County do not work well.

6. Consider distance based fares

Three passengers expressed the affordability of fares for short trips. Essentially, they were advocating for distance-based fares instead of flat fares on Routes 2 and 5 in particular. In general, they felt the fare was reasonable for trips from Tuolumne or Sierra Village to Sonora, but many who depend on Tuolumne County Transit cannot afford the \$2.00 fare for short trips, for example between Mi Wuk Village to Twain Harte and back to do laundry.

Fare affordability came up in several interviews as \$4.00 round trip to individuals on a fixed income, and \$8.00 if they are travelling with a significant other is a big expense to them and constrains the number of rides taken.

7. Improve the scheduling efficiency

While people appreciate the hourly service of Route 1, there were a couple of interviewees who mentioned the travel time it takes for a round trip. The driver is always catching up with the schedule. Constructive suggestion of having a bus stop on the street at the Timberhills Shopping Center, it would reduce travel time by 5 minutes according to the passenger. One passenger believed there could be fewer stops available.

8. Provide higher levels of weekend service

“On weekdays, it would be great. On weekends it’s a problem and even worse now that the Trolley is not operating”

Several of the comments for improved weekend service are noted for enabling great use of TCT for work trips. Most interviewees did not believe they were eligible for Saturday DAR service, and had little knowledge of its availability. “Heard that it’s available for old folks or disabled only” was a representative comment. The large majority of interviewees were not aware that Saturday DAR was available to them. One passenger was very aware of the service but lives in Mi-Wuk and would utilize Saturday DAR service regularly, but the Saturday DAR only serves up to Twain Harte, according to this respondent. Another interviewee had used Saturday DAR once, but it took too much planning ahead and felt the advance notice required was not reasonable.

Several of the residents along the Highway 108 corridor were frustrated that the last bus down the hill starting in Sierra Village was 4:25 pm. They said they would ride more often if there were later service down the hill, with a later bus returning up the hill.

Finally, a few respondents said their potential for increased utilization was limited because they simply don’t travel much. This was the case for three respondents. Two of the three were persons with some sort of disability, including one amputee, and one person who gets sick with “exposure to scents on the bus or in the grocery store.”

Follow-up on ratings of TCT attributes

Explored with each passenger the reasons behind poor ratings for Q30 that asked passenger to rate TCT on each of 10 factors. Focused on poor ratings of 1-2 and further input on ratings of 5.

All but one interviewee rated the drivers as a 5 on a scale from 1 is poor and 5 is excellent. By far, most of the passengers expressed how wonderful the drivers were, and that drivers went out of their way to be helpful to the passengers. One amputee told me that the drivers help him get packages on and off the bus. Another interviewee told me that the driver really helps him figure out the routes he needed to use.

One interviewee said most drivers were great but stopped utilizing the bus twice to his home in Sierra Village because two drivers told him he was taking too many bags of groceries on the bus, even though there was plenty of room on the bus. This individual talked to Tyler about this who told him it was a driver discretionary decision.

Poor ratings were often correlated to what they had told me earlier when I probed as to what TCT could do to increase utilization. Therefore, if they had given a 1 for the time the bus runs

in the evening, they normally had told me they would increase utilization if they had bus service later in the evening. These comments were captured above.

Knowledge of TV and radio ads

Many of the respondents do not watch TV. For those that did, I asked what TV channel or radio ads they watched:

- Majority of interviewees rely on Hulu, Netflix, Amazon Prime to watch TV
- Two respondents saw a TCT ad on traditional TV was on local KCRA 3.
- Interviewee said he saw a TCT ad on YouTube
- A couple of respondents saw a TCT Facebook ad

For radio, may also don't listen to the radio. For those do, they mentioned:

98.3 KWIN

92.7 (2)

93.5 CABIN (3)

Priorities for potential out-of-town service

All but three respondents wanted service to Modesto as their top priority. The majority wanted service on weekdays, but many also wanted service at least on Saturdays.

Almost ALL interviewees cited that the preferred destination was to the Modesto Mall, but also to the Amtrak/Greyhound station and several for medical trips in the Modesto Memorial Hospital area.

Desired departure times varied widely from early morning to early afternoon.

Responding interviewees would want to be in Modesto for two to four hours, with a majority in the 2-3 hour range.

Two interviewees wanted service to Oakdale, and both were knowledgeable about Stanislaus Transit connections. One had tried this, and it worked well.

A couple of interviewees said they would like to be able to connect to BART in Dublin so that could access the Bay Area. Modesto was a higher priority.

Two interviewees wanted service to Sacramento, one for a tourist related trip, and a second to visit friends.

What is their proximity to a bus stop?

Most respondents lived very close or within easy walking distance of a bus stop, within a half mile. The exceptions were:

- 45 minute walk
- 15 minute car ride who lives on “outskirts of Jamestown”

Have you ever used Uber or Lyft?

The large majority had not utilized either Uber or Lyft. There were a few exceptions. One person had re-located from Southern California where he had utilized Uber quite a bit. A second gentleman was on Medi-Cal and was able to utilize Uber for medical trips to and from Modesto, paid for by Medi-Cal. One other interviewee had tried to utilize Uber in Tuolumne County and couldn’t get a ride when they needed the service.

Exploration of On-Demand service like Uber or Lyft

For interviewees in Jamestown with low service levels and East Sonora, I did explore the option of on demand Uber-like service with the use of TCT bus, and when I had the time to explain the service, they thought it would be preferable to buses every 3 hours. I was only able to explore this with three passengers, so the sample size is very low.

Potential for Paying Fare with An App

When I had time, I explored the use of paying their fare with an app. Most of interviewees had a smart phone, and a few were interested without reservation. However, many were hesitant because they didn’t have a credit card or were skeptical about security or didn’t trust technology. These concerns were expressed by a majority of the 10 interviewees with whom I was able to explore this. One interviewee summed it up well, “I just don’t have much cash in the bank.”

If you could make one change to TCT, what would it be?

- At least hourly service on Route 2 between 3 and 7 pm.
- Improve customer service....information operators have been very rude at times.
- Route 2 bus should not be serving Crystal market as this routing takes too much time with little passenger activity
- TCT used to allow small animals in crate on the bus; the one change would be to allow her to bring her small dog in a crate on the bus.
- Wanted to make sure that the summer service Pinecrest and winter service to Dodge Ridge would be continued
- More frequency on the routes
- More comfortable seats on the Trolleys
- Availability on the weekends
- Just faster, more frequent service
- Frequency improvements on Route 3

- No improvements are needed
- Being able to utilize TCT to get to my 8 am class at Columbia College
- \$1.00 fare for Twain Harte for doing laundry
- More frequency of buses to Columbia
- Sunday service
- Lower disabled monthly pass price
- Provide service on weekends
- Being able to get out of the Tuolumne County on the bus.
- Saturday fixed route service
- Machine scanner for multi-ride tickets (she rode on a transit system had this)
- More garbage cans at bus stops
- Buses with adequate heating and air conditioning

Unsolicited comments:

There were a number of unsolicited comments that were not part of the questions I asked. Below is a list of relevant comments for the SRTP and Coordinated Plan:

- There is strong misperception of the eligibility and availability of Saturday DAR. In follow-up questions when they talked about service not being available, the large majority who were in the general public category did not know they were eligible. They thought it was only for disabled individuals and they were not available. The wording on TCT brochure is a bit misleading. Mixes up Phoenix Lake area with Saturday Dial-A-Ride. Perception that Saturday service is always booked up.
- Several interviewees were not aware of the Transit Tracker, and they were thrilled to learn about it.
- TCT got very high marks for getting the word out at Columbia College on the free fare program.
- On Route 2, two interviewees mentioned the frustration of not being able to utilize the deadhead buses heading up to Sierra Village to start at 6:25 am, and then again, after the bus finishes at 6:50 pm in Sierra Village and deadhead back down the hill and will not take passengers.