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EXECUTIVE SUMMARY

Adopted May 18, 2023



BACKGROUND

Yuba-Sutter Transit received a \$199,192 Fiscal Year 2021/22 Sustainable Communities Planning Grant from the California Department of Transportation (Caltrans) to develop a Comprehensive Operational Analysis (COA)/Short Range Transit Plan (SRTP). Transit plans are normally conducted every three to five years as a guide for future transit improvements and system modifications. A current transit plan is required to remain eligible for federal funding and the last Yuba-Sutter Transit SRTP was adopted in April 2015. The \$225,000 project budget includes the Caltrans grant and the required local match of \$25,808.

On April 21, 2022, a consulting team led by Innovate Mobility, LLC was selected to develop the now Yuba-Sutter NextGen Transit Plan in close collaboration with the Board of Directors, member jurisdictions, community stakeholders, and the public at large. The resulting plan is expected to shape the Yuba-Sutter Transit system for the next 5 to 10 years through pandemic recovery; construction of a new transit operating, maintenance, and administration facility; and transition to the large-scale operation of zero-emission buses. This top-to-bottom examination of the entire system (local, rural and commuter routes along with the Dial-A-Ride service) will result in recommendations that could include modifications to existing routes, new service areas, alternative service models, and more modern technology-based transportation delivery tools.

The project purpose is to develop an operational plan that will improve the customer travel experience by reducing travel time; improving service frequencies and connections (where possible); and introduce new and innovative transit options (where feasible). Critical to the planning process is the extensive public outreach effort that includes an initial public survey, two rounds of community open houses, stakeholder interviews, general system observations, multiple Board workshops, and on-going solicitation of public input. Three Board workshops on held on October 20th, January 12th, and February 16th, and community open houses were held on October 20th and February 16th.

EXISTING CONDITIONS

Yuba-Sutter Transit provides public transit to the cities in the sister counties of Yuba and Sutter. The majority of the population in these counties live in the cities of Yuba City and Marysville and the unincorporated communities of Linda and Olivehurst. Divided by the Feather and Yuba Rivers, the communities in Yuba and Sutter counties both act as a bedroom community for Sacramento, Placer Counties and beyond.

SERVICE LEVELS

In FY 2019, Yuba-Sutter Transit operated 42,423 revenue hours weekdays and 9,344 on Saturdays on the local fixed route service. Yuba-Sutter Transit also operated 19,911 revenue hours weekdays and 4,380 hours on Saturday for the Dial A Ride service. The Authority operated 14,060 revenue hours on Sacramento Commuter and Midday routes. Rural service accounted for 2,404 revenue hours.

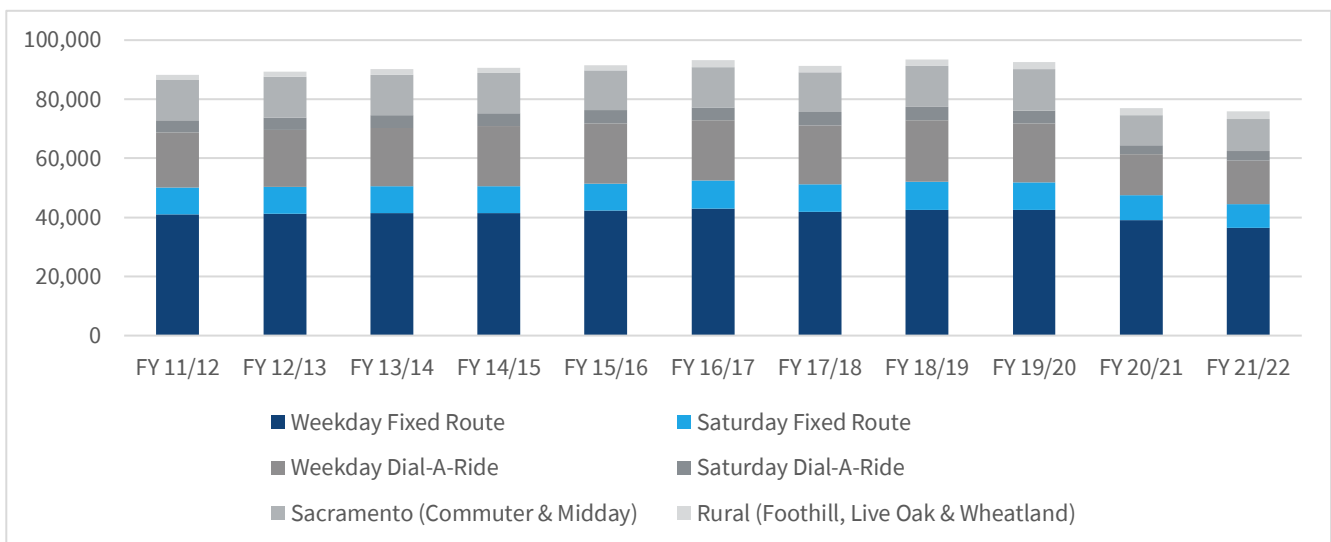


Figure 1 - Service Hours

SYSTEM RIDERSHIP

Like many other agencies throughout the country, COVID-19 had a significant impact on Yuba-Sutter Transit's daily ridership across the entire network. Overall, Yuba-Sutter Transit's ridership is projected to be 38% below pre-pandemic levels in FY 21/22. This does represent a 29% improvement over the previous year's totals. Commuter services have been hit the hardest in terms of ridership drops. Commuter ridership is projected to be 72% below pre-pandemic levels in FY 21/22. This does represent a 50% improvement over FY 20/21 indicating some riders are returning to the service. The Authority is operating 17 of 23 scheduled commuter trips currently.

On the fixed-route side, ridership is projected to be 32% below pre-pandemic levels. This does represent a 25% improvement over FY 20/21. Similarly, ridership on dial-a-ride services is projected to be approximately 28% below FY 19/20, but it appears that ridership on dial-a-ride is rebounding faster than other modes.

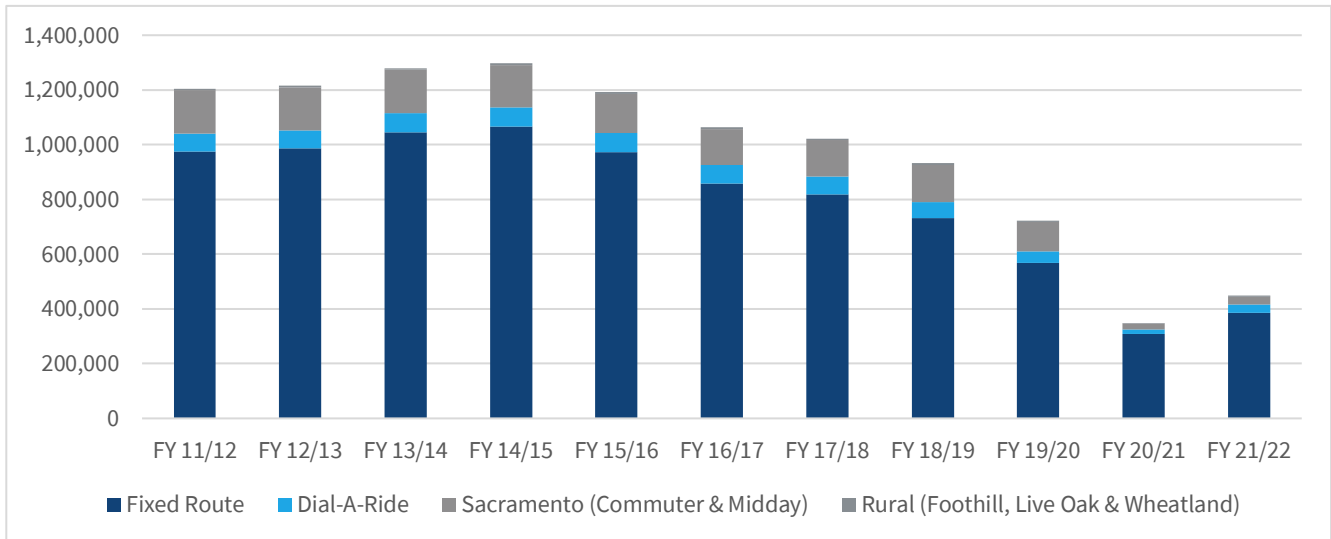


Figure 2 - Passenger Trips by Mode by Year

POST-PANDEMIC TRIP ORIGIN AND DESTINATION

In the post-pandemic time frame, the majority of trips in both counties either originate in or end in Yuba City. However, travel appears to be more significant throughout both counties. There is evidence of new trip intensity from Olivehurst to Linda, within Marysville and between Linda and Yuba City. Overall, there is significantly more travel in Sutter County than prior to the pandemic. Much of this new travel originates within the county itself rather than coming from Yuba City. Although cross-bridge travel between counties still continues to be the largest portion of travel demand in both counties.

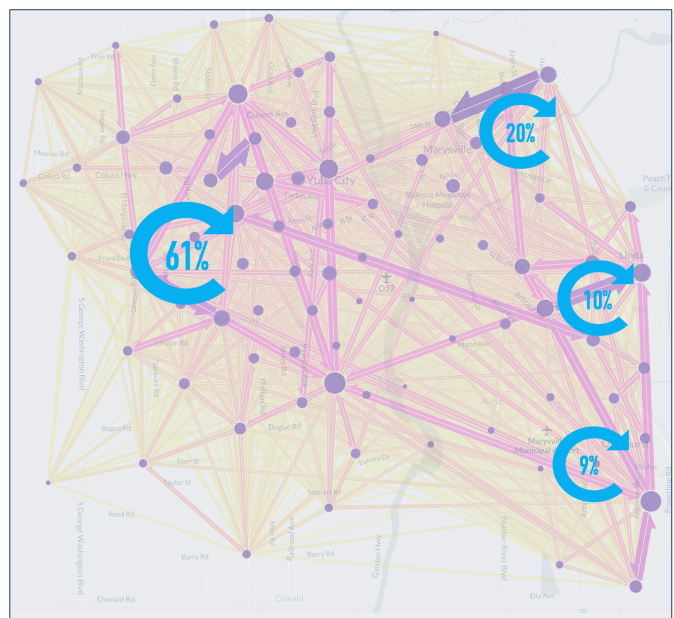


Figure 3 - Post-Pandemic Trip Origin and Destination

TRAVEL PATTERNS FOR VULNERABLE POPULATIONS

The major trip generators for the region where vulnerable populations reside are in North Yuba City, southern Marysville and portions of Linda and Olivehurst. For vulnerable residents, travel times to and from these locations are well over 40 minutes each way. This indicates an opportunity to improve access by introducing new or more direct transit services to better serve these communities.

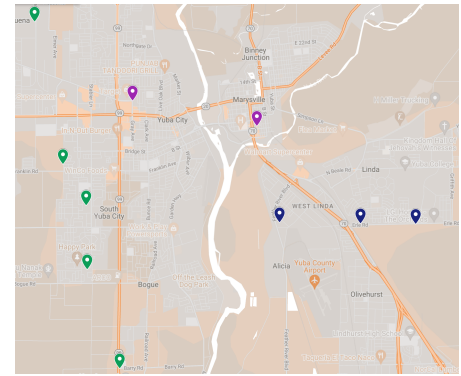


Figure 4 - Travel Time for Vulnerable Populations

SUMMARY

Overall, Yuba-Sutter Transit has faced the same issues that most transit agencies in the U.S. have. From ridership dropping for the five years leading up to the COVID-19 pandemic, to the significant drop in ridership in the pandemic years of 2020 and 2021. While ridership is bouncing back on Yuba-Sutter Transit in 2022, there are still areas for improvement. Based on the findings in the Existing Conditions Report the major areas of focus for the NextGen Transit Plan service recommendations will be:

- 1) Aligning fixed route service provided to service demanded – The NextGen Transit Plan recommendations will look at how people move around the service area now and align Yuba-Sutter Transit’s fixed route services accordingly. In some cases, this will mean changing timetables, others could involve re-routing existing service.
- 2) Introduce new services to support existing fixed routes – New modes such as microtransit may help provide greater coverage in areas where there is no fixed route service or provide a cost-effective replacement for fixed route service if it is underperforming.
- 3) Find solutions to bring back commuter ridership – Commuter services have been the most impacted by the COVID-19 pandemic. While riders are coming back, ridership remains 65-70% below pre-pandemic levels. The NextGen Transit Plan will look at ways to better feed existing services and determine what other opportunities exist to grow ridership.

TRANSIT EFFECTIVENESS

To determine how effective the existing Yuba-Sutter Transit network is in meeting trip demand in the region, this study reviews the proximity of trip generators to existing transit services. Then, potential transit trips were calculated by comparing the total population within ½ mile from each bus stop and total travel demand within that same area, to the actual ridership numbers. This analysis found that a total of 432,470 trips are taken on an average weekday, across all modes of transportation. With all the public transit services available in the area, approximately 57% of these trips could be completed using the current local transit route network (potential trips). Yuba-Sutter Transit’s current route network carries approximately 29% of the total trips taken in the service area, as shown in Figure 1 below. The data indicates that there is some room to increase ridership and utilization of the transit system as it is currently configured, and that there is also a relatively large percentage (43%) of trips that are taking place that are not accessible via public transportation (i.e. more than ½ mile from transit). These trip generators are shown in Figure 2. While this may seem like a large percentage of trips that aren’t covered, there will always be a percentage of trips that are not well suited for fixed route transit for a variety of reasons. There is also a relatively large number of people who will continue to drive, regardless of how efficient the transit network is. In order to make the most effective improvements to the transit network, the additional analysis later in this section will help determine where Yuba Sutter Transit should focus its efforts.

The darker areas in Figure 5 indicate trip generators that are more than ½ mile from a transit stop, making these destinations less accessible using public transit. Assessing the number of trips to these locations will provide insights into where route adjustments or expansions might be the most impactful and will draw the highest numbers of new riders.

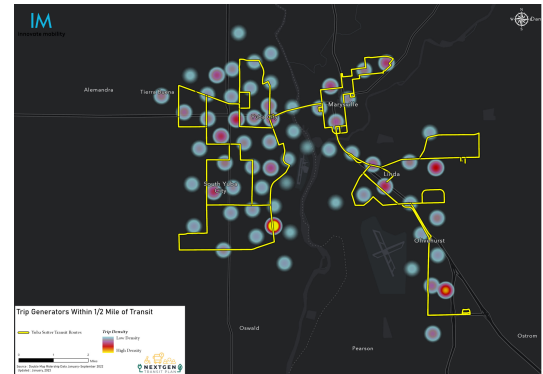


Figure 6 - Trip Generators Currently Served by Transit

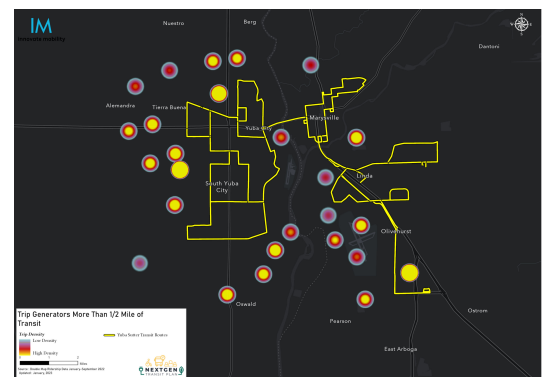


Figure 5 - Trip Generators More than 0.5 Miles from Transit

For example, extending a transit route to the area near the yellow dot on the west side of the map, which appears to be an elder care residential area including a skilled nursing facility, assisted living and an Alzheimer’s care facility, would likely result in increased ridership, as there is a high density of trips starting and ending in that location.

ROUTE PERFORMANCE BENEFIT INDEX

The Route Performance Benefit Index shown in Table 2 was developed to identify which routes, with changes could result in the greatest impact from route adjustments or increases in service frequency. To do this, it takes into consideration several data points, including trip generators, potential vs actual ridership, transit coverage, cost/benefit based on reductions in subsidy per passenger of potential vs actual ridership, and route performance which looks at improvements in productivity (riders per hour) of potential vs actual ridership.

From this we can see that the Yuba City loop (Route 2) has the greatest overall potential for growth, indicating that improvements should be focused on this route. This route has high potential for performance improvements given that transit coverage for this route is currently only about 15%. This comes from the fact that total potential ridership based on population density/proximity to the route is very high, over 430,000 annually, as compared to the number of actual rides, coming in at only about 66,000 per year. Route 2 previously operated at a 30-minute frequency which was decreased to hourly in June 2020. It is not realistic to expect the current or even a significantly improved transit route, can carry 430,000 riders per year. However, the goal of the recommendations section of this report is to attract as much of the potential ridership as possible through changes in travel time, wait time and access to major trip generators.

Table 1 - Route Performance Benefit Index

Route	Hours	Annual Ridership		Potential Ridership		Coverage	Cost/Benefit	Performance	Performance Benefit Index
		Current	Potential	Weekday	Weekend				
Yuba City Loop	6,881	66,483	435,572	1572.5	629.0	15%	1	8	5.7
Southwest Yuba City	3,478	27,492	209,714	757.1	302.8	13%	2	7	4.3
Marysville Loop	6,753	43,089	299,938	1082.8	433.1	14%	2	5	2.6
Yuba City to Yuba College	13,684	156,486	226,157	816.5	326.6	69%	2	4	1.8
Olivehurst to Yuba College	6,884	68,853	112,081	404.6	161.8	61%	3	4	1.5
Linda Shuttle	3,415	25,197	51,325	185.3	74.1	49%	4	4	1.0

RECOMMENDATIONS FRAMEWORK

Given the data presented above, the following four guiding principles helped focus the project team on the service recommendations:

- **Improve Rider Experience:** Provide better information, faster travel time, and connections to previously unserved areas.
- **More Regional Connections:** Connect more communities that are farther away and create a network where riders can seamlessly travel to these locations.
- **Improve Local Access:** Serve new, growing areas and connect them with fast, modern, cost-effective transit solutions.
- **Improve Operating Performance:** Reduce delays from bridge crossings and speed up Routes to ensure layover time and expected travel times.

Based on the above guiding principles, the following framework supports the service recommendations. The framework below defines the new service types and the expected performance standards.

	Crosstown	Community	Commuter
Segment Overview	Crosstown Services service the major communities of Yuba City, Marysville, Linda and Olivehurst	Community services connect smaller, more distant areas with the Crosstown. These services will be technology enabled allowing riders to book online (or via telephone). Paratransit eligible customers will get curb-to-curb service, all others will get connections to mobility hubs and major transfer points.	Peak only outbound and return service to major regional locations. Connect to Crosstown and Community services at hubs.
Performance Standards	12-20 PAX per hour 15%+ farebox recovery 0.75-2 seat turnover per trip	3-7 PAX per hour 10%+ farebox recovery 20%+ trip sharing	25-30 PAX per hour 25%+ farebox recovery 0 seat turnover
Span of Service	6:30am-8:00pm Weekdays 8:00am-6:00pm Saturdays	6:30am-8:00pm Weekdays 8:00am-6:00pm Saturdays	5:20am-5:30pm Weekdays
Frequency/Wait/Travel Time	30-minute frequency	15-30-minute wait time 10-30-minute travel time	Commuter services arrive at pre-scheduled times.
Other	Connects to other segments at mobility hubs	Non-paratransit customers cannot travel to destinations on Crosstown Services (other than to hubs)	
Vehicles req. (at full plan)	5 fixed route	10-11 On Demand+2 Flex+2-3 DAR	8 Commuter Buses

Figure 7 - Service Framework Recommendations

As this is a major functional change, the following section describes each mode and how it is different from today's service framework:

- **Crosstown Service** – This service type replaces what is currently known as “fixed-route”. It will be referred to as both fixed-route and crosstown as they are interchangeable throughout the rest of the report. What is important is the guiding criteria behind what constitutes a crosstown service. Crosstown services should traverse more than one city or community and provide connections at major stops known as “super stops” or “mobility hubs”. These are locations where the Community services can transfer to these Routes. Stop spacing will be based on population density and should operate and no higher than a 30-minute frequency.
- **Community Services** – The Community services segment encompasses what is currently known as “Dial-a-Ride” and “Rural” services. The current dial-a-ride system provides daytime service to ADA-eligible customers **within ¾ of a mile of existing fixed-routes**. Yuba-Sutter Transit goes beyond this ¾ mile requirement with its current dial-a-ride service and includes seniors as an eligible population. As Yuba-Sutter Transit launches its future on-demand zones this will also be under the banner of “Community” services. These services are designed for short point to point service connecting riders to longer crosstown Routes. They also serve less dense populations such as Live Oak, the Foothills, and Wheatland. These services generally operate in an on-demand fashion or flex routing as the current rural service is operated.
- **Commuter Services** – The last criteria of service is Yuba-Sutter Transit’s existing Commuter service. Apart from the expansion to a new destination (Roseville Galleria Transit Center) and consolidation of some schedules, no changes are recommended to this service criteria.

PLAN RECOMMENDATIONS

The plan calls for a phased rollout of changes beginning with a preparatory phase beginning in July 2023. All major changes would be concluded by FY2028 coinciding with the construction completion of Yuba-Sutter Transit's NextGen Transit Facility. Details as to the costing of each phase can be found in the Cost Estimation section of this report.

PHASE 0 – JULY 1, 2023

This phase is about preparing for the deployment of the major service changes by procuring new technology and beginning the recruitment of new staff. The major tasks in this phase are as follows:

- Transit technology continues to evolve at a rate faster than before. As a result, the plan calls for the recruitment of a Transit Technology Manager. Yuba-Sutter Transit is staffed leanly and major changes such as those envisioned by the NextGen Transit Plan call for simultaneous deployment of technology, and service. This combined with the new facility dictates a need for the recruitment of a Transit Technology Manager – the position is planned to come on board by Q2 FY 2024.
- Given the heightened need for community involvement when deploying a large-scale change such as that envisioned by the plan, we are recommending recruiting a Community Relations Manager as well. This position can be delayed to Q4 or later but should be brought on prior to the start of roll out of the Community on-demand zones.
- The plan also calls for beginning the procurement for the technology necessary to support the transition from fixed-route to on-demand service. The technology has become much more widely available in the past 10 years with more than 10 prospective vendors.
- Finally, in Phase 0, it is recommended that Yuba-Sutter Transit consolidate its existing commuter services. This consolidation will include removing the trips that are no longer operated from the schedule as well as reducing one AM and PM trip from the existing schedule to transition it to the new Roseville service which will launch in Phase 1. There is adequate capacity in the commuter schedule to carry current passenger loads as well future loads should ridership on these services grow.

PHASE 1 – AUGUST 1, 2024

Phase 1 of the plan includes major changes in Yuba City including the deployment of the first on-demand Community Zone and expanding the span of service to 8pm on weekdays. The major tasks in this phase are as follows:

- In Yuba City, the plan recommends streamlining Route 1 to reduce total travel time between Yuba City and Yuba College by up to 20%. In addition, in this phase, the plan recommends deploying the first Community on-demand zone in Yuba City. This zone will replace the existing Routes 2 and 5.
- In Phase 1, the plan recommends deploying new service to the Roseville Galleria Transit Center. The plan calls for one initial trip to be funded by the commuter service consolidation that took place in Phase 0. A second trip can be funded through an intercity grant that Yuba-Sutter Transit can apply for. If this application is successful, the Authority would launch the Roseville service with two trips.
- Yuba-Sutter Transit to begin procurement of 10 electric 14-16 seat “cutaway” buses. These buses are expected to cost between \$350,000 and \$450,000 per vehicle. This procurement is in line with the authority’s fleet replacement plan. The expected delivery time of these vehicles is 18-24 months coinciding with the full deployment of the plan. Yuba-Sutter Transit will begin construction of its NextGen Facility in Summer 2025 with an expected completion date in Fall 2027. Should this schedule change, the authority would need to consider alternatives to the electric vehicles as there will be no charging infrastructure to support these vehicles.
- Finally, in Phase 1, the plan calls for the elimination of the evening Dial-A-Ride service. With the deployment of the Yuba City Community on-demand zone and the expansion of the span of service to 8pm, and the current limited utilization of the evening DAR – the change will not result in a material impact.

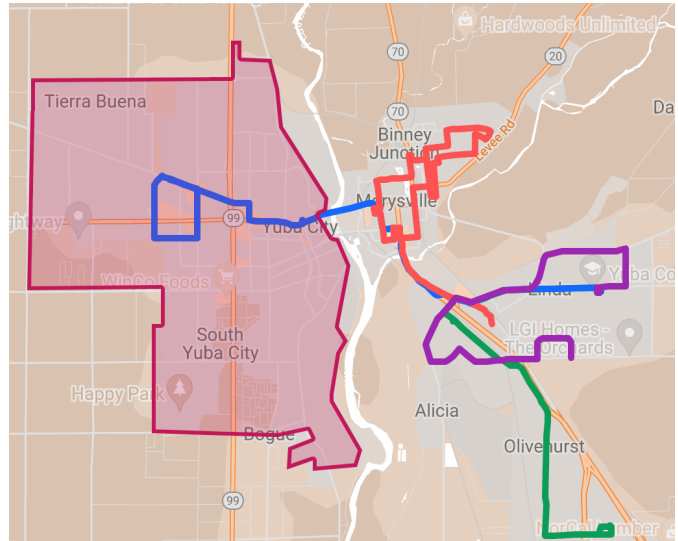


Figure 8 - Phase 1 Proposed Changes

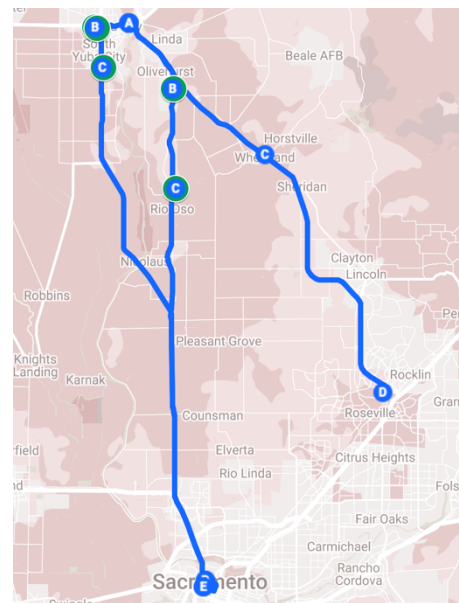


Figure 9 - Phase 1 Commuter Service Map

PHASE 2 – JULY 1, 2025

Phase 2 includes an expansion of the Community on-demand zones to Marysville and Linda and supporting the volunteer driver program in Challenge and Dobbins. The major tasks in this phase include:

- New Community on-demand zones in Marysville and Linda that will replace Routes 4 and 6 in those communities. With these new zones, Route 3 will be truncated at Peachtree Clinic/HHS providing riders from Olivehurst a direct Route to this location.
- With the near full deployment of the Community on-demand zones, the existing DAR/ADA service will be comingled with the new on-demand services providing ADA-eligible residents of Yuba and Sutter Counties a faster and better experience.

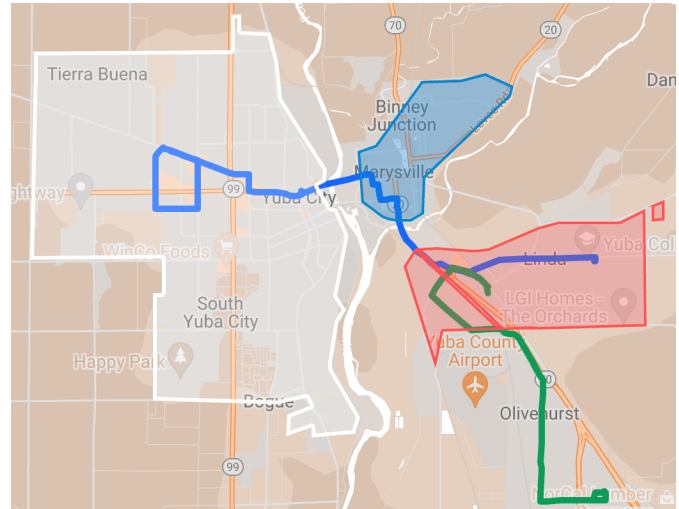


Figure 10 - Phase 2 Proposed Changes

PHASE 3 – JULY 1, 2026

The final phase of the plan recommends the creation of a Community on-demand zone in Olivehurst and expansion of the Roseville service (if necessary and if not funded in a previous phase).

- The final Community on-demand zone in Olivehurst provides residents of that area expanded services over Route 3 increasing the coverage of Yuba-Sutter Transit's services.
- Should the Roseville service be successful, phase 3 of the plan calls for an additional trip to and from the Roseville Galleria Transit Center. This would only be necessary if the grant application the Authority is pursuing is not successful.

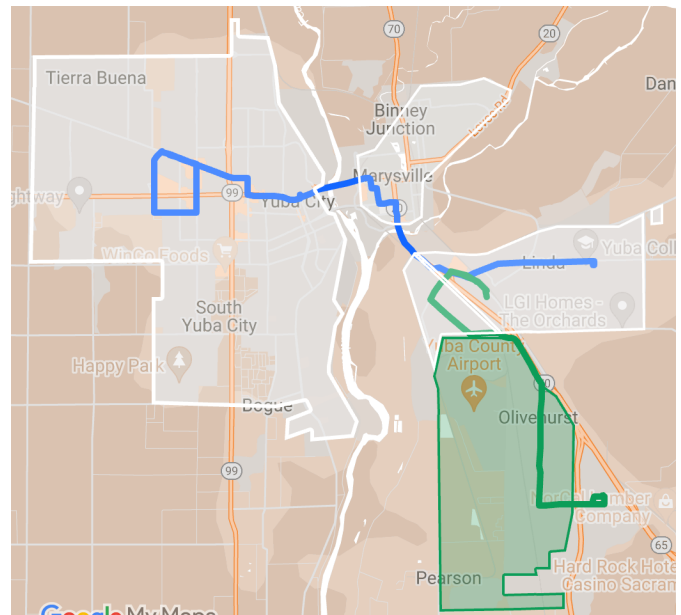


Figure 11 - Phase 3 Proposed Service Changes

PLAN COST ESTIMATION

As stated previously, it was Yuba-Sutter Transit’s goal to redesign service and reallocate existing operational costs with a potential for increasing costs as necessary. The service plan is predicated on increased costs at the beginning of the plan and adjusting costs for inflation. The following table breaks down the major cost drivers of the plan and their anticipated spend date:

Table 2 - Operating Cost Items

Phase.Quarter	Date	Change	Anticipated Cost
FY 2024			
0.1	July 2023	Recruit Transit Technology Manager	\$0.00
0.1	September 2023	Hire Transit Technology Manager	\$104,167
0.1	September 2023	Consolidate Commuter Service	-\$165,269
0.2	January 2024	Recruit Community Relations Manager	\$0.00
0.3	March 2024	Hire Community Relations Manager	\$41,667
0.3	March 2024	Award On-Demand Technology Contract	\$25,000
FY 2024 Total		\$5,565	
FY 2025			
1.1	July 2024	Deploy On-Demand Technology	\$30,450
1.1	July 2024	Full year of staffing costs (annual)	\$250,000
1.1	July 2024	Previous phase service changes	-\$198,293
1.1	August 2024	Streamline route 1. Launch Yuba City Community On-Demand Zone and cancel routes 2,5 and Evening Dial-A-Ride	-\$34,092
1.1	August 2024	Extend service to 8pm (annual)	\$288,750
1.1	September 2024	Launch Roseville Service (2 runs)*	\$583,188
FY 2025 Total		\$920,003	
FY 2026			
2.1	July 2025	On-Demand Technology	\$57,600
2.1	July 2025	Previous phase service changes	\$715,721
2.1	July 2025	Full year of staffing costs (annual)	\$250,000
2.1	August 2025	Launch Linda and Marysville Community On-Demand Zones and cancel routes 4,6.	\$47,579
FY 2026 Total		\$1,070,900	

FY 2027			
3.1	July 2026	Full year of staffing costs (annual)	\$250,000
3.1	July 2026	Previous phase(s) service changes	\$767,725
3.1	August 2026	Launch Olivehurst Community On-Demand Zone. Additional software licenses.	\$213,101
3.1	August 2026	On-Demand Technology	\$72,000
FY 2027 Total		\$1,302,726	

* - Yuba-Sutter Transit will be applying for a competitive grant to expand the Roseville service. Should this application be successful, the Authority could add a second run to the service.

The above table does not include inflation adjustments that are expected to average \$260,000 per year over the life of the plan. Additionally, in FY 2028, Yuba-Sutter Transit is expected to rebid its operating contract and will see between a 7.5% and 10% increase resulting in an additional \$225,000 per year over the life of the plan.

SERVICE PLAN COSTING AND OPERATIONS PROJECTIONS BY PHASE

The following tables break down the service costs by type for the first three years of the plan.

Table 3 - FY 2025 - Phase 1 Service Costing

	Weekday Cost	Saturday Cost	Annual Cost	Annual Hours	Annual Miles
Route 1	\$ 1,364,146	\$ 272,829	\$ 1,636,975	13,113	196,700
Route 3	\$ 688,625	\$ 137,725	\$ 826,350	6,557	104,906
Route 4	\$ 668,969	\$ 133,794	\$ 802,763	6,557	85,236
Route 6	\$ 701,728	\$ 140,346	\$ 842,074	6,557	118,020
DAR/Rural	\$ 1,964,870	\$ 392,974	\$ 2,357,843	21,173	169,380
Commuter	\$ 934,814	\$ -	\$ 934,814	8,325	232,801
On-Demand	\$ 1,335,735	\$ 267,147	\$ 1,602,883	13,113	236,040
		Annual Totals	\$ 9,003,702	75,395	1,153,083
		Cost per Hour	\$ 119.42		

Table 4 - FY 2026 - Phase 2 Service Costing

	Weekday Cost	Saturday Cost	Annual Cost	Annual Hours	Annual Miles
Route 1	\$ 1,374,117	\$ 274,823	\$ 1,648,940	13,113	170,473
Route 3	\$ 1,050,931	\$ 210,186	\$ 1,261,117	6,557	98,350
DAR/Rural	\$ 1,568,347	\$ 313,669	\$ 1,882,017	16,468	131,740
Commuter	\$ 1,485,380	\$ -	\$ 1,485,380	12,949	243,661
On-Demand	\$ 2,743,674	\$ 548,735	\$ 3,292,409	26,227	472,079
		Annual Totals	\$ 9,569,863	75,314	1,103,303
		Cost per Hour	\$ 127.07		

Table 5 – FY 2027 - Phase 3 Service Costing

	Weekday Cost	Saturday Cost	Annual Cost	Annual Hours	Annual Miles
Route 1	\$ 1,450,550	\$ 290,110	\$ 1,740,660	13,113	196,700
Route 3	\$ 732,294	\$ 146,459	\$ 878,752	6,557	104,906
DAR/Rural	\$ 972,647	\$ 194,529	\$ 1,167,176	9,865	78,923
Commuter	\$ 1,532,045	\$ -	\$ 1,532,045	12,949	297,836
On-Demand	\$ 3,550,292	\$ 710,058	\$ 4,260,350	32,783	590,099
		Annual Totals	\$ 9,578,984	75,268	1,268,463
		Cost per Hour	\$ 127.27		

FARE RECOMMENDATIONS

Under the proposed recommendations, Yuba-Sutter Transit would transition away from monthly passes on Crosstown/fixed route and Community services. The Authority would instead create monthly fare caps. These fare caps would act as a makeshift pass and allow riders who ride frequently to still receive a discount for their patronage. Those who ride often (2-3 days per week) would see some level of capping and those who ride infrequently would pay the full fare for each ride. Discounts would still be offered to eligible riders under this scenario. This scenario includes increasing fares in line with the on-demand systems reviewed earlier. Under this option, fares would increase in FY27 when all the Community on-demand zones would be deployed.

Table 6 – Fare Recommendations Key Performance Indicators

	Ridership	Fare Revenue	Productivity	Average Fare	Farebox Recovery	Subsidy per Passenger
FY25	607,413	\$998,337.47	7.9	\$1.64	11%	\$13.44
FY26	634,515	\$956,944.06	8.4	\$1.51	10%	\$12.99
FY27	759,147	\$1,116,342.10	10.1	\$1.47	12%	\$11.15
FY28	762,285	\$1,170,096.42	10.0	\$1.53	12%	\$11.60
FY29	787,804	\$1,209,268.37	10.2	\$1.53	12%	\$11.46
FY30	807,687	\$1,239,788.56	10.3	\$1.53	12%	\$11.43
FY31	828,159	\$1,271,213.34	10.4	\$1.53	12%	\$11.40
FY32	850,754	\$1,305,895.25	10.5	\$1.53	12%	\$11.34
FY33	865,157	\$1,328,003.45	10.5	\$1.53	12%	\$11.41

RECOMMENDED FARE STRUCTURE

The plan recommends implementing a fare increase in FY 27 when the Olivehurst Community on-demand zone launches. In addition to the fare increase, the plan recommends the following changes.

- Eliminate monthly passes and introduce fare capping for monthly (30-day) fares. This must coincide with the future contactless payment technology deployment currently under consideration.
- Increase commuter single ride and monthly fares and eliminate midday discounts. While this is a small change, it would create consistency and simplicity in the structure by reducing fare complexity.

The proposed fare structure would be as follows:

Table 7 – Comparing Proposed Fares to Existing Fares

Fare	Current Fares	FY 2025 Fares	FY 2027 Fares
Crosstown Single Ride/Discount	\$1.50/\$0.75	\$1.50/\$0.75	\$2.00/\$1.00
On-Demand Single Ride /Discount	N/A	\$1.50/\$0.75	\$2.00/\$1.00
Daily Cap/Discount *	\$3.00/\$1.50	\$5.00/\$2.50	\$6.00/\$3.00
Monthly Cap (30-days)/Discount *	N/A	\$50.00/\$25.00	\$60.00/\$30.00
Commuter Single Ride	\$4.50	\$4.50	\$5.00
Commuter Midday Single Ride/Discount	\$4.50/\$2.25	\$4.50	\$5.00
Commuter Monthly Pass/Combined	\$135/\$185	\$135/\$185	\$150/\$200
DAR Single Ride	\$3.00	\$3.00	\$4.00
Evening Dial-a-Ride/Discount	\$4.00/\$2.00	N/A	N/A
Rural Single Ride/Discount	\$3.00/\$1.50	\$3.00/\$1.50	\$4.00/\$2.00
Monthly Pass	\$30/\$15 (temporarily discounted to \$10/\$5)	N/A	N/A

* - Daily and monthly caps do not apply to Dial-a-Ride, Rural, and Commuter fares

Under this proposal, farebox recovery would increase 28% over the base scenario, however, it would still be below the required threshold. This could be offset by inflation being below the expected level and elasticity not materializing. Both are realistic options as the plan includes conservative estimates for both items. Ridership is projected to increase 23% and fares are projected to increase by 56% under this proposed plan over the current fare structure.

RIDERSHIP ESTIMATION

This section covers ridership estimation for the proposed changes in the plan. To set a baseline, a review of existing ridership was completed. Like many other agencies throughout the country, COVID-19 had a significant impact on Yuba-Sutter Transit’s daily ridership across the entire network. Overall, Yuba-Sutter Transit’s ridership is projected to be 46% below pre-pandemic (FY 18/19) levels in FY 22/23. This does represent a 44% improvement over FY 20/21 totals. Commuter services have been hit the hardest in terms of ridership drops. Commuter ridership is projected to be 72% below FY 22/23 levels. This represents a 90% improvement over FY 20/21, indicating some riders are coming back. On the fixed-route side, ridership is projected to be 41% below pre-pandemic levels. This does represent a 40% improvement over FY 20/21. Similarly, ridership on dial-a-ride services is projected to be approximately 51% below FY 19/20 but is over 65% higher than FY 20/21 indicating riders are returning to the service.

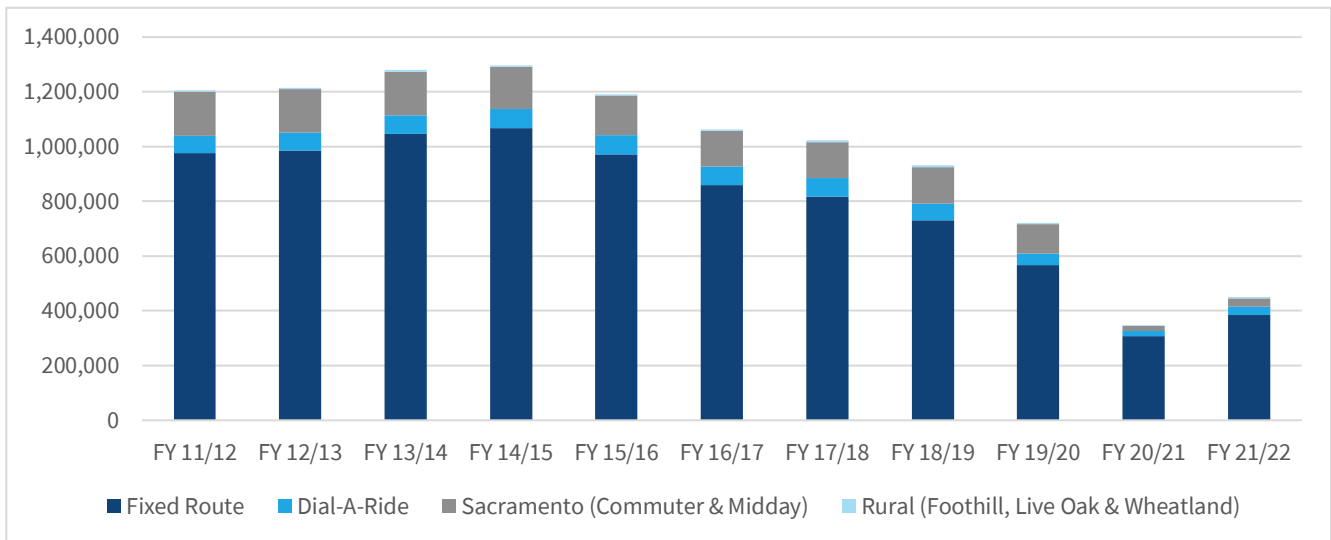


Figure 12 - Passenger Trips by Mode by Year

The plan calls for a dramatic change in the types of services (new on-demand service) offered and a restructuring of modes (Community, Crosstown, and Commuter). Under the proposed plan, ridership would begin rising with Phase 0 and continuing to increase regularly as more demand services are added and travel patterns are met.

Ridership is projected to increase 20% in the first year of the plan as new Yuba City services are launched (FY 2025). By deploying on-demand zones throughout the service area, Yuba-Sutter Transit is projected to see a 40% increase in ridership. To note: The addition of new on-demand services and the changes recommended in this plan will not add any meaningful service hours. In other words, the system will operate more effectively. Productivity systemwide should increase 30-40%. With the fare plan proposed in the Cost Estimation section of this report, both average fares and farebox recovery are projected to increase. While ridership is not projected to return to pre-covid levels during the plan, this is more of a result of current work from home patterns and less service being operated. There is no data to support that work from home levels will drop appreciably during the plan period, however, anecdotally more and more employers are requiring employees to be in the office 3-5 days per week. Should this occur, Yuba-Sutter Transit would see a gradual annual increase of approximately 50,000 trips which would return ridership to FY 14/15 levels before the end of the plan period.

Beyond the next three years, the plan models increasing service each year in line with population and demand growth.

Table 8 – Plan Projected Ridership and Service Levels

	Ridership	Hours	Miles	Fare Revenue	Annual Cost	Productivity	Average Fare	Cost per Hour	Farebox Recovery	Subsidy per Passenger
FY25	607,413	76,781	1,153,083	\$998,337.47	\$ 9,159,499	7.9	\$1.64	\$119.29	11%	\$13.44
FY26	634,515	75,354	1,152,478	\$956,944.06	\$ 9,198,562	8.4	\$1.51	\$122.07	10%	\$12.99
FY27	759,147	75,268	1,268,463	\$1,116,342.10	\$ 9,578,984	10.1	\$1.47	\$127.27	12%	\$11.15
FY28	762,285	76,397	1,282,271	\$1,170,096.42	\$10,014,349	10.0	\$1.53	\$131.08	12%	\$11.60
FY29	787,804	77,543	1,291,895	\$1,209,268.37	\$10,240,799	10.2	\$1.53	\$132.07	12%	\$11.46
FY30	807,687	78,706	1,301,745	\$1,239,788.56	\$10,472,369	10.3	\$1.53	\$133.06	12%	\$11.43
FY31	828,159	79,887	1,311,825	\$1,271,213.34	\$10,709,175	10.4	\$1.53	\$134.05	12%	\$11.40
FY32	850,754	81,085	1,322,136	\$1,305,895.25	\$10,951,336	10.5	\$1.53	\$135.06	12%	\$11.34
FY33	865,157	82,301	1,332,682	\$1,328,003.45	\$11,198,973	10.5	\$1.53	\$136.07	12%	\$11.41



Existing Conditions Report



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OVERVIEW

The Existing Conditions section of the NextGen Transit Plan is designed to set a baseline for the System Analysis and Recommendations. The methodology used to understand the existing conditions includes the compilation of publicly available data such as U.S. Census, County General Plans, purchased cellular data, and data generated directly by Yuba-Sutter Transit.

This section will provide details on the built environment, the population and how they move, the existing transit services, and financial and operating performance.

The Existing Conditions Report includes the following sections:

- Service Framework
 - Mode Overview
 - System Performance by Mode by Year
 - Fare Overview
- Market Assessment
 - Regional Demographics
 - County Development
 - Equity and Access Assessment
- Peer Review
- Route Profiles
- Financial and Cost Analysis

SUMMARY OF FINDINGS

Yuba-Sutter Transit provides public transit to the cities in the sister counties of Yuba and Sutter. The majority of the population in these counties live in the cities of Yuba City and Marysville and the unincorporated communities of Linda and Olivehurst. Divided by the Feather and Yuba Rivers, the communities in Yuba and Sutter counties both act as a bedroom community for Sacramento, Placer Counties and beyond.

Yuba City is located in Sutter County and is the largest city in both counties. With a 2020 estimated population of 67,955, the city has grown 3.5% since 2010 and 85% since 2000, primarily due to the annexation of previously unincorporated areas. Regardless, Yuba City eclipses California’s overall population growth rate.

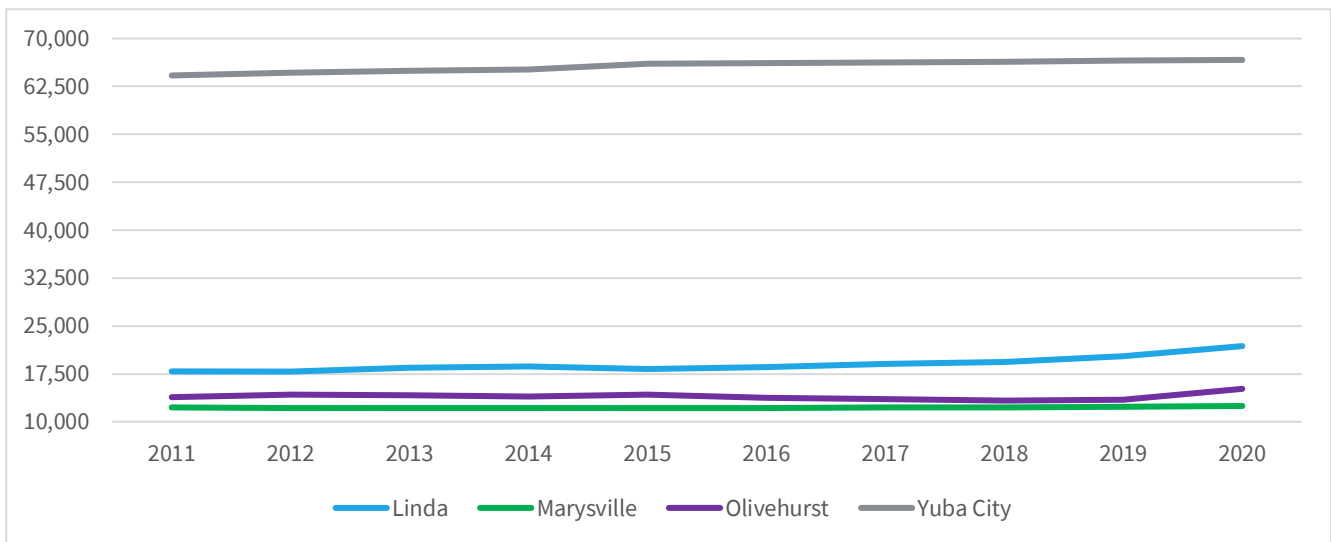


Figure 13 – Region Population by Year

SERVICE FRAMEWORK

In general, Yuba-Sutter Transit’s fixed-route services operate Monday through Saturday. Dial-A-Ride operates a similar span of hours as fixed-route services. Rural routes have a varied schedule where some routes run daily and others only Tuesday to Thursday.

Yuba-Sutter Transit’s local services are centered around major transit hubs: the Yuba College Transit Center, Yuba County Government Center, Sam's Club on Walton Avenue, the Alturas & Shasta Terminal, and the Walmart on North Beale Road.

SERVICE LEVELS

In FY 2019, Yuba-Sutter Transit operated 42,423 revenue hours weekdays and 9,344 on Saturdays on the local fixed route service. Yuba-Sutter Transit also operated 19,911 revenue hours weekdays and 4,380 hours on Saturday for the Dial A Ride service. The Authority operated 14,060 revenue hours on Sacramento Commuter and Midday routes. Rural service accounted for 2,404 revenue hours.

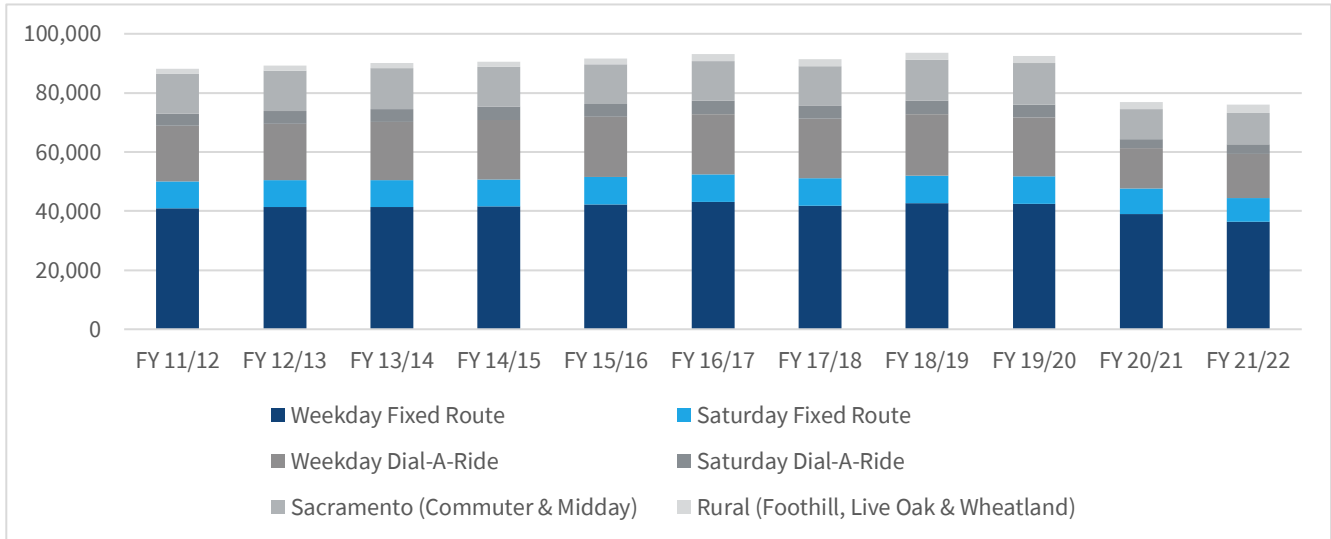


Figure 14 - Service Hours

Due to the COVID-19 pandemic service was reduced across the board with Dial-A-Ride and commuter seeing the largest reductions of 31% and 27% respectively. Rural service experienced the smallest cut of only 3%, while fixed route saw a 7% reduction.

Service levels in FY 21/22 are projected to remain below FY 19/20 levels. Weekday and Saturday local fixed route service hours are projected to be 14% below pre-pandemic levels. Commuter and Dial-a-Ride are expected to be between 24-26% below FY 19/20 revenue hour totals. Service levels on rural routes are above pre-pandemic levels.

SYSTEM RIDERSHIP

Like many other agencies throughout the country, COVID-19 had a significant impact on Yuba-Sutter Transit's daily ridership across the entire network. Overall, Yuba-Sutter Transit's ridership is projected to be 38% below pre-pandemic levels in FY 21/22. This does represent a 29% improvement over the previous year's totals. Commuter services have been hit the hardest in terms of ridership drops. Commuter ridership is projected to be 72% below pre-pandemic levels in FY 21/22. This does represent a 50% improvement over FY 20/21 indicating some riders are returning to the service. The Authority is operating 17 of 23 scheduled commuter trips currently.

On the fixed-route side, ridership is projected to be 32% below pre-pandemic levels. This does represent a 25% improvement over FY 20/21. Similarly, ridership on dial-a-ride services is projected to be approximately 28% below FY 19/20, but it appears that ridership on dial-a-ride is rebounding faster than other modes.

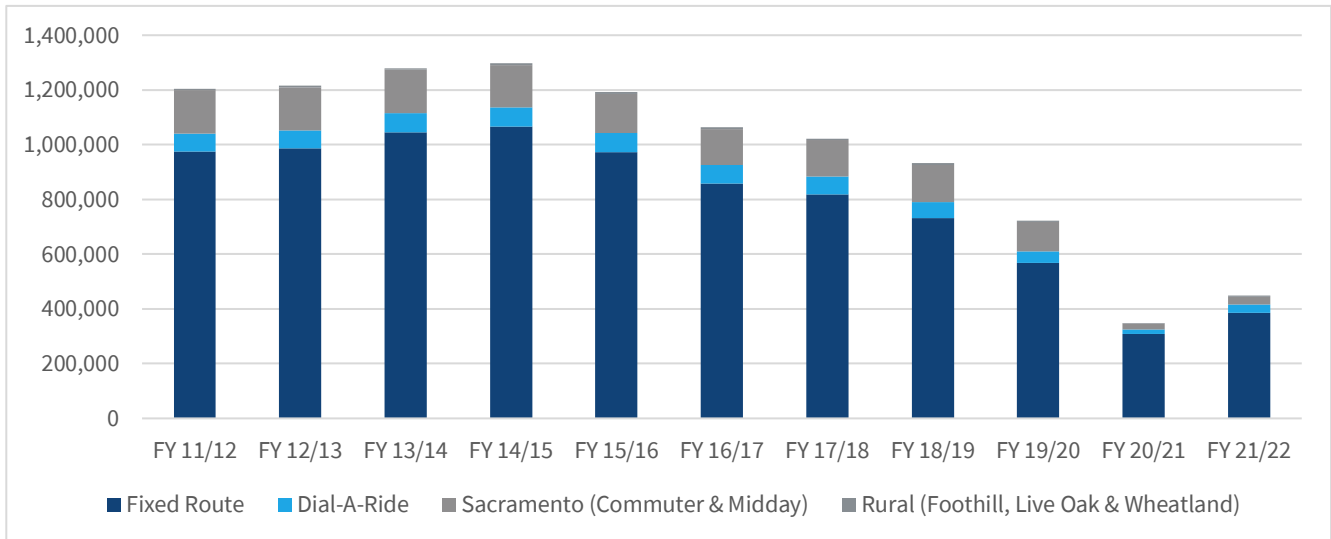


Figure 15 - Passenger Trips by Mode by Year

WORK FROM HOME IMPACTS

When looking a little more closely at the workforce post-pandemic, it is clear that a large portion of the population now works from home fully or a majority of the time. All four communities were seeing an uptick in work from home residents even prior to the pandemic, however in 2020, Yuba City saw a 55% increase in employees who reported that they are working from home. When reviewing Yuba-Sutter Transit’s commuter ridership, it is clear that work from home has had a significant impact on the patronage of those services.

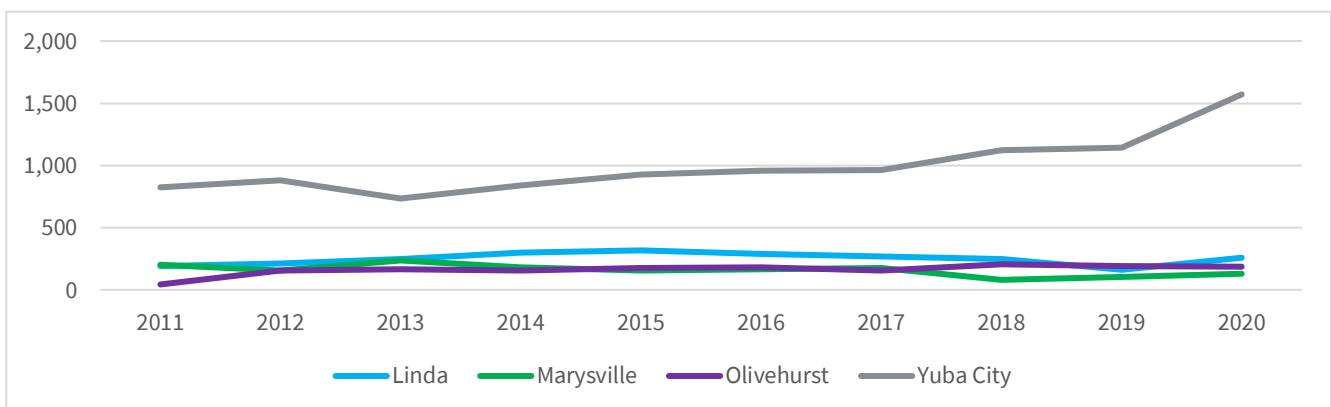


Figure 16 - Population Working from Home

As of June 1, 2022, the current vacancy rate in Downtown Sacramento is 10.3%¹, this is a 255% increase over 2021. Further impacting commuting into Sacramento is the reduction in on-premises work at the State’s Capitol. The most recent passed state budget also forecasts a reduction of 20% in square footage for state departments. These are broader market headwinds that will affect any recovery planned for Yuba-Sutter Transit’s commuter services. Ridership on commuter routes is averaging 80% higher than the same period in 2021, but still remains over 80% below pre-pandemic levels.

POST-PANDEMIC TRAVEL PATTERNS

While COVID-19 continues to be a significant factor in daily life, it appears that most of the general public in the U.S. has become accustomed to it. Most regulations that hindered mobility have also been lifted. These factors combined present a reality that is in stark contrast from pandemic-era mobility. Additionally, as inflation and gas prices continue to soar, public transit becomes even more of a critical component of community social infrastructure to help residents get to work, healthcare and school. While these last two variables have not been included in the data analysis below, the full impact is yet to be known.

When comparing trip patterns between pre, mid, and post-pandemic time periods, it is clear that more trips are being taken on a daily basis than prior to the pandemic and more of these new trips are taking place earlier in the day.

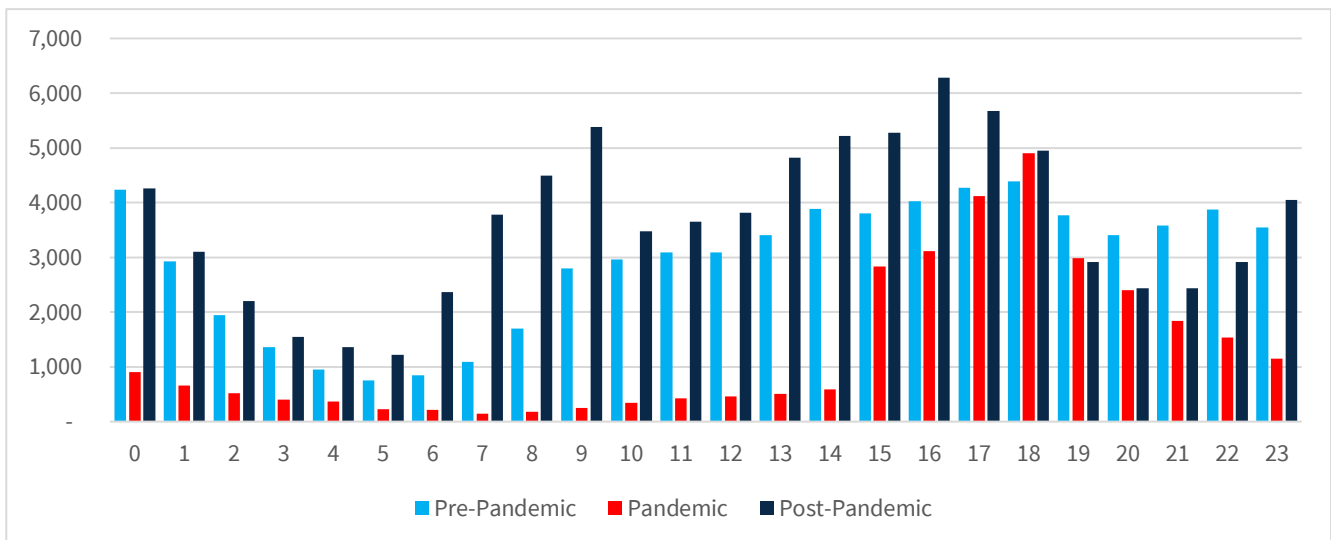


Figure 17 – Trip Comparison by Time Period

¹ <https://kidder.com/market-reports/sacramento-office-market-report/>

POST-PANDEMIC TRIP ORIGIN AND DESTINATION

In the post-pandemic time frame, the majority of trips in both counties either originate in or end in Yuba City. However, travel appears to be more significant throughout both counties. There is evidence of new trip intensity from Olivehurst to Linda, within Marysville and between Linda and Yuba City. Overall, there is significantly more travel in Sutter County than prior to the pandemic. Much of this new travel originates within the county itself rather than coming from Yuba City. Although cross-bridge travel between counties still continues to be the largest portion of travel demand in both counties.

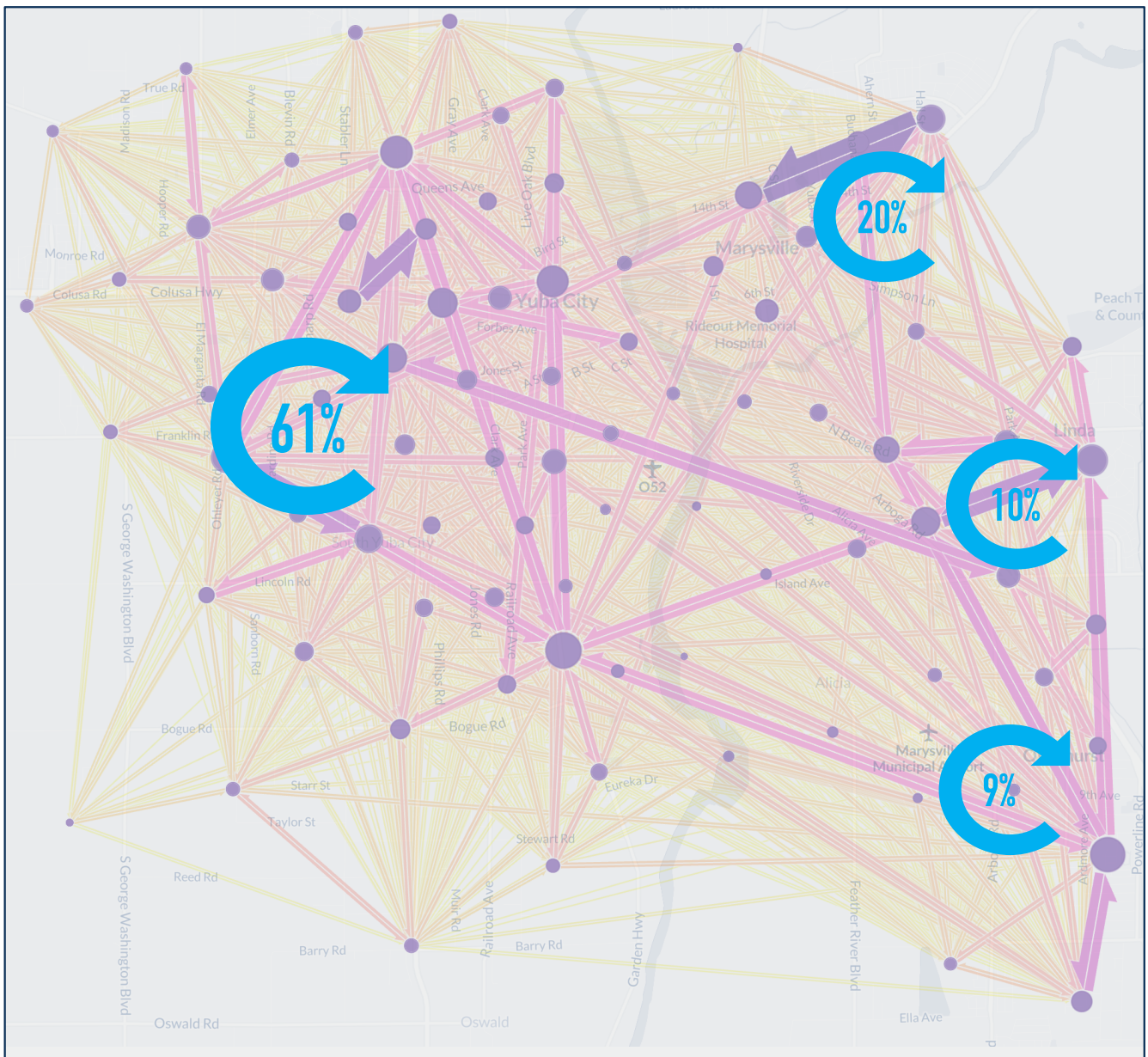


Figure 18 - Post-Pandemic Trip Origin and Destination

TRAVEL PATTERNS FOR VULNERABLE POPULATIONS

The major trip generators for the region where vulnerable populations reside are in North Yuba City, southern Marysville and portions of Linda and Olivehurst. For vulnerable residents, travel times to and from these locations are well over 40 minutes each way. This indicates an opportunity to improve access by introducing new or more direct transit services to better serve these communities.

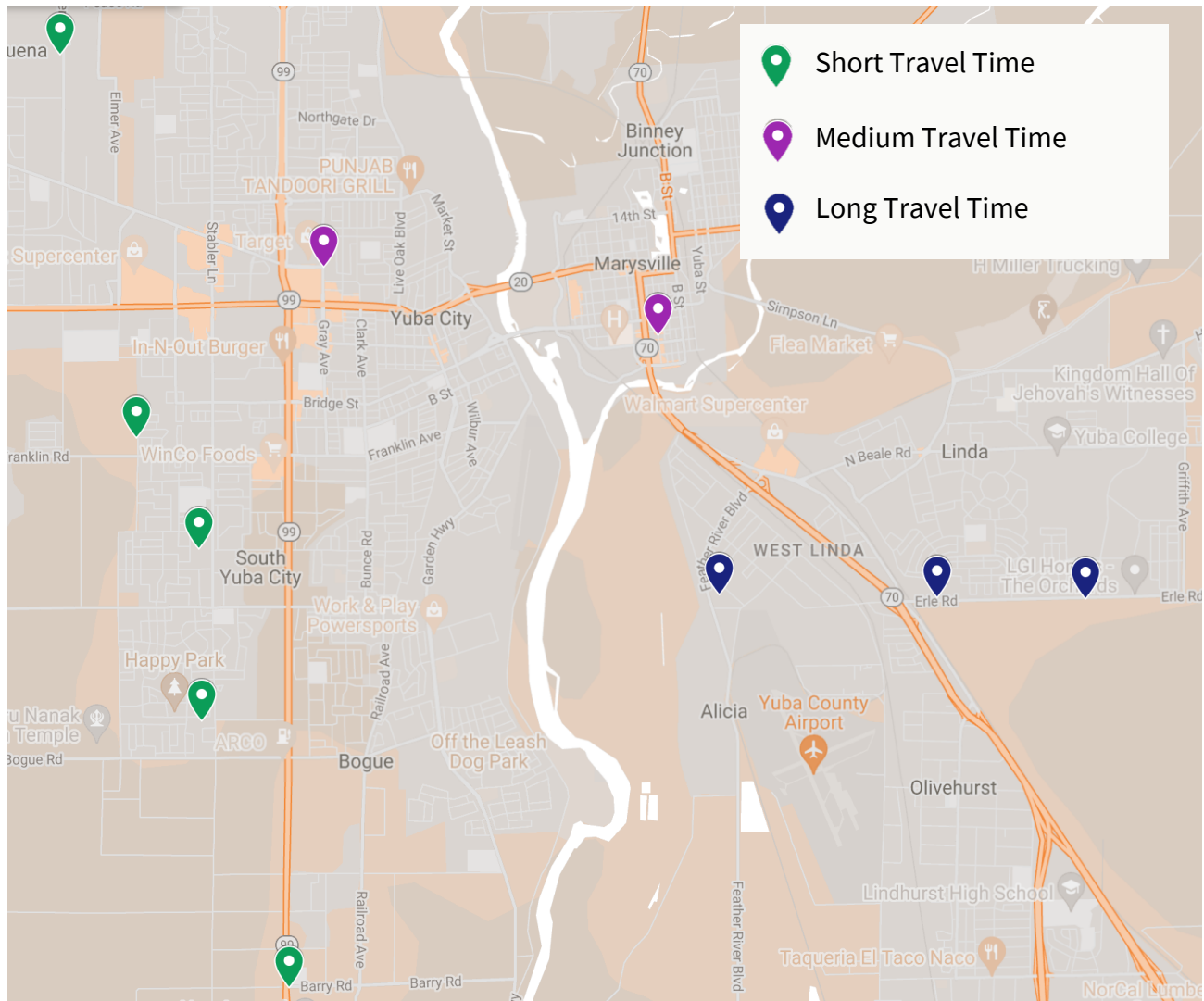


Figure 19 - Travel Time for Vulnerable Populations

PEER COMPARISON

A key part of the NextGen Transit Plan and the Existing Conditions report is understanding how Yuba-Sutter Transit compares to similar systems. This is important both to compare performance, but also to understand what innovations and changes these systems made and how the systems improved. Peers were selected based on a range of criteria including population, service area size, ridership, and annual service hours and miles. All peer agencies share geographic similarities to Yuba-Sutter Transit. As Yuba-Sutter Transit operates multiple modes, different peers were selected for each mode.

The NextGen Transit Plan utilizes ridership per capita as a key indicator to determine how effective the transit network is. For the peer review, ridership per capita was compared amongst similar agencies for each mode.

FIXED ROUTE RIDERSHIP PER CAPITA

Transit ridership has been dropping nationwide since its peak in 2016-2017. Yuba-Sutter Transit saw a reduction of 18% in 2018-2019 compared to previous years while the peer group saw a reduction of 20% during the same period. When looking at COVID-19 impacts, ridership for the peer group dropped an average of 42% when compared to 49% for Yuba-Sutter Transit.

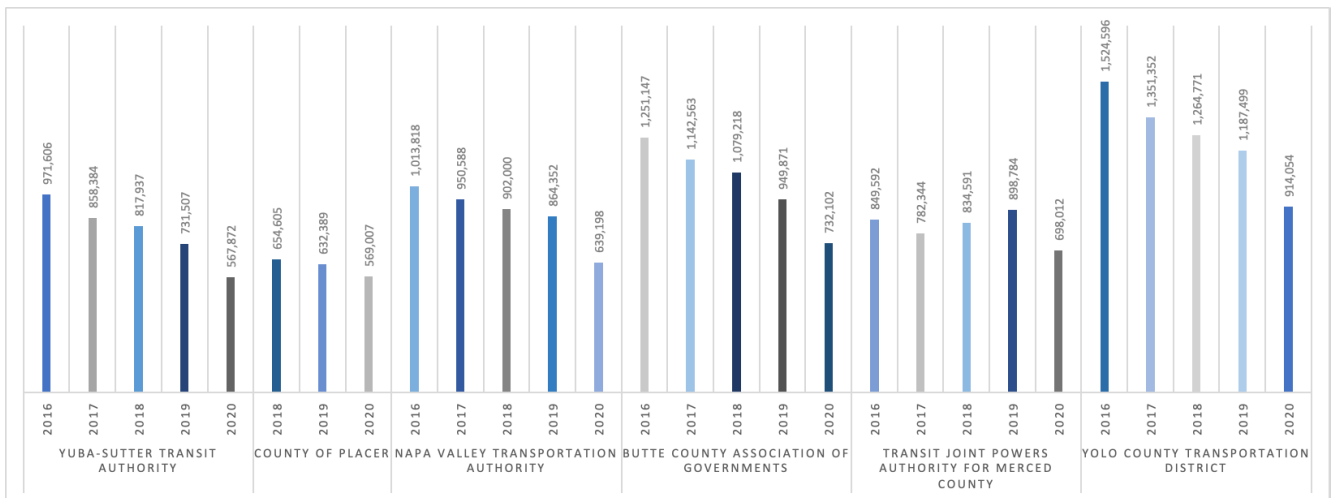


Figure 20 –Fixed Route Passenger Trips per Capita

SUMMARY OF EXISTING CONDITIONS

Overall, Yuba-Sutter Transit has faced the same issues that most transit agencies in the U.S. have. From ridership dropping for the five years leading up to the COVID-19 pandemic, to the significant drop in ridership in the pandemic years of 2020 and 2021. While ridership is bouncing back on Yuba-Sutter Transit in 2022, there are still areas for improvement. Based on the findings in the Existing Conditions Report the major areas of focus for the NextGen Transit Plan service recommendations will be:

- 4) Aligning fixed route service provided to service demanded – The NextGen Transit Plan recommendations will look at how people move around the service area now and align Yuba-Sutter Transit’s fixed route services accordingly. In some cases, this will mean changing timetables, others could involve re-routing existing service.
- 5) Introduce new services to support existing fixed routes – New modes such as microtransit may help provide greater coverage in areas where there is no fixed route service, or provide a cost-effective replacement for fixed route service if it is underperforming.
- 6) Find solutions to bring back commuter ridership – Commuter services have been the most impacted by the COVID-19 pandemic. While riders are coming back, ridership remains 65-70% below pre-pandemic levels. The NextGen Transit Plan will look at ways to better feed existing services and determine what other opportunities exist to grow ridership.

Finally, as it relates to the COVID-19 pandemic and transit ridership, there were some interesting findings as part of a nationwide review of mobility. While overall mobility (travel to work and retail) is up, transit usage is trending downwards.

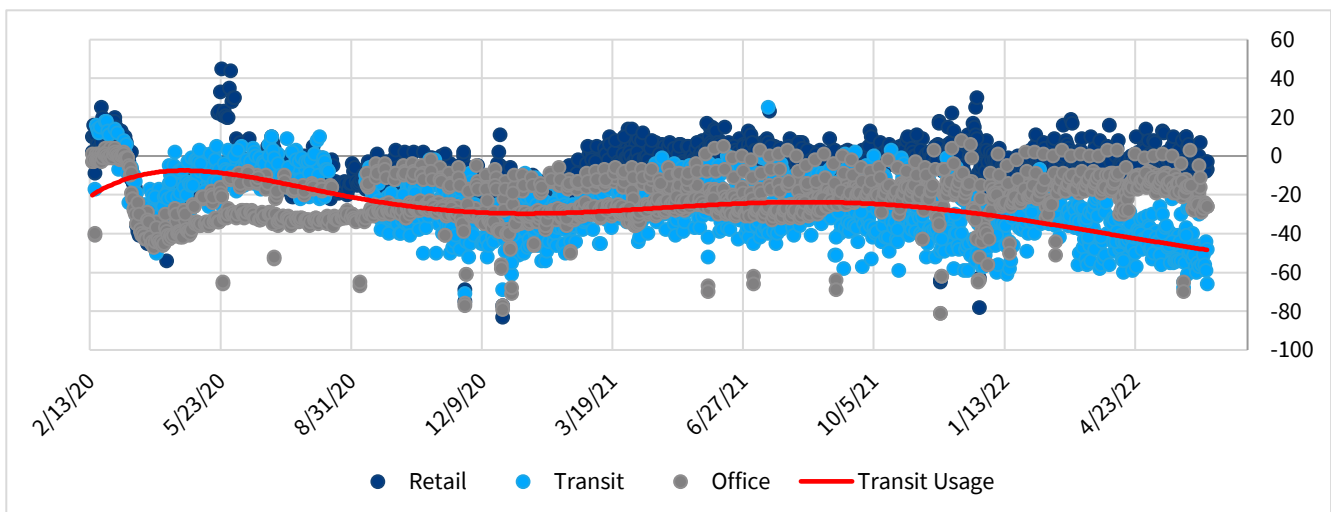


Figure 21 - Nationwide COVID-19 Mobility Trends

DATA SOURCES AND GLOSSARY

AMERICAN COMMUNITY SURVEY: The American Community Survey (ACS) is an ongoing survey that provides vital information on a yearly basis about our nation and its people. Information from the survey generates data that help determine how more than \$675 billion in federal and state funds are distributed each year. The American Community Survey samples approximately 3.5 million addresses per year and is a supplement to the Census which is only conducted once every 10 years and counts every person in the United States.

Through the ACS, we know more about jobs and occupations, educational attainment, veterans, whether people own or rent their homes, and other topics. Public officials, planners, and entrepreneurs use this information to assess the past and plan the future. When you respond to the ACS, you are doing your part to help your community plan for hospitals and schools, support school lunch programs, improve emergency services, build bridges, and inform businesses looking to add jobs and expand to new markets, and more.

CENSUS DATA: The census provides critical data that lawmakers, business owners, teachers, and many others use to provide daily services, products, and support for you and your community. Every year, billions of dollars in federal funding go to hospitals, fire departments, schools, roads, and other services based on census data.

The results of the census also determine the number of seats each state will have in the U.S. House of Representatives, and they are used to draw congressional and state legislative districts.

The Constitution: Article 1, Section 2 mandates that the country conduct a count of its population once every 10 years. The 2020 Census marked the 24th time the country has counted its population; the first was in 1790.

GPS/LBS DATA: Global positioning and location-based data has become common place through the advancement and proliferation of smartphones. This study utilizes disaggregated, anonymized GPS/LBS data to understand traffic movement, including frequency, location, and duration.

GENERAL PLAN: Development projections were obtained by reviewing both Yuba and Sutter County's most recently adopted General Plans along with their respective updates.

EDUCATION DESERT: An education desert is defined as a local area where there are either zero or only one public broad-access colleges nearby.

TRANSIT DEPENDENCY: The American Public Transportation Association (APTA) defines Transit-Dependent Populations as people in the transit-dependent market that have no personal transportation, no access to such transportation, or are unable to drive.



Service Framework



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OVERVIEW

The service framework report evaluates the current services operated the Yuba-Sutter Transit Authority (Yuba-Sutter Transit), outlines the design of the network, evaluates service levels and effectiveness of the service (productivity, cost efficiencies, and subsidies), and analyzes how the existing ridership uses the network.

Yuba-Sutter Transit offers a network of services to meet the various needs of the Yuba City and Marysville communities. Yuba-Sutter Transit offers fixed-route local bus service within the region, an overlapping paratransit service, rural routes servicing the Yuba County Government Center, and a Commuter service which operates primarily peak hours service with a few additional trips during the midday. These commuter trips connect Yuba and Sutter Counties with downtown Sacramento along Route 70 and Route 99.

DATA COLLECTION METHODOLOGY

The data to support the analysis herein was collected through a number of methodologies and using multiple sources which were then combined, corroborated, and analyzed.

Boardings and Alightings – Known as “ridership”; was collected combining Connect Card data, DoubleMap data, and Yuba-Sutter Transit reports.

Financial information – Fares, expenses, and subsidies; this data was obtained from Yuba-Sutter Transit reports.

Operational data – Service Hours, miles, on-time performance, key locations served; this data was obtained from Yuba-Sutter Transit reports and corroborated with Connect Card data.

Paratransit Data – Trip requests, completions; this data was obtained for 2019 and 2020 from reports provided by the paratransit service provider.

Travel Pattern Data – Data was obtained from GPS providers who utilize apps and non-smartphone pings and compile the data geographically. Custom machine-learning algorithms were utilized to organize this disaggregated, de-identified data into trips. Data is validated by comparing it against census data and Yuba-Sutter Transit ridership data.

All data was mapped using the Census 2020 base map.

SERVICE FRAMEWORK

In general, Yuba-Sutter Transit’s fixed-route services operate Monday through Saturday. Dial-A-Ride operates a span of hours similar to fixed-route services. Rural routes have a varied schedule where some routes run daily and others only Tuesday to Thursday. Commuter service runs weekdays only from major park and rides in the service area into Sacramento. The service operates AM peak into Sacramento and PM peak returning to Yuba and Sutter counties. There is a midday service providing riders another option into and out of Sacramento.

Yuba-Sutter Transit’s local services are centered around major transit hubs: the Yuba College Transit Center, Yuba County Government Center, Sam's Club on Walton Avenue, the Alturas & Shasta Terminal, and the Walmart on North Beale Road. The following tables outline Yuba-Sutter Transit’s operating hours, services, and frequencies.

ROUTE OVERVIEW AND SPAN OF SERVICE

	Route	Major Location and Destination Served	Weekday		Saturday		Headway	
			Start	End	Start	End	Peak	Off Peak
Local	1	Yuba College, North Beale Transit Center, Yuba City Marketplace, Walton Terminal	6:30 AM	6:30 PM	8:30 AM	5:30 PM	30	30
	2 A/B	Walton Terminal, Senior Center, Yuba City HS, Alturas Terminal	6:30 AM	6:30 PM	8:30 AM	5:30 PM	30	30
	3	Yuba College, North Beale Transit Center, McGowan Park & Ride	6:30 AM	6:30 PM	8:30 AM	5:30 PM	30	30
	4 A/B	Alturas & Shasta Terminal, Yuba County Gov't Center, North Beale Transit Center	6:30 AM	6:30 PM	8:30 AM	5:30 PM	60	60
	5	Walton Terminal, Bogue Park & Ride, Winco Center, Yuba City Marketplace	6:30 AM	6:30 PM	8:30 AM	5:30 PM	60	60
	6	Yuba College, North Beale Transit Center	6:30 AM	6:30 PM	8:30 AM	5:30 PM	60	60
Rural	Foothill	Loma Rica, Willow Glen, Oregon House	Tue -Thur: AM inbound, midday roundtrip, PM outbound					
	Live Oak	Yuba College, Sutter County Center (by reservation)	Daily: AM inbound, midday roundtrip, PM outbound					
	Wheatland Sacramento	North Beale Transit Center	Tue -Thur: AM inbound, midday roundtrip, PM outbound					
Commuter	Commuter	Yuba City Marysville, Downtown Sacramento	No Service			No Service		
	Express		5:20 AM	6:35 PM	Varies			
	Sacramento Midday Express	Yuba City Marysville, Downtown Sacramento	7:55 AM	3:30 PM	No Service	No Service	Varies	
Demand Response	Dial-A-Ride	Defined area within Yuba City and Marysville	6:30 AM	9:30 PM	8:30 AM	5:30 PM	On Demand	On Demand

Figure 22 - Route Overview and Span of Service

FARE STRUCTURE

Local Route Fares			Rural Route Fares		
	One-way fare	Daily cap		One-way fare	Daily cap
Basic	\$1.50	\$3.00	Basic	\$3.00	
Senior (age 65+)	\$0.75	\$1.50	Senior (age 65+)	\$1.50	
Disabled (w photo I.D)	\$0.75	\$1.50	Disabled (w photo I.D)	\$1.50	
Medicare Cardholder	\$0.75	\$1.50	Medicare Cardholder	\$1.50	
Youth (age 5 - 18)	\$0.75	\$1.50	Youth (age 5 - 18)	\$1.50	
Children (age 4 and under)	\$0.75	\$1.50	Children (age 4 and under)	Free (2/ adult)	
Basic Monthly Pass	\$30.00		Basic Monthly Pass	\$30.00	
Senior/Disabled/ Youth Monthly Pass	\$15.00		Senior/Disabled/ Youth Monthly Pass	\$15.00	
Ticket Sheets (Twenty \$0.50 tickets)	\$10.00		Ticket Sheets (Twenty \$0.50 tickets)	\$10.00	
Ticket Sheets (Twenty \$0.75 tickets)	\$15.00		Ticket Sheets (Twenty \$0.75 tickets)	\$15.00	
Sacramento Route Fares			Dial-A-Ride Fares		
	One-way fare	Daily cap		One-way fare	After 6PM
Basic	\$4.50		Disabled & ADA Eligible (w photo I.D)	\$3.00	\$2.00
Children (age 4 and under)	Free (2/ adult)		Medicare Cardholder	\$3.00	\$2.00
Midday Senior/ Disabled	\$2.25		Senior (age 65+)	\$3.00	\$2.00
Midday Youth	\$2.25		Companion Fare (with eligible adult)	\$3.00	\$2.00
Monthly Yuba-Sutter Transit			Children (age 4 and under)	Free (2/ adult)	
Sacramento Commuter Pass	\$135.00				
Combined Yuba-Sutter Transit/ Sacramento Regional Transit (RT) Pass	\$185.00		Basic Weekday Evening Fare		\$4.00
Ticket Sheets (Twenty \$0.50 tickets)	\$10.00		Ticket Sheets (Twenty \$0.50 tickets)	\$10.00	
Ticket Sheets (Twenty \$0.75 tickets)	\$15.00		Ticket Sheets (Twenty \$0.75 tickets)	\$15.00	

Figure 23 - Fare Structure

Yuba Sutter Transit offers a comprehensive fare structure for its network of services outlined in the table to the right. Local routes have a flat fare for a single ride with a daily cap.

Yuba Sutter Transit offers a daily cash fare cap (or daily pass) for Connect Card users on the local fixed route system. Once the Connect Card has been used for two cash fare trips in one day, no additional fares are deducted for the remainder of the day. Transfers are no longer issued to any passengers and Connect Card is the only way to access the daily cap. Sacramento routes have a system where passengers can buy a one-way fare or two kinds of monthly passes: One pass that only applies to Sacramento Commuter, and another that is valid for both Yuba-Sutter Transit and Sacramento Regional Transit District routes. Rural route trips require a flat fare for local service. Customers have the option to purchase a single ride pass or a basic monthly pass. Daily caps do not apply to rural route trips. Dial-A-Ride has a basic fare for most of the day, then after 6PM there is a discount for eligible riders. Additionally, after 6PM on weekdays Dial-A-Ride service is available to the general public without eligibility restrictions.

For all services, a maximum of two children can ride for free with each adult. Additionally, ticket sheets are available for riders across the system with 20 tickets each. It should be noted that monthly passes eligible for use on fixed route and rural services were reduced in response to the COVID-19 pandemic. to \$10 for the general public and \$5 for discount-eligible customers. The authority utilizes various grant funds to compensate for lost fare revenue due to this discount. Those funds are set to expire in 2023 and 2024. Yuba-Sutter Transit will need to apply for new grants should the authority wish to continue providing these discounts.

SERVICE OVERVIEW

SERVICE LEVELS

In FY 2019, Yuba-Sutter Transit operated 42,423 weekday revenue hours and 9,344 on Saturdays on the local fixed route service. Yuba-Sutter Transit also operated 19,911 weekday revenue hours and 4,380 hours on Saturday for the Dial-A-Ride service. The Authority operated 14,060 revenue hours on Sacramento Commuter and Midday routes. Rural service accounted for 2,404 revenue hours.

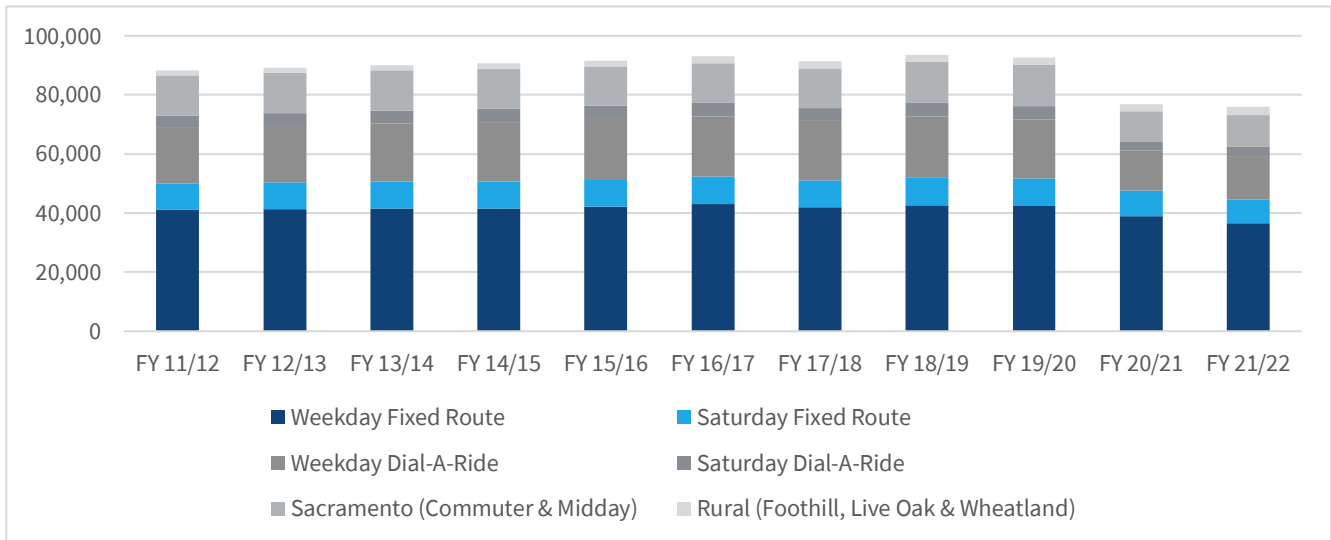


Figure 24 - Service Hours

Due to the COVID-19 pandemic service was reduced across the board with Dial-A-Ride and commuter seeing the biggest reductions of 31% and 27% respectively. Rural service experienced the smallest cut of only 3%, while fixed route saw a 7% reduction.

Service levels in FY 21/22 are projected to remain below FY 19/20 levels. Weekday and Saturday service hours are projected to be 14% below pre-pandemic levels. Commuter and Dial-a-Ride are expected to be between 24-26% below FY 19/20 revenue hour totals. Service levels on rural routes are above pre-pandemic levels.

Note: Route specific metrics are found in individual route profiles.

Yuba-Sutter Transit's fleet levels have remained fairly flat for the past decade. As shown in Figure 4, the Authority has averaged approximately 50 vehicles since FY 13/14.

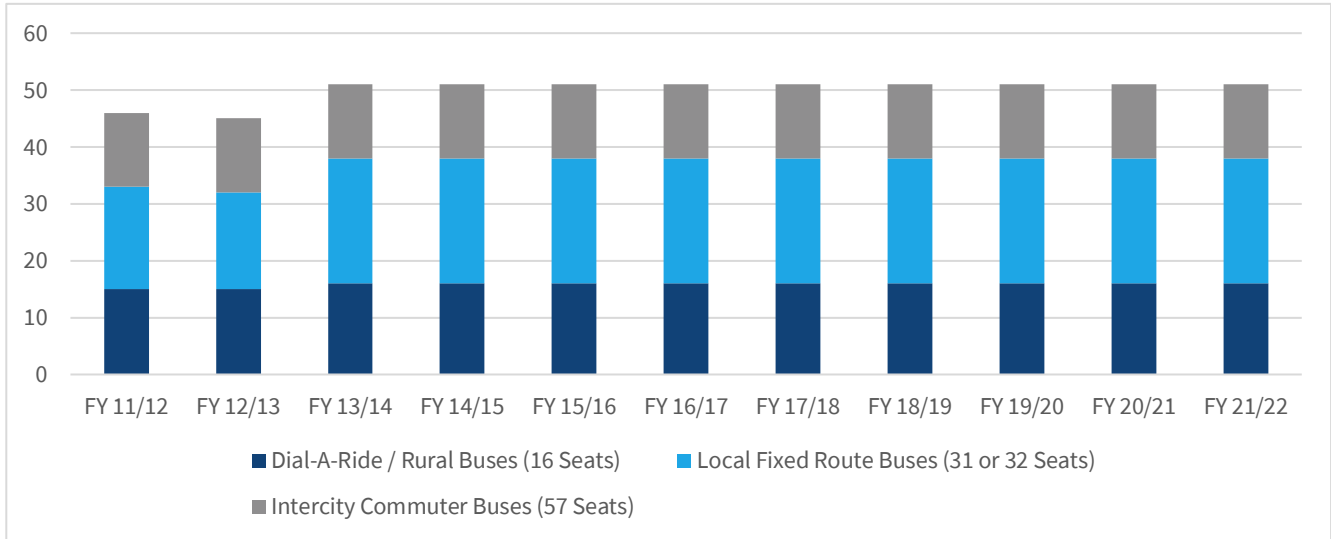


Figure 25 - Fleet Inventory by Year by Type

SERVICE EFFICIENCY AND EFFECTIVENESS

The measures in this section review the network’s productivity, cost efficiency, and subsidies (farebox recovery ratio, revenue per revenue hour, cost per unlinked passenger, and subsidy per passenger) required. Network data is used for productivity while route level data is used for productivity, farebox recovery ratio, cost per unlinked passenger, and subsidy per passenger.

Note: All revenue related cost efficiency and subsidy metrics are based on fares collected until FY 2021-2022.

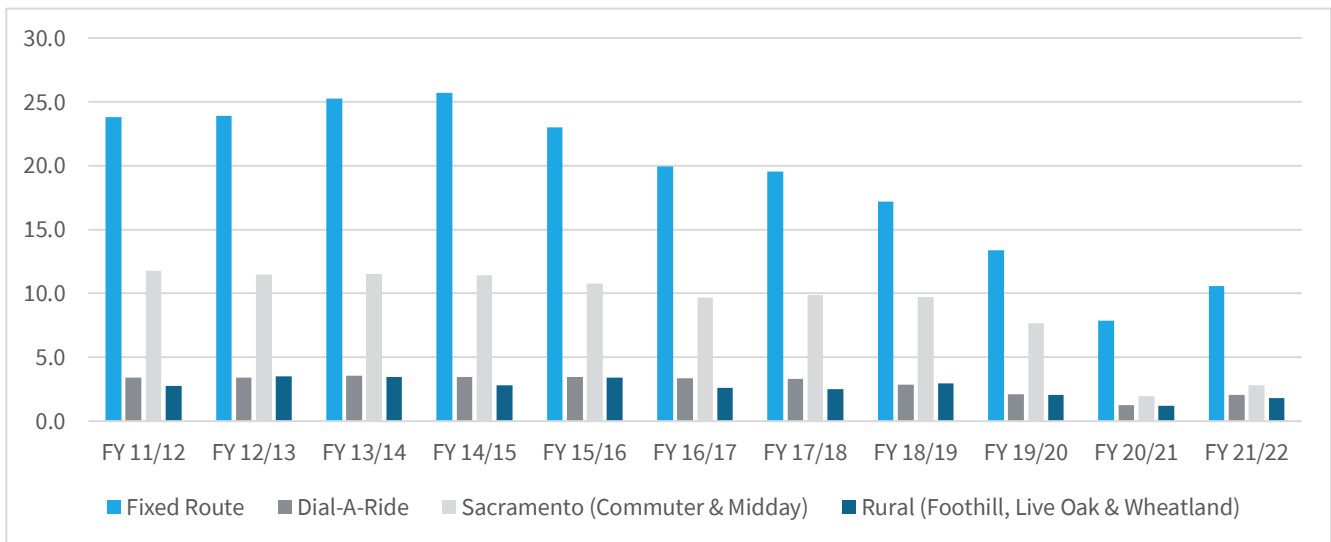


Figure 26 - Passenger Trips per Hour

Farebox Recovery Ratio measures how much of the service operating costs are paid from passenger fares. A higher ratio means the service is less reliant on subsidies to operate. Farebox recovery has improved since the pandemic but is still not at pre pandemic levels at below 10%. Prior to the pandemic this was between 15 and 20% and generally on a downward trend similar to other agencies nationwide.

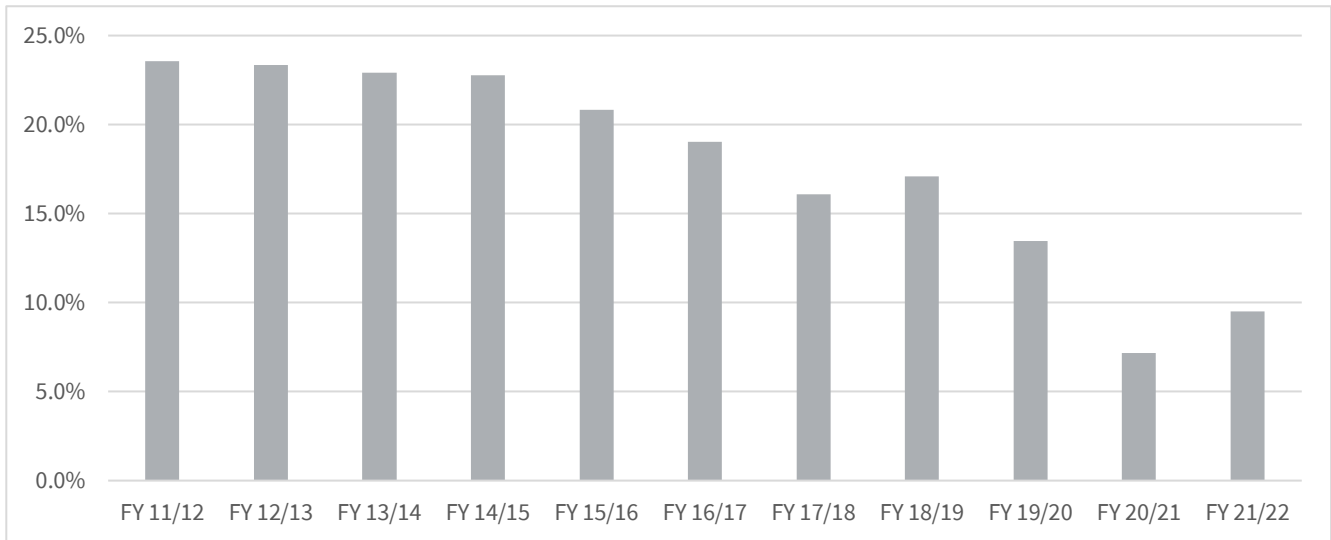


Figure 27 - Farebox Recovery Ratio

Operating Expense by Mode measures the cost of operating each of Yuba-Sutter Transit’s services. Since FY 11/12 operating expenses have increased an average of 3.5%. The local fixed route service accounts for roughly 60% of that expense annually and has seen a 1% increase since FY 19/20.

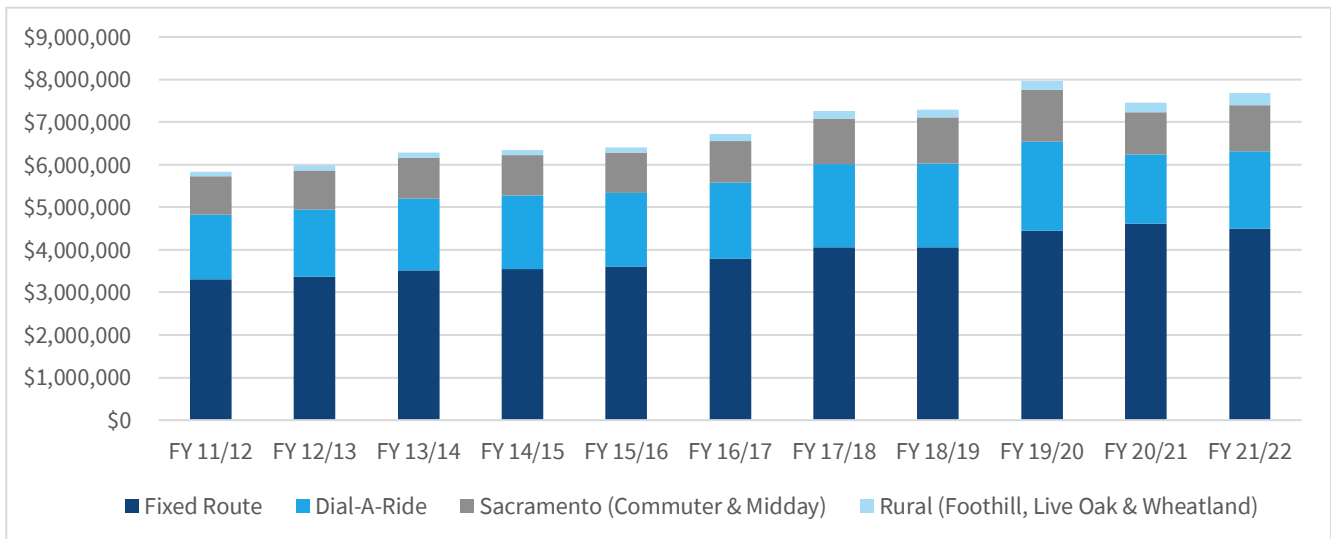


Figure 28 - Operating Expense by Mode

Cost per revenue hour measures the cost of operating each revenue hour on Yuba-Sutter Transit’s services. Since FY 19/20 cost per revenue hour has increased by 18% rising to \$101.02/ hour compared to \$86.02/ hour prior to FY 19/20. This is due to operating expenses staying relatively the same while hours dropped during the pandemic. Prior to the pandemic, the Authority averaged approximately \$75 an hour.

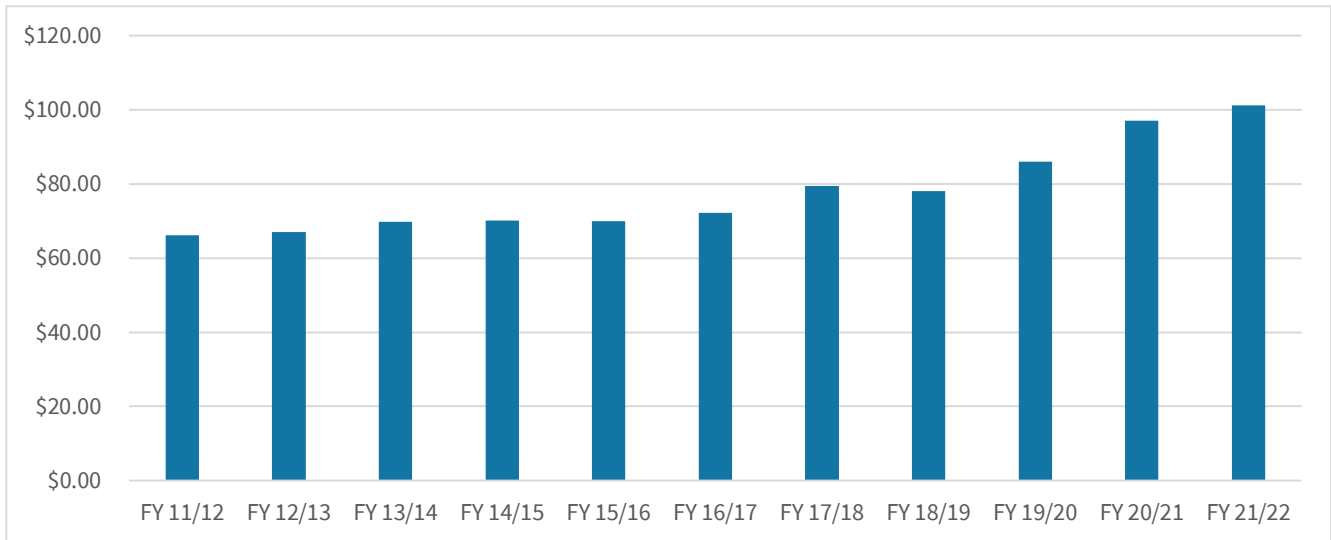


Figure 29 - Cost Per Revenue Hour

Subsidy per passenger measures how much additional subsidy is required for what is not covered by passenger fares. The goal is to have a lower subsidy as it signifies a more self-sustaining route. The local routes have the lowest subsidy among all routes at approximately \$4.73 per trip prior to the pandemic. Dial-A-Ride as currently operated has the highest pre-pandemic subsidy per passenger at \$54.05. Commuter route subsidy per passenger has averaged approximately \$26 pre-pandemic.

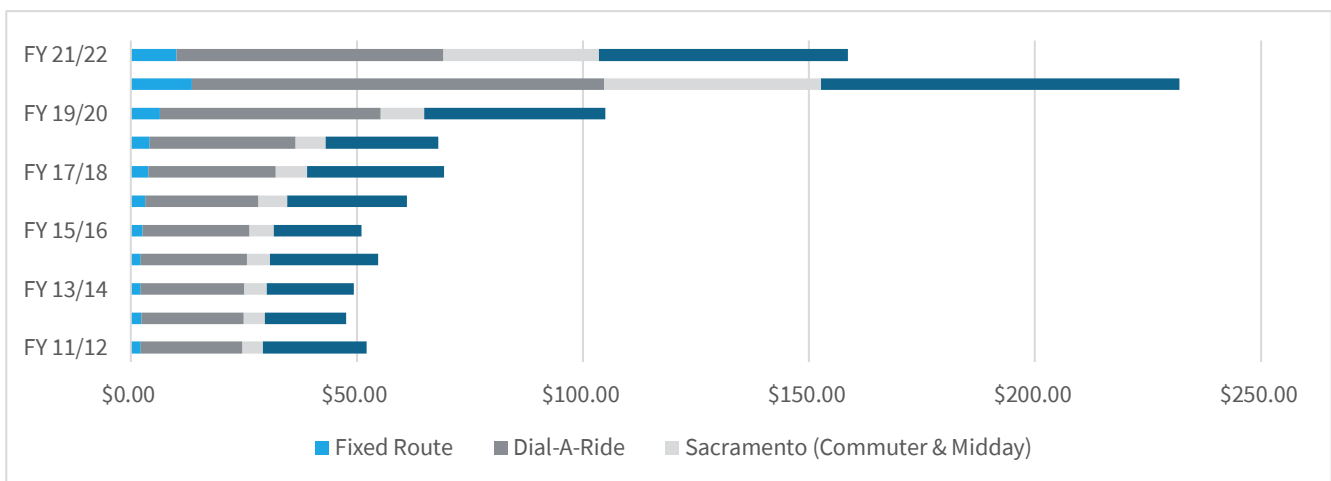


Figure 30 - Subsidy per Passenger

SYSTEM RIDERSHIP

This section covers ridership, which measures the total number of trips taken by customers on Yuba-Sutter Transit’s network.

Like many other agencies throughout the country, COVID-19 had a significant impact on Yuba-Sutter Transit’s daily ridership across the entire network. Overall, Yuba-Sutter Transit’s ridership is projected to be 38% below pre-pandemic (FY 2018/2019) levels in FY 21/22. This does represent a 29% improvement over the previous year’s totals. Commuter services have been hit the hardest in terms of ridership drops. Commuter ridership is projected to be 72% below pre-pandemic levels in FY 21/22. This represents a 50% improvement over FY 20/21, indicating some riders are coming back. The Authority is operating 17 of 23 scheduled commuter trips currently. On the fixed-route side, ridership is projected to be 32% below pre-pandemic levels. This does represent a 25% improvement over FY 20/21. Similarly, ridership on dial-a-ride services is projected to be approximately 28% below FY 19/20, but it appears that ridership on dial-a-ride is rebounding faster than other modes.

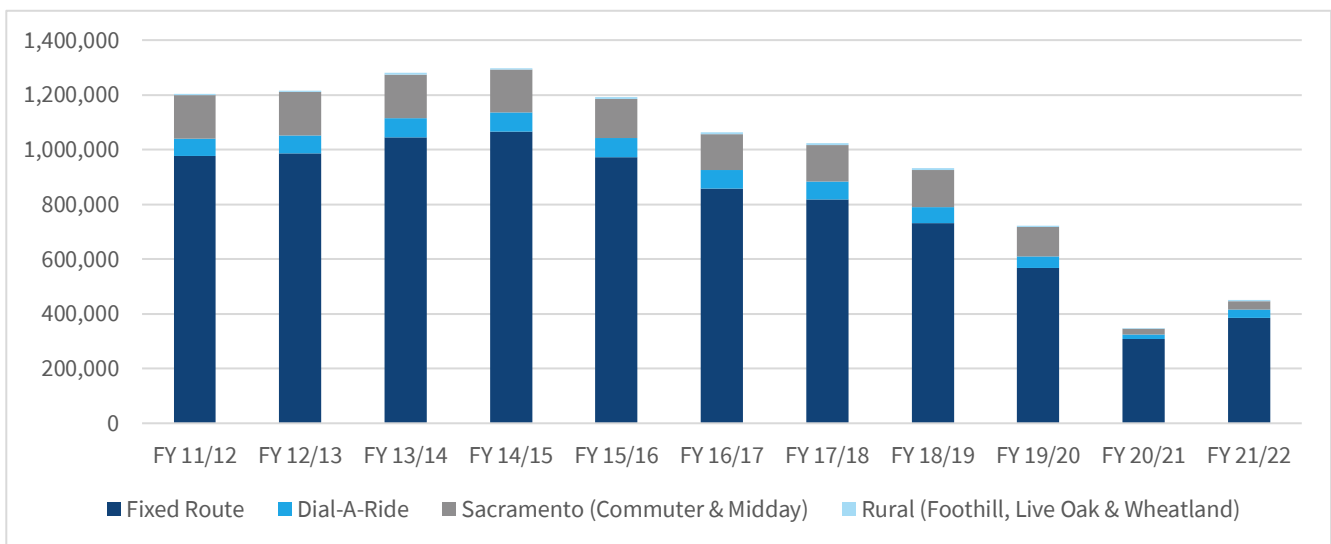


Figure 31 - Passenger Trips by Mode by Year

FIXED ROUTE

Yuba-Sutter Transit operates six local fixed routes. Two routes (2 and 4) operate as loops in Yuba City and Marysville respectively and one route (6) operates as a shuttle within Linda. Route 1, connecting the Walton Terminal in Yuba City to the Yuba College transit center in Linda is the highest trip generator. Route 1 is also the only route to traverse both the Feather and Yuba rivers. There are only three connections between Yuba City, Marysville/Linda and Olivehurst. These bridges (10th street, 5th street, and E street) can become congested and result in on-time performance issues.

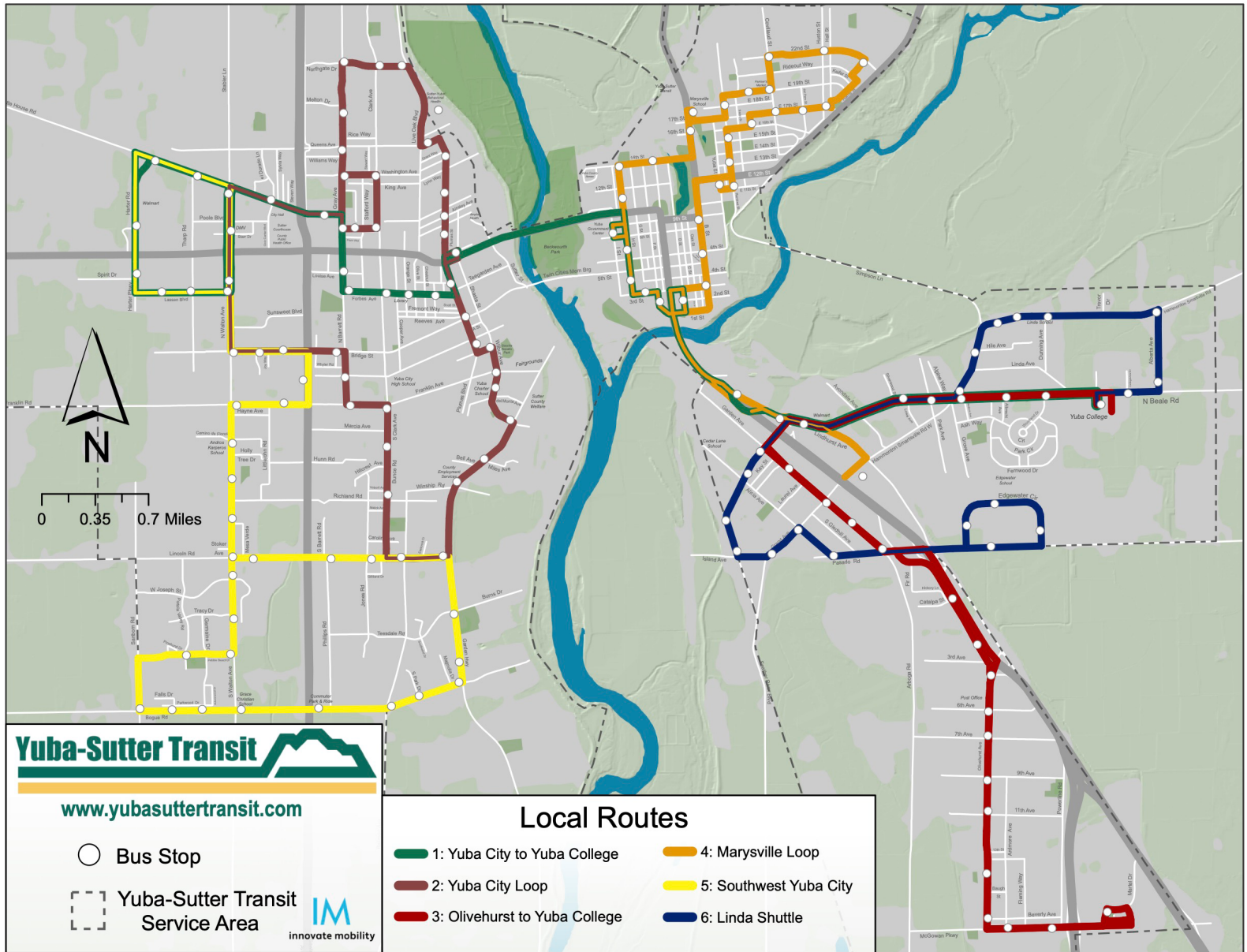


Figure 32 - Fixed Route Map

Pre-pandemic, Route 2 operated as a bi-directional hourly service effectively providing service every 30-minutes, but it has since been reduced to 60-minute loop service on an emergency basis. Loops may not result in the best user experience due to riders being forced to travel in one direction over another.

Stop frequencies

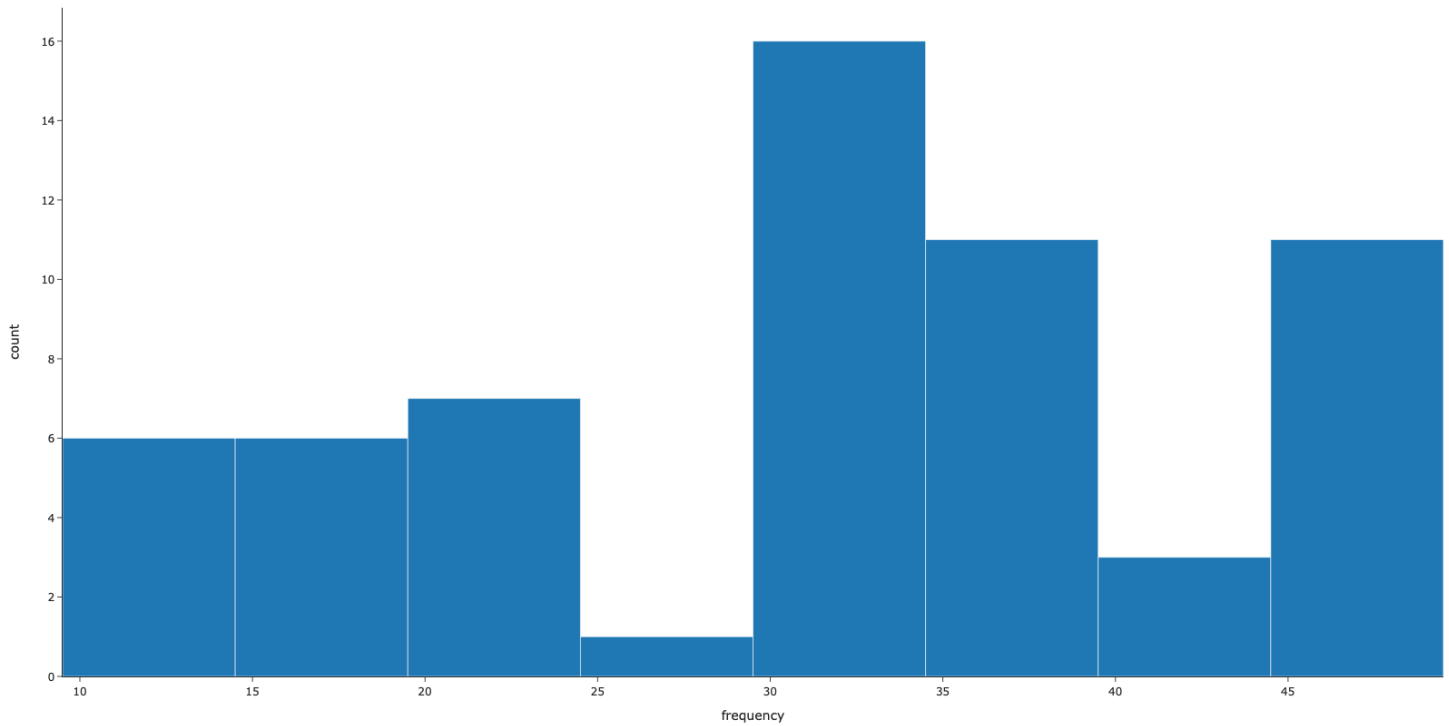


Figure 33 - Average Frequency by Stop

While fixed route ridership overall has been dropping since 2015, the data shows signs of recovery during the past two years.

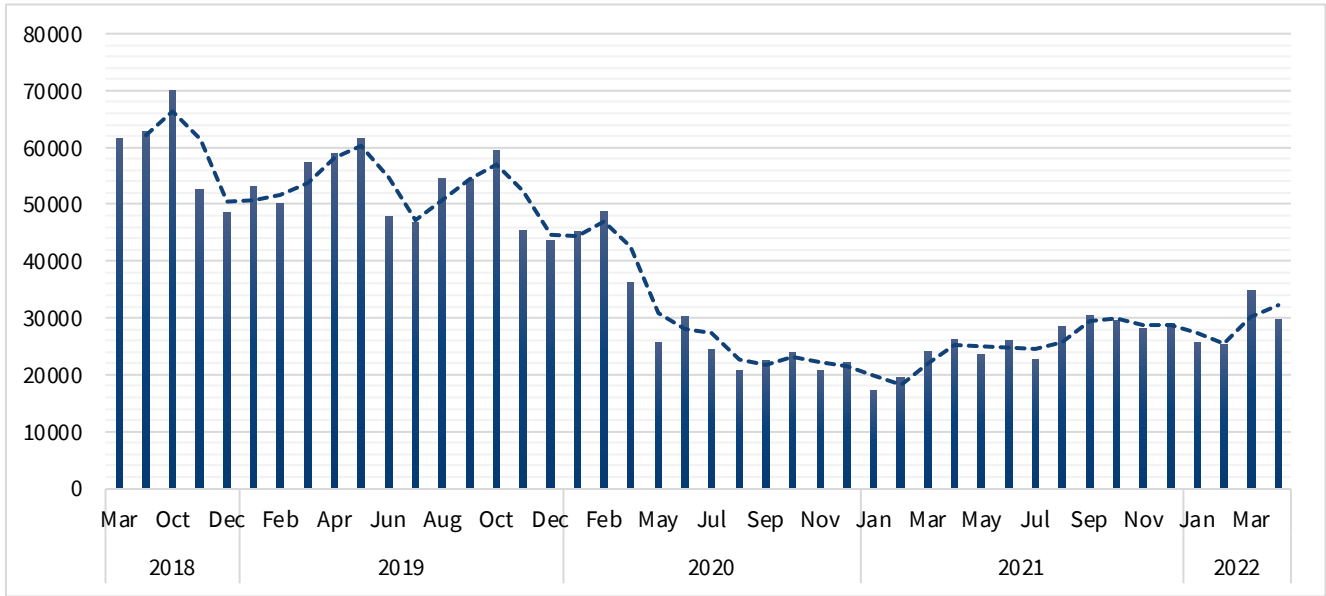


Figure 34 - Fixed Route Weekday Ridership by Month

Saturday ridership has held steadier and seen less of a decrease than weekday ridership overall. While there is more fluctuation on a month-to-month basis, the macro trend is much more consistent when compared to weekday.

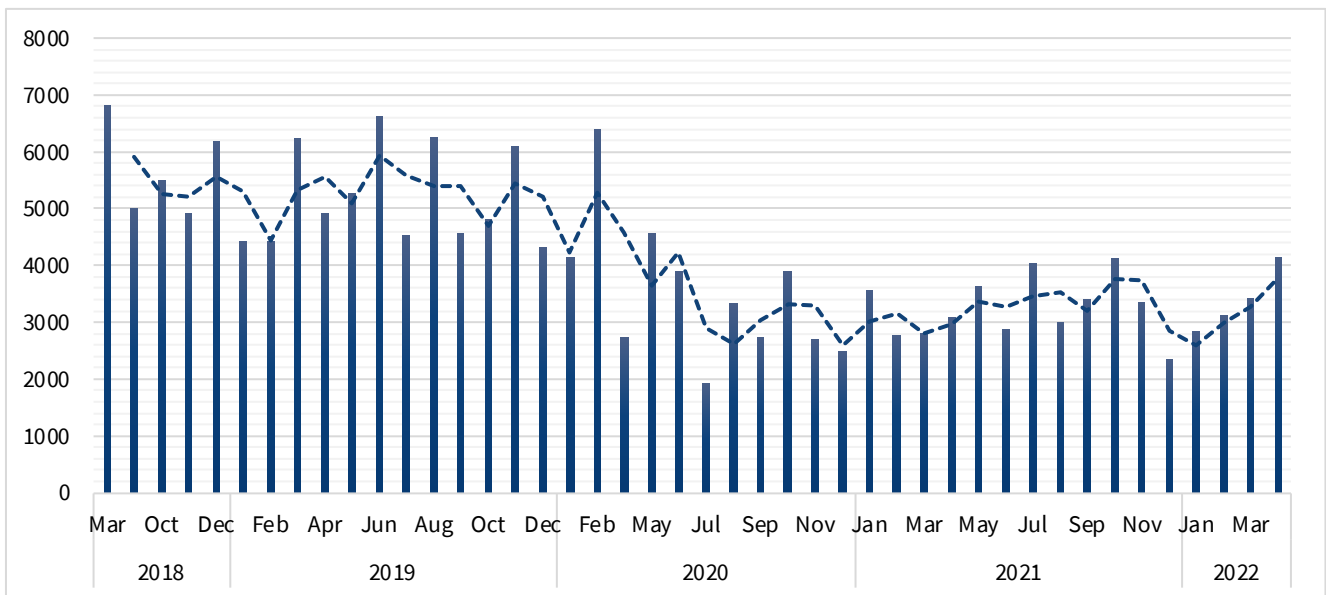


Figure 35 - Fixed Route Saturday Ridership by Month

Yuba-Sutter Transit has by and large maintained operating hours at pre-pandemic levels. Outside of seasonal changes and a reduction in Route 2, all other fixed routes operate essentially the same schedule.

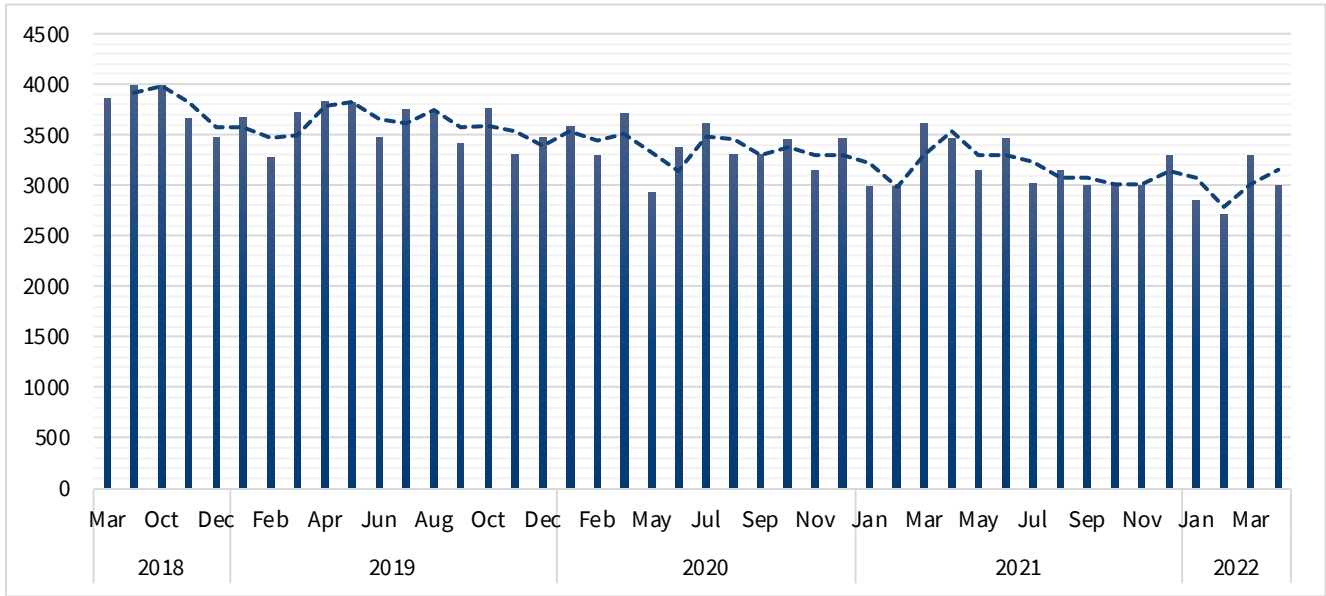


Figure 36 - Fixed Route Weekday Service Hours

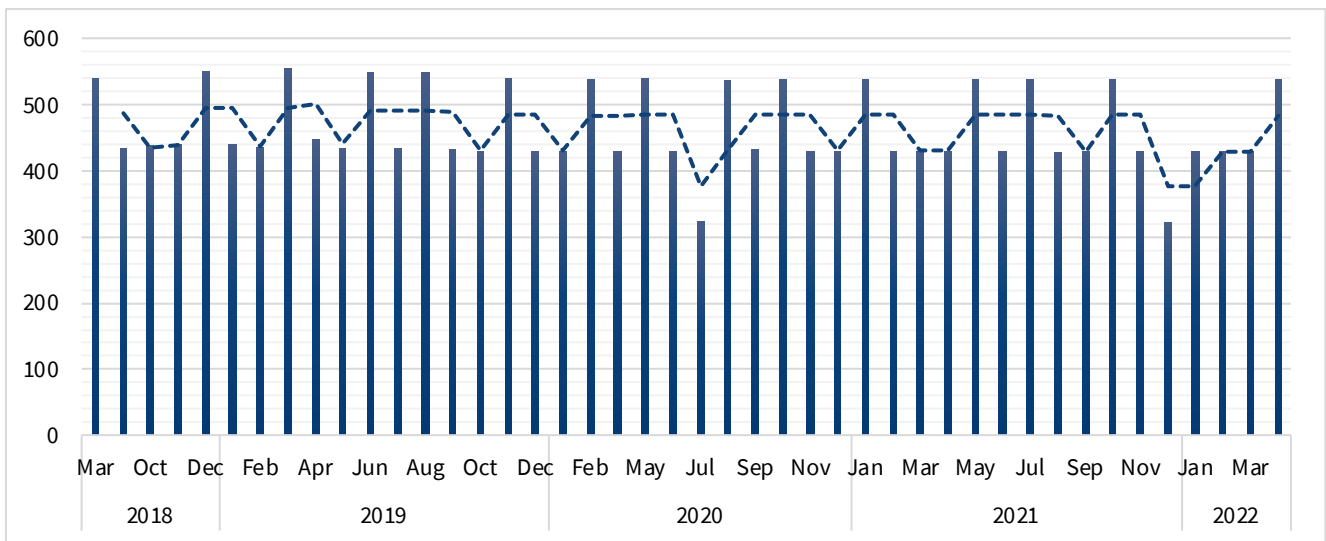


Figure 37 - Fixed Route Weekend Service Hours

Fixed route weekday ridership by route shows how COVID-19 has negatively impacted the ridership across the system. Route 1 was the most impacted route losing nearly half its ridership. In terms of total riders, Routes 5 and 6 lost the least number of riders, although this loss still represents a large portion of the routes' total ridership.

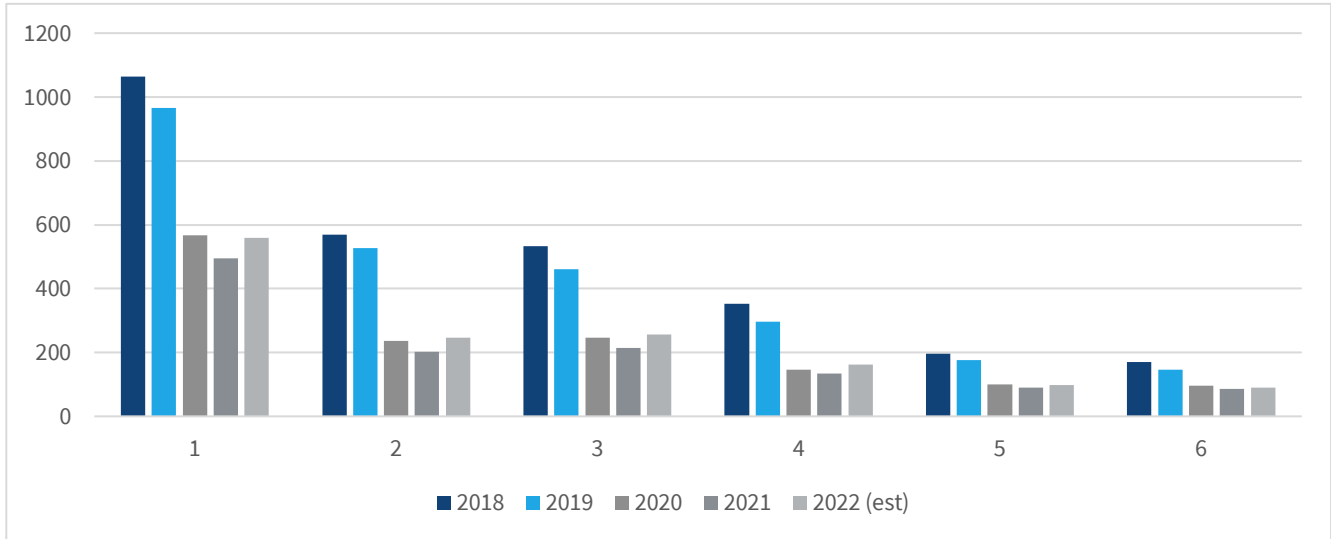


Figure 38 - Fixed Route Weekday Ridership by Route

COMMUTER SERVICES

Yuba-Sutter Transit operates trips into downtown Sacramento via either the Route 99 or Route 70 highways. Route 99 outbound services stop at park and rides at the Yuba County Government Center and Walton Terminal before heading to the Bogue Park and Ride, the southernmost terminal before heading into Sacramento. Highway 70 routes also begin at the Yuba County Government Center before stopping at the McGowan Park and Ride, and the Plumas Lake Park and Ride before going into Sacramento. It should be noted that the origins of the trips do change by time of day. Yuba-Sutter Transit does operate a midday commuter service that can either take the 70 or 99 highways to Sacramento. Services generally start at 5:20am from Marysville for Highway 70 routes, and at 5:30am from Yuba City on Highway 99 routes.

Commuter services have understandably been the most impacted by the COVID-19 pandemic and the California stay-at-home order which was enacted on March 19, 2020. As of June 1, 2022, the current vacancy rate in Downtown Sacramento is 10.3%², this is a 255% increase over 2021. Further impacting commuting into Sacramento is the reduction in on-premise work at the State’s Capitol. The most recent passed state budget also forecasts a reduction of 20% in square footage of office space for State departments. These are broader market headwinds that will affect any recovery planned for Yuba-Sutter Transit’s commuter services. Ridership on commuter routes is averaging 80% higher than the same period in 2021, but still remains over 80% below pre-pandemic levels.

² <https://kidder.com/market-reports/sacramento-office-market-report/>

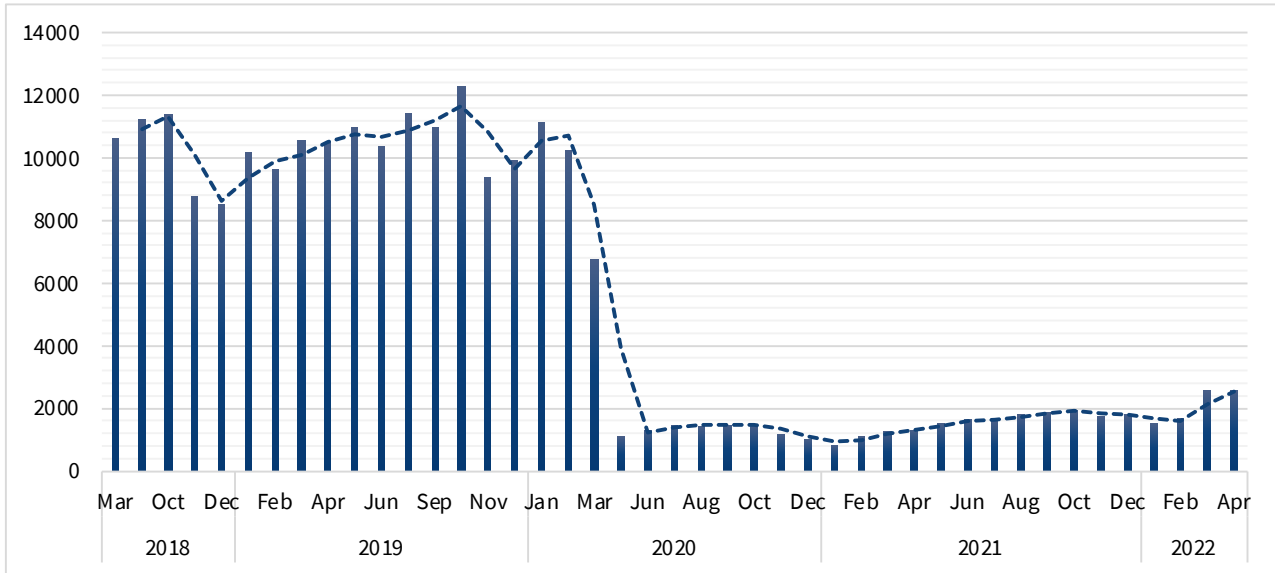


Figure 39 - Commuter Services Ridership by Month

Service levels on Yuba-Sutter Transit’s commuter routes are operating at close to 2021 levels but remain 30% lower than pre-pandemic levels. Even at these reduced levels, there remains significant excess capacity on the currently operated routes.

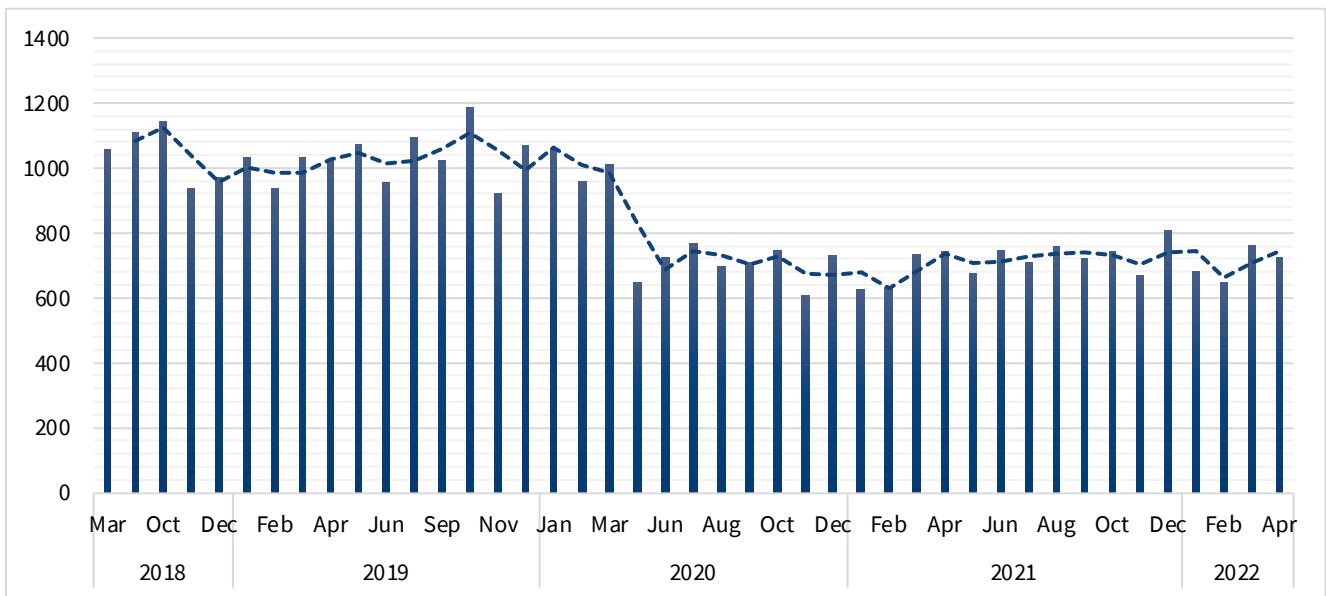


Figure 40 - Commuter Route Service Hours by Month

Yuba-Sutter does operate a midday commuter route that drops off riders in Downtown Sacramento between 9:00am and 2:00pm on three separate trips. Midday ridership appears to be 60% below pre-pandemic levels but is trending upwards.

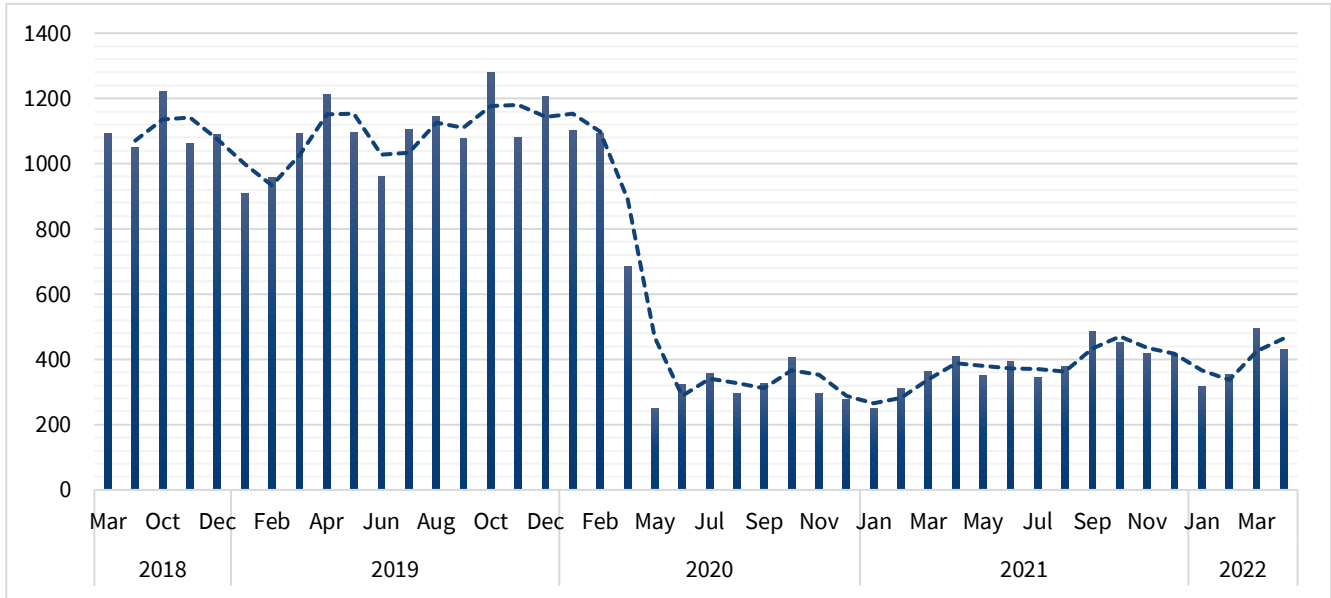


Figure 41 - Commuter Midday Ridership by Month

DIAL-A-RIDE AND RURAL SERVICES

Yuba-Sutter Transit operates a demand response system in a dial-a-ride manner. The service is offered to eligible passengers anywhere within the boundaries of Yuba City, Marysville, Linda and Olivehurst. The service operates from 6:30am to 9:30pm on weekdays and between 8:30am and 5:30pm on Saturdays. No service is offered on Sundays or holidays. The service offers seniors and persons with eligible disabilities ADA paratransit curb-to-curb service for \$3.00 per ride. Riders must be certified prior to boarding. From 6:00pm to 9:30pm on weekdays the service is open to the general public for a fare of \$4.00 per trip with a discount fare of \$2.00 for otherwise eligible passengers. All riders, including eligible riders, must call in to reserve their trip, and may do so up to 14 days in advance.

Prior to the pandemic, Yuba-Sutter Transit operated an average of approximately 1,500 hours per month on its Dial-a-Ride service. Those hours were reduced by approximately 33% in April 2020, and were not increased again until December 2021. When reviewing 2022, dial-a-ride hours were operating at approximately 13.2% over 2021 levels, but still 10% below pre-pandemic levels.

Yuba-Sutter Transit also operates rural services in the communities of Live Oak, Foothill and Wheatland. These routes operate in a combination of fixed route and advance reservation. The Foothill route operates two trips Tuesday through Thursday only. Live Oak operates three trips Monday through Friday, with on-demand service possible to and from major trip generators such as Yuba College and the Yuba County Government Center. And, finally, the Wheatland service operates as a flex route with some on-demand availability.

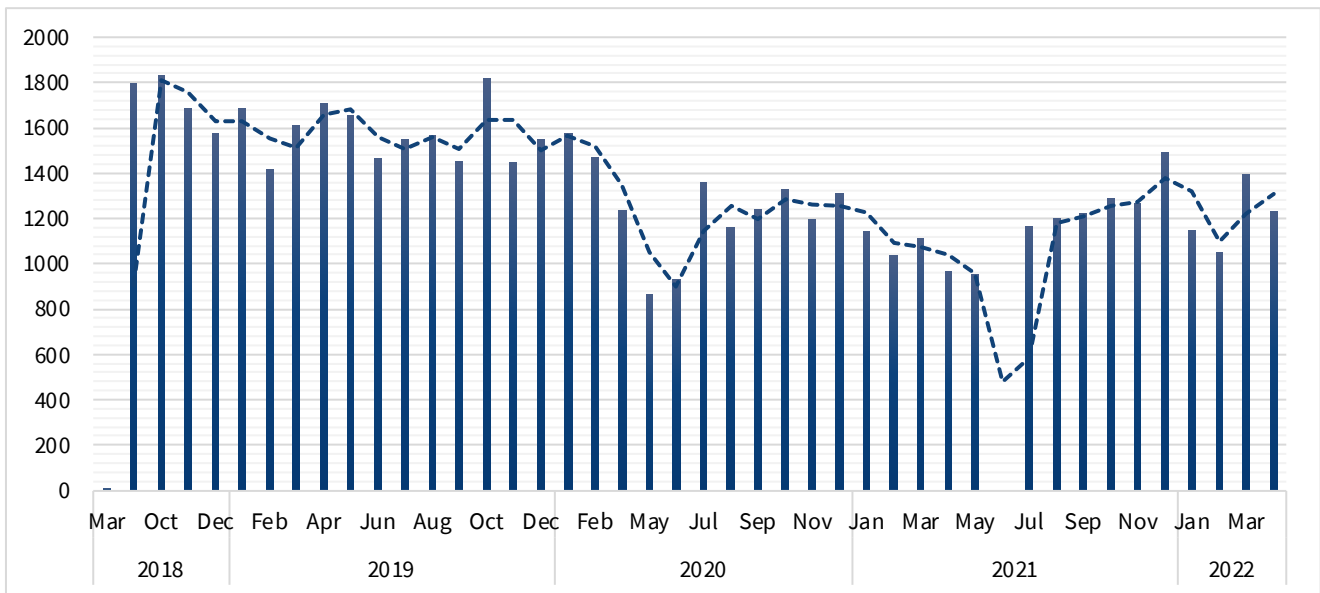


Figure 42 - Dial-a-Ride Service hours by Month

Ridership on dial-a-ride is up over 90% in 2022 vs 2021. While still down over 57% from the pre-pandemic peak of approximately 4,200 riders per day, the last three months have seen the highest monthly average increases in two years.

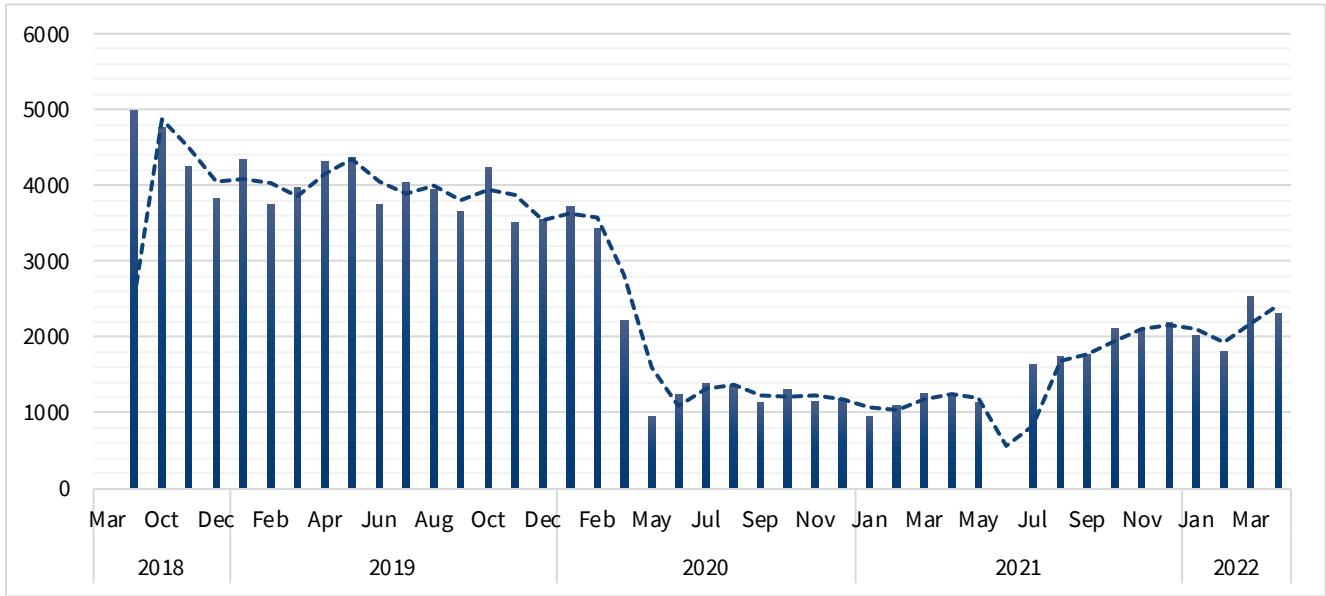


Figure 43 - Dial-a-Ride Ridership by Month

Rural ridership observes a level of seasonality not observed on either Dial-a-Ride, Fixed or Commuter services. Services increase over the summer (as does ridership). Pre-pandemic, Yuba-Sutter Transit operated approximately 3.8 hours of rural service per month off season (January-June). In-season (July-December), service levels increase to an average of 27 hours per month. In 2021, off season services hours remained below pre-pandemic levels, and in-season services were still operating at 56% below pre-pandemic levels. In 2022, service levels on rural routes have returned and even exceeded pre-pandemic levels. Averaging 38 hours per month for the first four months of 2022.

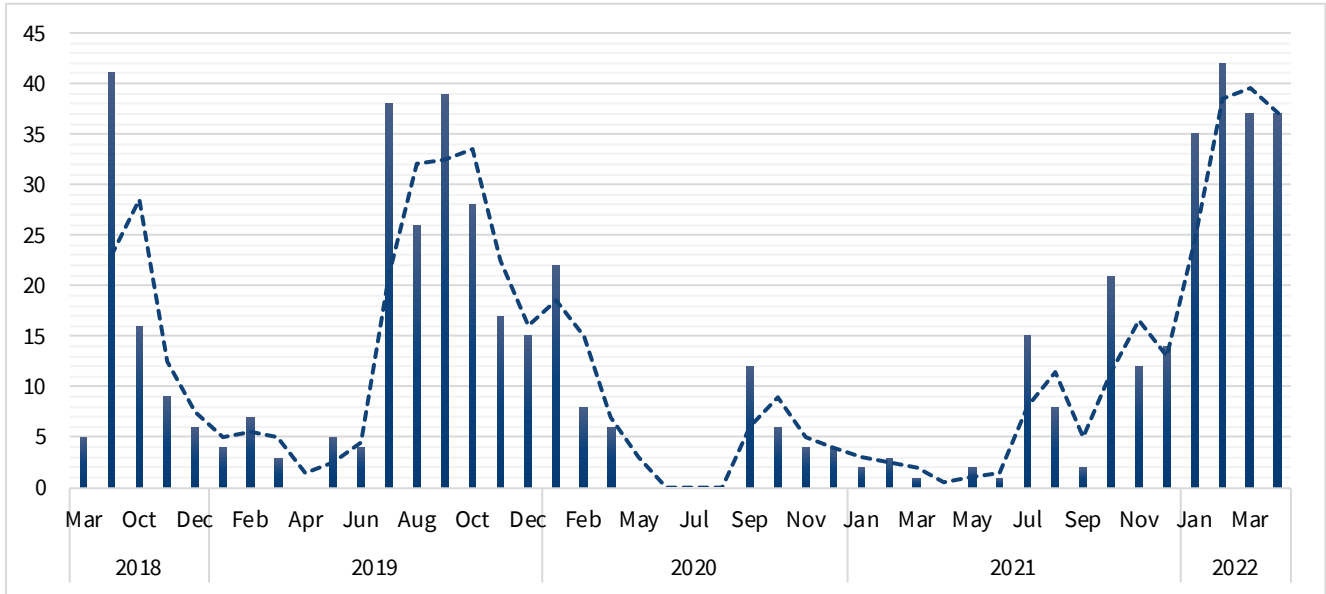


Figure 44 - Rural Service Hours per Month

Ridership on rural services in 2022 appears to be returning to and exceeding pre-pandemic levels. For the first four months of 2022, rural routes are carrying approximately 18% more riders than the first four months of 2020. In terms of productivity, 2022 still lags behind the previous two years.

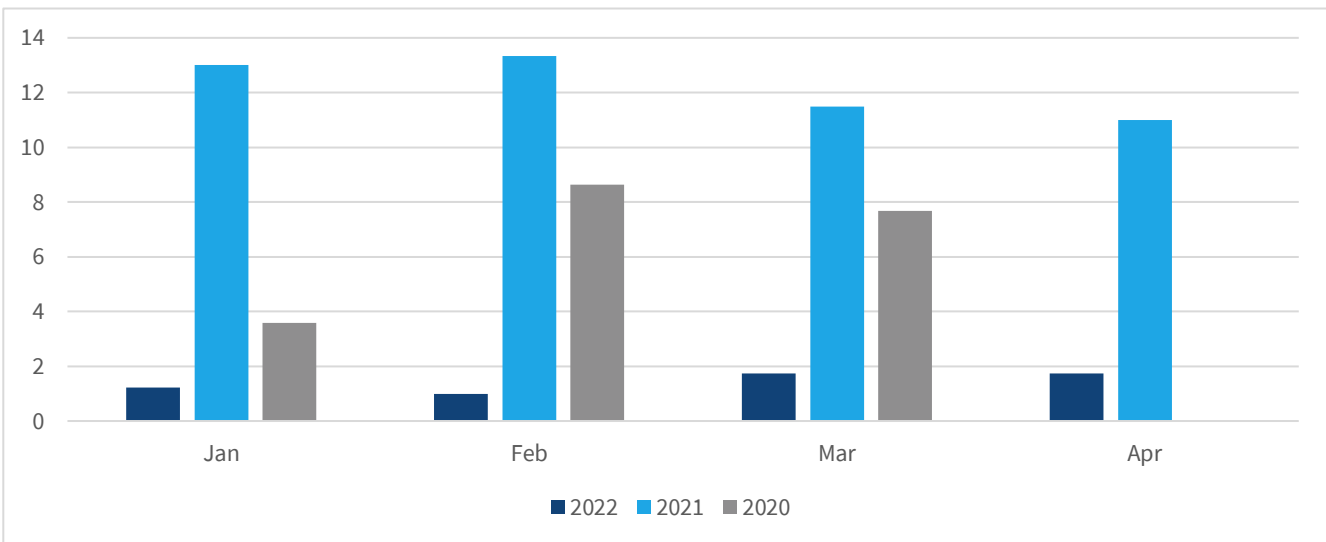


Figure 45 - Rural Route Passengers per Hour

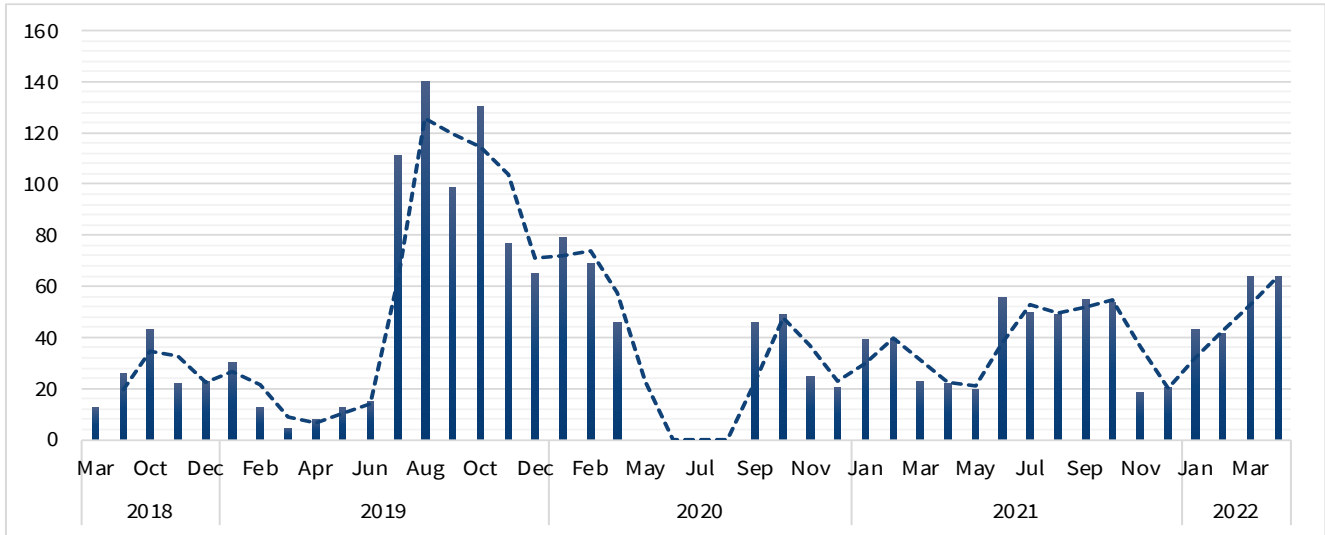


Figure 46 - Rural Service Ridership by Month

FINANCIAL PERFORMANCE

Over the past three years the average fare per passenger has steadily increased. This is a trend we see continuing since FY 11/12, but the increases are getting larger as time goes on. Major across the board fare increase became effective in July 2019. This also reflects the disproportionate impact of ridership changes between local and Sacramento services where average fares are much higher.

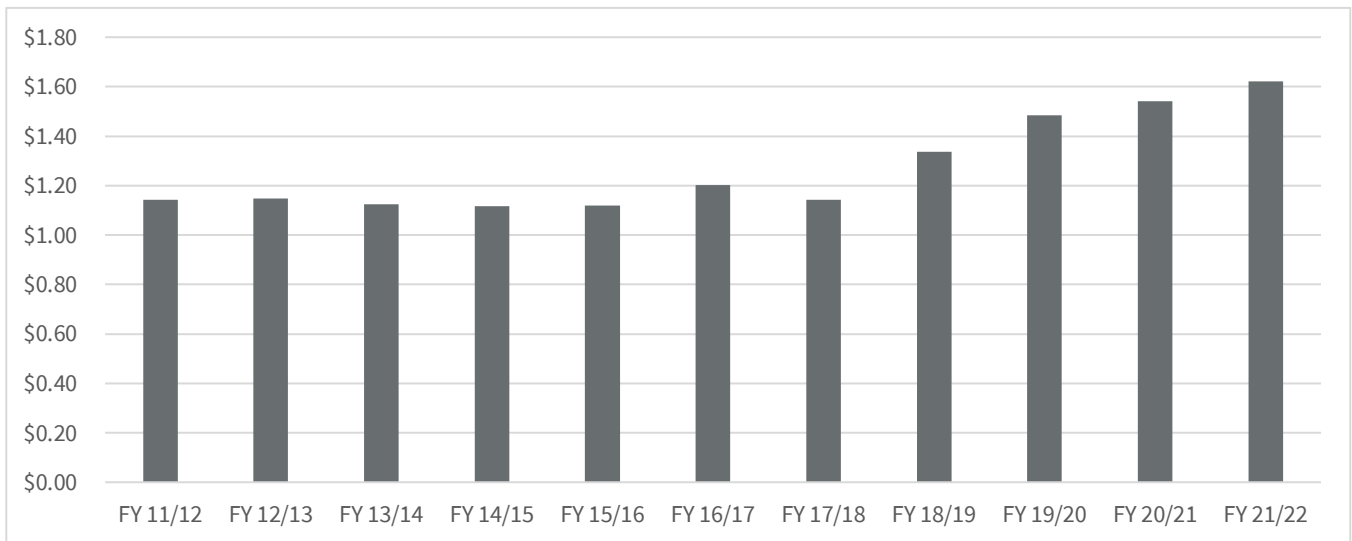


Figure 47 – Average Fare per Passenger

Operating cost per passenger almost doubled between FY 20 and FY 21. This is largely due to ridership being cut nearly in half but operating expenses seeing only a small reduction. With ridership beginning to return, average cost per passenger has dropped by 20% in FY 21/22.

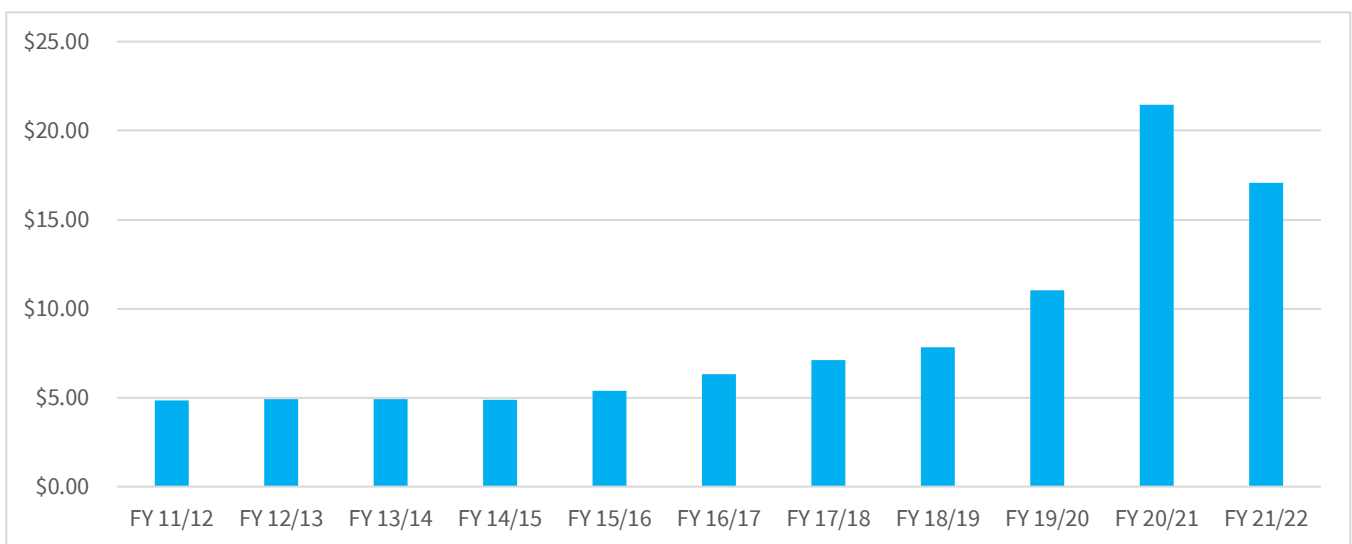


Figure 48 – Average Cost per Passenger



Market Assessment



innovate mobility

REGIONAL OVERVIEW

The Market Assessment section of the NextGen Transit Plan provides background on the population and demographics of Yuba-Sutter Transit’s service area. The goal is to provide background on the population characteristics to better understand who makes up the market of current and potential riders.

Table 9 - Yuba and Sutter County Population and Demographics

Population and Demographics	California	Sutter County	Yuba County
Total Population	39,346,023	96,315	77,524
Age			
Under 18	8,711,118	24,979	21,355
Over 65	5,644,497	14,791	9,588
Commuting			
Drive Alone	13,376,951	30,440	23,874
Take Public Transit	908,392	265	247
No Vehicles Available	570,526	773	599
Disabled Population	4,146,951	11,885	11,451
Ethnicity			
White Alone	16,296,122	46,810	46,590
Black Alone	2,237,044	1,982	3,052
Asian Alone	6,085,947	18,234	5,774
Hispanic Alone	15,579,652	31,568	23,520
Two or more races	5,760,235	12,490	11,773
Housing			
Total Housing Units	14,210,945	34,394	28,632
Housing Units in multi-unit structures*	3,760,415	5,315	3,508
Average household size	3	3	3
Owner-occupied housing units	7,241,318	19,267	16,089
Income			
Median Household Income	111,622	86,703	73,030
Individuals living below the poverty line	4,853,434	12,460	11,420
Less than \$25,000	15.50%	16.50%	20.50%
\$25,001-\$50,000	17.00%	22.70%	22.90%
\$50,001-\$100,000	27.60%	31.80%	29.90%
>\$100,000	39.90%	29.00%	26.70%

DEVELOPMENT

As mentioned earlier, Yuba and Sutter Counties are geographically and geometrically shaped in a way that requires travel across three thoroughfares to cross the rivers. Further, when reviewing development plans for both counties, there are planned developments that will need to be connected by transit, in addition to enhancing existing connections to address travel patterns and population growth.

SUTTER COUNTY

Yuba City and Live Oak are the two incorporated cities in Sutter County. Both cities have an independent land use authority and adopted general plans that guide development within their incorporated boundaries. Both cities also have adopted Spheres of Influence (SOI) that extend beyond their city limits defining their probable future incorporated boundaries. Until such time that the SOI areas are approved for annexation by the Sutter County Local Agency Formation Commission, they remain within the jurisdiction of Sutter County. The Sutter County General Plan includes policies that promote the cooperative and comprehensive planning of the SOI areas.

Sutter County encompasses several small unincorporated communities consisting of lower intensity residential, commercial and/or employment uses with limited levels of public services. The recognized unincorporated rural communities include Meridian, Sutter, Robbins, Rio Oso, Trowbridge, Nicolaus, and East Nicolaus. Other, smaller unincorporated communities within Sutter County that do not have adopted community boundaries include Tudor and Pleasant Grove.

Sutter Pointe, in the south of Sutter County encompasses approximately 7,528 acres. On November 17, 2020, the Board of Supervisors approved the first phase development in the Sutter Pointe Specific Plan called Lakeside at Sutter Pointe. This first phase comprises 873+ acres located in the eastern portion of the plan area north of Riego Road and South of Sankey Road. This first phase will establish 3,402 single-family and 399 multi-family homes, along with 46.1 acres of employment centers, 25 acres of commercial centers, 61.3 acres of parkland, 54.9 acres of open space along with a K-8 school.

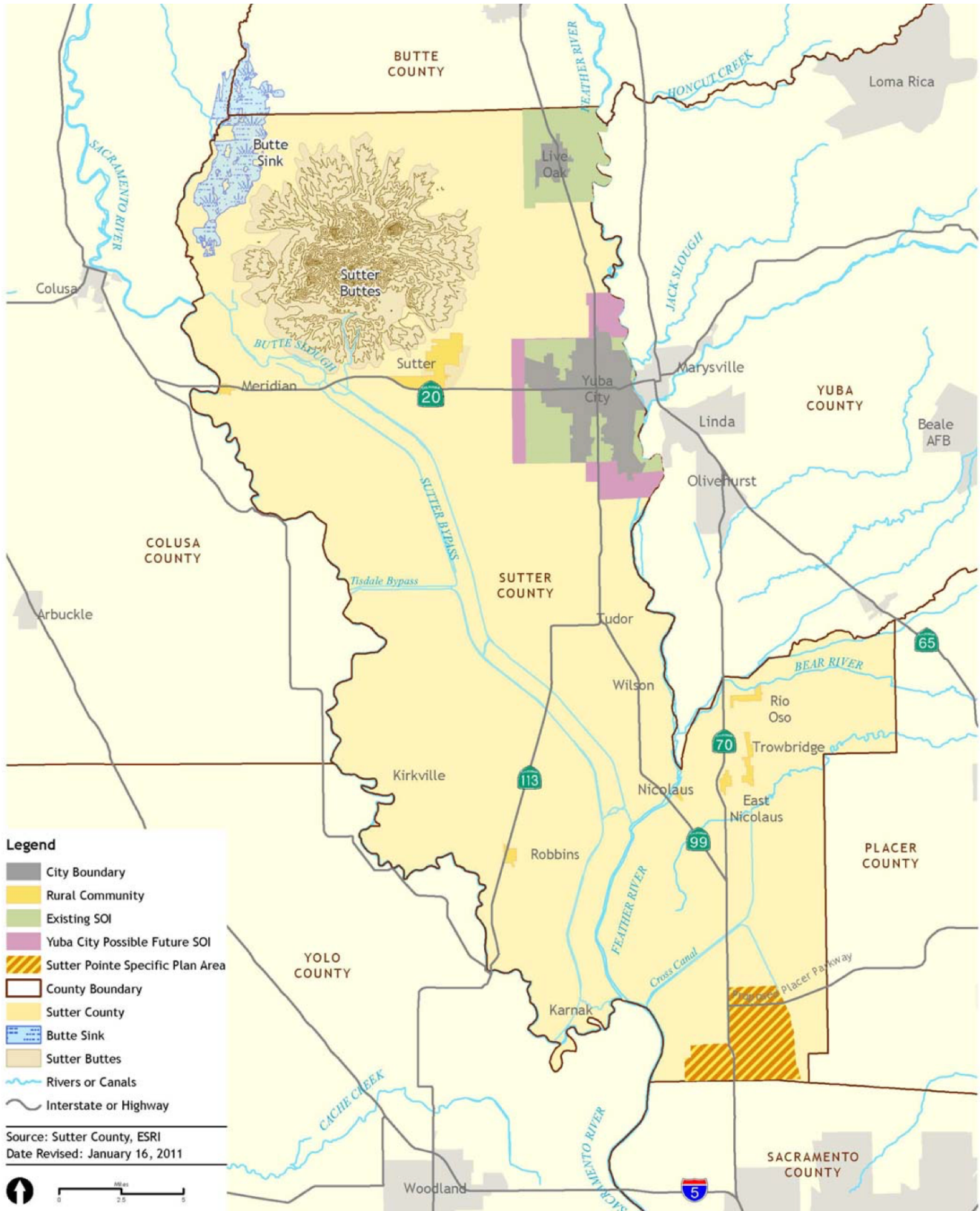


Figure 49 - Sutter County Development Plan

YUBA COUNTY

Located in Yuba County are the cities of Marysville (the County seat) and Wheatland. Unincorporated communities include Linda and Olivehurst - Plumas Lake, on the valley floor, as well as the community of Hallwood and other small settlements. In the foothills and mountain areas of the County are the communities of Loma Rica, Browns Valley, Brownsville, Challenge, Oregon House, Dobbins, Log Cabin, Rackerby, Camptonville, Smartsville, Strawberry Valley, Camp Far West, and Collins Lake.

In 1996, Voters approved an area for development called the "Sports and Entertainment Zone," for expansive sports, entertainment, and related uses. This area is home today to the Toyota Amphitheater and the Hard Rock Hotel & Casino – Sacramento at Fire Mountain. The voter's vision for this area is continued in the 2030 General Plan as an area for development of a wide range of cultural, recreational, entertainment, and supportive uses. Also, during the course of preparing the

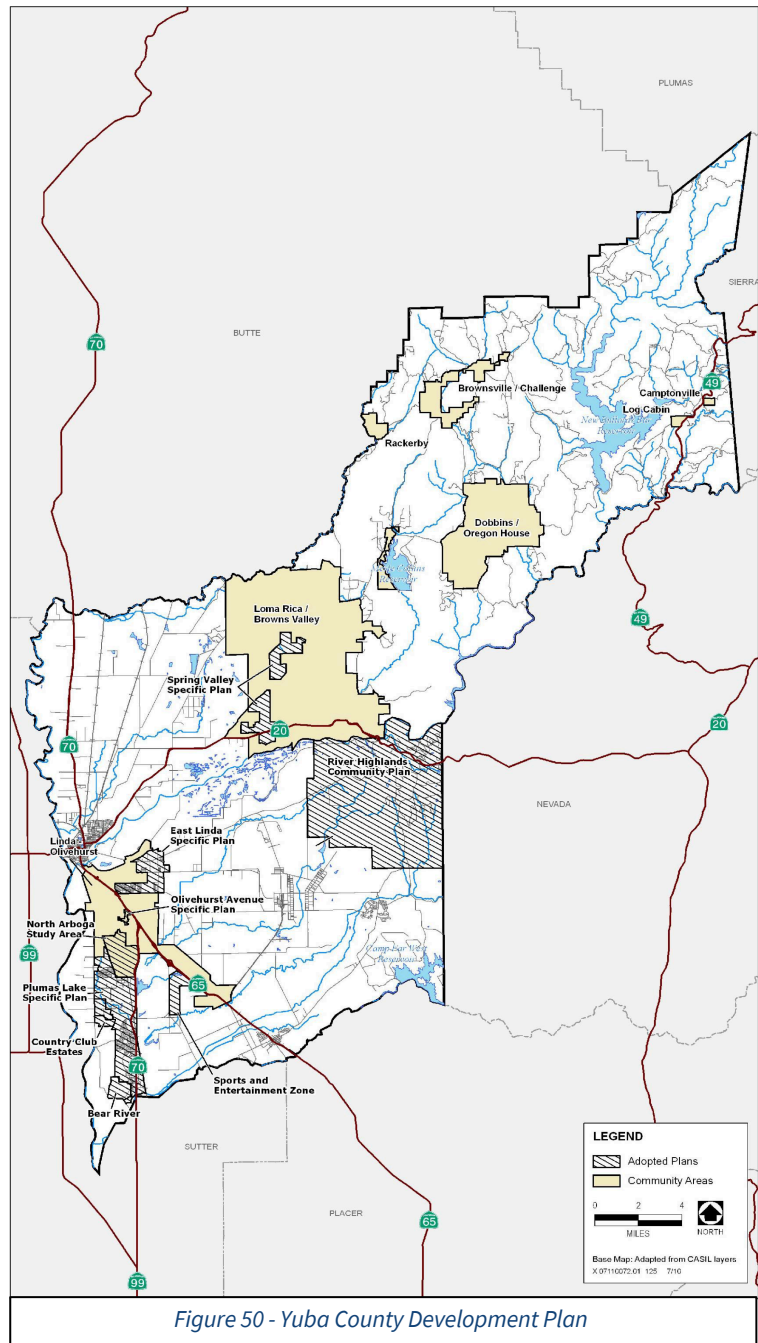


Figure 50 - Yuba County Development Plan

2030 General Plan, the County also approved a project known as "Bear River," which expanded the Plumas Lake Specific Plan Area by 550 acres and includes approximately 2,100 single- and multi-family units, as well as a variety of commercial and public services. The County also approved a project called "Country Club Estates," which would involve development of approximately 1,700 single- and multi-family units, neighborhood commercial, parks, schools, and added approximately 218 acres to the Plumas Lake Specific Plan Area.

POPULATION

Yuba-Sutter Transit provides public transit to the cities in the sister counties of Yuba and Sutter. The majority of the population in these counties live in the Cities of Yuba City and Marysville and the unincorporated communities of Linda, and Olivehurst. Divided by the Feather and Yuba Rivers, the communities in Yuba and Sutter counties both act as a bedroom community for Sacramento and Placer Counties and beyond. With the COVID-19 pandemic, more residents are staying within the counties for employment, shopping and healthcare than ever before. Much of the employment is service related, however, with commutes to downtown Sacramento at an all-time low, due to work from home allowances, many residents are finding they don't need to commute to work.

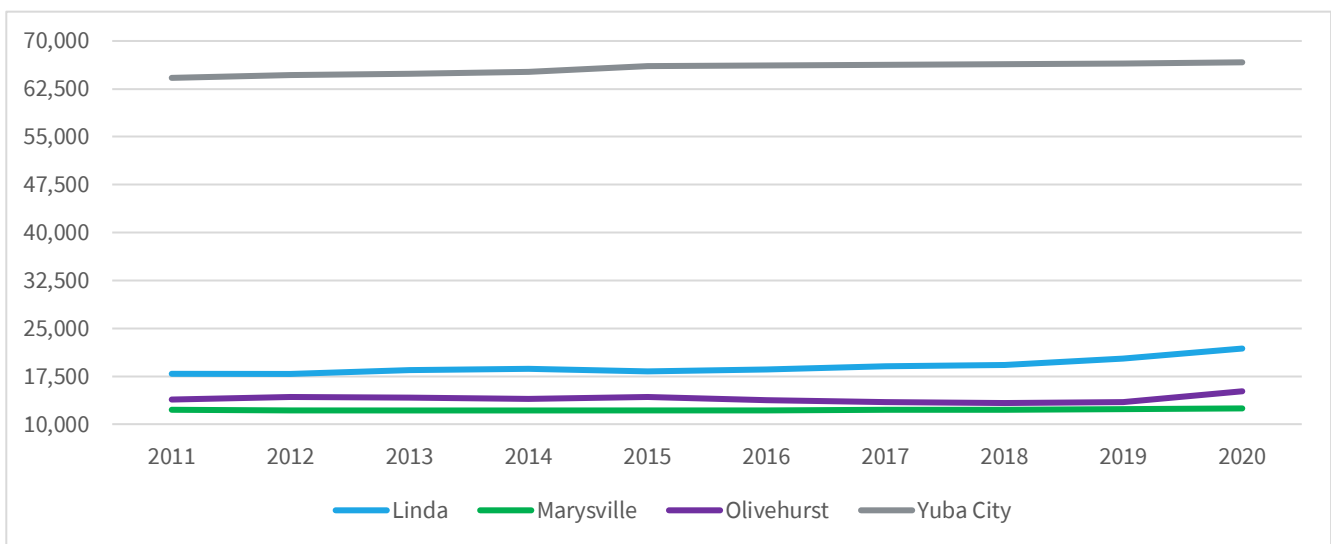


Figure 51 - Population by City

With a 2020 estimated population of 67,955, the city has grown 3.5% since 2010 and 85% since 2000, primarily due to the annexation of previously unincorporated areas. Regardless, Yuba City eclipses California's overall population growth rate. Yuba County is the 27th fastest growing county in California, and Sutter is 34th. The majority of the population lives along Highway 99 or Highway 70, the two major connectors in the sister counties. There are growing areas in southern Yuba County, namely Plumas Lake, where major housing developments are being constructed. Yuba-Sutter Transit already serves a park and ride in close proximity to these developments.

The median age by community across both counties is 32 years old, with Yuba City's population trending above 35 and Linda's population below 30.

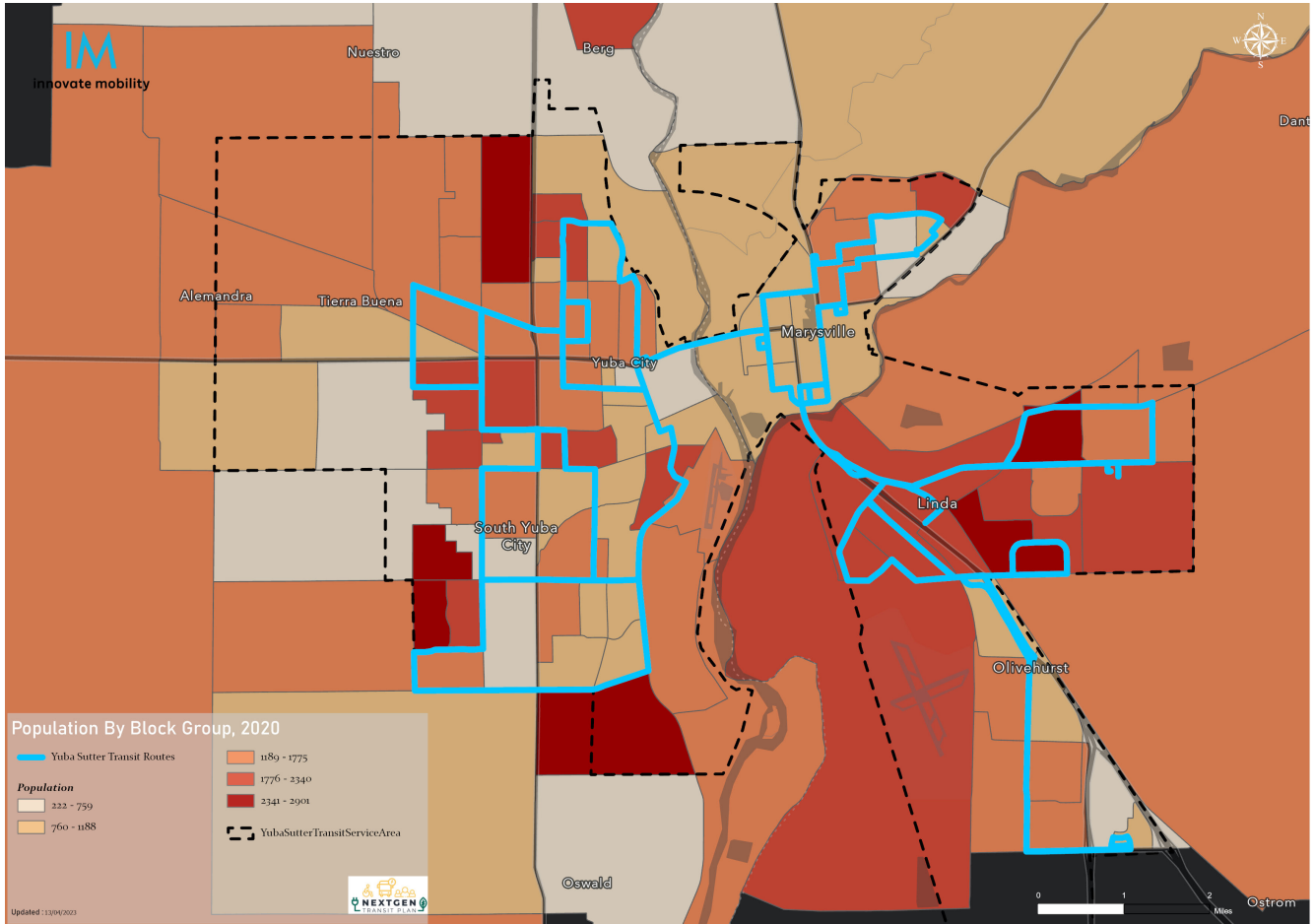


Figure 52 - Service Area Population

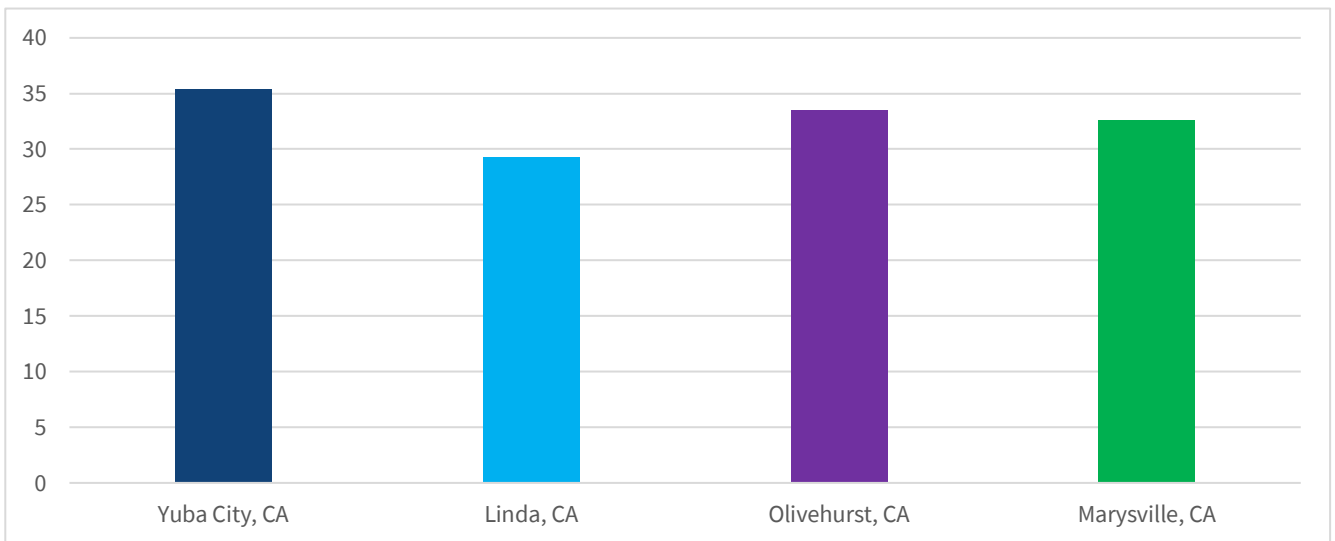


Figure 53 - Median Age by City

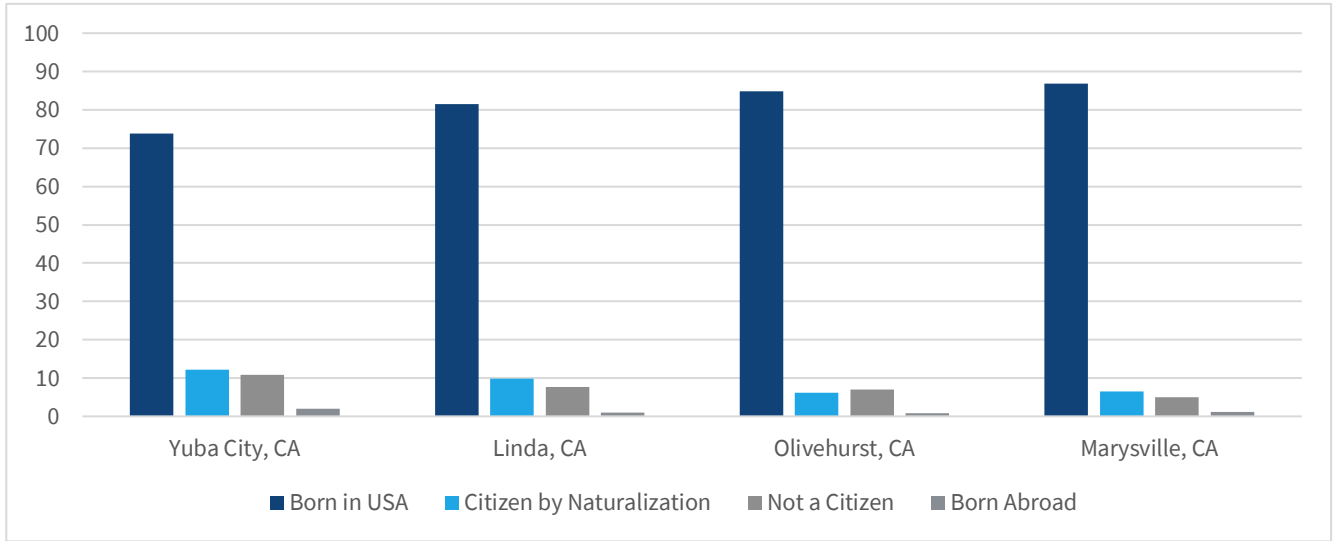


Figure 54 – Percent of Population by Origin

INCOME AND EMPLOYMENT

The median income per capita in Yuba City is \$28,000 per year with Marysville, Olivehurst and Linda residents having a median income of just over \$26,000, \$25,000 and \$23,000 respectively. This indicates that the majority of residents live below the California poverty line of \$35,500 per year.

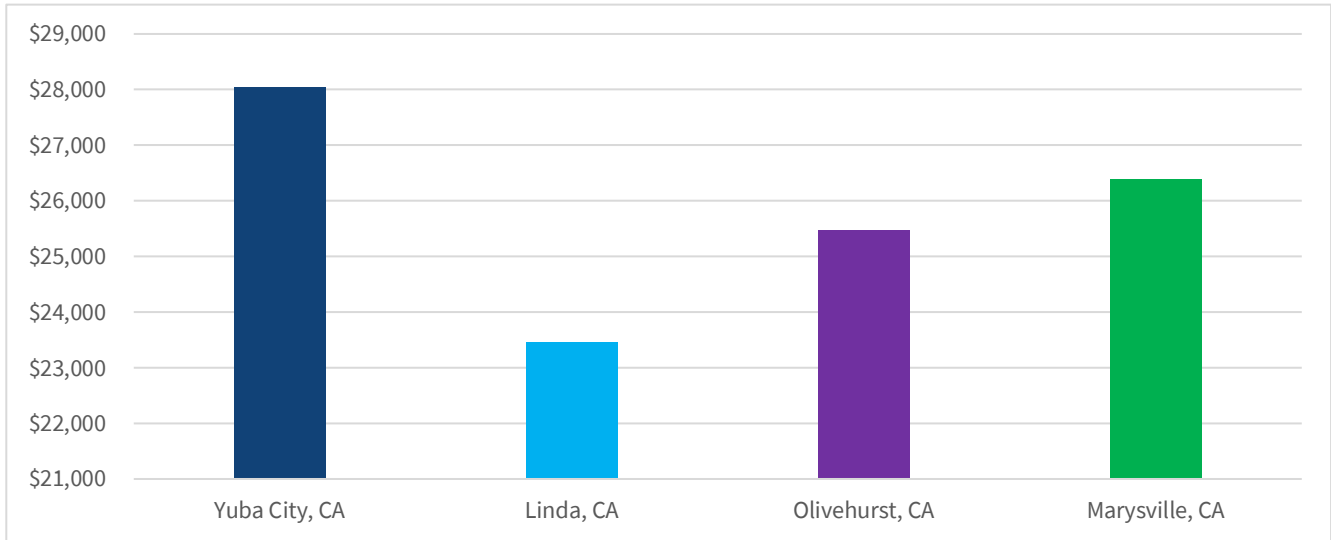


Figure 55 - Median Income by City

On a per capita basis, median income in Marysville is increasing, however, Olivehurst, Linda and Yuba City have all seen reduced median income per capita for the past two years. This is an indication that while population is growing, wages are not.

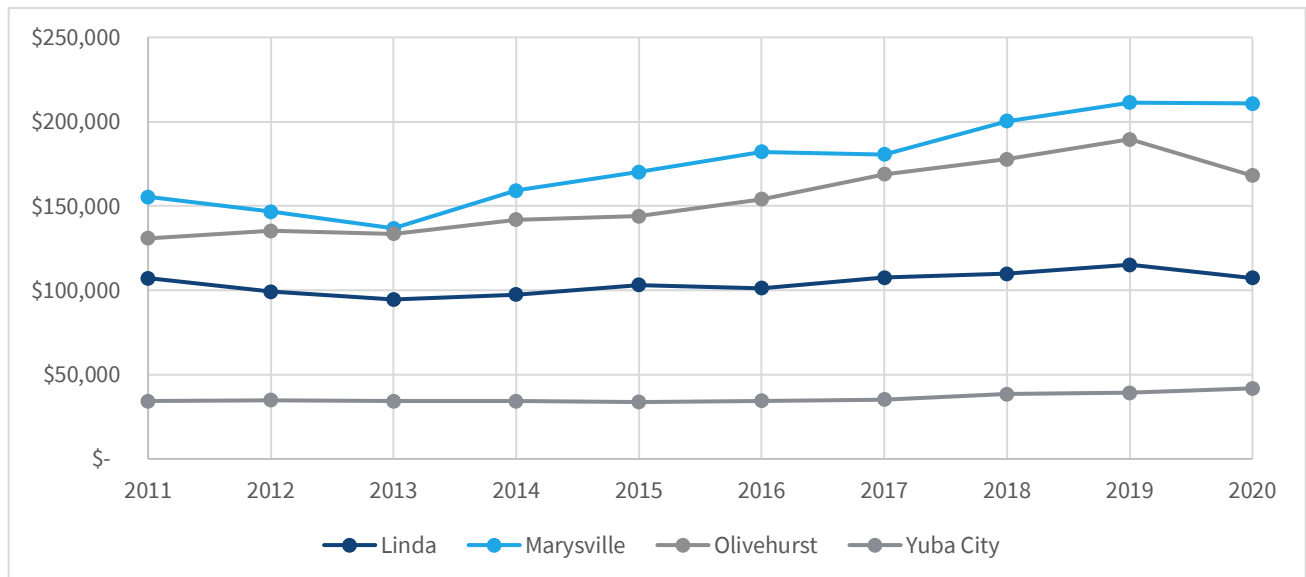


Figure 56 - Median Income per Capita

Unemployment is highest in the major population centers of the counties. Yuba City did see a significant drop in its population in the workforce due to the COVID-19 pandemic, and 3% of those that were employed prior to the pandemic have exited the workforce.

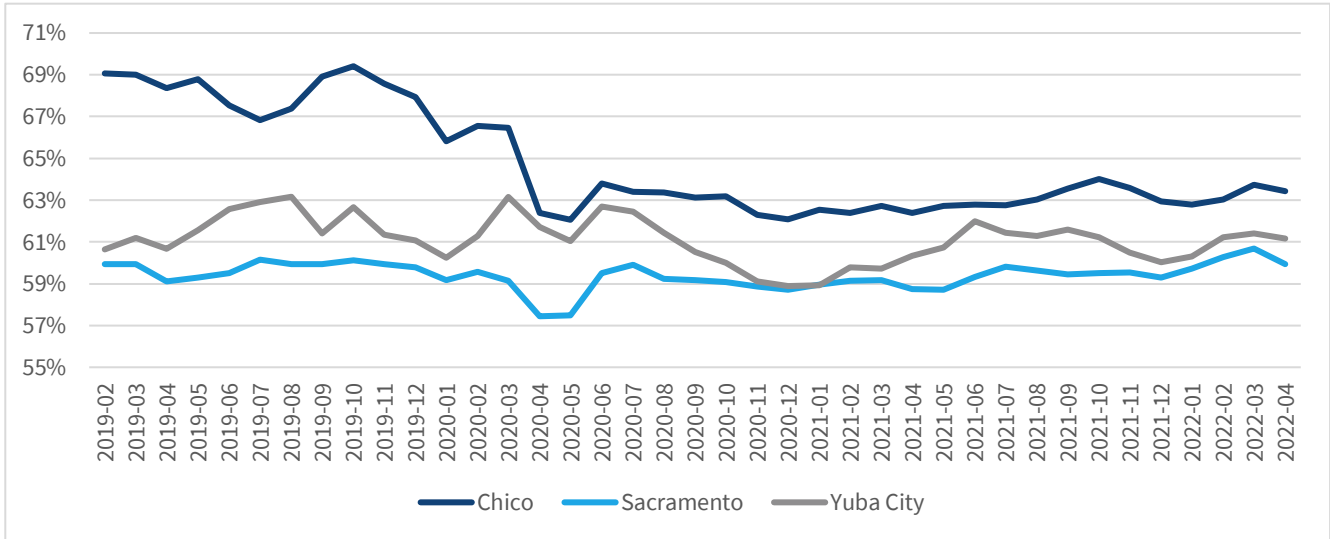


Figure 57 - Population in Labor Force

When looking a little more closely at the workforce post-pandemic, it is clear that a large portion of the population now works from home fully or a majority of the time. All four cities were seeing an uptick in work from home residents even prior to the pandemic. In 2020 Yuba City saw a 55% increase in employees who reported that they are working from home. When reviewing Yuba-Sutter Transit’s commuter ridership, it is clear that work from home has had a significant impact on the patronage of those services. There has been some anecdotal evidence of employers requesting their employees return to at least a hybrid working arrangement. The California state departments have not committed to a return-to-work plan.

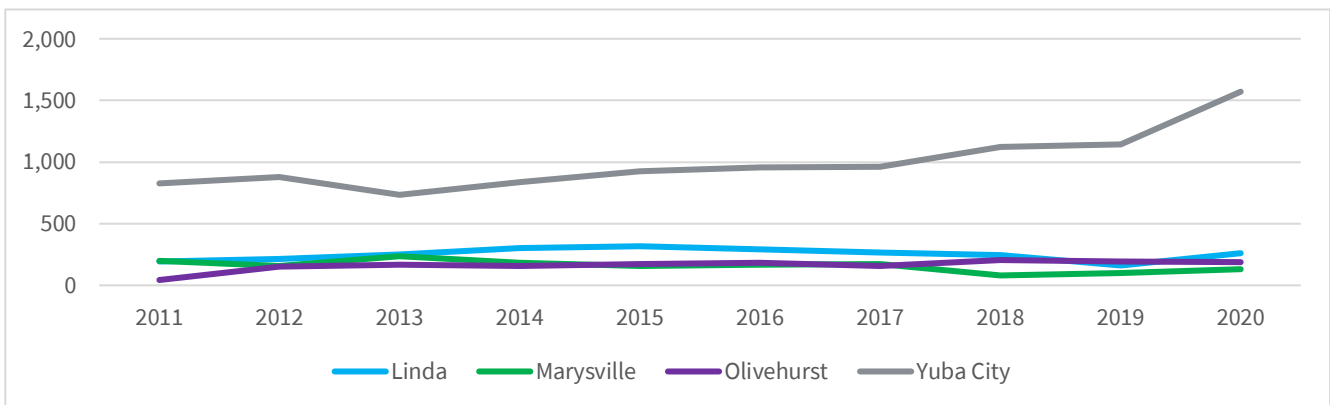


Figure 58 - Population Working from Home

POVERTY

With income levels hovering below the California poverty line, and unemployment being highest in the population centers of the counties, poverty in Yuba and Sutter counties is a major issue. In Yuba City, 16% of the population lives below the poverty line. In Linda, Marysville, and Olivehurst, 25%, 27%, and 18% respectively live below the poverty line.

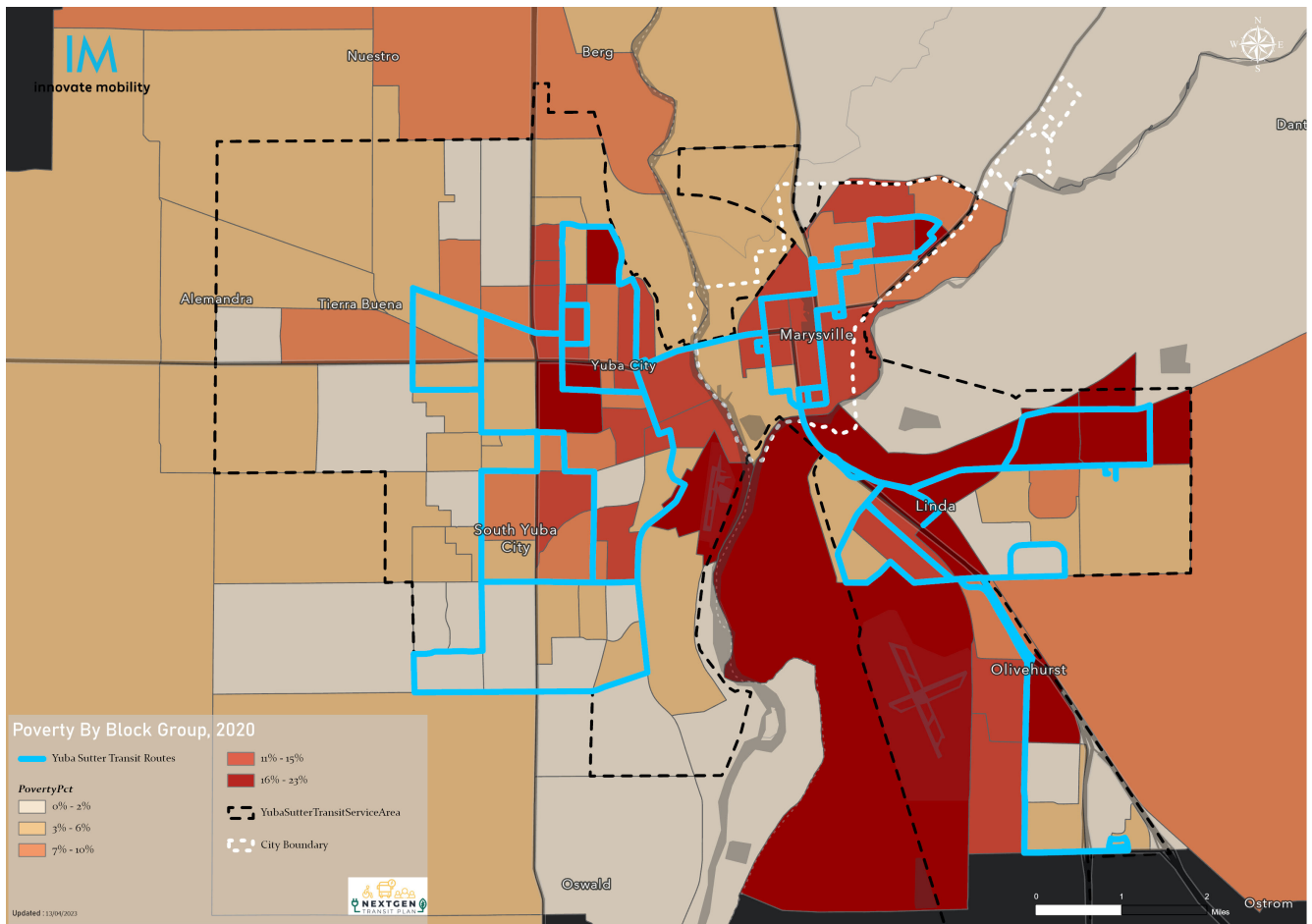


Figure 59 - Service Area Poverty

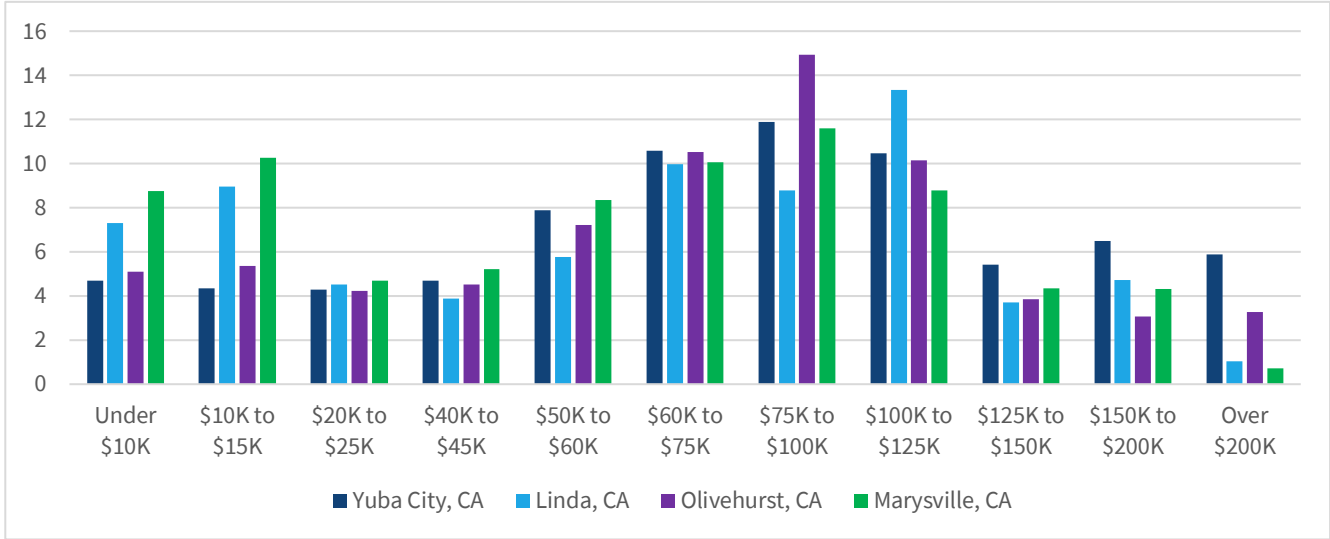


Figure 60 – Percent of Population by Income Bracket (per capita)

Overall, men earn more than women per year in Yuba and Sutter counties. The gap is not as significant in Marysville as it is in the other major cities in the counties.

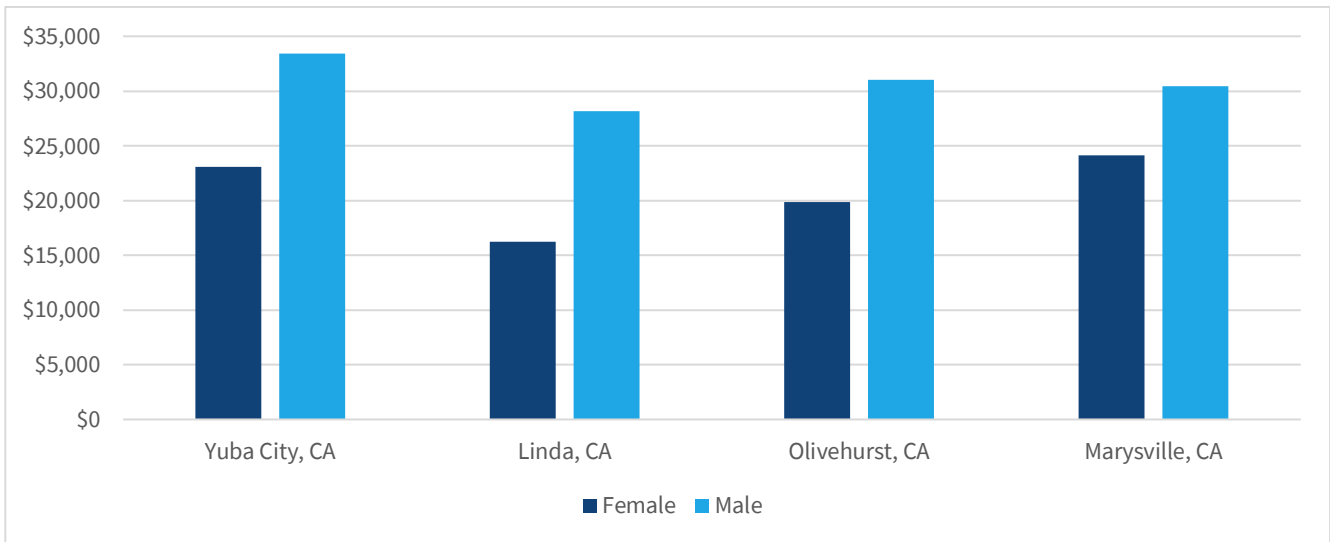


Figure 61 -Annual Income by Sex

RACE AND ETHNICITY

Using 2020 self-reported census data, Yuba and Sutter counties were mapped by both density and density by race and ethnicity. The map below shows a fairly integrated region, with some pockets of racial concentration.

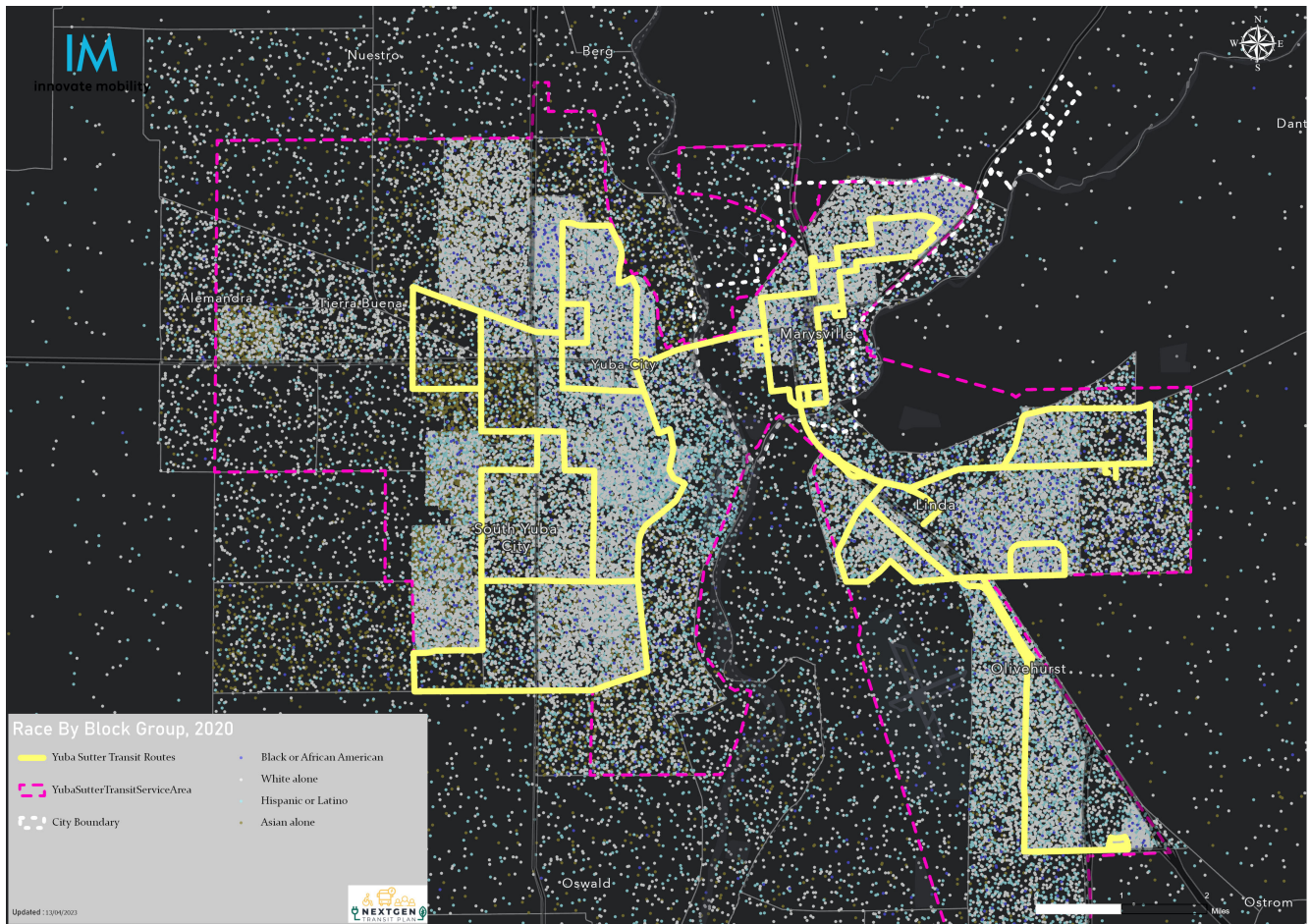


Figure 62 – Service Area Race and Ethnicity by Census Block Group

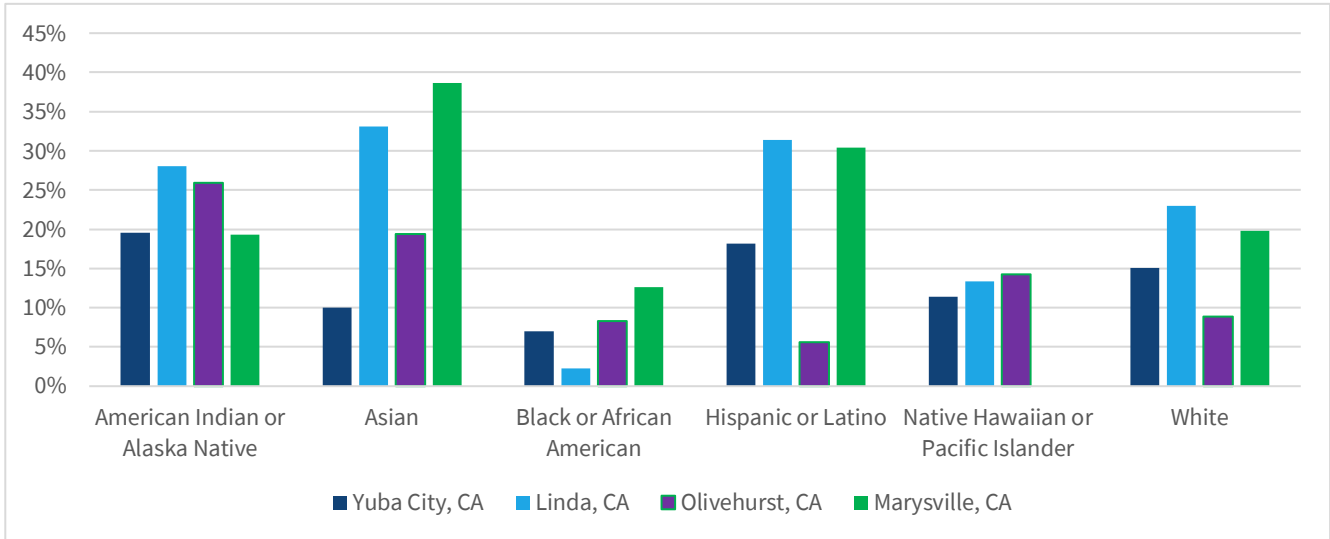


Figure 63 - Service Area Poverty by Ethnicity

The largest ethnicity experiencing poverty in Yuba and Sutter Counties identify as Asian, followed closely by American Indian/Alaskan Native and Hispanic or Latino. Areas in Olivehurst appear to have residents who identified as older and non-white in the 2020 census.

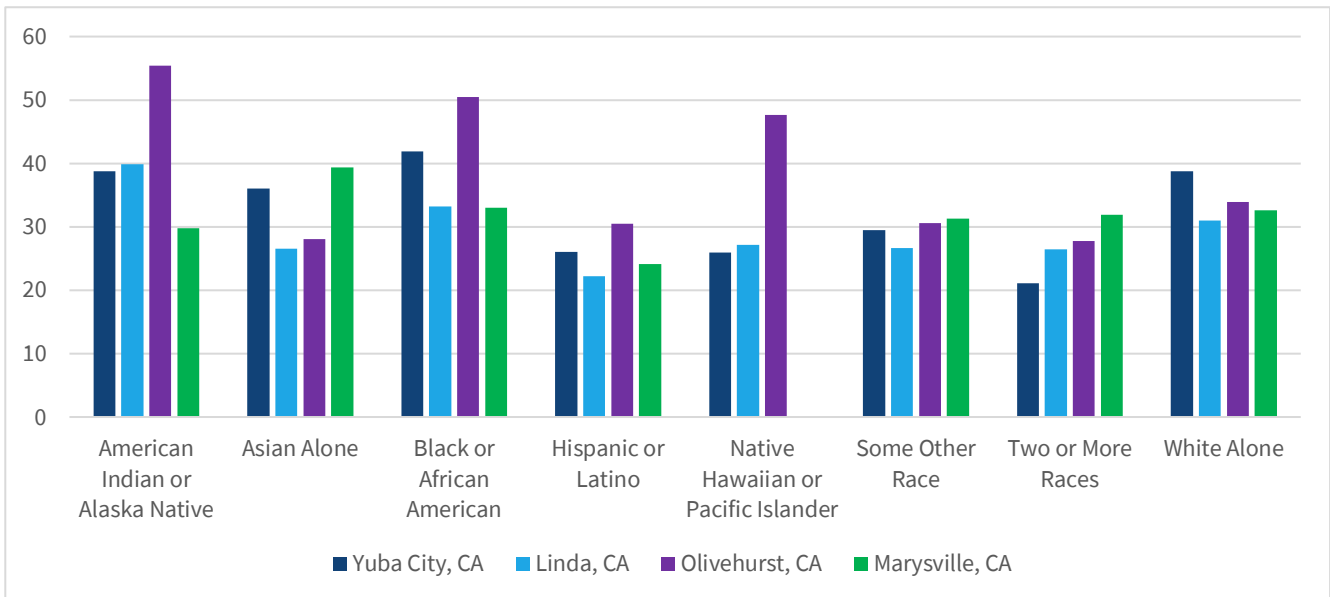


Figure 64 - Median Age by Ethnicity

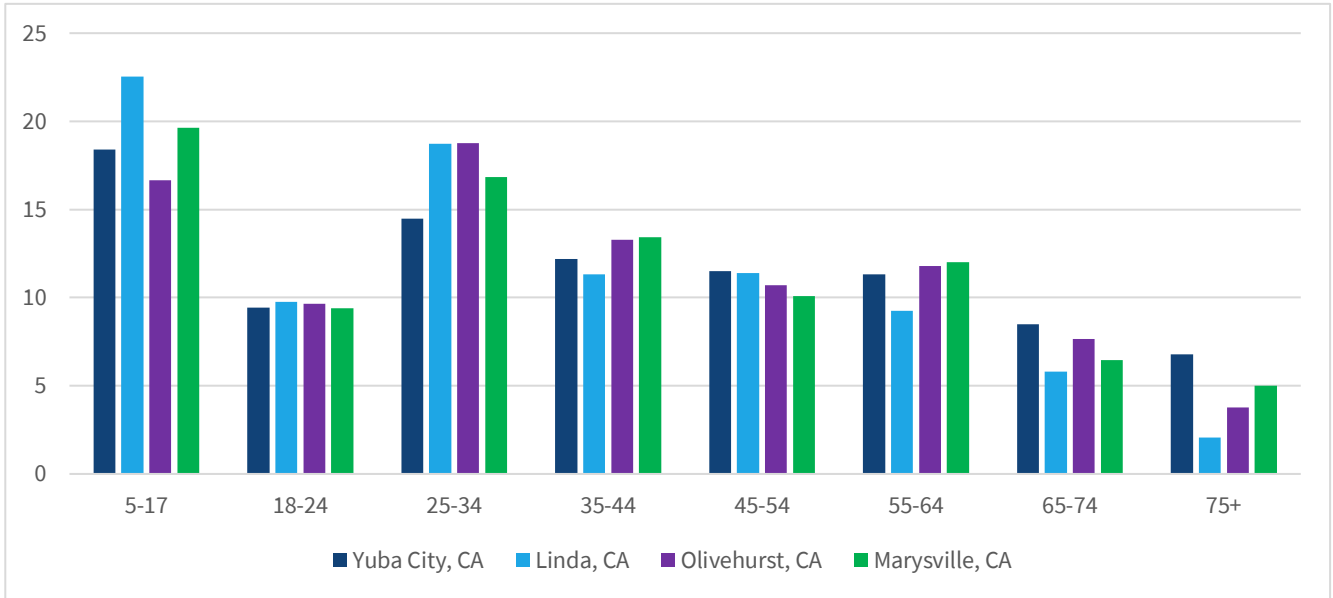


Figure 65 - Age Distribution by City

EDUCATION

When looking at highest level of degree achieved, there is a direct correlation between the poverty map and level of education. In areas of dense poverty, we see dense populations without a GED.

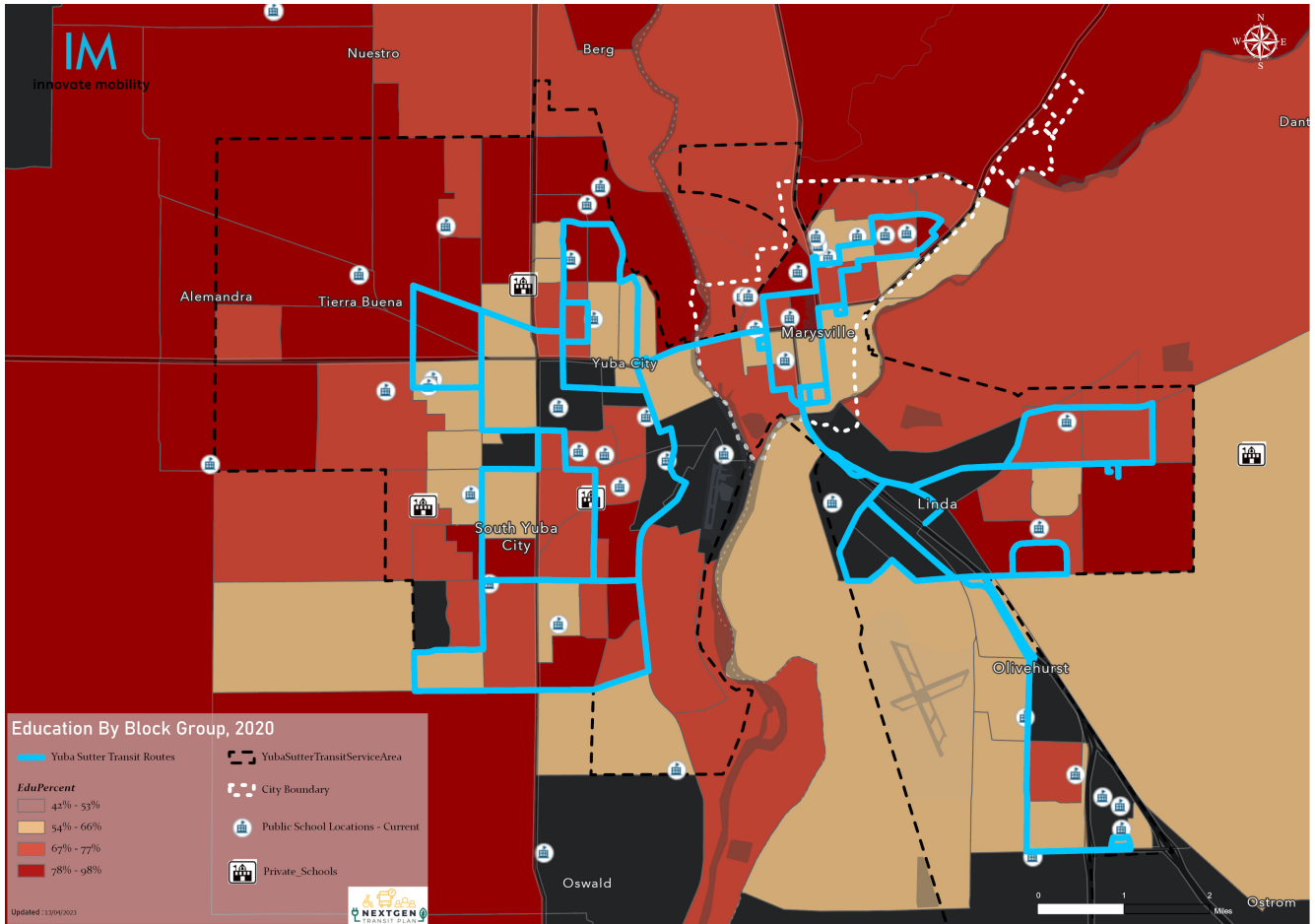


Figure 66 - Service Area Education

Areas of South Yuba City and Linda specifically have majority concentrations of people without a high school diploma. These are also areas where the majority of residents live below the poverty line. This is also the case in the southern portion of Olivehurst,

EQUITY AND ACCESS

For a very long time, transit agencies have used the terms “transit dependent” and “choice riders” to represent their user base. Transit dependency is traditionally used to ensure that there is some level of lifeline service for those who have no other option, but to use transit. It is normally derived from combining multiple socio-economic indicators such as poverty level, housing status, car ownership, and language proficiency. These factors are evaluated to determine the population’s propensity to use transit. The issue with using transit dependency to forecast ridership is that, by its own measure, this population is one or two socio-economic changes away from not depending on transit. This directly contradicts efforts transit systems nationwide have made to grow ridership and improve the overall transit riding experience.

On the other hand, transit agencies like to attract choice riders. Those who have a car, or the means to use other modes, but *choose* to use public transit. Often designing services for choice riders means nicer vehicles, or more frequency, or single seat rides.

The fallacy of trying to categorize users into these two buckets is that neither solves the problems transit agencies face today. Namely:

- 1) How do we ensure that our service area is accessible to all and...
- 2) How can we design equitable services that attract new riders, but give existing riders a better experience?

Because of these contradictions, transit dependency and attracting choice riders may not be the optimal post-pandemic indicator of whether someone will actually use transit. In many regions across the U.S., socio-economic markers are now being analyzed in new and different ways.

Despite its inherent contradictions, it is still important to look at where vulnerable populations reside. Mobility vulnerability is defined as excess sensitivity to factors affecting mobility, such as vehicle ownership, gas prices, congestion, lack of public transit access, etc. As part of this analysis, we have collected 16 indicators from the decennial U.S. census and the 2019 American Communities Survey (ACS) to determine where vulnerable populations within the region reside. These indicators are then weighted based on their applicability to transit and act as a more accurate reflector of potential ridership growth. The **Mobility Vulnerability Index** (MVI) weighs these indicators based upon historical information to determine what service areas will most likely be impacted by changes to the public transit system.

MVI data also identifies congestion impacts and where education and food deserts are located. Pinpointing Yuba and Sutter County's highest mobility vulnerable populations identifies where community voices need to be sought and heard during the recommendation phase of this project.

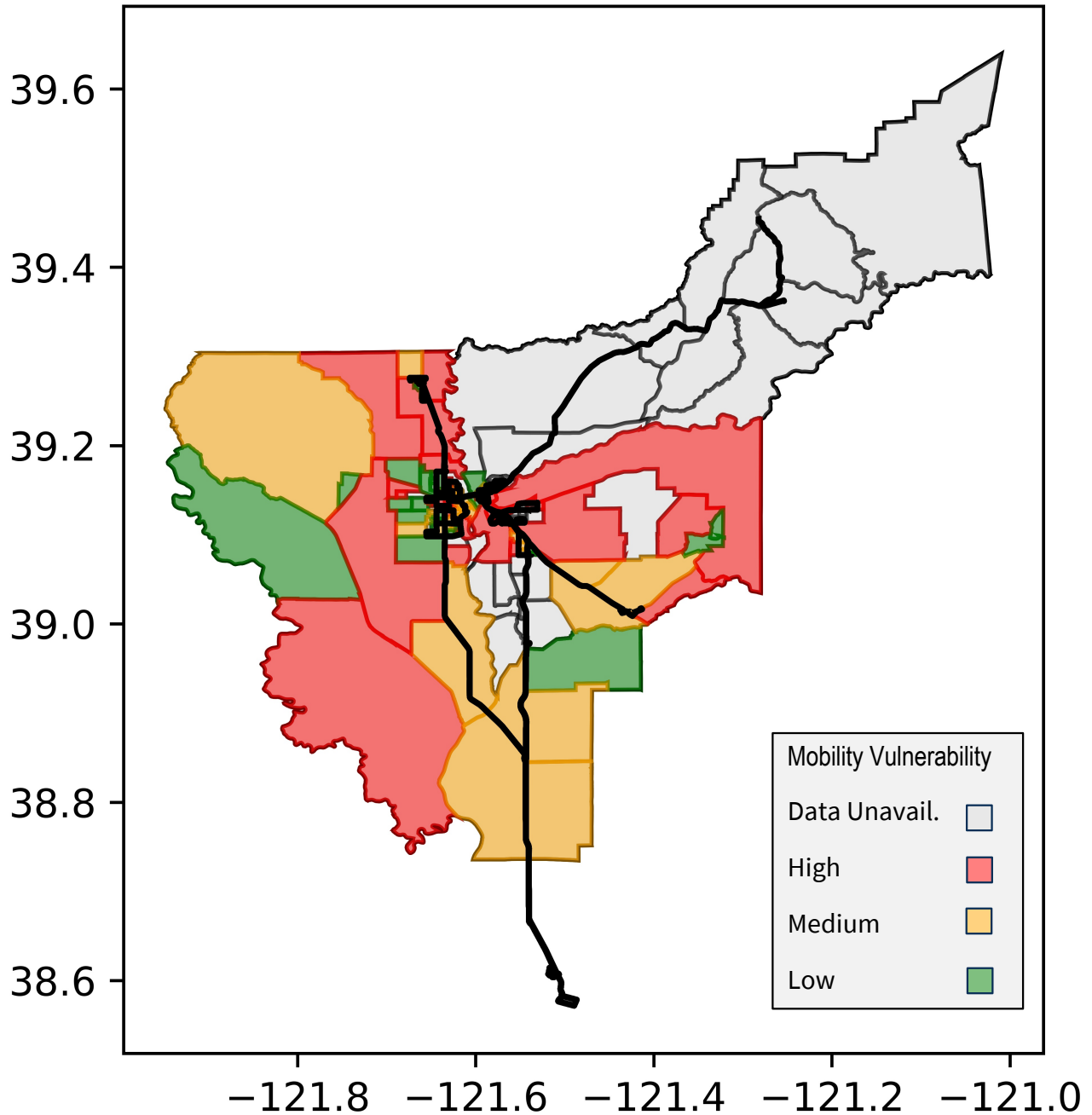


Figure 67 - Mobility Vulnerability Index

When looking at the MVI map and comparing it to the poverty map, it is clear that there are some areas that overlap, and others that do not. These latter areas indicate that while there is a clear level of poverty, residents in these areas may have access to a vehicle. However, areas in North Yuba City and the western parts of South Yuba City and Linda have both high concentrations of poverty as well as high mobility vulnerability.

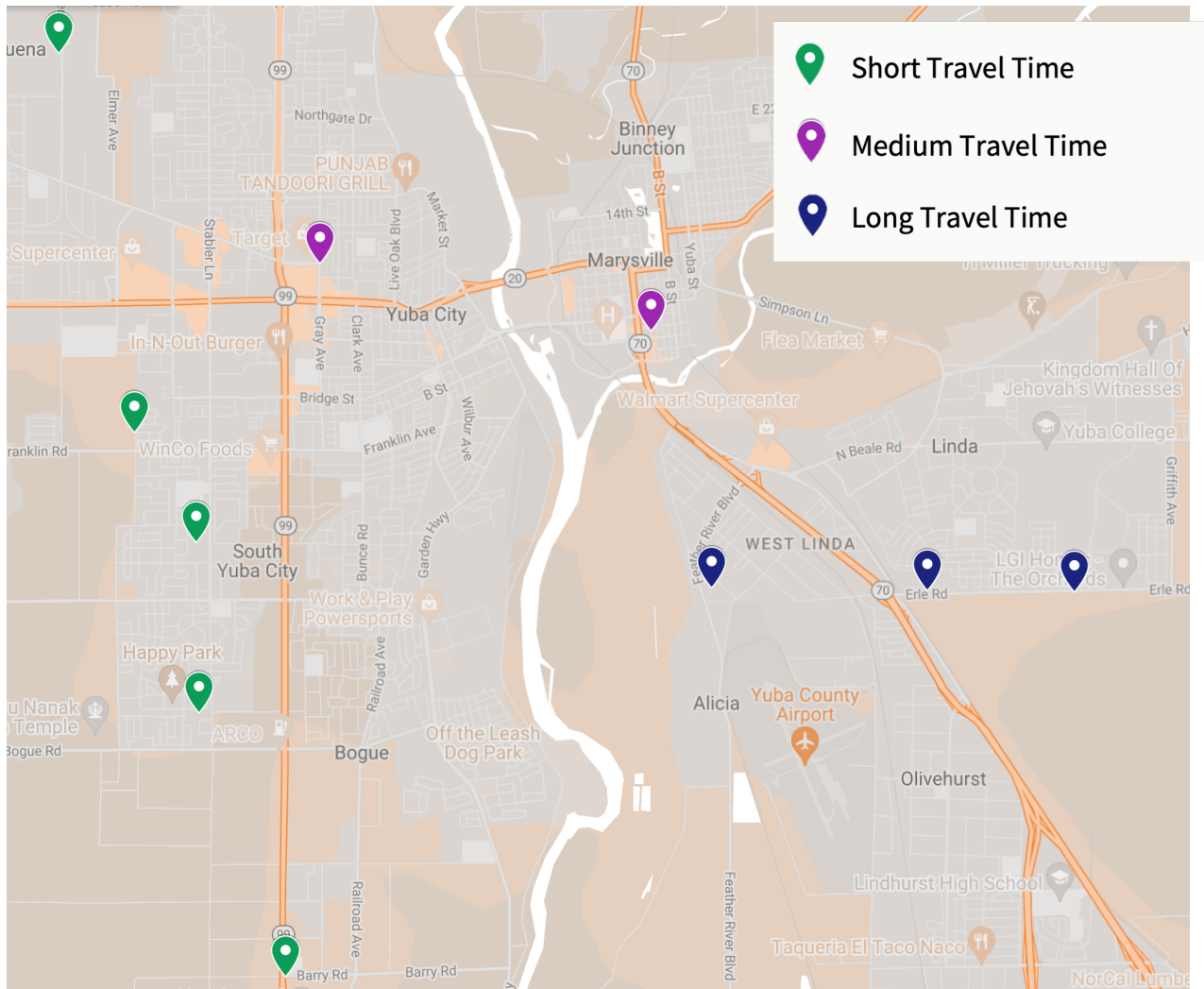


Figure 68 - Travel Time for Vulnerable Populations

For vulnerable residents, travel times to and from these locations are well **over 40 minutes** each way. This indicates an opportunity to improve access by introducing new transit services to these communities.

Overlaying locations of vulnerable populations onto the Yuba-Sutter Transit route map allows us to estimate travel times for these residents. The major trip generators for the region where vulnerable populations reside are in North Yuba City, southern Marysville and portions of Linda and Olivehurst.



Travel Patterns



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OVERVIEW

Transit planning has not evolved much in the past 20 years. Transit authorities and the firms they hire still mostly use operational data (vehicle performance, fares collected, automated passenger counters (APCs) to estimate ridership. There are a few issues with this method in understanding ridership:

- 1) Fares collected do not provide a complete picture of a user. We can only count the frequency of a trip, or the estimated patronage at a certain stop. It is very difficult, even with account-based payment systems to fully understand origins and destinations of a transit user-base.
- 2) APCs give a more accurate count of load, and ons and offs at specific stops, but cannot determine that by user.
- 3) All current methods do not address the changing travel profile that began even before the COVID-19 pandemic and cannot be used to forecast travel patterns in the future.
- 4) And we cannot solve for equity and access issues by counting existing riders.

As a result, we need new ways to understand travel patterns. As part of the NextGen Transit Plan, Yuba-Sutter Transit is utilizing a next generation way of understanding travel patterns. Using cellular and GPS data, that has been anonymized and disaggregated, and complex machine learning algorithms, the Authority is able to better understand true travel patterns. Then comparing these travel patterns across past and current years, Yuba-Sutter Transit is able to forecast future travel patterns.

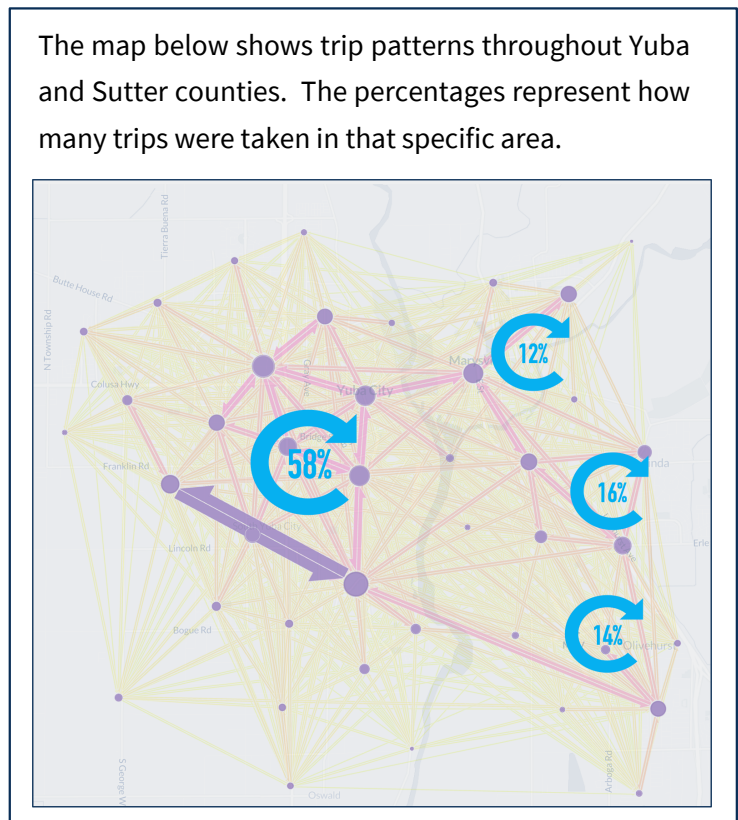
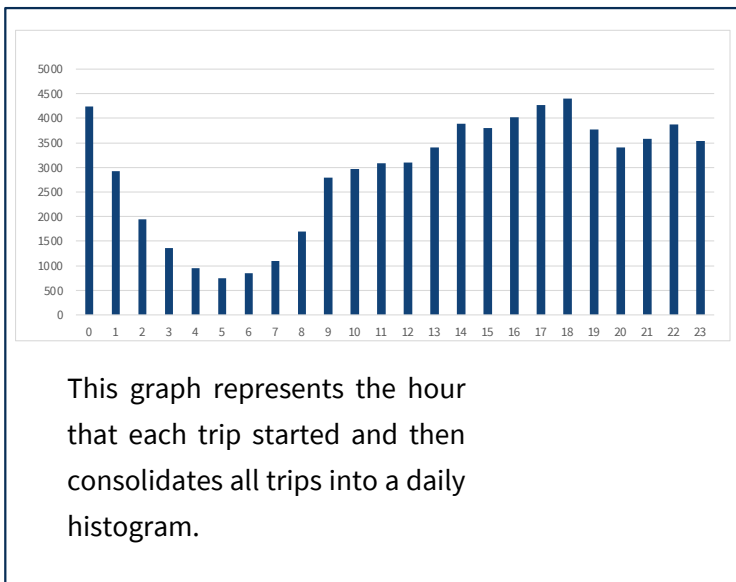
This section provides information on current and past travel patterns, and an early glimpse as to how well travel needs are met with existing Yuba-Sutter Transit services. The focus of these analyses is only on Yuba and Sutter Counties as the Authority's trips originate and end in these locations.

HOW TO READ THIS REPORT

This report contains data for all travel independent of mode within the counties of Yuba and Sutter. While Yuba-Sutter transit does provide transit services to Sacramento, using data south of Plumas Lake would muddy the analysis to a point where it would be difficult to separate local travel from commuting travel.

Please see the note below on how to interpret the report’s main graphics:

<p>69k Trips per Day</p>	<p>This box represents the total trips taken within Yuba and Sutter Counties for the time period under review. These are all trips, walking, biking, driving, or transit.</p>
<p>3.36 mi Avg. Trip Dist.</p>	<p>This box identifies the average trip distance for each of the trips taken. This is measured by taking the start point of all trips and the end point of all trips and calculating average distance.</p>
<p>7.7 mins Avg. Trip Time</p>	<p>Finally, the last box shows the average trip time. The time is calculated using the google maps API. It is not currently possible to apply traffic delays to historical data, some level of congestion forecasting has been included based on the trips taken by time of day.</p>



PRE-PANDEMIC TRAVEL PATTERNS

As shown in the Service Framework, ridership on Yuba-Sutter Transit services began dropping in FY 15/16. Fixed Route services dropped an average of 9% per year between FY 15 and FY 19. Dial-a-Ride trips dropped an average of 4% and Commuter route ridership dropped an average of 3% during this same period.

To understand travel demand prior to the pandemic, Yuba-Sutter Transit employed the use of a travel demand model. This model utilizes a combination of GPS and location-based data with U.S. Census demographic data and route data to determine how residents of the city move. The data sets used to inform the model were built from monthly data in 2019. The model determines major trip generators within the region by time of day, and then using machine learning algorithms joins trip generators to create trips. These trips are then analyzed by time of day and proximity to transit.

69k
Trips per Day

3.36 mi
Avg. Trip Dist.

7.7 mins
Avg. Trip Time

PRE-PANDEMIC TRIP DISTRIBUTION BY TIME OF DAY

Prior to the pandemic, the majority of travel within Yuba and Sutter counties took place between the hours of 9am and 11pm. **78%** of all trips observed took place within these hours. The traditional AM peak periods of 6am to 9am only accounts for **9%** of all trips taken on an average weekday. Alternatively, **28%** of trips take place during the PM peak hours of 4pm and 8pm. On average, over 69,000 trips were taken each day in 2019. Each trip was approximately 3.4 miles and took about 8 minutes.

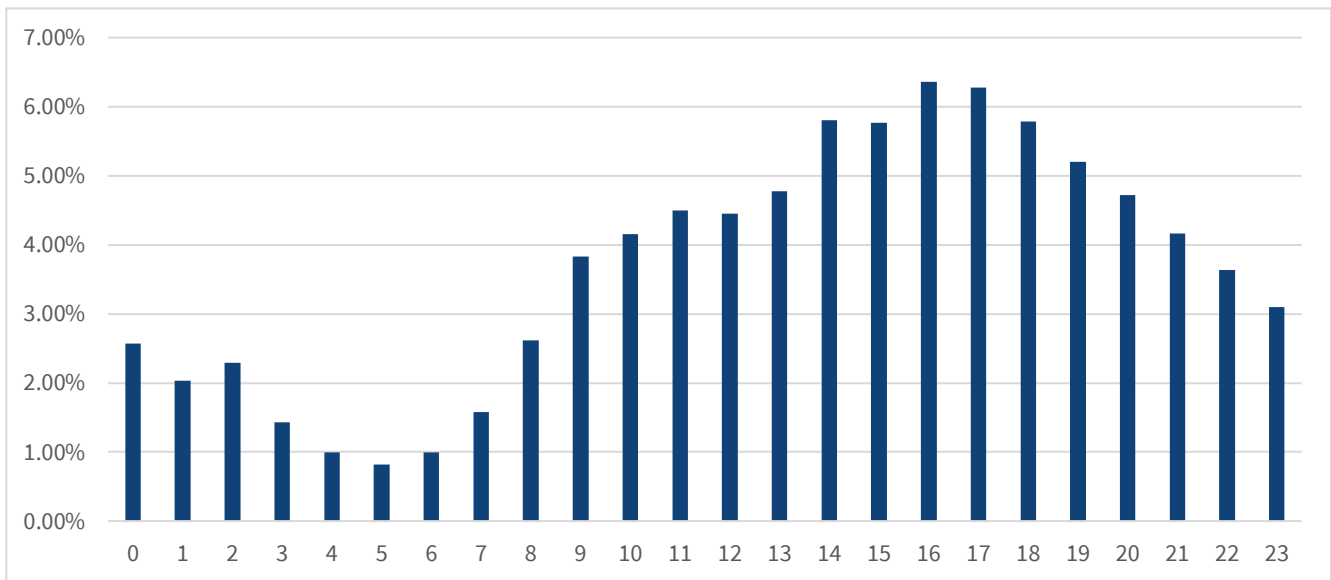


Figure 69 – Pre-Pandemic Average Proportion of Trips by Hour

PRE-PANDEMIC TRIP ORIGIN AND DESTINATION

Beyond looking at when trips take place throughout an average day, Yuba-Sutter Transit also reviews trip origin and destination. The majority of travel takes place in Yuba City south of Franklin to major trip generators north of Bogue Road. In 2019, intra-county travel was more prevalent than what will be seen in 2020 and 2022. The majority of trips in 2019 originated from Yuba City. While Linda produced the second most trips followed closely by Olivehurst and Marysville.

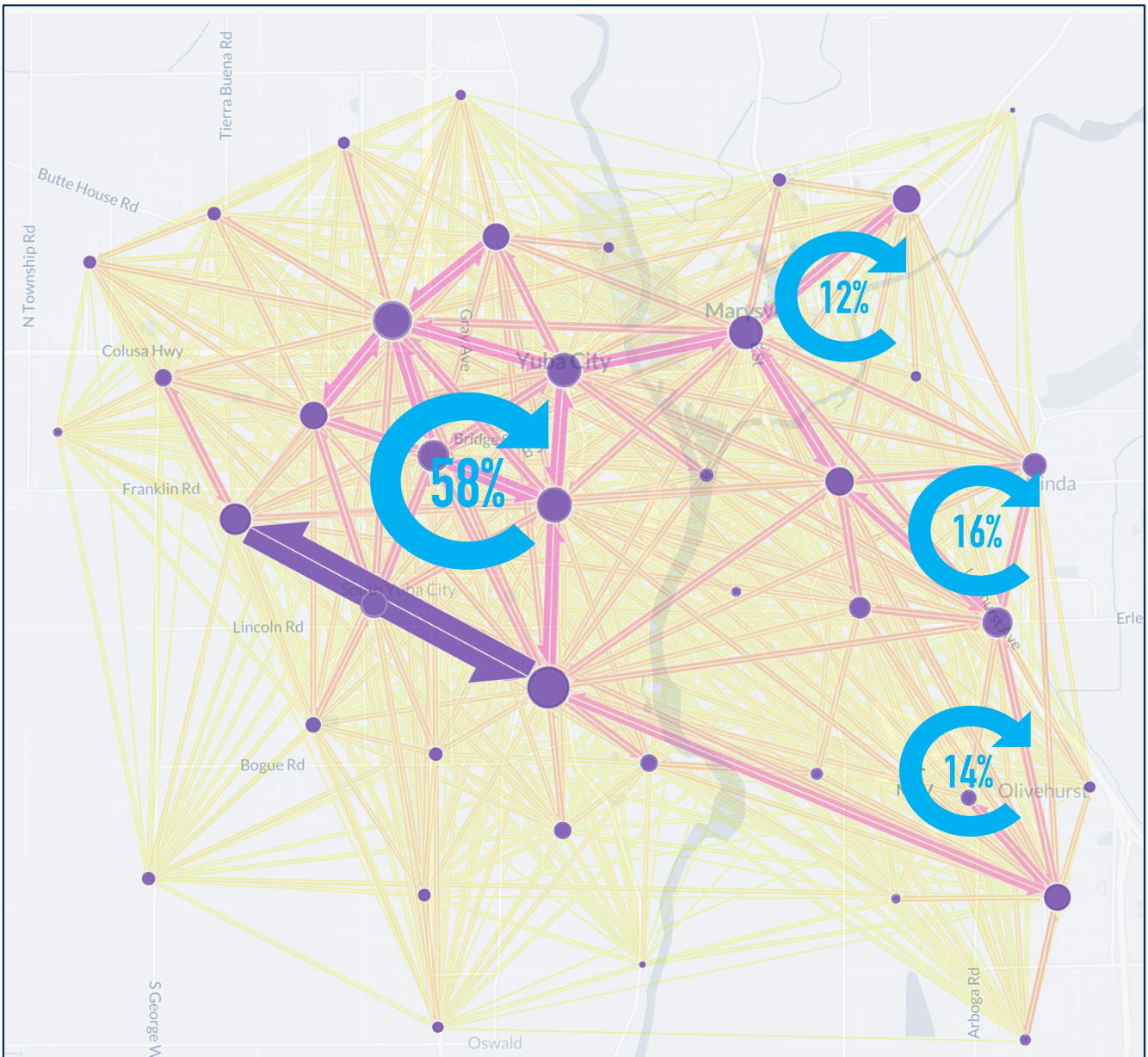


Figure 70 - Pre-Pandemic Travel Patterns

PANDEMIC TRAVEL PATTERNS

For the purposes of this plan, Yuba-Sutter Transit considers the “pandemic” to occur from March 2020 through May 2021. This roughly 15-month period encompasses the March 2020 shutdown through the Delta and start of Omicron waves. While at the time of the drafting of this report in June 2022, the pandemic has not subsided in some regions in the country, there are signs that travel patterns and habits are returning to pre-pandemic levels. The goal of reviewing this era is to show how travel patterns changed. We cannot extrapolate much from these travel patterns as they represented a heightened, once in a generation state that will more than likely not occur again. However, these data sets when compared to 2019 and 2022 data can provide intelligence on the long-term impacts to travel patterns and mobility to help shape the recommendations of the NextGen Transit Plan.

31k
Trips per Day

2.91 mi
Avg. Trip Dist.

6.6 mins
Avg. Trip Time

PANDEMIC TRIP DISTRIBUTION BY TIME OF DAY

The impact of work from home and shutdown orders is clearly shown in the chart below. Whereas prior to the pandemic, travel patterns would begin appearing at 9am, the majority of trips during the pandemic began at 3pm. Daily travel remained depressed prior to that hour. After 3pm, trip levels returned to pre-pandemic levels, with more trips that started at 6pm than prior to the pandemic. Unlike 2019, trips taken begin to drop after 7pm. Based on the data, approximately 31k trips were taken per day during the pandemic, a **55%** reduction from pre-pandemic levels. Trips taken were also shorter in both distance and duration during the pandemic.

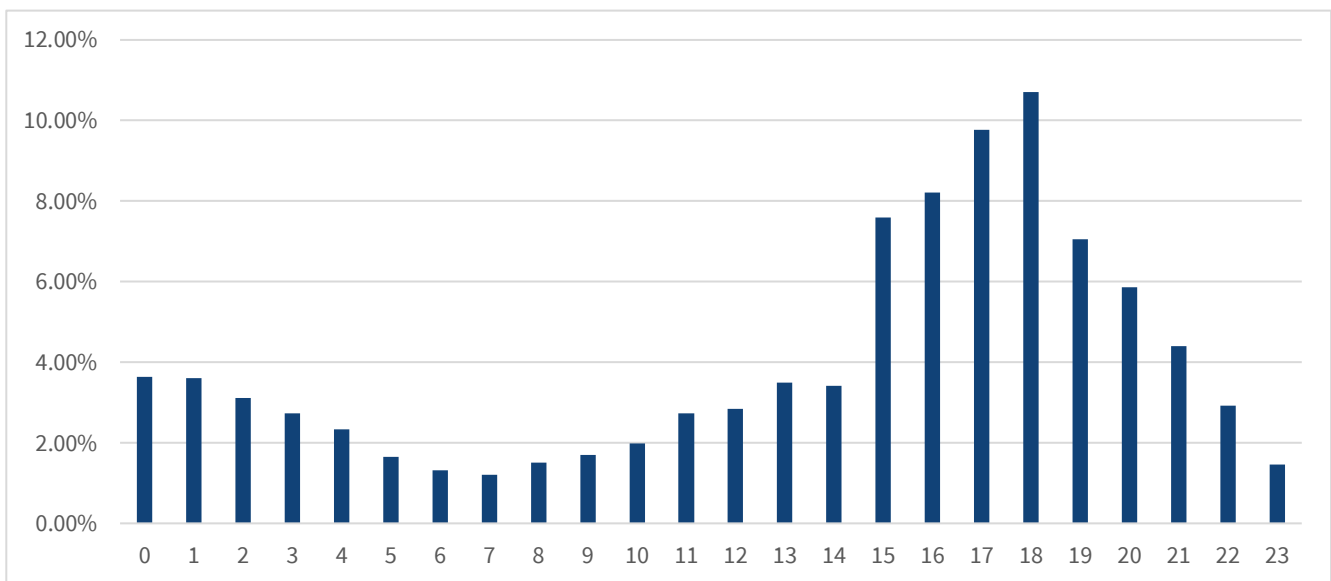


Figure 71 - Pandemic Average Proportion of Trips by Hour

PANDEMIC TRIP ORIGIN AND DESTINATION

There are similar patterns to 2019 when looking at pandemic trip origin and destination. However, there is more concentrated travel within Yuba City with new trip generators near the 5th street bridge and shopping centers which expanded near Butte House Road and Hwy 99. The Walmart in Marysville became a major destination during the pandemic. And with Yuba College not being in session, travel to Linda was significantly depressed.

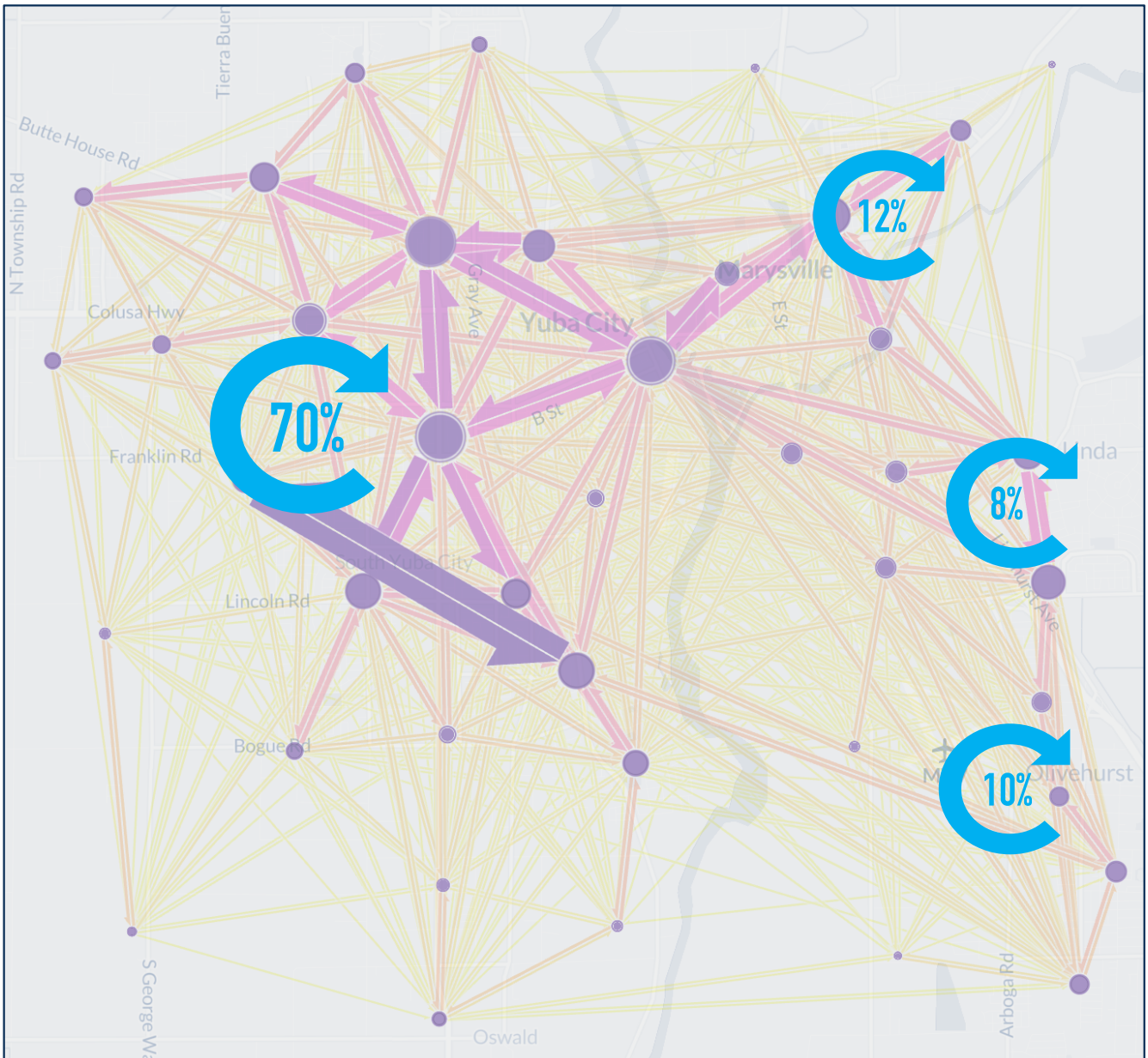


Figure 72 - Pandemic Trip Origin and Destination

POST-PANDEMIC TRAVEL PATTERNS

For the purposes of the NextGen Transit Plan, periods after May 2021 through present are considered “post-pandemic.” While the COVID-19 situation continues to be significant, it appears that most of the general public in the U.S. has become accustomed to it. Most regulations that hindered mobility have also been lifted. Finally, we are seeing more return-to-work requirements from businesses. These factors combined present a reality that is in stark contrast with pandemic-era mobility. Additionally, as inflation and gas prices continue to soar, public transit becomes an even more critical component of community social infrastructure to help residents get to work, healthcare and school. While market variables such as inflation have not been included in the data analysis below, the full impact is yet to be known.

79k
Trips per Day

4.33 mi
Avg. Trip Dist.

9.9 mins
Avg. Trip Time

POST-PANDEMIC TRIP DISTRIBUTION BY HOUR

Overall, residents of Yuba and Sutter Counties are taking approximately **13%** more trips daily than pre-pandemic levels and almost **1.5** times the number of trips they took during the pandemic. These trips are longer, and also take longer with residents traveling almost an additional mile per trip and each trip taking about 2 minutes more on average. When looking at trips by hour, it is clear that travel patterns have now changed compared to prior to the pandemic. While we still see a spike in trips at 9am, every hour after is seeing 20-30% more trips than prior to the pandemic until the early evening.

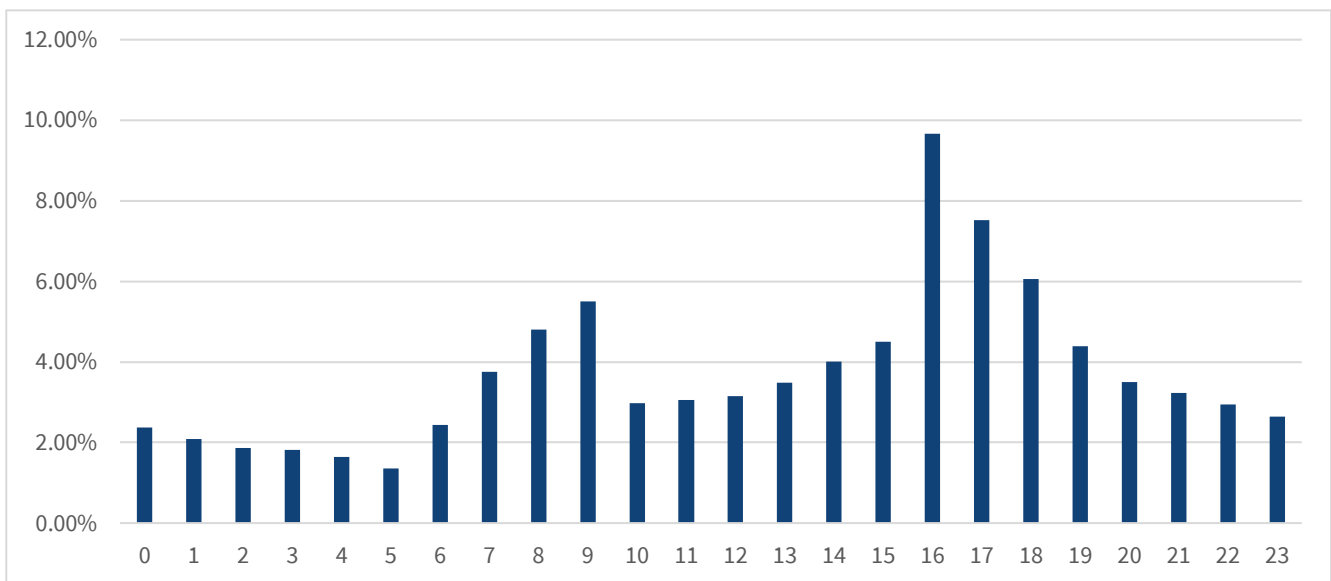


Figure 73 – 2022 Average Proportion of Trips by Hour

When comparing trip patterns between pre, mid, and post-pandemic time periods, it is clear that more trips are being taken on a daily basis than prior to the pandemic and more of these new trips are taking place earlier in the day.

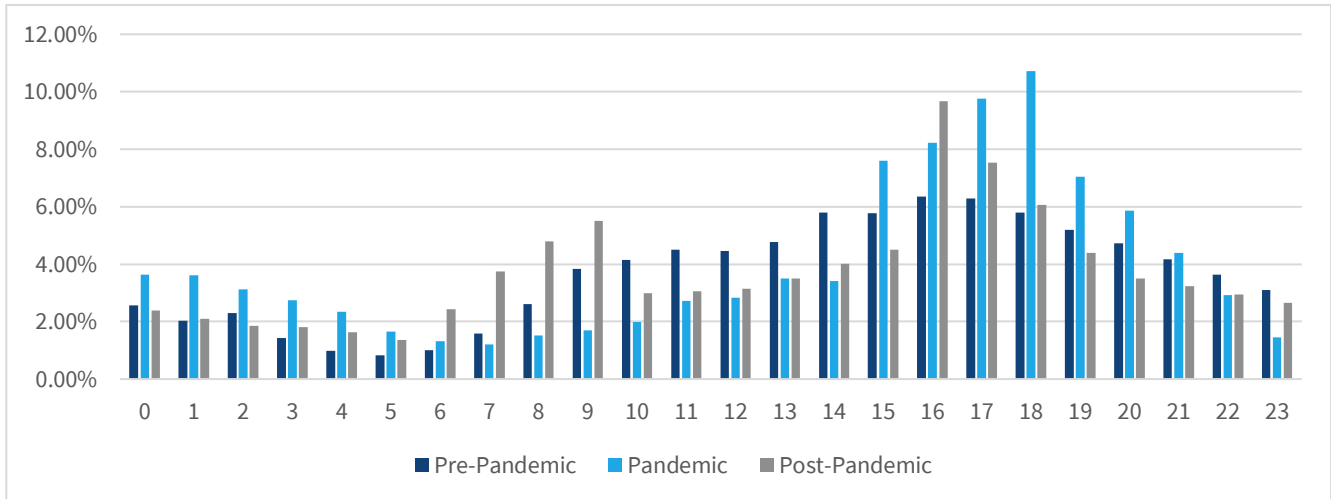


Figure 74 – Trip Comparison by Time Period

POST-PANDEMIC TRIP ORIGIN AND DESTINATION

In the post-pandemic time frame, the majority of trips in both counties either originated in or ended in Yuba City. However, travel appears to be more significant throughout both counties. New trip intensity from Olivehurst to Linda, within Marysville and between Linda and Yuba City. Overall, there is significantly more travel in Sutter County than prior to the pandemic. Much of this new travel originates within the county itself rather than coming from Yuba City, although cross-bridge travel between counties still continues to be the largest portion of travel demand in both counties.

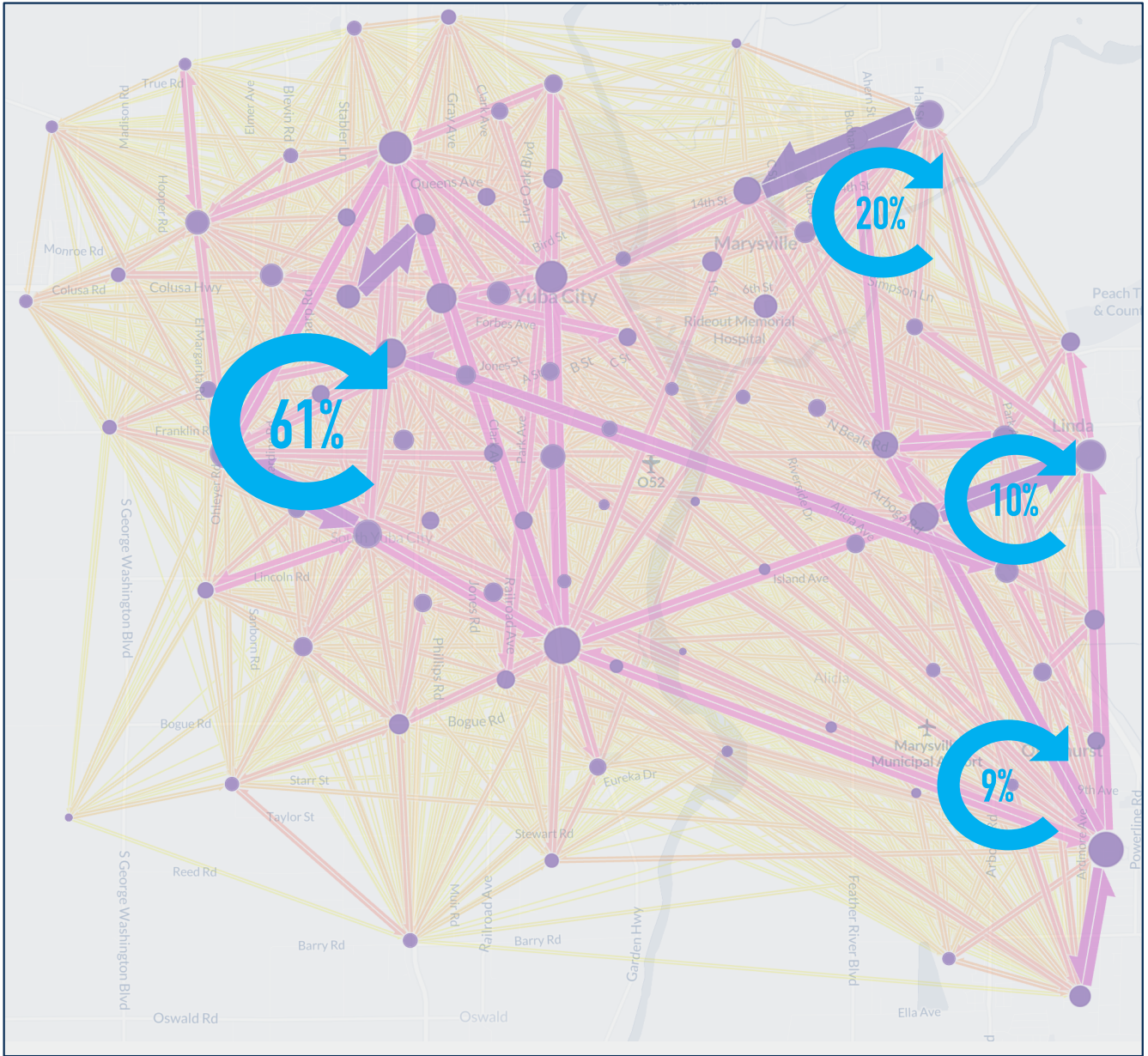


Figure 75 - Post-Pandemic Trip Origin and Destination

CITY BY CITY TRAVEL PROFILES

Using post-pandemic data, the NextGen Transit Plan can analyze city by city travel demand. This information is helpful to determine how much travel exists within the cities within the county and how much travel is intracity.

YUBA CITY

Travel within Yuba City (trips that originate and end in the city) still remains the biggest source of trips for both Yuba and Sutter counties. When comparing pre-pandemic to post-pandemic, travel intensified between Yuba City and Linda. New trip generators in North Yuba City and Olivehurst were added to the major generators that existed prior to the pandemic. These generators in South Yuba City on the western edge of North Yuba City, at Franklin Road still create the majority of trips for residents.

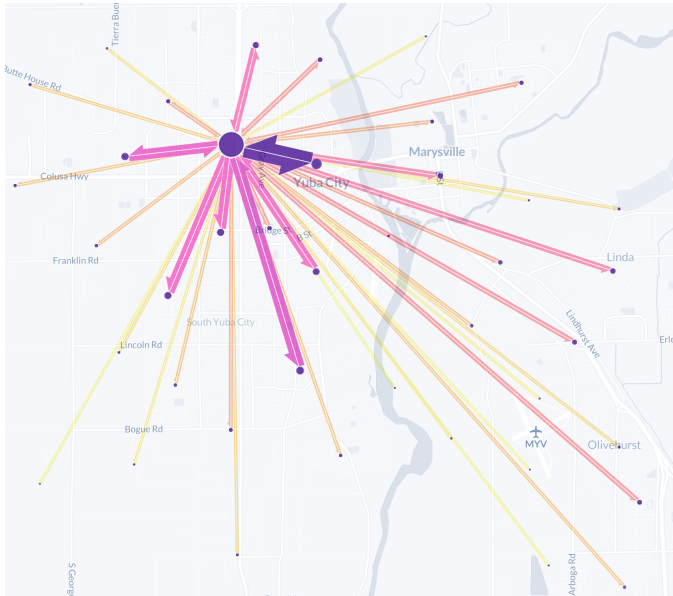


Figure 76 - North Yuba City Trip Patterns

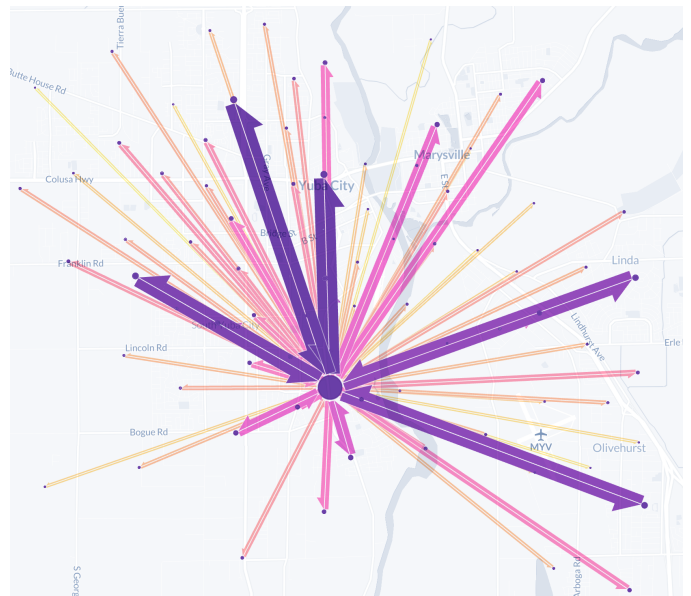


Figure 77 - South Yuba City Trip Patterns

MARYSVILLE

Travel demand in Marysville is usually made up of shorter trips, and mostly to shopping and retail. This will only increase as new commercial development is completed. The majority of this demand comes from Linda and Olivehurst. Yuba City of Marysville remains a major trip pattern for residents of the counties.

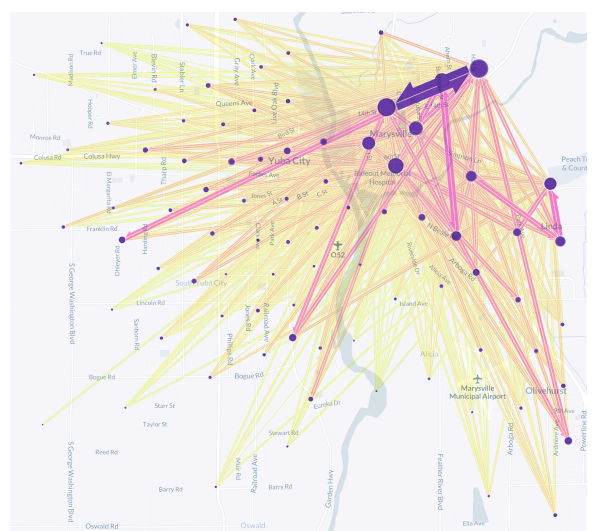


Figure 78 - Marysville Trip Patterns

LINDA AND OLIVEHURST

Travel between Linda and Olivehurst has grown substantially since 2019. And, while residents of Olivehurst travel to Linda and some to Marysville, the primary trip need is to Yuba City.

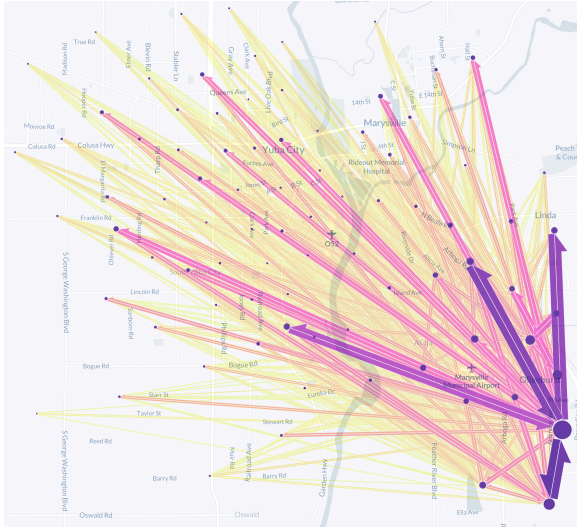


Figure 80 - Olivehurst Trip Patterns

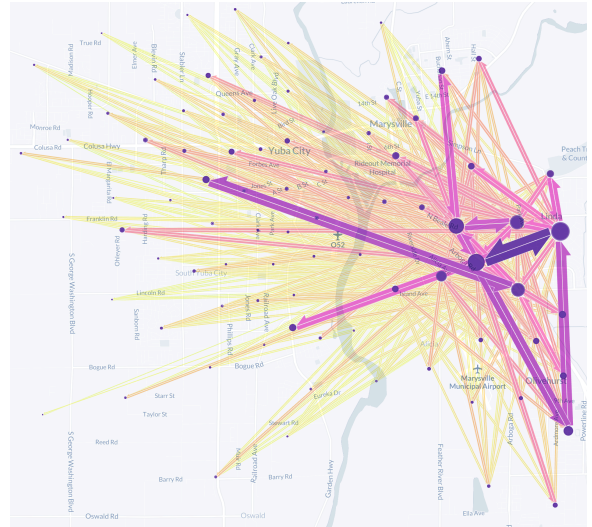


Figure 79 - Linda Trip Patterns

TRANSIT USAGE

The table below outlines, by time period, the total number of trips and the proportion of those trips that can be taken on transit. This is determined by a start and end point being within ¼ mile of an existing transit stop.

Table 10 – Potential Transit Proportion of Trips by Time of Day

Time Period	Trips	Transit Proportion
Early AM	12,171	0
AM Peak	13,371	43%
Midday	23,088	52%
PM Peak	17,594	44%
Late Night	10,300	0
Total	83,267	41%

While the System Analysis section of this document will specifically review how transit is used, the Market Analysis can be used as a guide to show current commute times for denser populations in the region. The map below shows where there is population density and how long the average commute is for these residents. As shown on the map, residents in northern parts of Yuba City and Olivehurst as well as eastern parts of South Yuba City experience travel times of greater than 30 minutes by bus.

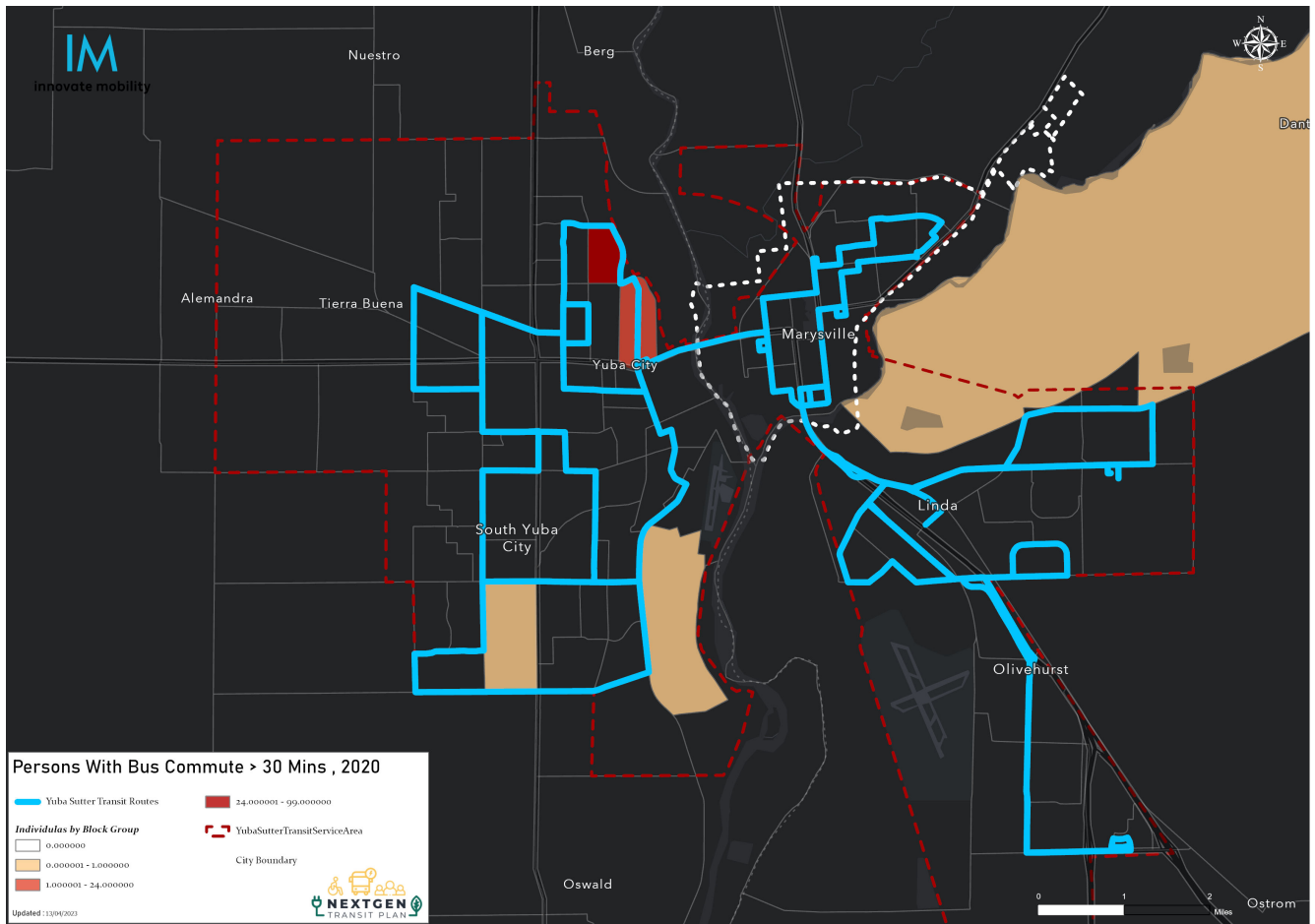


Figure 81 - Service Area Public Transit Trav



Peer Review



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Overview

A Peer Review is a process used to evaluate the performance of a transit system against agencies that have similar operating environments. Peers were selected based on a range of criteria including population, service area size, ridership, and annual service hours and miles. All peer agencies selected share geographic similarities to Yuba-Sutter Transit. As Yuba-Sutter Transit operates multiple modes, different peers were selected for each mode.

Each Key Performance Indicator (KPI) was reviewed and compared to the three service types provided by Yuba-Sutter Transit including Commuter, Paratransit, and Fixed Route. Data was pulled from the National Transit Database archives. A special COVID-19 impacts section is listed at the end of the report.

KEY FINDINGS FOR YUBA-SUTTER TRANSIT

- Only service area that has seen population growth
- Ridership drops due to COVID-19 were more significant compared to peers
- Service per capita generally lower than peers

PEER SELECTION

Yuba-Sutter Transit’s service and performance was compared to similarly sized transit agencies including:

Fixed Route Peers	Butte County Association of Gov., CA Placer County Transit, CA Napa Valley Transportation Authority, CA Merced County, CA Yolo County Transportation District, CA	Commuter Peers	Roseville Transit, CA Placer County, CA Napa Valley Transportation Authority, CA San Joaquin Regional Transit, CA
			DR Peers

HOW TO READ THIS DOCUMENT

This document is separated by the different modes operated by Yuba-Sutter Transit. Metrics for these modes, Fixed Route, Commuter, and Demand Response are then compared to the peers listed earlier. These metrics are broken into four criteria:

Ridership – This criterion includes metrics for both total ridership and ridership per capita. The latter is important to note in a peer comparison as it can provide an idea of how much service should be offered, and how that service is patronaged.

Effectiveness – When addressing system effectiveness, metrics for system productivity are compared. Productivity is defined as a metric of riders to volume of service (hours and miles).

Operations – Each mode is also compared as it relates to pure operational elements like revenue hours operated. In this criterion is also the measurement for system speed, which is an important metric for overall quality of service.

Efficiency – The final peer comparison is made on overall system efficiency by mode. Efficiency is primarily a measure of economics in system performance. The key elements compared are cost per hour, cost per rider.

For each metric, the following chart is included:

-4% Pre-COVID	The first box provides the annual peer group performance for the years 2015-2016 compared to 2018-2019
-29% COVID	The second box provides the change in the metric for 2020 compared to 2015-2019
-9%/-22% Yuba-Sutter Pre/COVID	The final box shows the average annual pre-COVID-19 performance for Yuba-Sutter Transit specifically as well as the drop in 2020 for the Authority.

SERVICE AREA OVERVIEW

POPULATION

Using the fixed route peers, one of the key metrics to compare is the size of the population served. The population in Yuba-Sutter Transit’s service area grew 2.2% from 2015-2020. The remainder of the peer group saw almost no population growth aside from Placer County.

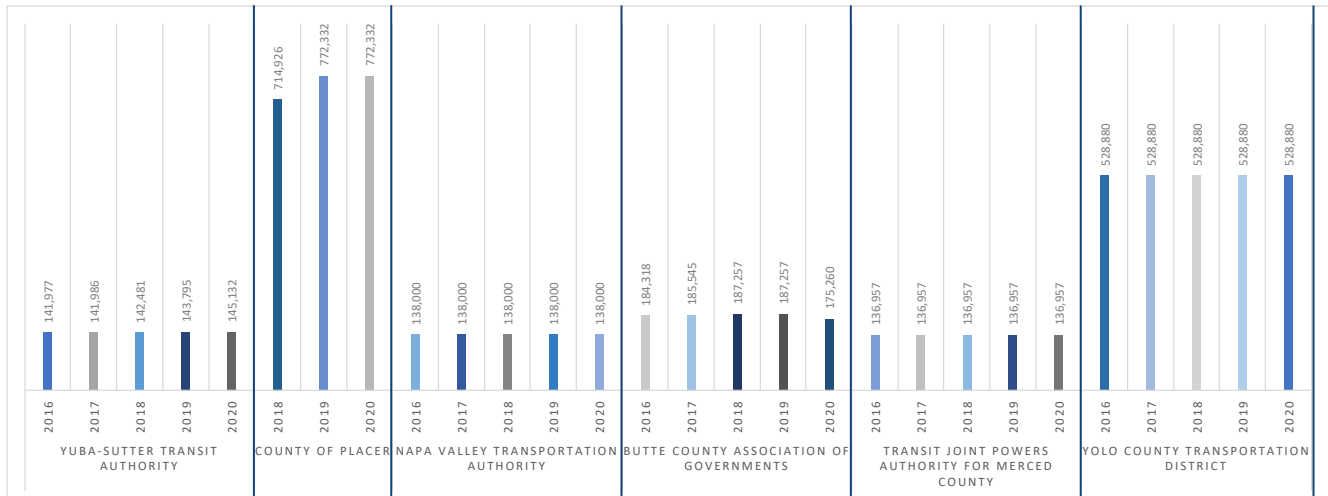


Figure 82 – Service Area Population (Fixed Route Peers)

VEHICLES MILES PER SERVICE AREA CAPITA

Vehicle miles per service area capita provides an indication of whether or not transit service has kept up with population growth. In all cases, vehicle miles actually reduced when compared to population growth. The peer group on average saw a reduction of 13%, while Yuba-Sutter Transit’s reduction was 6%. This is important as the Yuba-Sutter region is one of only two to experience population growth during the review period.

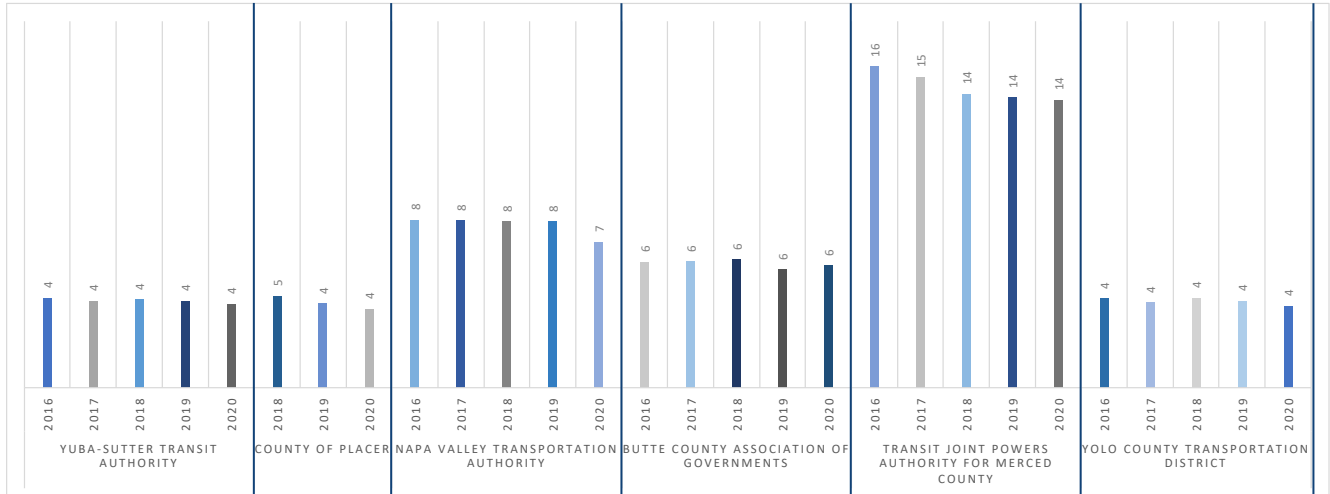


Figure 83 – Vehicle Miles per Service Area Capita (Fixed Route Peers)

FIXED ROUTE RIDERSHIP

TOTAL RIDERSHIP

Yuba-Sutter Transit’s fixed route service carried 567,872 passenger trips in 2020, a decrease of 29% from 2019, continuing a downward trend that began in 2015 and has been seen nationally at other agencies as well. The majority of the ridership reduction in 2020, however, is due to the COVID-19 pandemic.

Yuba Sutter’s ridership surmises a large car culture in the service area, but also indicates the potential for ridership gains with modernization efforts and updates to service offerings.

-18%
Pre-COVID

-42%
COVID

-18%/-49%
Yuba-Sutter
Pre/COVID

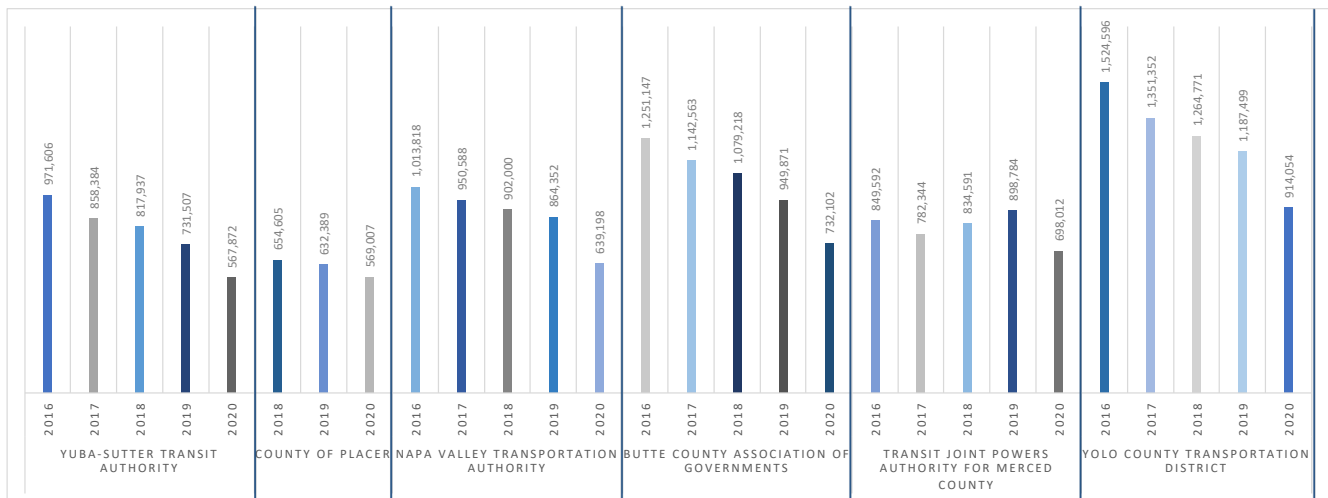


Figure 84 – Fixed Route Passenger Trips

PASSENGER TRIPS PER CAPITA

The NextGen Transit Plan will focus its recommendations on the average passenger trips per capita due to the large size of the service area. As stated earlier, the Yuba-Sutter region is the only one of only two to see population growth during the review period. With that said, the peer group members all saw average transit usage drop during the review period. Transit usage per capita in the peer group dropped an average of 25% per year from 2015-2019. In 2020, usage dropped an average of 44% across the peer group. Overall, transit usage per capita in 2020 is on average approximately half of what it was in 2015 for these peer agencies.

-25%
Pre-COVID

-44%
COVID

-19%/-52%
Yuba-Sutter
Pre/COVID

For Yuba-Sutter Transit’s fixed route services, usage dropped an average of 19% per year from 2015-2019. Passenger trips per capita in the Yuba-Sutter region dropped an additional 33% due to the pandemic. In total Yuba-Sutter’s ridership per capita has dropped to about half of what it was in 2015 which is in line with its peers.

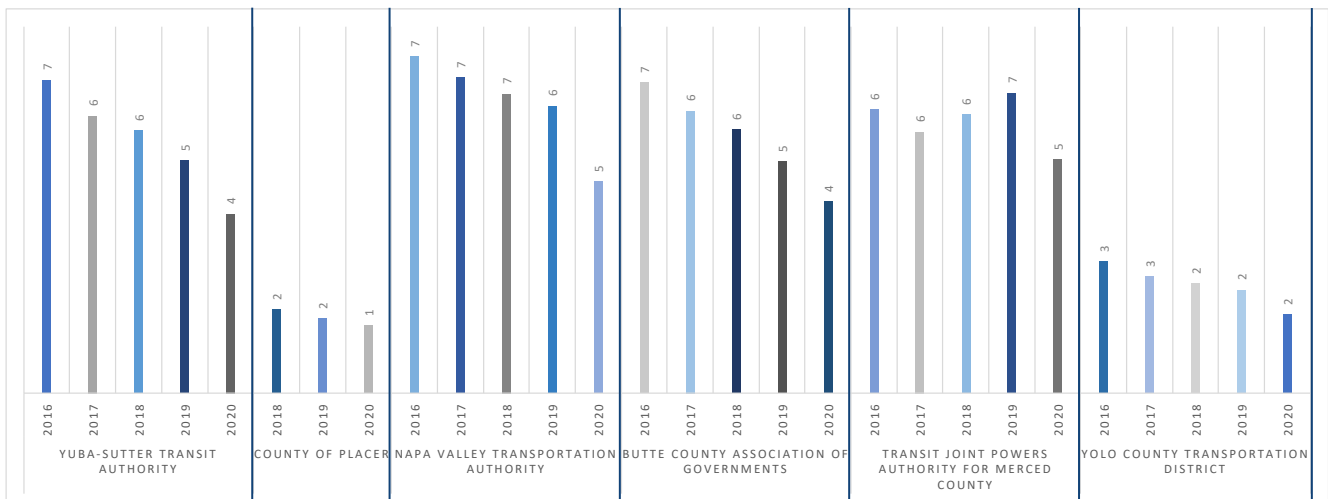


Figure 85 –Fixed Route Passenger Trips per Capita

FIXED ROUTE EFFECTIVENESS

PASSENGER TRIPS PER REVENUE HOUR

Fixed route effectiveness is often measured by looking at passenger trips per hour and per mile. In terms of hourly productivity, the peer group saw an average of a 11% drop each year between 2015-2019 in passenger trips per hour. The peer group saw an average 25% drop in passenger trips per hour due to COVID.

Yuba-Sutter Transit saw an average 18% reduction in passenger trips per hour in comparing 2015-2016 to 2018-2109, reaching a 43% reduction during COVID. In total, Yuba-Sutter’s trips per revenue hour are down 54% since 2015, a significantly larger reduction than its peers have seen.

-11%
Pre-COVID

-25%
COVID

-18%/-43%
Yuba-Sutter
Pre/COVID

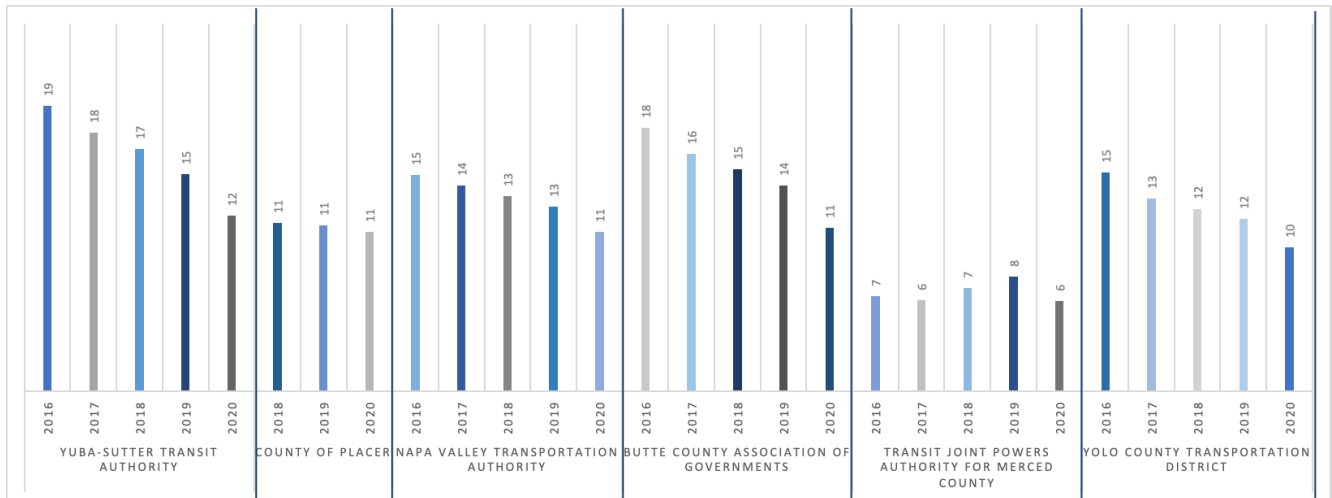


Figure 86 –Fixed Route Passenger Trips per Revenue Hour

FIXED ROUTE OPERATIONS

REVENUE HOURS

In this section we look at miles and hours operated and the overall system speed. Overall, Yuba-Sutter Transit’s service levels stayed essentially flat in the years leading up to the pandemic. In 2016 and 2018, the Authority’s hours of revenue service increased slightly. Within the peer group, the average pre-pandemic decrease in revenue hours was 8%. This is in line with industry averages. In 2020, agencies in the peer group reduced their hours of service by an average of 12%. Comparatively, Yuba-Sutter Transit reduced its fixed route revenue hours by 4%.

- 8%
Pre-COVID
- 12%
COVID
- 0%/-4%
Yuba-Sutter
Pre/COVID

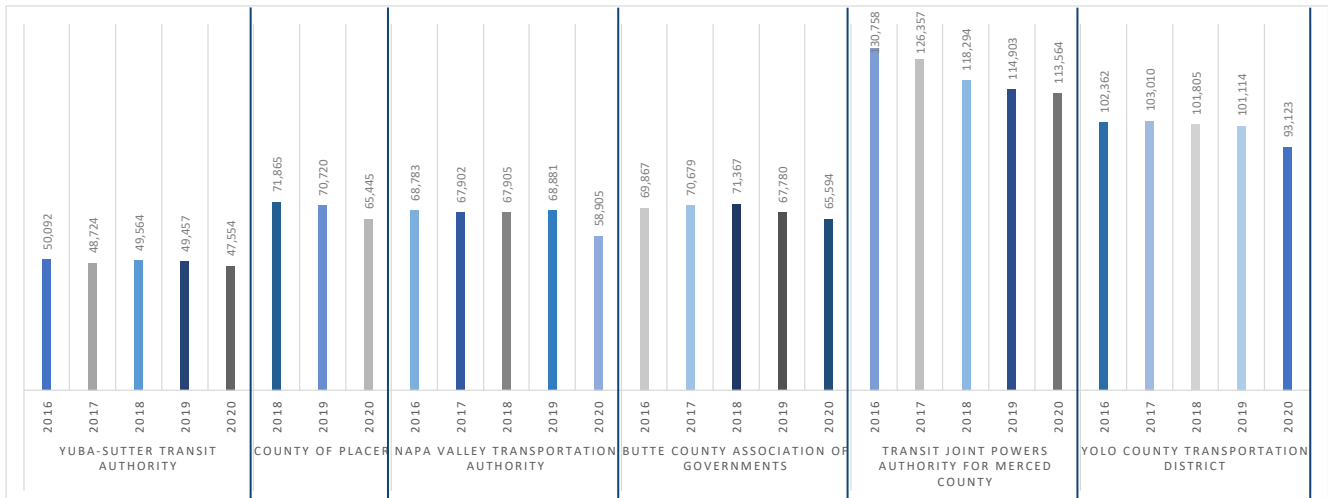


Figure 87 – Fixed Route Revenue Hours

REVENUE OPERATING SPEED

In terms of operating speed, the peer group operated at an average speed of 18 mph prior to the pandemic. In 2020, this increased to 19 mph – this can be attributed to fewer cars on the road. Yuba-Sutter Transit has operated at essentially the same speed since 2015 on its fixed route services: 11.8 mph.

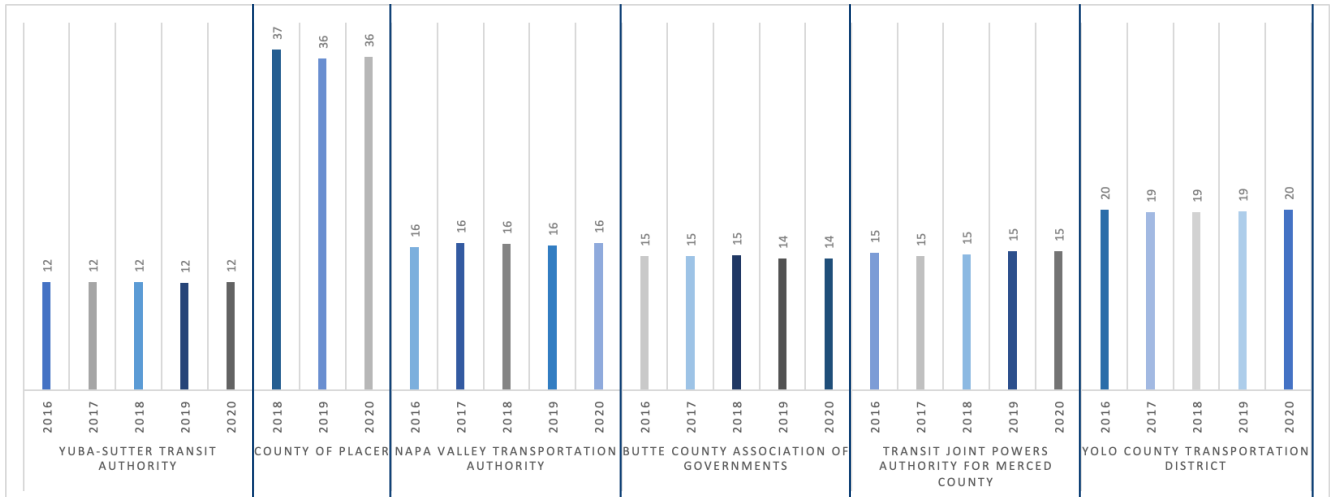


Figure 88 – Fixed Route Revenue Speed

FIXED ROUTE EFFICIENCY

OPERATING COSTS PER REVENUE HOUR

When comparing the peers, we also looked at how efficient the peer reviews operate. Efficiency is measured by revenue and cost comparisons. Yuba-Sutter Transit’s fixed routes operated at an average cost of \$78.40 per hour prior to 2020. In 2020, with the reduction of hours, this increased to \$93.73, a 16% increase compared to pre-covid average. This increase can be explained through administrative and other fixed costs remaining steady while service hours were reduced. Prior to the pandemic, Yuba-Sutter Transit saw an average annual increase of 10% in its cost per hour. The peer group experienced a 34% average increase pre-COVID, which jumped 23% to an average cost per hour of \$127.

34%
Pre-COVID

23%
COVID

10%/16%
Yuba-Sutter
Pre/COVID

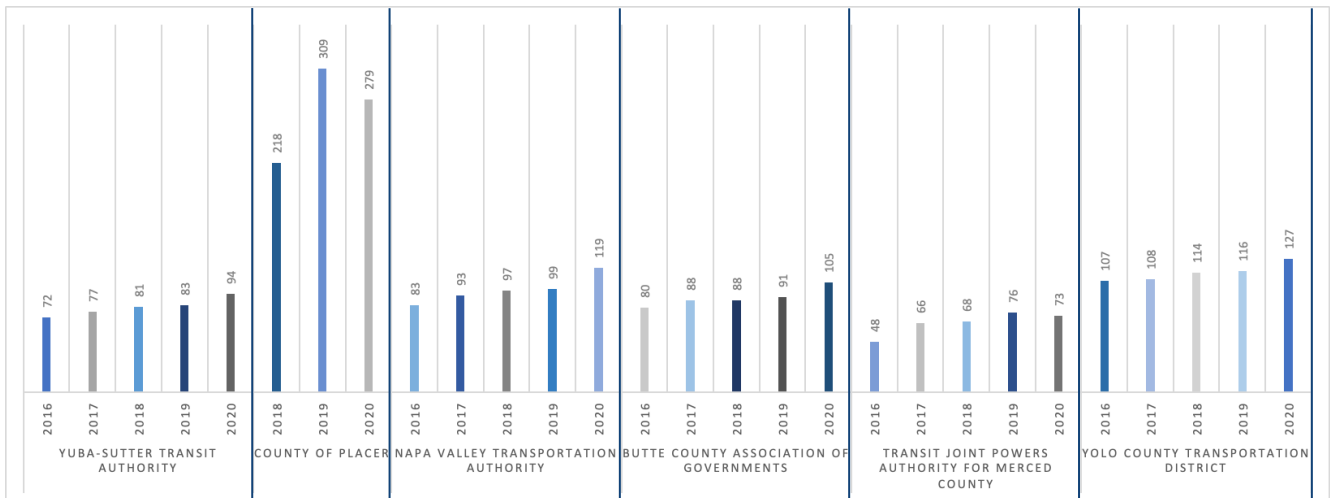


Figure 89 – Fixed Route Cost Per Revenue Hour

FAREBOX RECOVERY

Farebox recovery can mostly only be measured pre-COVID as most agencies stopped collecting fares for some or all of 2020. The entire peer group, including Yuba-Sutter Transit saw decrease of 41% in farebox recovery ratio, indicating that fares have not kept up with costs.

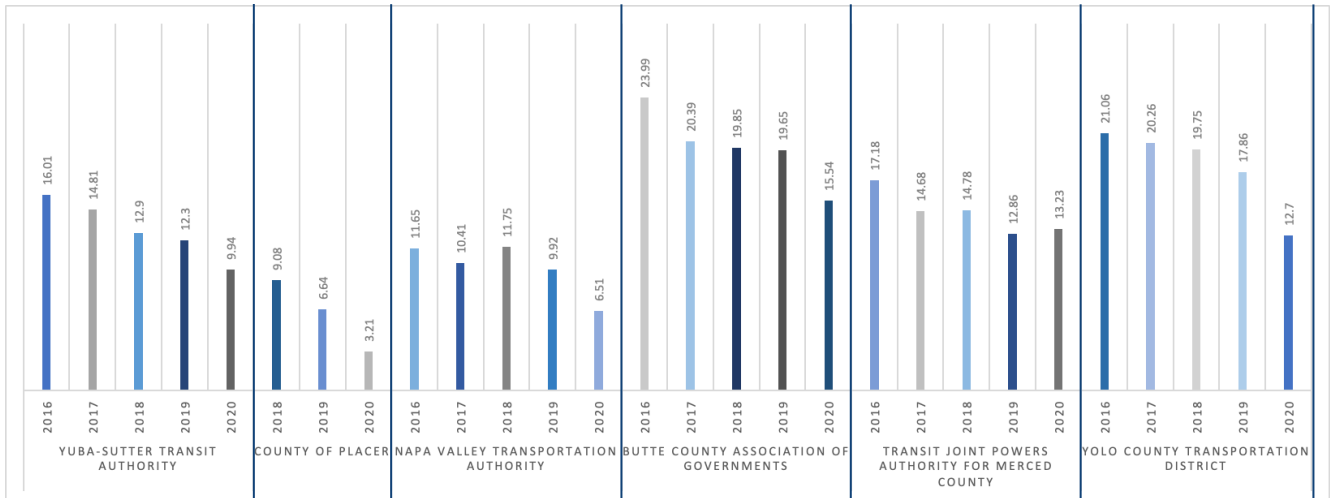


Figure 90 – Fixed Route Farebox Recovery Ratio

COST PER TRIP

The final metric to understand and compare system efficiency is the average cost per trip. The importance of this metric is that it compares cost and benefit. In other words, costs will rise based on normal factors such as labor negotiations, inflation, etc. However, major cost increases should coincide with investments in service that lead to ridership growth. In all, the peer group saw an average annual increase of 11% in their operating cost per trip pre-COVID. This indicates that any service increases or costs related did not result in ridership increases. Yuba-Sutter Transit has seen an average annual increase of 22% in their operating cost per trip.

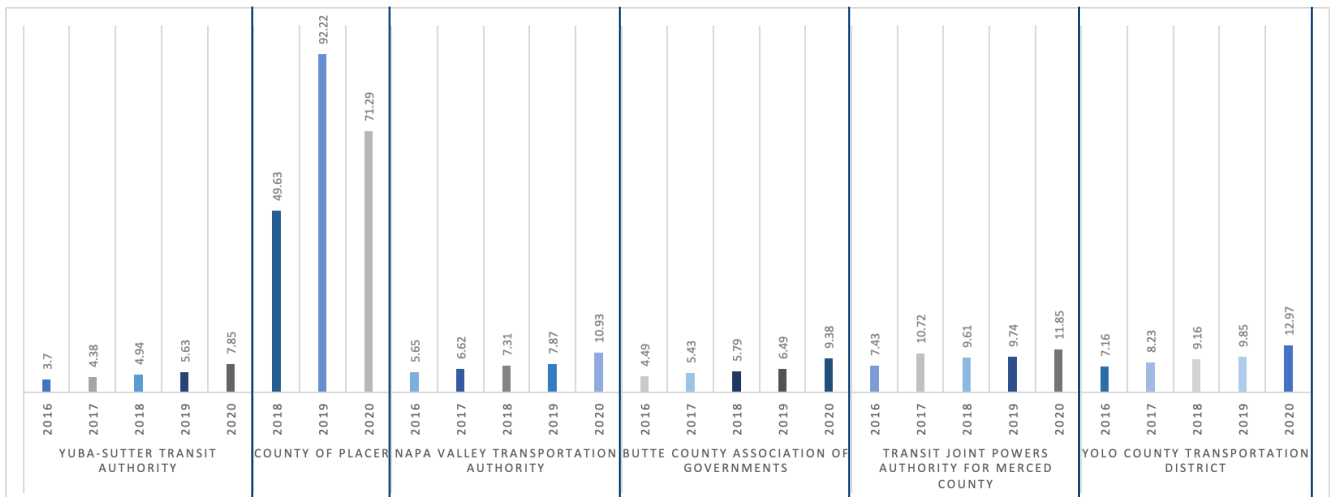


Figure 91 – Fixed Route Cost Per Revenue Passenger Trip

FIXED ROUTE PEER REVIEW SUMMARY

Overall, the peers and Yuba-Sutter Transit were matched well. All have seen ridership decreases over the past five years. Whereas Yuba-Sutter Transit’s ridership drop, on average, has been double what was seen in the peer group, it is clear that there is still a good ridership base to work from. All agencies in the peer group kept their service relatively flat prior to COVID and made a wide range of adjustments as a result of the pandemic. The key area to focus on for Yuba-Sutter Transit’s fixed routes will be increasing ridership. The Authority clearly has the appropriate level of service for its region, the goal will then be to improve the quality of the service at existing operating costs.

COMMUTER SERVICE RIDERSHIP

TOTAL RIDERSHIP

Commuter service is very important to Yuba-Sutter Transit’s operation. Not only is it a major contributor to fare revenue, but it also meets a major need for Yuba and Sutter County residents. With downtown Sacramento being a major draw, at least pre-COVID, Yuba-Sutter Transit has invested heavily in park and rides and vehicles to provide residents of the sister counties as high a level of service as possible. Prior to COVID, this investment paid off. While the peer agencies saw a decrease of 21% in commuter ridership in the years leading up to 2020, Yuba-Sutter Transit only saw a 3% decrease. In 2018 and 2019, ridership on the Authority’s commuter services actually increased 2% and 1% respectively.

-21%
Pre-COVID

-75%
COVID

-3%/-26%
Yuba-Sutter
Pre/COVID

Commuter ridership did however drop by 26% in 2020, and the significant drop has continued, as most downtown Sacramento offices continue to provide employees with a work from home benefit.

As shown in the Service Framework, commuter ridership dropped an additional 81% in FY 20/21. This peer review report will continue to focus on 2015-2020 as that is the range that data is available for all peer agencies. The Service Framework and the System Analysis section of the NextGen Transit plan includes Yuba-Sutter Transit specific performance post COVID. It should be noted that the City of Roseville’s Transit data was classified as “Roseville Transit” prior to 2018.

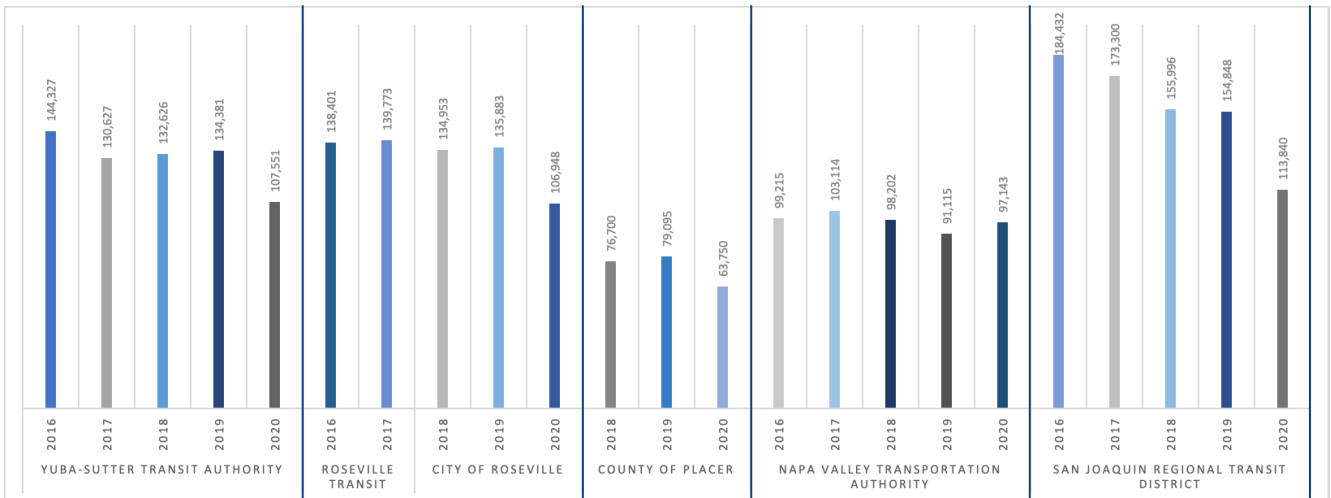


Figure 92 – Commuter Service Unlinked Passenger Trips

COMMUTER SERVICE EFFECTIVENESS

PASSENGER TRIPS PER REVENUE HOUR

Service effectiveness is not as critical of a metric for commuter services as most of these trips are homogenous in nature. In other words, commuter services will never be as productive as fixed route services, as the riders are usually collected from central points like park and rides and then carried closed door to a central business district. Without the benefit of seat turnover (shorter rides that result in more passengers in the same seat), commuter route service effectiveness will almost always be lower than fixed route. That is not to say that there is not a need for commuter services, it is more to say that there is less opportunity for improvement. The agencies in the peer group actually saw an in productivity of commuter services from 2018-2019 compared to 2015-2016. This represents an average of 1% year over year increase resulting from service hours staying relatively flat with ridership increasing. The peer group saw an approximate 68% drop in productivity due to COVID, while Yuba-Sutter Transit’s productivity dropped 23%. As stated earlier, Yuba-Sutter Transit’s commuter ridership continues to be well below pre-COVID levels. While the early months of 2022 have seen large increases, productivity remains 65-70% below 2019 levels.

-16%
Pre-COVID

-68%
COVID

-7%/-23%
Yuba-Sutter
Pre/COVID

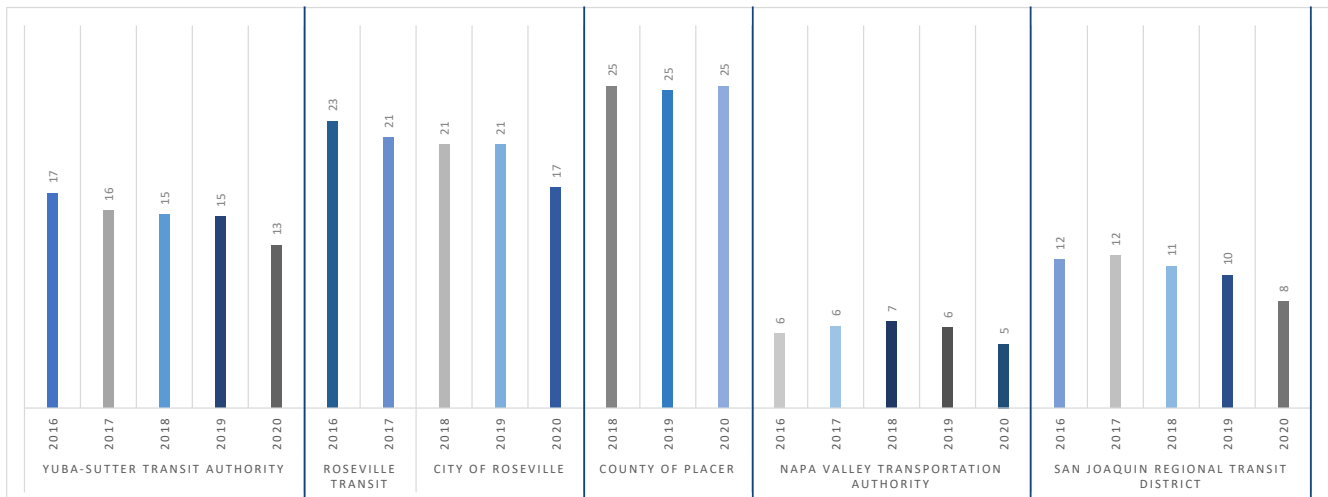


Figure 93 - Commuter Service Passengers per Revenue Hour

COMMUTER SERVICE VEHICLE OPERATIONS

REVENUE HOURS AND SPEED

When looking at Yuba-Sutter Transit’s commuter operations, we look at hours operated and the overall system speed. Overall, most agencies in the peer group reduced their service hours by an average of 4% per year. When looking at the productivity above, the drop in ridership was less than the drop in revenue hours. This indicates that all the agencies became slightly more productive. Yuba-Sutter Transit increased its commuter hours slightly between 2015-2019, but reduced hours similarly in 2020 due to the pandemic. The service hour reduction has continued post pandemic as 6 of the 23 commuter trips remain out of service.

-32%
Pre-COVID

-70%
COVID

4%/-3%
Yuba-Sutter
Pre/COVID

Overall, Yuba-Sutter Transit does run one of the fastest operations in terms of revenue speed.

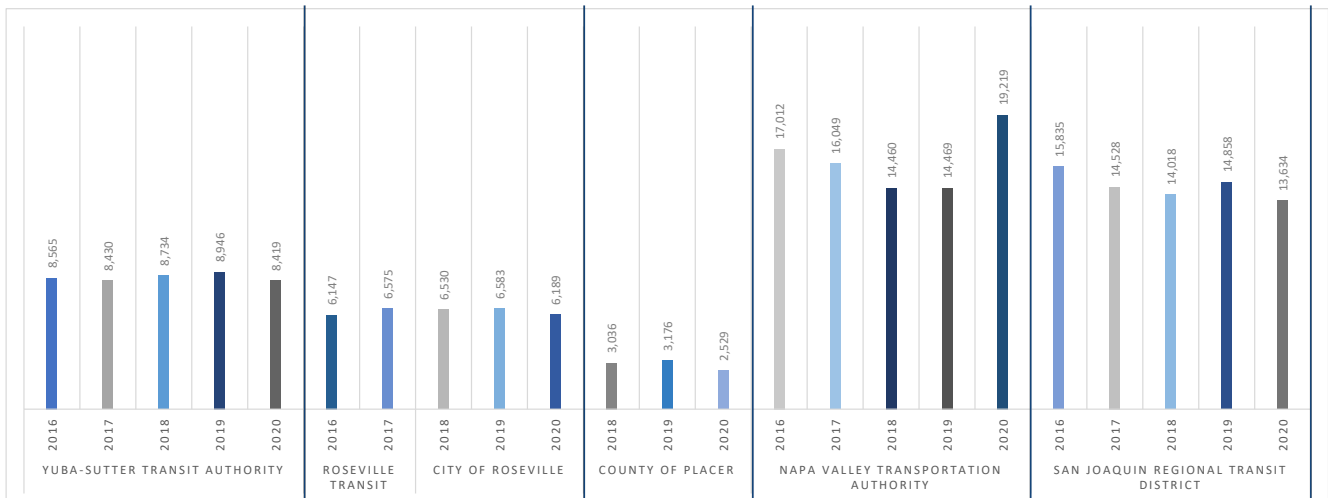


Figure 94 - Commuter Service Revenue Hours

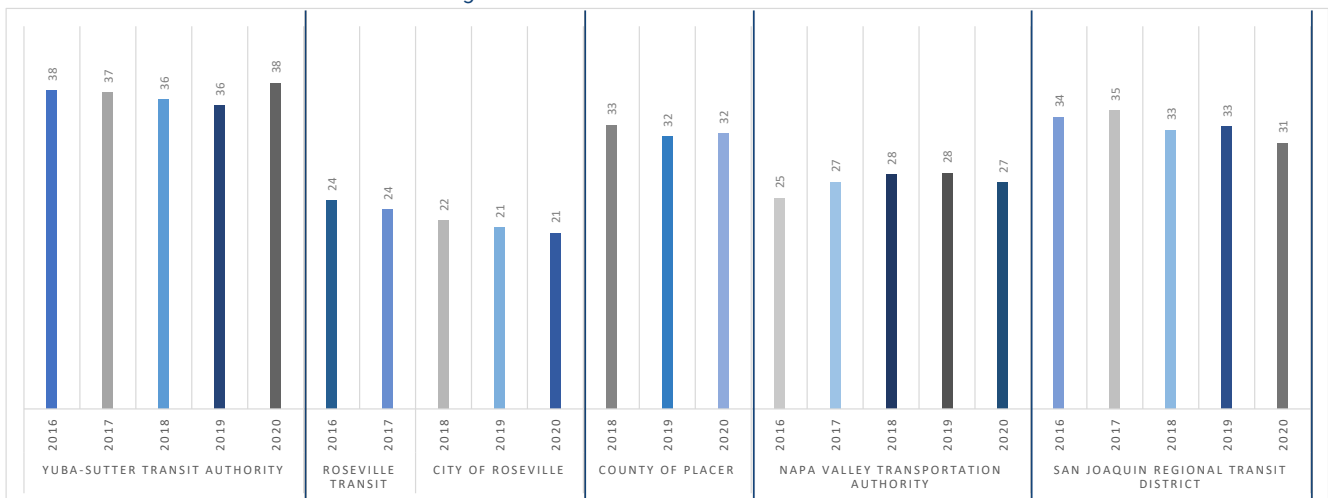


Figure 95 - Commuter Service Revenue Speed

COMMUTER SERVICE EFFICIENCY

COST PER REVENUE HOUR

Commuter efficiency is measured by revenue and cost comparisons. All the agencies in the peer group saw increases in this metric leading into COVID. Yuba-Sutter Transit did a very good job in controlling costs prior to COVID and only saw a 7% increase year over year. Costs per revenue hour for Yuba-Sutter in 2020 increase by 18%. With service hours reducing for all peer agencies, this puts Yuba-Sutter in line with its peers who averaged a 9% increase in costs per hour of service.

29%
Pre-COVID

9%
COVID

7%/18%
Yuba-Sutter
Pre/COVID

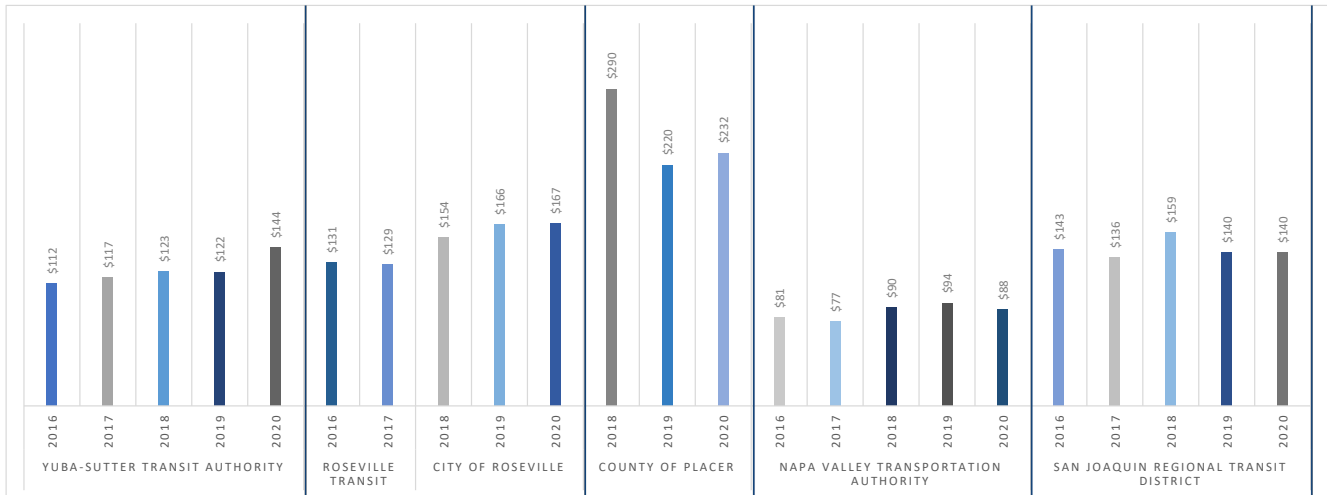


Figure 96 - Commuter Service Cost per Revenue Hour

COST PER TRIP

When looking at costs on a per trip basis, most agencies saw an increase of 6% year over year prior to COVID. Due to ridership dropping significantly during the COVID pandemic, all agencies saw major increases in costs per trip with the peer group averaging an 21% increase.

Yuba-Sutter performed in line with their peers, averaging a 13% average increase pre-COVID. However, like its peers the agency did see a large jump in 2020 of 33% in cost per passenger trip.

11%
Pre-COVID

21%
COVID

13%/33%
Yuba-Sutter
Pre/COVID

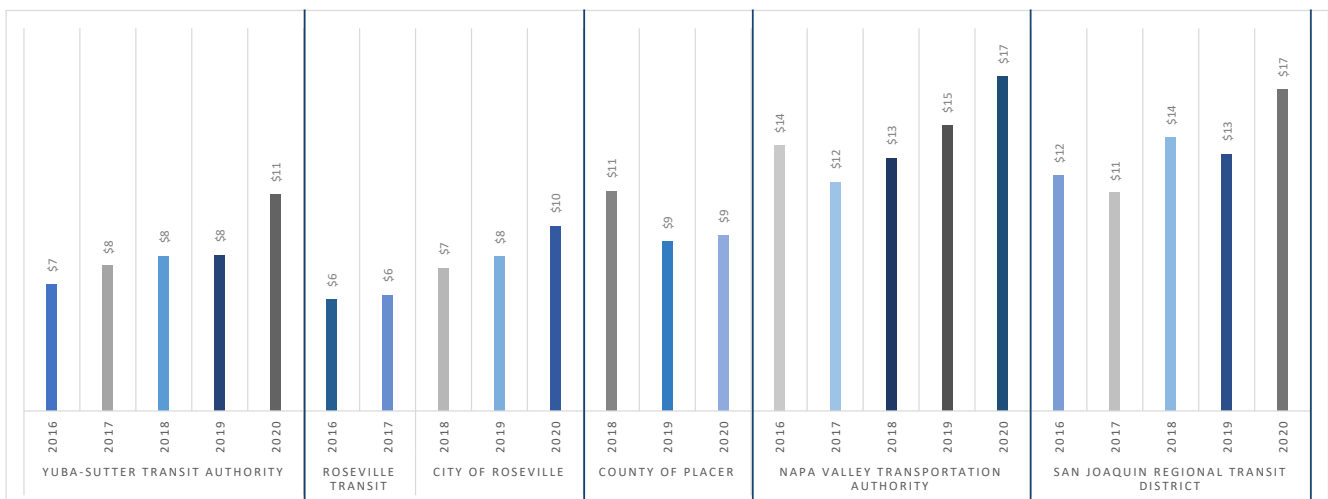


Figure 97 - Commuter Service Cost per Passenger Trip

FAREBOX RECOVERY AND AVERAGE FARES

Two areas specific to commuter routes that are not compared in detail in the fixed route and demand response sections are average fare and farebox recovery ratio. As stated earlier, fare revenue from commuter service is important to not only ensure the service is efficient, but it is also critical in helping to subsidize local routes. The peer systems observed an 12% drop in farebox recovery ratio prior to the pandemic. Yuba-Sutter Transit observed a 21% drop in farebox recovery ratio on average pre-pandemic. Farebox recovery ratio during the pandemic isn't necessarily informative due to the fact some agencies did not collect fares or reported fares differently.

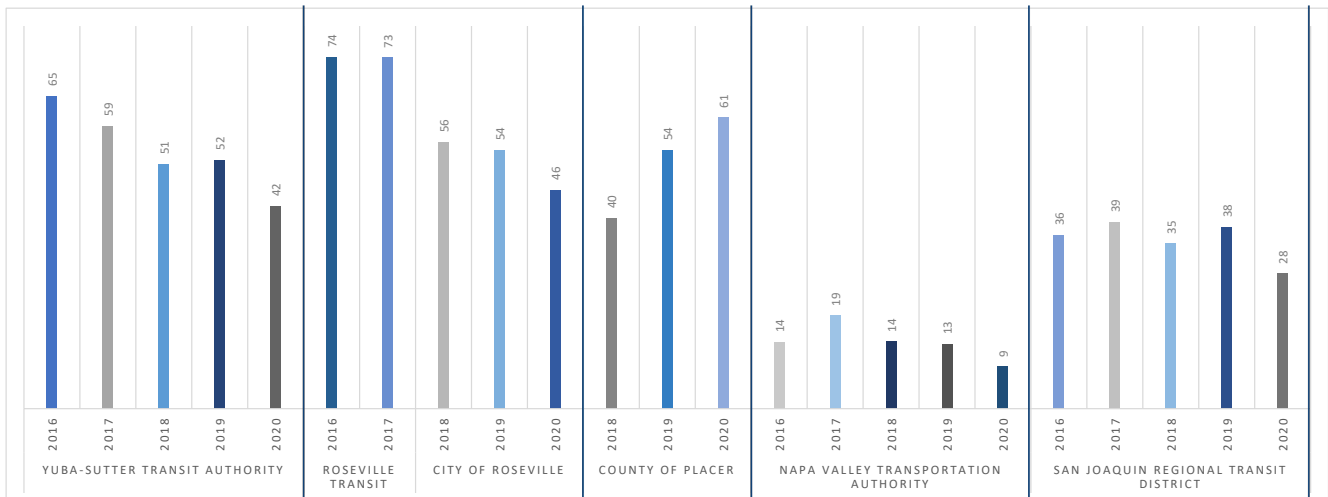


Figure 98 – Commuter Service Farebox Recovery Ratio

Average fare is another area specific to commuter services. Generally, the peer agencies received an average fare 2-3x the local base fare. Yuba-Sutter as an example does not give discounts on its commuter services.

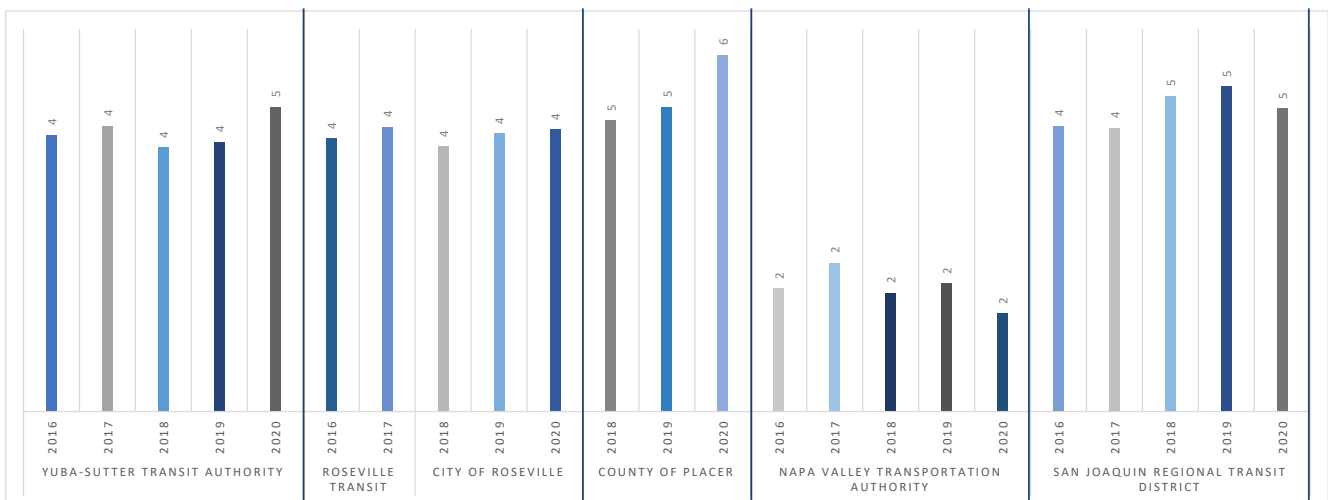


Figure 99 – Commuter Service Average Fare per Passenger

DEMAND RESPONSE PEER REVIEW

PEER SELECTION AND TOTAL RIDERSHIP

Peers for the demand response services were selected based on the same criteria as the fixed route and commuter modes. The demand response peer group averaged 51,000 trips per year. Yuba-Sutter Transit operated an average of 72.3k trips per year for the four years preceding COVID-19. In 2020, the number of trips dropped by 6% for the peer group, while Yuba-Sutter Transit’s demand response service saw 56% fewer riders.

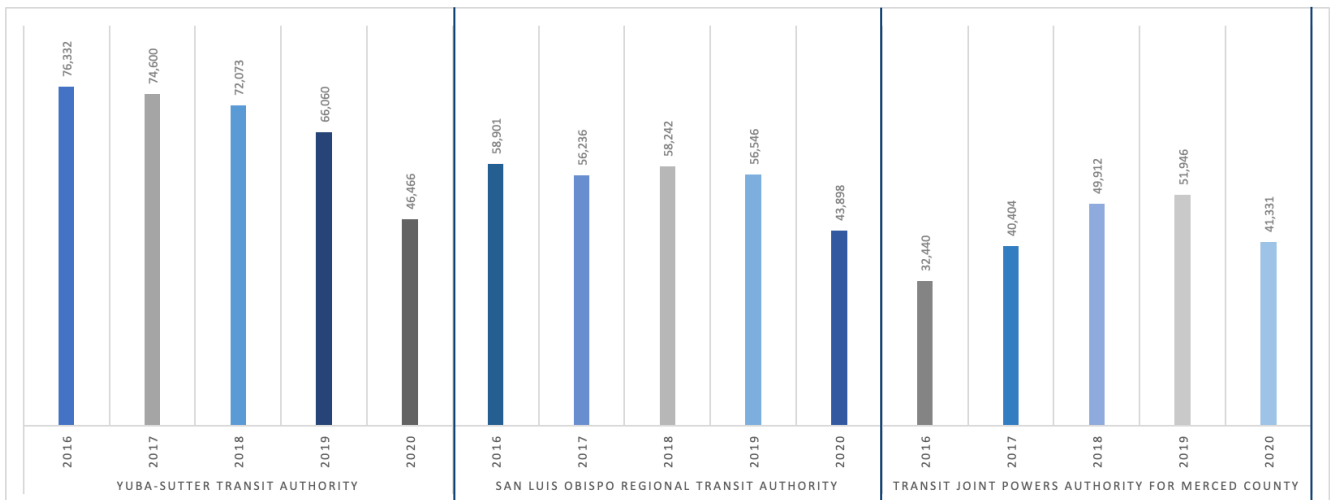


Figure 100 – Annual Demand-Response Passenger Trips

PASSENGER TRIPS PER CAPITA

When comparing demand response trips per service area capita, we can see that Yuba-Sutter Transit carries approximately twice the ridership per capita when compared to the peer group. However, Yuba-Sutter Transit’s demand response ridership dropped an average of 10% when compared to a 15% increase in the peer group. Yuba-Sutter Transit’s ridership also dropped significantly more than that of the peer group due to the pandemic.

15%
Pre-COVID

-15%
COVID

-10%/-59%
Yuba-Sutter
Pre/COVID

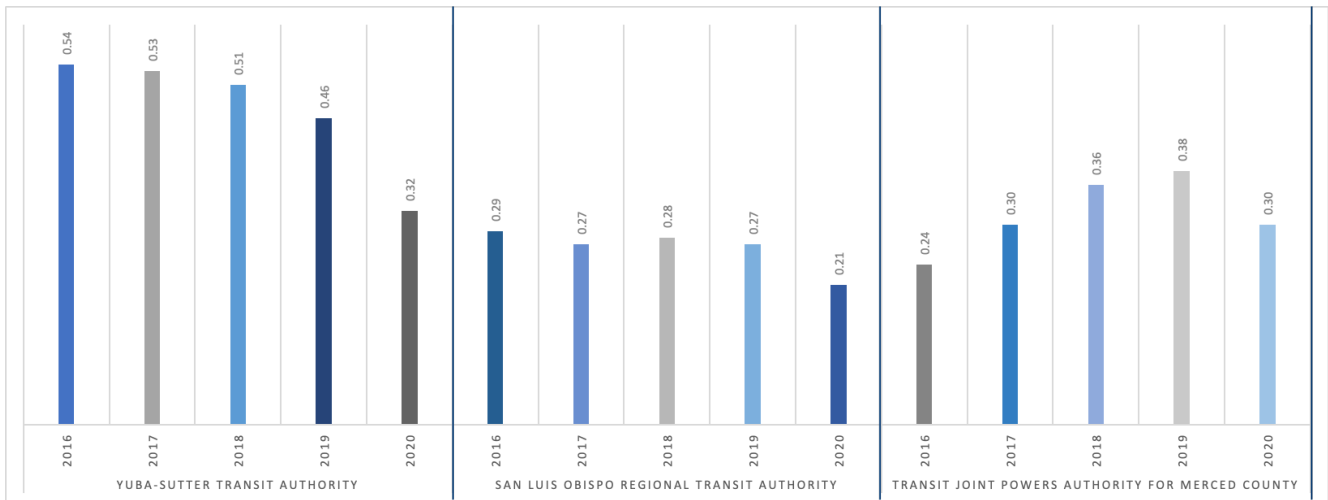


Figure 101 – Annual Demand-Response Passenger Trips per Capita

DEMAND RESPONSE SERVICE EFFECTIVENESS

PASSENGER TRIPS PER REVENUE HOUR

When looking at effectiveness two interesting points were found in the data: Yuba-Sutter Transit’s demand response service’s productivity is began dropping before the pandemic. When compared to the peer group, the agencies actually were seeing a small increase in productivity. This is in line with the rest of the U.S. transit market, where fixed route transit has been dropping while paratransit/demand response ridership had been increasing. The second point is that the peer group agencies saw a much smaller drop in demand response ridership when compared to Yuba-Sutter Transit.

2%
Pre-COVID

-7%
COVID

-10%/-25%
Yuba-Sutter
Pre/COVID

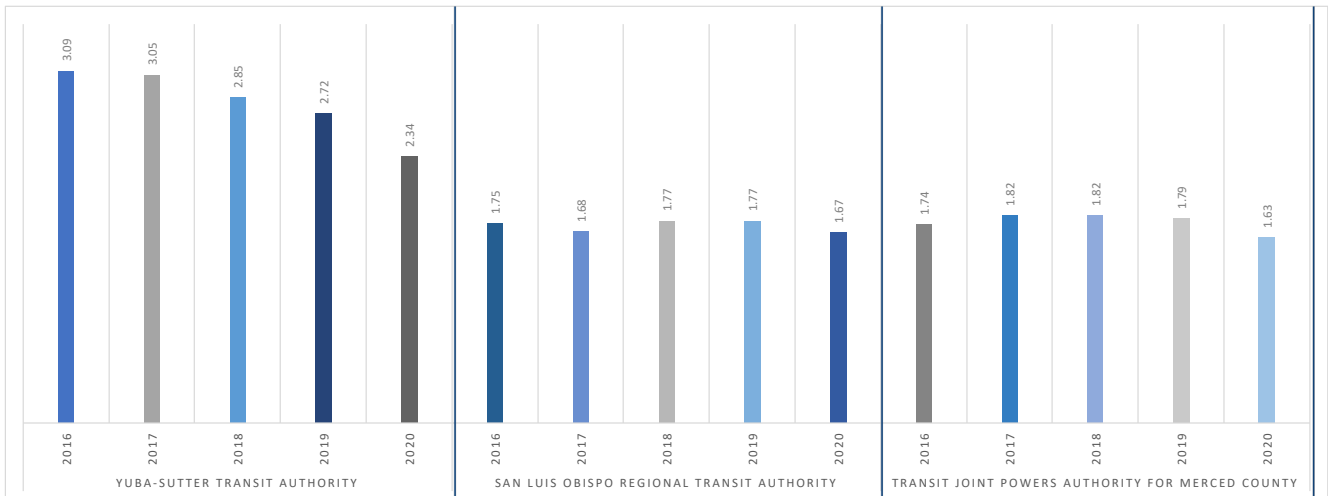


Figure 102 – Annual Demand-Response Passenger Trips per Hour (Mode Productivity)

DEMAND RESPONSE SERVICE OPERATIONS

REVENUE HOURS

When looking at Yuba-Sutter Transit’s demand response operations, we look at miles and hours operated and the overall system speed.

Overall, Yuba-Sutter operated approximately 18% fewer hours annually compared to their peers prior to 2020. The peer group averaged approximately 29,000 annual revenue hours in the years prior to 2020.

In response to the pandemic the peer group reduced revenue hours by 10% on average due to COVID in 2020. Yuba-Sutter in comparison reduced their service hours by 24% in 2020. Yuba-Sutter Transit’s reduction in overall revenue hours does line up with the drop in ridership referenced earlier, indicating that there was some latent demand on demand response services.

11%
Pre-COVID

-10%
COVID

1%/-24%
Yuba-Sutter
Pre/COVID

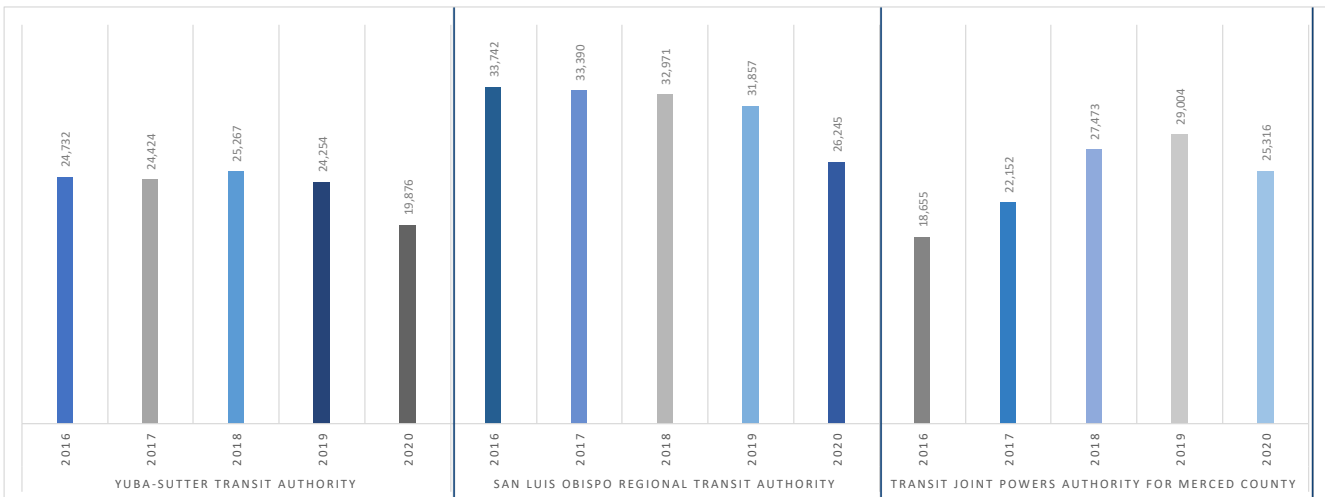


Figure 103 – Annual Demand-Response Revenue Hours

SPEED

Another measure of effective operations is to look at overall system speed. This is a key metric for demand response services as they are so much more expensive than fixed route and generally do not have the same productivity. As a result, a slower demand response system on average costs significantly more than even the slowest fixed route system. Overall, Yuba-Sutter Transit’s system speed was in line with the peer group and its speed is slightly faster than its’ fixed route service. The key difference is that while the fixed route speed did increase during the pandemic, demand response speed actually dropped slightly.

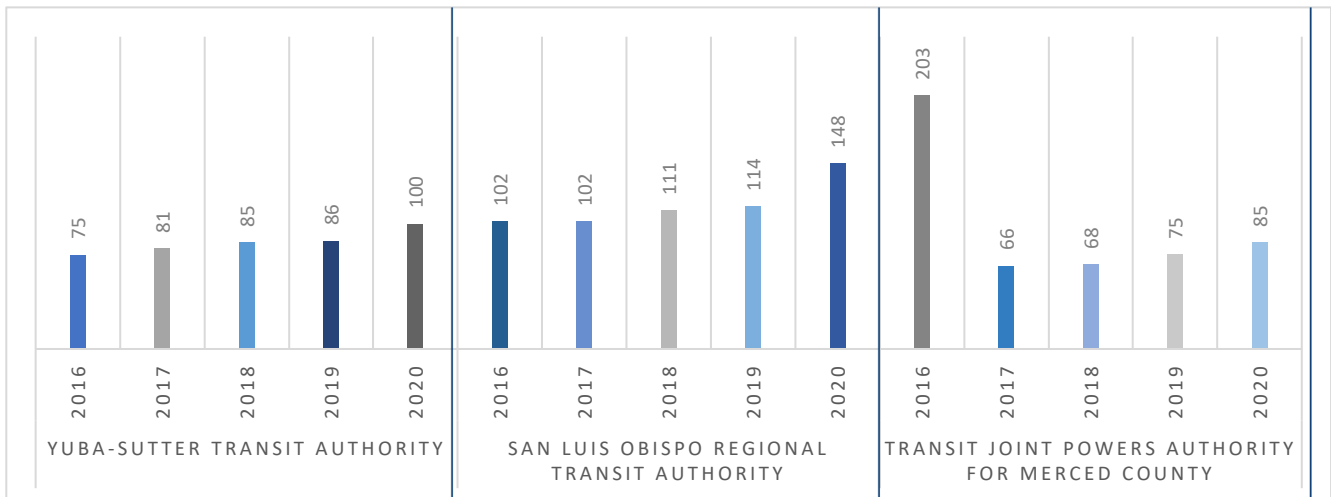


Figure 104 – Annual Demand-Response Revenue Miles

DEMAND RESPONSE SERVICE EFFICIENCY

When measuring how efficient a transit operation is, we generally look at outcomes compared to cost. These outcomes include ridership, operating capacity, etc. In terms of cost per trip, the peer group averaged \$61.89 per trip. Yuba-Sutter Transit’s demand response service averaged \$30.98 per trip, a little less than 50% lower than their peer group. The key difference is while other agencies did see increases in ridership and hours, the resulting productivity did not materialize. Yuba-Sutter Transit actually saw improved productivity prior to the pandemic and even though ridership dropped, it did not drop as much as revenue hours resulting in an increase in productivity.

-32%
Pre-COVID

18%
COVID

17%/34%
Yuba-Sutter
Pre/COVID

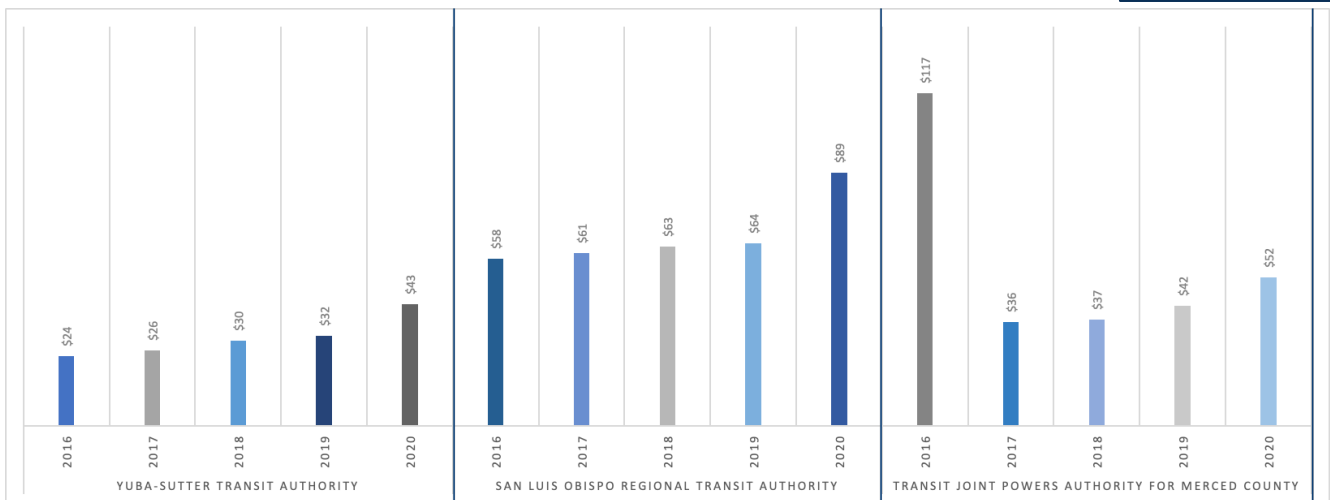


Figure 105 – Annual Demand-Response Cost per Passenger Trip

ANNUAL OPERATING COST PER VEHICLE

When looking at operational efficiency, we also look at annual operating cost per vehicle. Yuba-Sutter Transit operates at approximately \$85.36 per demand response vehicle. This is 26% lower than the peer group average of \$107.41. The peer group actually saw slightly improving costs leading into the pandemic and did see an increase during the pandemic. Yuba-Sutter Transit alternatively saw a 9% annual increase leading into the pandemic and observed an 18% increase during the 2020 pandemic.

-29%
Pre-COVID

11%
COVID

9%/18%
Yuba-Sutter
Pre/COVID

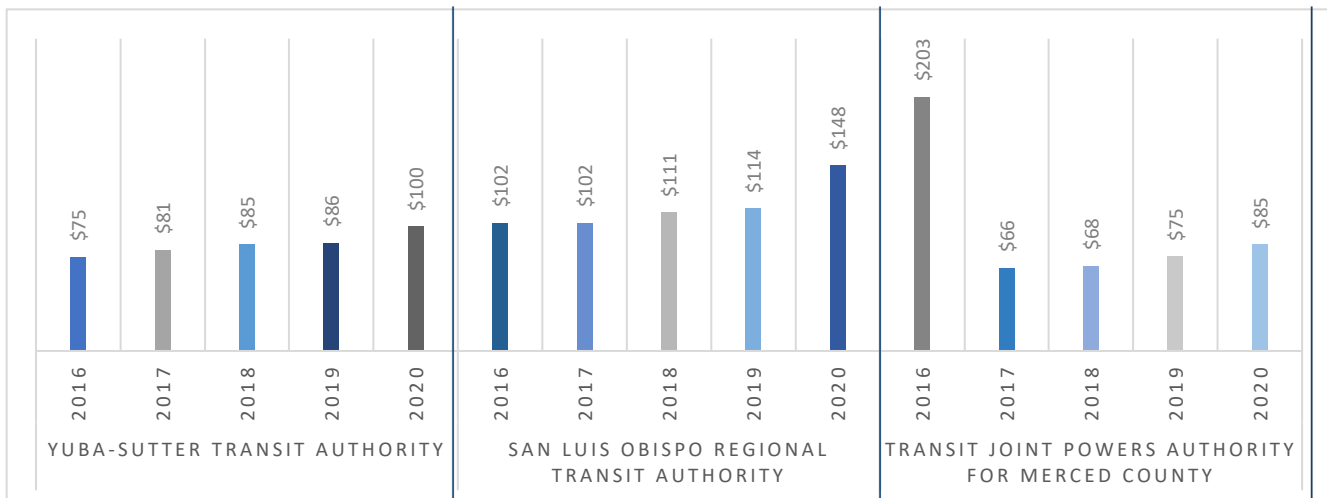


Figure 106 – Annual Demand-Response Cost per Vehicle

COVID-19 IMPACTS ON TRANSIT SERVICES

Yuba and Sutter Counties were heavily impacted by COVID-19 and the stay-at-home orders that followed. While much of the riding public is now able to telecommute, we are beginning to understand how COVID 19 has shifted demographics and the pandemic's overall effect on travel patterns.

When looking at overall mobility trends in the counties, retail visits are at or above pre COVID levels. This is in line with the rest of California and the U.S. at large.

Nationwide, transit ridership remains significantly below pre-pandemic levels and has been trending downwards for the past few months.

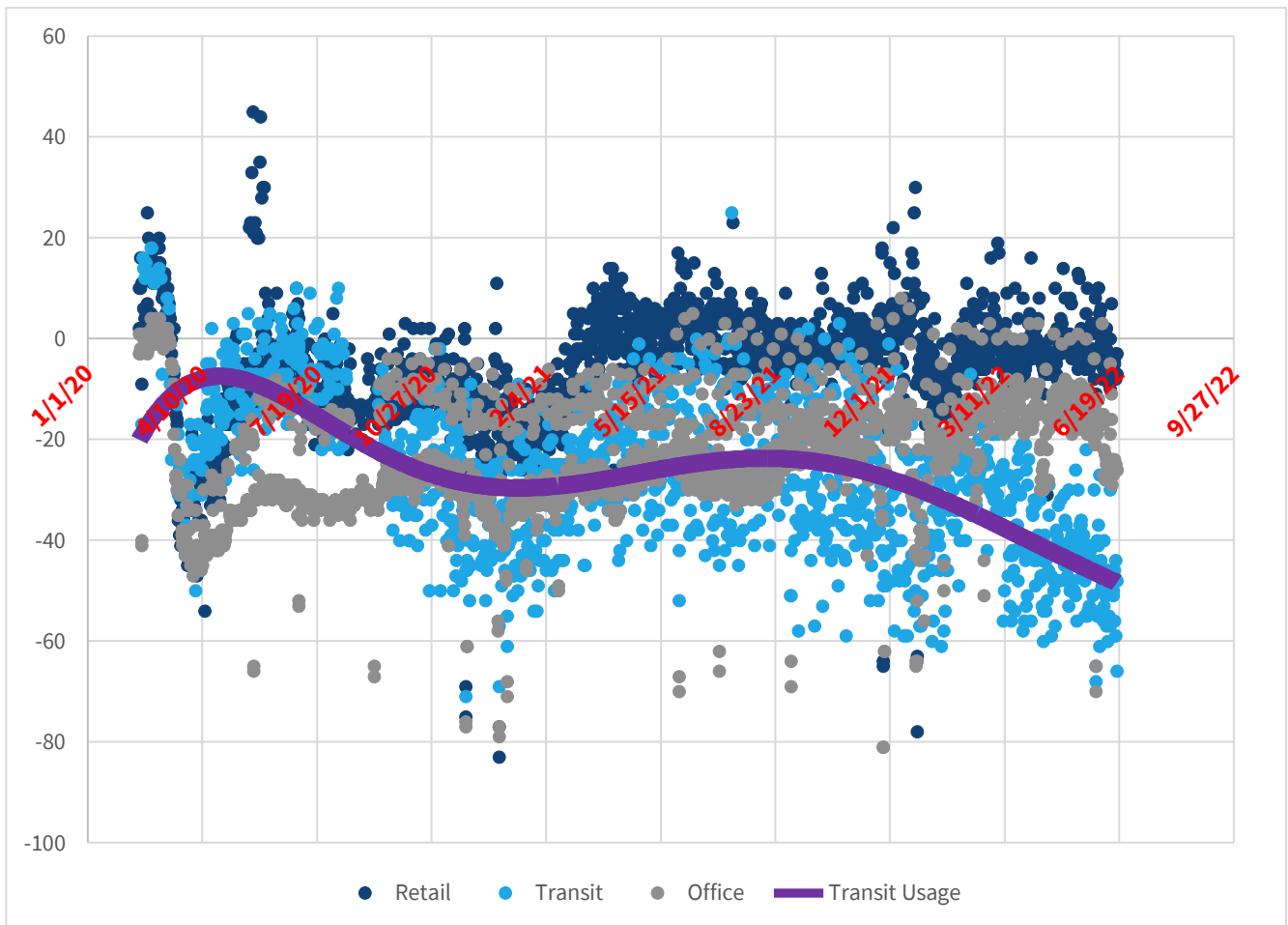


Figure 107 - Pandemic Mobility Trends (Google location data)



Financial Review and Cost Allocation Model



innovate mobility

OVERVIEW

The NextGen Transit Plan aims to provide Yuba-Sutter Transit with a set of service changes, administrative and operational improvements, and an overall roadmap for modernization for the next ten years. In order to properly understand the revenue plan, this section describes the current funding sources utilized by the Authority compared with operating expenses, and how they have changed over time. Ultimately, as part of the NextGen Transit plan a fully loaded cost allocation plan has been created. This plan includes the ability to conduct scenario planning and can help forecast revenue needs and provide the impact of lost revenue.

CURRENT FUNDING ENVIRONMENT

Yuba-Sutter Transit’s annual audited operating expenses in 2021 were \$8,477,448. This was a slight increase from 2020 and represents an 8% increase in costs over 2019. It should be noted that the majority of that increase is due to the Authority’s procurement of its operations and maintenance contract. The new contract with Storer Transportation, is approximately 7.5% higher annually than Yuba-Sutter Transit’s previous contractor, Transdev. This increase is in line with industry norms and is not a cause for concern. A benefit to this new contract is the annual increase ceiling and floor. This ceiling and floor caps CPI-related increases and so Yuba-Sutter will not see contract cost increases similar to the rest of the industry. The Authority has managed its costs well seeing only an average of 2% increases year over year since FY 18/19, and only 3% year over year prior to the Storer contract.

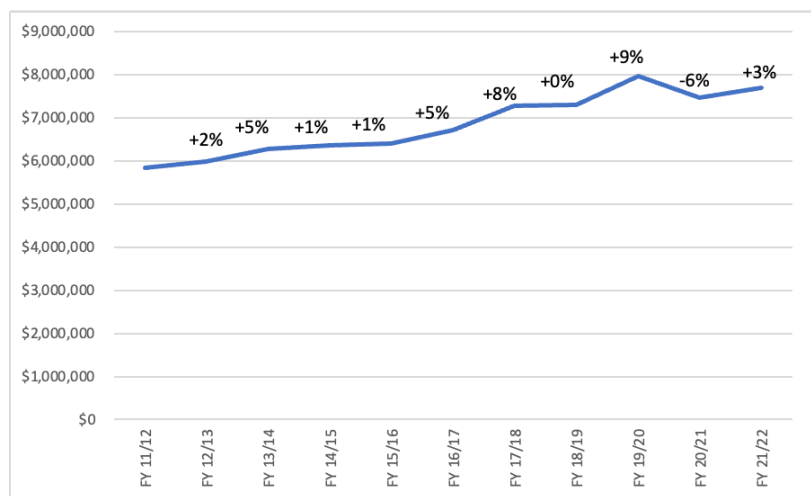


Figure 108 - Annual Operating Costs by Year

OPERATING REVENUES

Yuba Sutter Transit’s most recent 10-year capital and operations plan calls for modest increases for FY 21/22 and then no further increases in this funding for the period of the plan. The majority of Yuba-Sutter’s operating revenue is derived from Federal Transit Administration (FTA) sources. As with many transit systems across the United States, Yuba-Sutter Transit did receive one-time funding through the CARES act during the pandemic to help offset losses from ridership reductions, extraordinary pandemic related costs, and suspending fares on some services. Yuba-Sutter Transit, as a small operator, also received Small Urban and Rural operating funding from the FTA. This revenue is broken into two formula categories, Section 5307 and 5311.

The remainder of Yuba-Sutter Transit’s revenue is provided through a formula from the California Transit Development Act (TDA). TDA includes both State Transit Assistance (STA), and the Local Transportation Fund (LTF). Unlike FTA funding, STA funding is expected to increase an average of 15% per year for the next 10 years. The LTF portion of the TDA is derived from a ¼ cent of the general sales tax collected statewide. The State Transit Assistance is derived from a portion of the sales tax on gasoline and diesel fuel. As a result, the TDA funds are subject to economic downturns as may be coming in 2023. As an example, STA funds dropped an average of 12% per year from FY 20 onwards. Modeling scenarios developed for the NextGen Transit Plan will include a potential reduction in both state and federal funding levels. Further information on this funding mechanism can be found in the appendix.

Table 11 - Revenue Sources (\$000s)

Revenue Source	2021 Funding	2020 Funding
Federal Transit Administration Operating Grants	\$3,919	\$3,445
Local Transportation Fund	\$2,800	\$2,800
State Transit Assistance Fund (operating)		\$244
State Operating Grants	\$215	\$297
Advertising	\$39	\$43
Other Revenues	\$100	\$87
Fares	\$536	\$1,071
Other Revenue		\$500k
Total	\$7,610	\$8,550

COST ALLOCATION MODELING

It is critical to properly forecast out costs and revenues, as well as ridership, as part of the NextGen Transit Plan. To do so, the project team has built a cost allocation model. The cost allocation model divides Yuba-Sutter Transit’s annual operating costs into fixed and variable criteria. Fixed costs are those that the Authority will incur regardless of the level of service it operates. These are what we call “keeping the lights on” expenses. Variable costs are broken into per hour costs and per mile costs and ebb and flow based on service levels. This separation of expenses will be useful when costing out recommendations and building scenarios.

FIXED COSTS

Using Yuba-Sutter Transit’s general ledger expenses combined with the audited financials for the prior three years, the following items are included in the Authority’s fixed costs.

Table 12 - Fixed Expenses

Expense Category
50102 · SALARIES/WAGES
50200 · FRINGE BENEFITS
50300 · SERVICES/MAINT - OPERATIONS
50301 · ACCOUNTING
50302 · LEGAL
50303 · PRINTING/COPYING
CORRIDOR ENHANCEMENT PLAN
NEXT GEN FACILITY PLANNING
50309 · MISC SERVICES - ADMIN - Other
5049911 · OFFICE SUPPLIES
50500 · UTILITIES PGE
50501 · WATER
50502 · TELEPHONE
50600 · VEHICLE INSURANCE
50901 · DUES/SUBSCRIPTIONS
50902 · TRAVEL/MEETINGS
50903 · BOARD OF DIRECTORS
50904 · ADVERTISING/PROMOTION LCTOP ENHANCED SAC COM SERVICE
LCTOP FREE FARE ADVERTISING
LCTOP YUBA COLLEGE SHUTTLE
TDM GRANT ADVERTISING
50904 · ADVERTISING/PROMOTION - Other
Total 50904 · ADVERTISING/PROMOTION

In FY 21/22 these expenses account for approximately \$1,346,342 of Yuba-Sutter Transit’s annual operating budget.

VARIABLE COSTS

The remainder of the operating expenses are considered variable. The largest portion of these expenses are resulting from Storer’s operations contract. As stated above, variable costs are broken into a per hour cost and a per mile cost in order to correctly capture the variable most likely to generate costs. For example, insurance and fuel and tires are per mile expenses.

Table 13 - Variable Expenses

Expense	Variable Per Hour	Variable Per Mile
50401 · FUEL/LUBRICANTS		X
50402 · TIRES/TUBES		X
5049910 · MATERIALS/SUPPLIES OPERATIONS COVID-19 MATERIALS		X
5049910 · MATERIALS/SUPPLIES OPERATIONS - ...		X
Total 5049910 · MATERIALS/SUPPLIES OPERATIONS		X
50800 · CONTRACT SERVICES	X	
50801 · OUT OF CONTRACT SERVICES COVID-19 CONTRACTOR SERVICES	X	
50801 · OUT OF CONTRACT SERVICES - Other	X	
Total 50801 · OUT OF CONTRACT SERVICES	X	
50900 INSURANCE		X

For FY 21/22, Yuba-Sutter Transit is estimating \$6.3 million expenses that are considered variable per hour expenses and \$847k per mile variable expenses.

SCENARIO PLANNING

As part of the NextGen Transit Plan, Yuba-Sutter Transit is considering three financial scenarios.

- **A marginal (5-10%) increase in inflation-adjusted operating costs**
- **An unconstrained financial plan**
- **A cost neutral plan**

The cost allocation model allows for the incorporation of all of these scenarios and has built sensitivities into the model to determine the impact to ridership from each scenario. For example, if revenue levels were to drop, what would the resulting hours of service be? And, how much could ridership drop due to reduced service hours? The model also includes additional sub-scenarios based on non-transit market factors that will influence Yuba-Sutter Transit's decision making over the next decade. These sub-scenarios include:

- Service Increases and Decreases
- Fare Changes
- Population Changes
- Employment Changes
- Gas Price Increase or Decrease
- Work From Home Changes
- Quality of Service Improvements
- Income Changes

Each of these variables has shown to have an impact on transit ridership.

Year 1			
Assumptions			
Revenue	3%		
Gas Prices	-5%		
Economy	-5%		
Work From Home	-2%		
Service Levels	0%		
Service Quality	0%		
	Per Hour	Per Mile	
Fixed Route	\$ 85.06	\$ 1.18	
Dial-A-Ride	\$ 80.94	\$ 1.07	
Commuter	\$ 96.54	\$ 0.64	
Variables	Hours	Miles	Passengers
Fixed Route	44,526	490,607	385,094
Dial-A-Ride	21,873	252,973	30,007
Commuter	9,434	217,253	30,007
Total	75,832	960,833	445,108
Expenses			
Administrative	\$ 1,103,645		
Operations	\$ 5,634,174		
Maintenance+Insurance	\$ 863,631		
Total	\$ 8,557,855		
Revenue			
Federal	\$ 4,371,340		
State & Local (TDA)	\$ 3,225,056		
Miscellaneous	\$ 372,800		
Fares	\$ 588,660		
Total	\$ 8,557,855		
Service Level +/-	(168)	0%	
Cost per Hour	\$ 112.85	3.2%	
Productivity	5.87	0.2%	

Figure 109 - Scenario Planning Example



Transit Effectiveness Review



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OVERVIEW

TRANSIT EFFECTIVENESS REVIEW

The origin destination analysis reviewed the total number of trips taking place across the region on all modes, gathered via cell phone data, including car trips, biking, walking, transit etc. This data makes it easier to determine points of interest, and common origins and destinations. This can help to better design and operate transit systems, as it allows us to determine what percentage of these trips could currently be taken using public transit.

The Transit Effectiveness Review is an analysis of how well existing transit services meets travel demand and where Yuba-Sutter Transit's current routes do not address existing trips. Travel demand is defined as the intensity of trip generation as shown in the Origin-Destination Analysis.

This review provides an analysis of where existing fixed routes meet travel demand and where gaps exist. These datasets are then indexed and compared to determine what existing services have the highest potential for additional ridership. This review provides the first step to understanding where existing routes can be altered and how, by improving existing services, Yuba-Sutter Transit can increase ridership.

As previously noted, the data used for this analysis is procured and analyzed to ensure that user privacy and equity are taken into consideration. The data utilized is generated from both smartphones and non-smartphones to ensure that as large of sample as possible can be obtained. This data is then cross referenced against population data from the 2020 Census and the Mobility Vulnerability Index presented in the Existing Conditions section. This cross-referencing ensures that vulnerable populations are not undercounted.

TRIP TYPES AND PERFORMANCE INDICATORS

This review looks at three categories of trips, including Fixed Route, On-Demand/Dial a Ride, and Rural Routes. It also takes into consideration and compares trips taken at different times throughout the day, including the AM peak (6am-10am), Midday trips (10am-4pm), and PM peaks (4pm-8pm).

For each category of trip (Fixed Route, On Demand or Rural), the total number of potential trips is derived by calculating the total population within ¼ mile of each transit stop, and the total travel demand within ¼ mile of existing stops. Transit Coverage is calculated by comparing the potential ridership to actual ridership. This is used to examine how adjustments to service affect cost per passenger subsidies, and where improvements can be made to route performance (i.e. increase in number of riders per hour), as well as which routes will benefit the most with changes in either coverage or passenger experience, which is indicated by the routes performance benefit index (discussed further below).

FIXED ROUTE

To determine how effective the existing Yuba-Sutter Transit network is in meeting trip demand in the region, this study reviews the proximity of trip generators to existing transit services. Then, potential transit trips were calculated by comparing the total population within ½ mile from each bus stop and total travel demand within that same area, to the actual ridership numbers. This analysis found that a total of 432,470 trips are taken on an average weekday, across all modes of transportation. With all the public transit services available in the area, approximately 57% of these trips could be completed using the current local transit route network (potential trips). Yuba-Sutter Transit’s current route network carries approximately 29% of the total trips taken in the service area, as shown in Figure 1 below. The data indicates that there is some room to increase ridership and utilization of the transit system as it is currently configured, and that there is also a relatively large percentage (43%) of trips that are taking place that are not accessible via public transportation (i.e. more than ½ mile from transit). These trip generators are shown in Figure 2. While this may seem like a large percentage of trips that aren’t covered, there will always be a percentage of trips that are not well suited for fixed route transit for a variety of reasons. There is also a relatively large number of people who will continue to drive, regardless of how efficient the transit network is. In order to make the most effective improvements to the transit network, the additional analysis later in this section will help determine where Yuba Sutter Transit should focus its efforts.

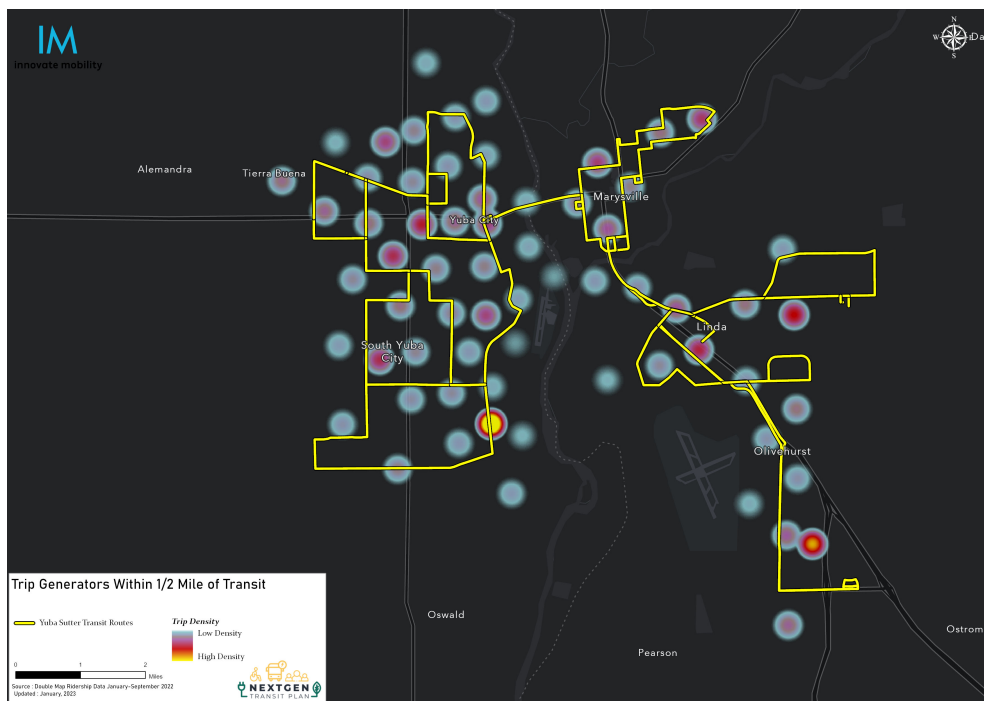


Figure 110 - Trip Generators Currently Served by Transit

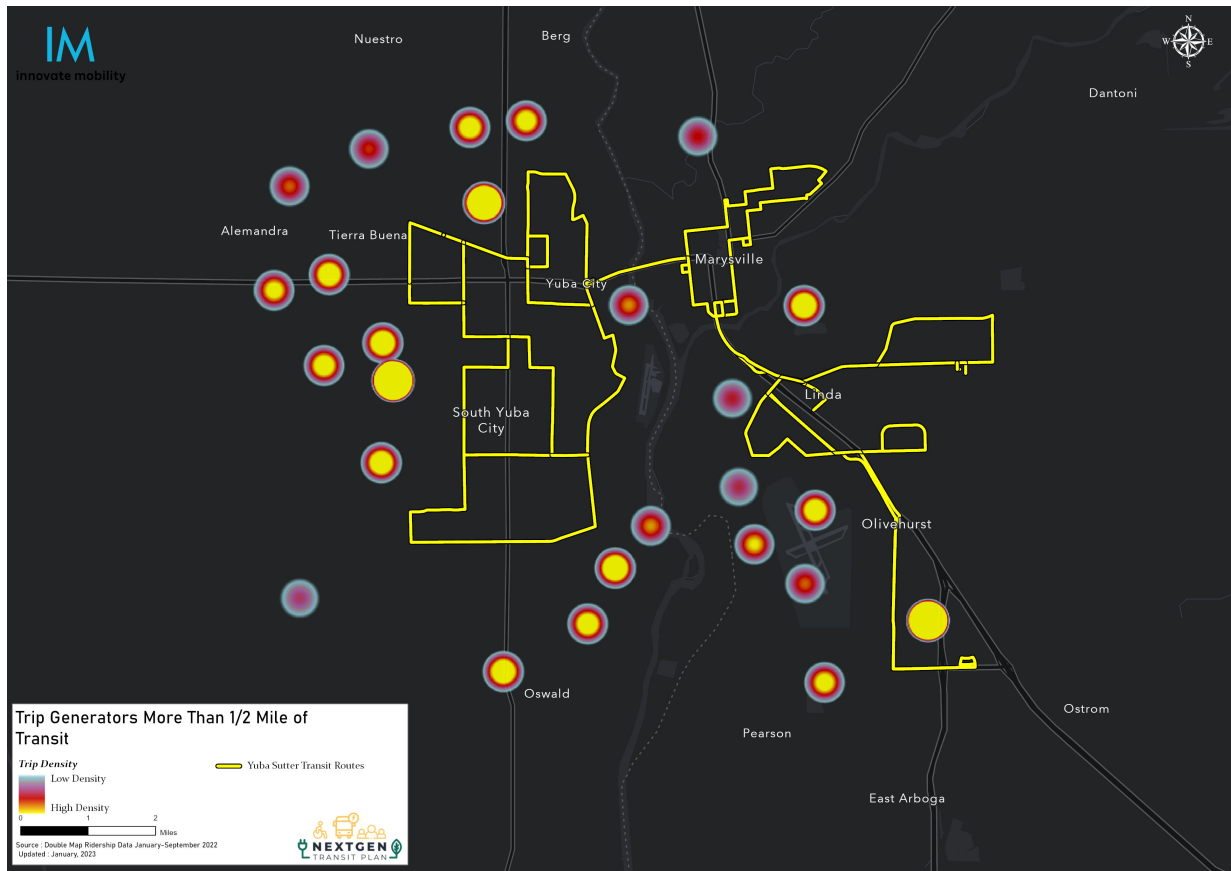


Figure 111 - Trip Generators More than 0.5 Miles from Transit

The darker areas in Figure 2 indicate trip generators that are more than ½ mile from a transit stop, making these destinations less accessible using public transit. Assessing the number of trips to these locations will provide insights into where route adjustments or expansions might be the most impactful and will draw the highest numbers of new riders. For example, extending a transit route to the area near the yellow dot on the west side of the map, which appears to be an elder care residential area including a skilled nursing facility, assisted living and an Alzheimer’s care facility, would likely result in increased ridership, as there is a high density of trips starting and ending in that location.

TRANSIT COVERAGE OF TRAVEL DEMAND

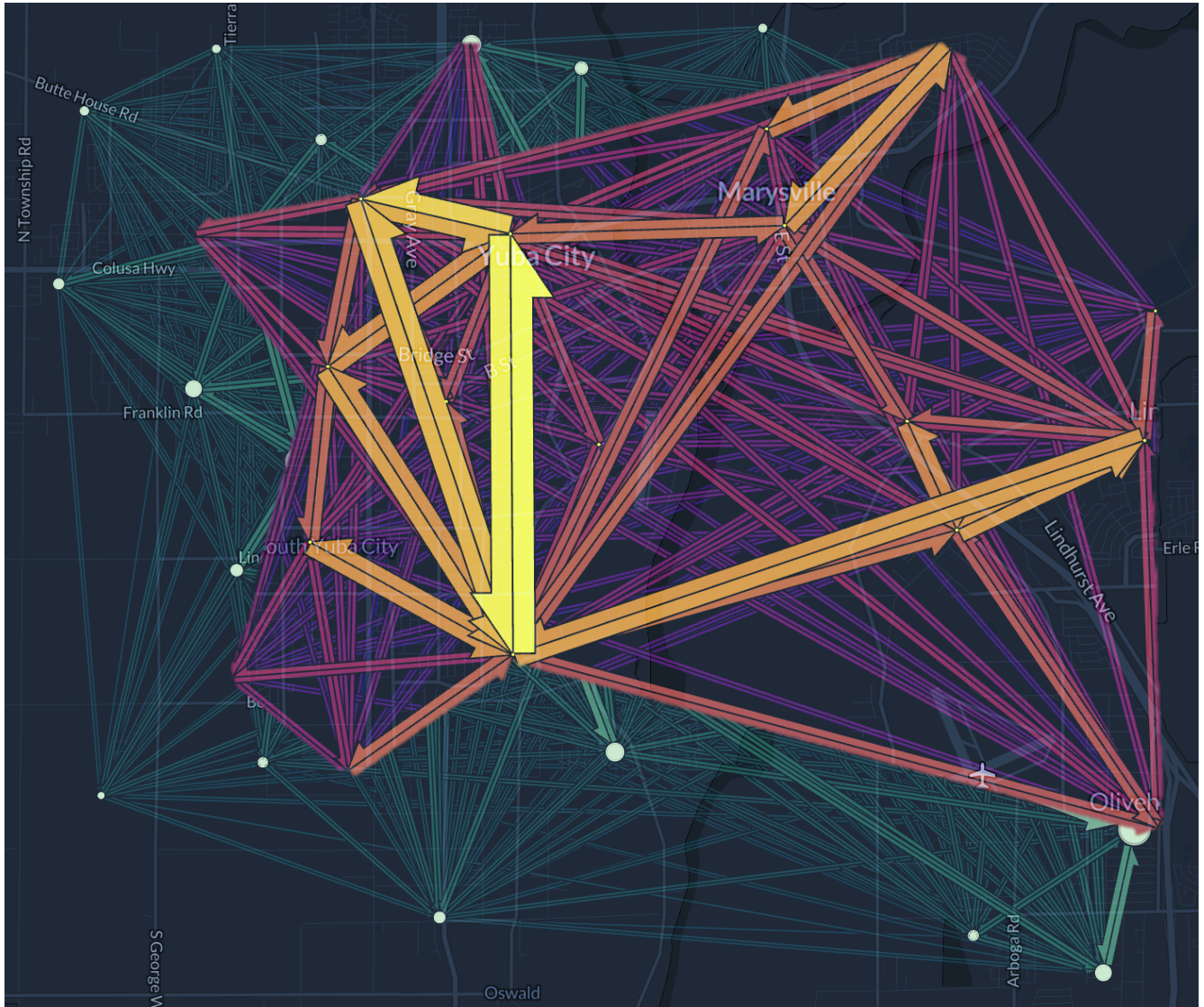


Figure 112 - Transit Coverage of Travel Demand – All Day

Figure 3 shows the overall level of travel demand, as compared to transit coverage throughout the entire day. The data shows that trip frequency between Yuba City and the residential area near Garden Highway and River Oaks is high. This diagram also indicates areas where trip demand is high, but transit coverage is limited (shown in orange or green), which could be considered for increasing trip frequency or adjusting routes/route times to better meet the demand.

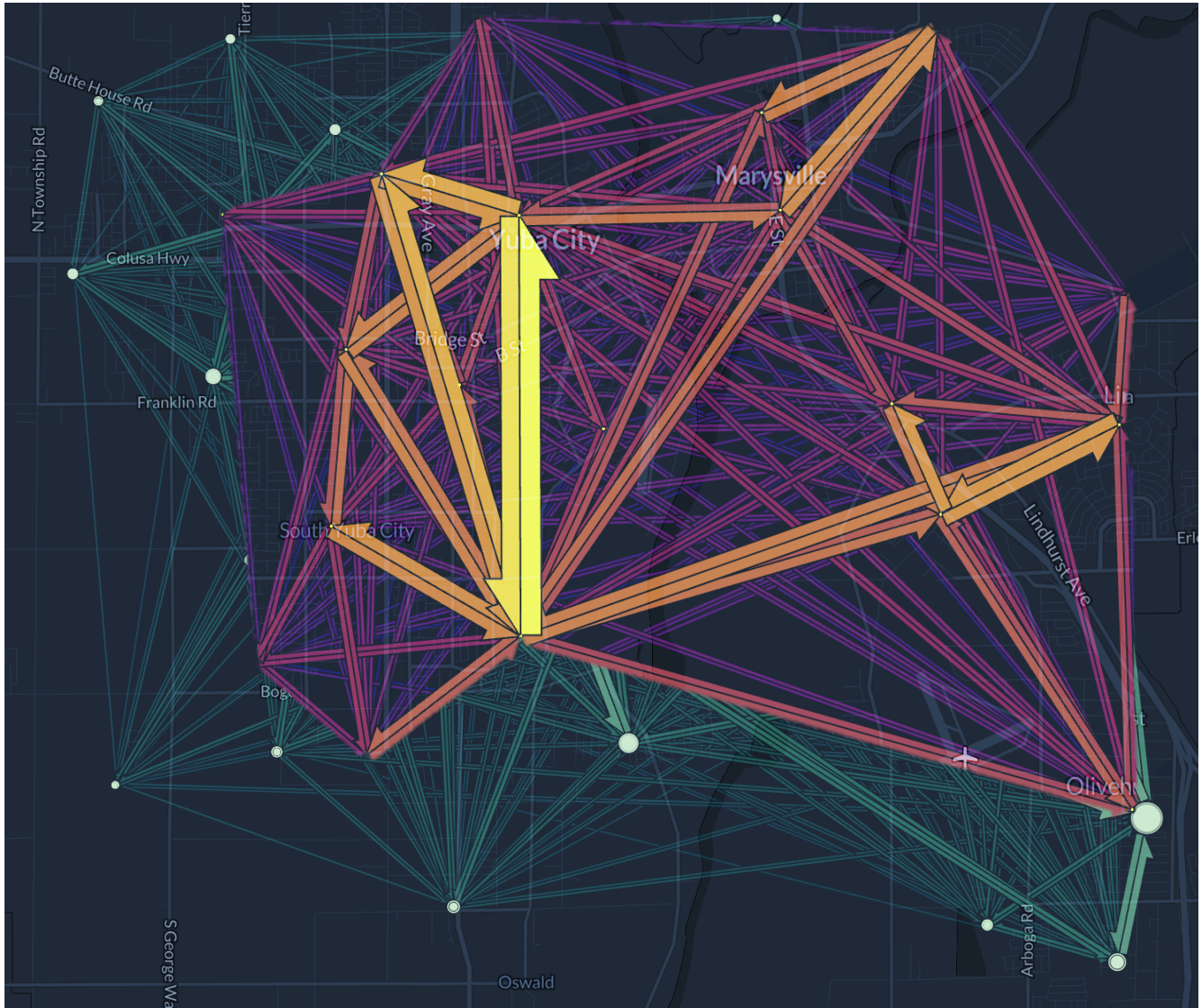


Figure 113 – Transit Coverage of Travel Demand - AM Peak

During the AM peak, overall travel demand is highest between residential and retail areas in Yuba City, and the area of the Garden Highway and River Oaks in Yuba City and there is already a relatively high-level transit coverage between those locations. During the AM peak, there is also a high number of trips occurring between South Yuba City and the Olivehurst area, as well as between South Yuba City near the fire station (at intersection of Lincoln and Railroad Ave), and Garden Highway and River Oaks in Yuba City. Transit coverage between these trip generators is not as strong and could present opportunities for service adjustments.

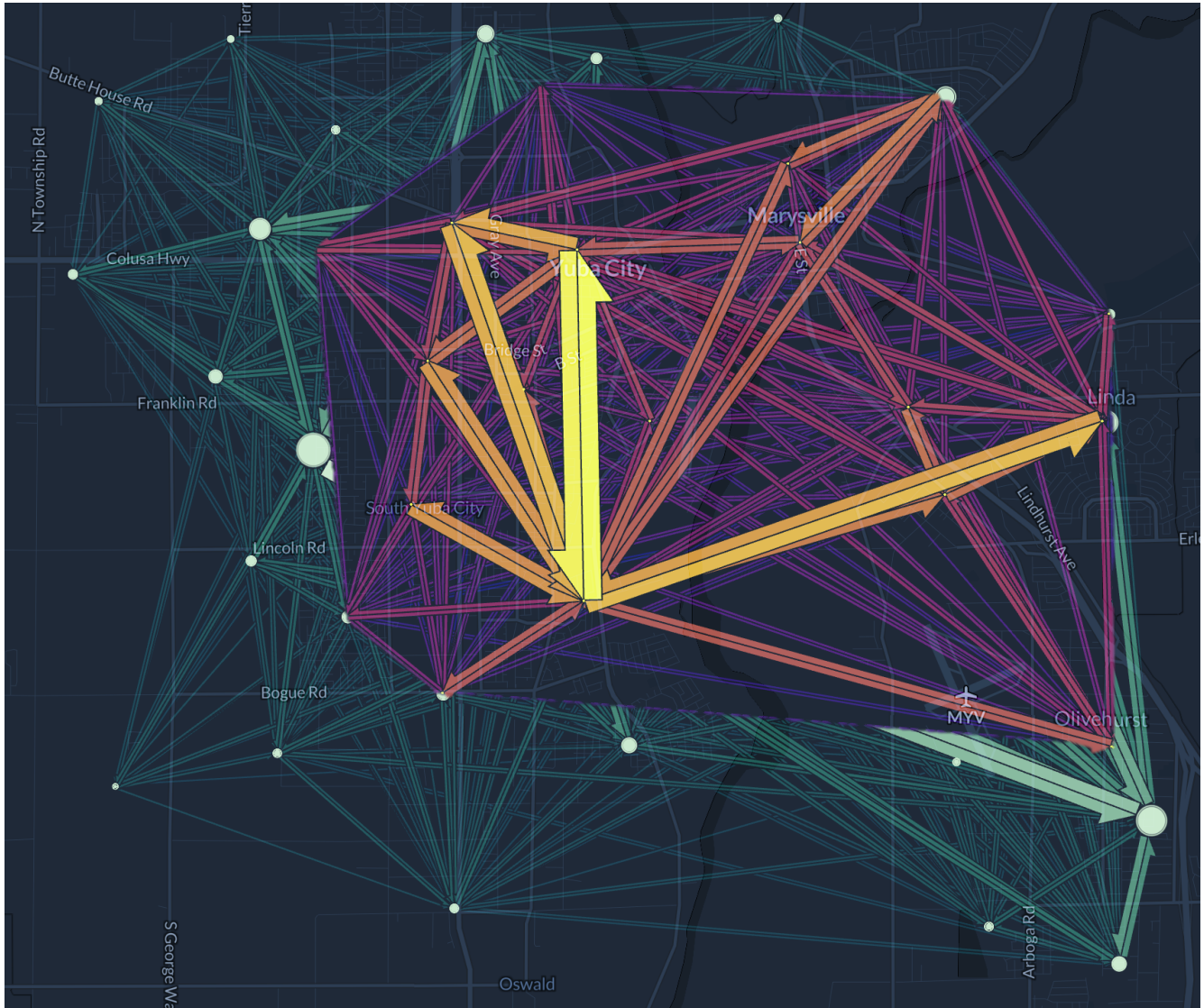


Figure 114 - Transit Coverage of Travel Demand – Midday

Similar to the AM peak travel, during the midday hours, there is also high travel demand between Yuba City and The Garden Highway and River Oaks on Garden Highway near the intersection with Bogue Road which has transit coverage. Travel demand to Linda is also relatively high with good transit coverage. There is also significant demand between South Yuba City near the fire station, and the Garden Highway and River Oaks, and from South Yuba City through Marysville to Olivehurst. Both of these locations have a lower level of transit coverage and may be areas to look at increasing coverage.

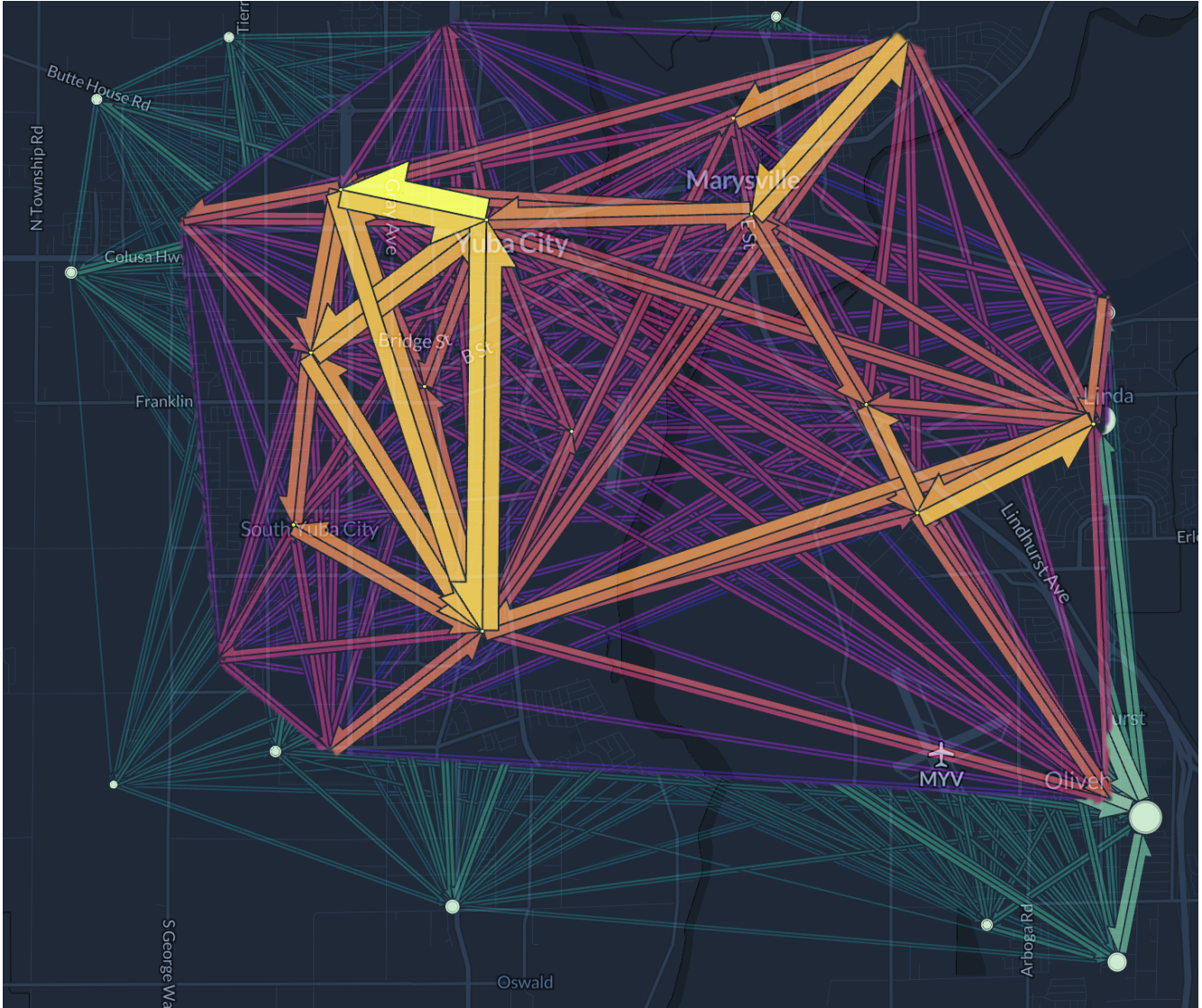


Figure 115 - Transit Coverage of Travel Demand – PM Peak

Similar patterns exist during the PM peak, with slightly higher overall travel demand than transit coverage between the area in South Yuba City near the fire station and the Garden Highway and River Oaks, indicating that increased transit coverage between these areas might be beneficial. Additionally, during PM peak hours there is relatively strong trip demand between South Yuba City through Marysville to Olivehurst, with very low transit coverage during this time, indicating an opportunity for increasing transit coverage to meet some of the trip demand.

Table 14 - Travel Demand Coverage by Time of Day

Time Period	Trips	Trips near Transit	Coverage	Avg. Trip Length	Avg. Transit Trip	Avg. Travel Time	Avg. Transit Travel Time	Addl. Time
00:00 - 06:00	66,237	-	-	4.7	-	11.82	-	-
06:00 - 10:00	77,198	54,567	71%	4.8	3.7	12.97	18.69	44%
10:00 - 16:00	137,464	116,337	85%	4.9	3.9	13.96	19.26	38%
16:00 - 20:00	100,797	75,643	75%	5.0	3.9	14.91	19.60	31%
20:00 - 24:00	50,774	-	-	4.8	-	12.48	-	-
Total	432,470	246,547	57%	4.8	3.8	13.23	19.18	45%

While minor improvements could likely be made with careful consideration, transit coverage for the AM Peak, Mid Day and PM peak is relatively high, covering above 70% percent of the trips taking place. However, because nearly a quarter of trips take place in the late night and early morning hours, overall coverage for transit drops to below 60%. Expanded service during late night and early morning hours is a request that transit agencies receive regularly, particularly from those who do not have access to a personal vehicle, and/or work a very early or late shift. Unfortunately, this demand is very difficult to meet using fixed route services, as the cost to operate a full-sized bus, compared to the potential ridership gains, is very high, and often makes it unsustainable. Supplementing fixed route service with other modes, such as rideshare, or on-demand services may be an option to improve overall transportation coverage and meet some of the late night/early morning demand.

The average trip length for transit trips throughout the day is consistently lower than all trips by roughly a mile, while trip times are longer by about 5 minutes on average. Given that transit trips in general are less direct than car, walking, or biking trips, the network is performing relatively well, but there may be some adjustments that could improve overall trip times. The sections that follow will provide more detailed information about where to consider making these adjustments, looking at a number of factors, and highlighting the adjustments that will have the highest overall impact on rider experience.

POTENTIAL VS. ACTUAL TRANSIT TRIPS

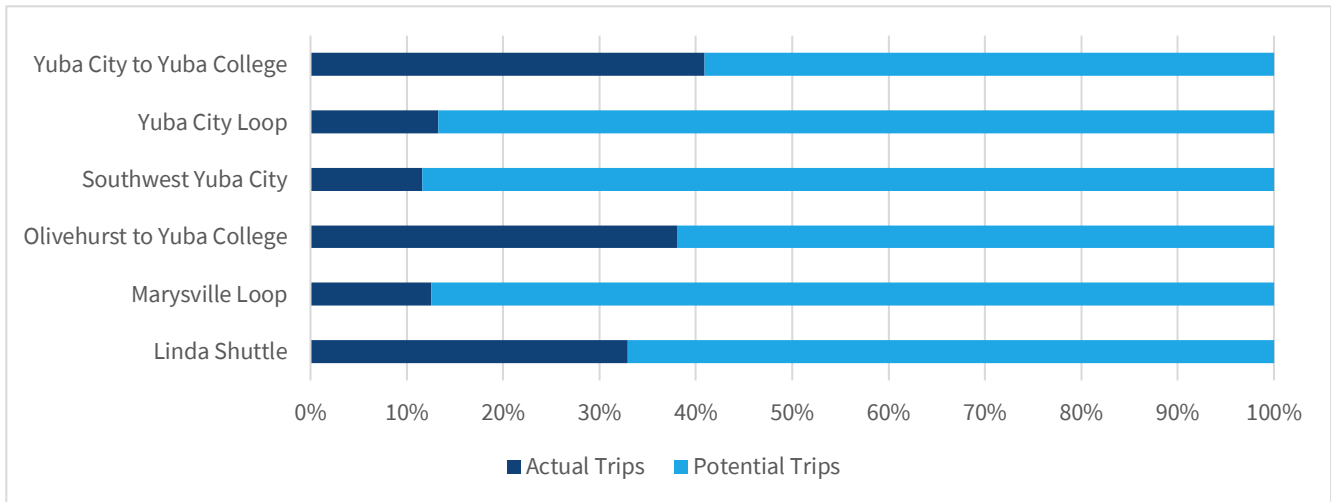


Figure 116 - Existing Transit Usage Compared to Potential Transit Usage

The above chart provides an overall comparison of the total number of trips that could be completed using transit, compared to the actual number of trips being taken on transit. Potential trips are derived from calculating total population within ½ mile of each stop and total travel demand within ½ mile of existing stops and comparing them to the actual number of trips taking place on transit.

Compared to the other routes, the Yuba City to Yuba College route is the best performing with over 40% of all potential transit trips translating into actual trips, followed closely by the Olivehurst to Yuba College route. It is not surprising that there is higher transit use to and from campus destinations, given that staff and students must purchase parking permits to park on campus during most of the day.

Since all of these are “eligible” trips, in that they are close enough to existing transit stops and routes, we can assume that there are other factors besides proximity to transit that prevent people from taking transit, such as wait times, familiarity or understanding of the transit network, access to a personal vehicle etc.

ROUTE PERFORMANCE BENEFIT INDEX

The Route Performance Benefit Index shown in Table 2 was developed to identify which routes, with changes could result in the greatest impact from route adjustments or increases in service frequency. To do this, it takes into consideration several data points, including trip generators, potential vs actual ridership, transit coverage, cost/benefit based on reductions in subsidy per passenger of potential vs actual ridership, and route performance which looks at improvements in productivity (riders per hour) of potential vs actual ridership.

From this we can see that the Yuba City loop (Route 2) has the greatest overall potential for growth, indicating that improvements should be focused on this route. This route has high potential for performance improvements given that transit coverage for this route is currently only about 15%. This comes from the fact that total potential ridership based on population density/proximity to the route is very high, over 430,000 annually, as compared to the number of actual rides, coming in at only about 66,000 per year. Route 2 previously operated at a 30-minute frequency which was decreased to hourly in June 2020. It is not realistic to expect the current or even a significantly improved transit route, can carry 430,000 riders per year. However, the goal of the recommendations section of this report is to attract as much of the potential ridership as possible through changes in travel time, wait time and access to major trip generators.

Table 15 - Route Performance Benefit Index

Route	Hours	Annual Ridership		Potential Ridership		Coverage	Cost/Benefit	Performance	Performance Benefit Index
		Current	Potential	Weekday	Weekend				
Yuba City Loop	6,881	66,483	435,572	1572.5	629.0	15%	1	8	5.7
Southwest Yuba City	3,478	27,492	209,714	757.1	302.8	13%	2	7	4.3
Marysville Loop	6,753	43,089	299,938	1082.8	433.1	14%	2	5	2.6
Yuba City to Yuba College	13,684	156,486	226,157	816.5	326.6	69%	2	4	1.8
Olivehurst to Yuba College	6,884	68,853	112,081	404.6	161.8	61%	3	4	1.5
Linda Shuttle	3,415	25,197	51,325	185.3	74.1	49%	4	4	1.0

DIAL-A-RIDE

The charts below display average dial-a-ride pickups and drop-offs by hour of the day for an average month. Not surprisingly we see an AM peak, and midday peak for both pickups and drop offs, with the highest numbers of trips between noon and 1pm, indicating these are likely midday shopping or medical trips rather than commute trips, especially since dial a ride service during these hours is limited to seniors ages 65 and over and those with disabilities.

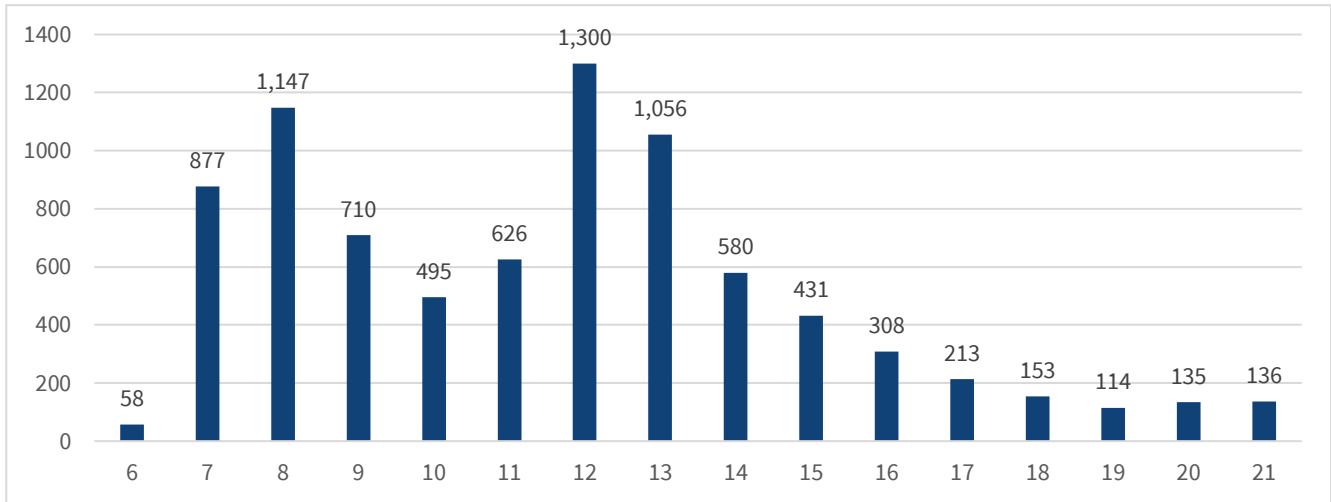


Figure 117 – Dial-A-Ride Pickups by Hour

Given the average trip distance, it is not surprising that the drop off peaks are similar to pickups, indicating most trips are within 30 minutes or less. Today’s dial-a-ride service requires riders to call ahead to book trips. Compared to taxis or rideshare, Yuba-Sutter Transit’s Dial-a-Ride services cannot be booked on-demand. Same day reservations are accepted for eligible passengers if capacity is available. The dial-a-ride service opens to the general public in the evening (6:00-9:30pm), however, ridership during this period is the lowest of the day.

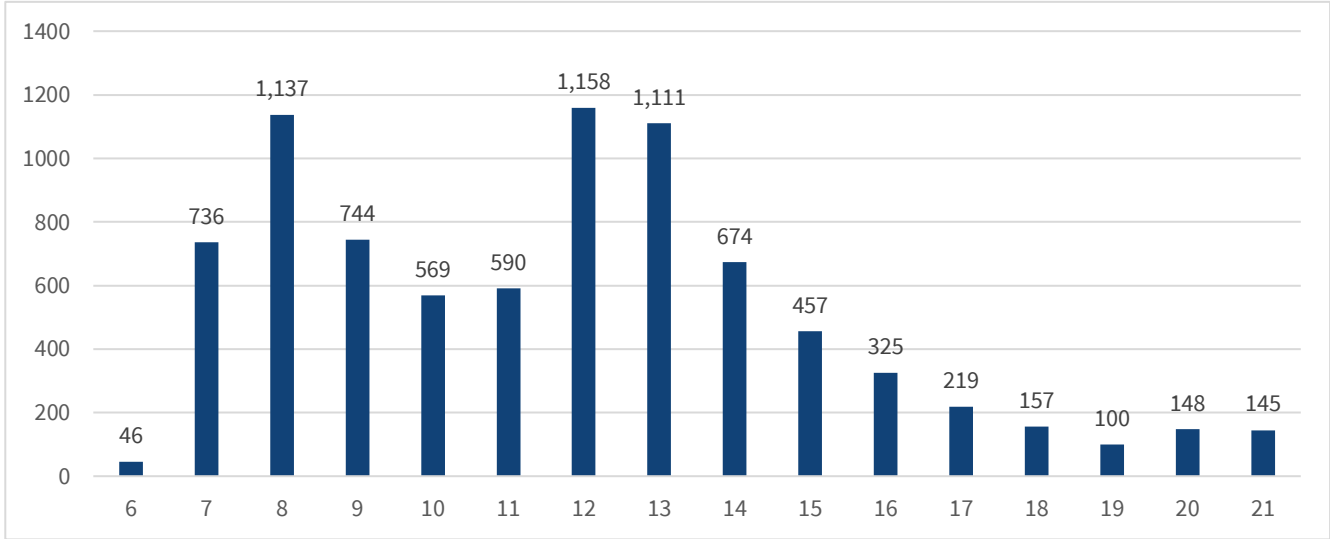


Figure 118 – Dial-a-Ride Drop-offs by Hour

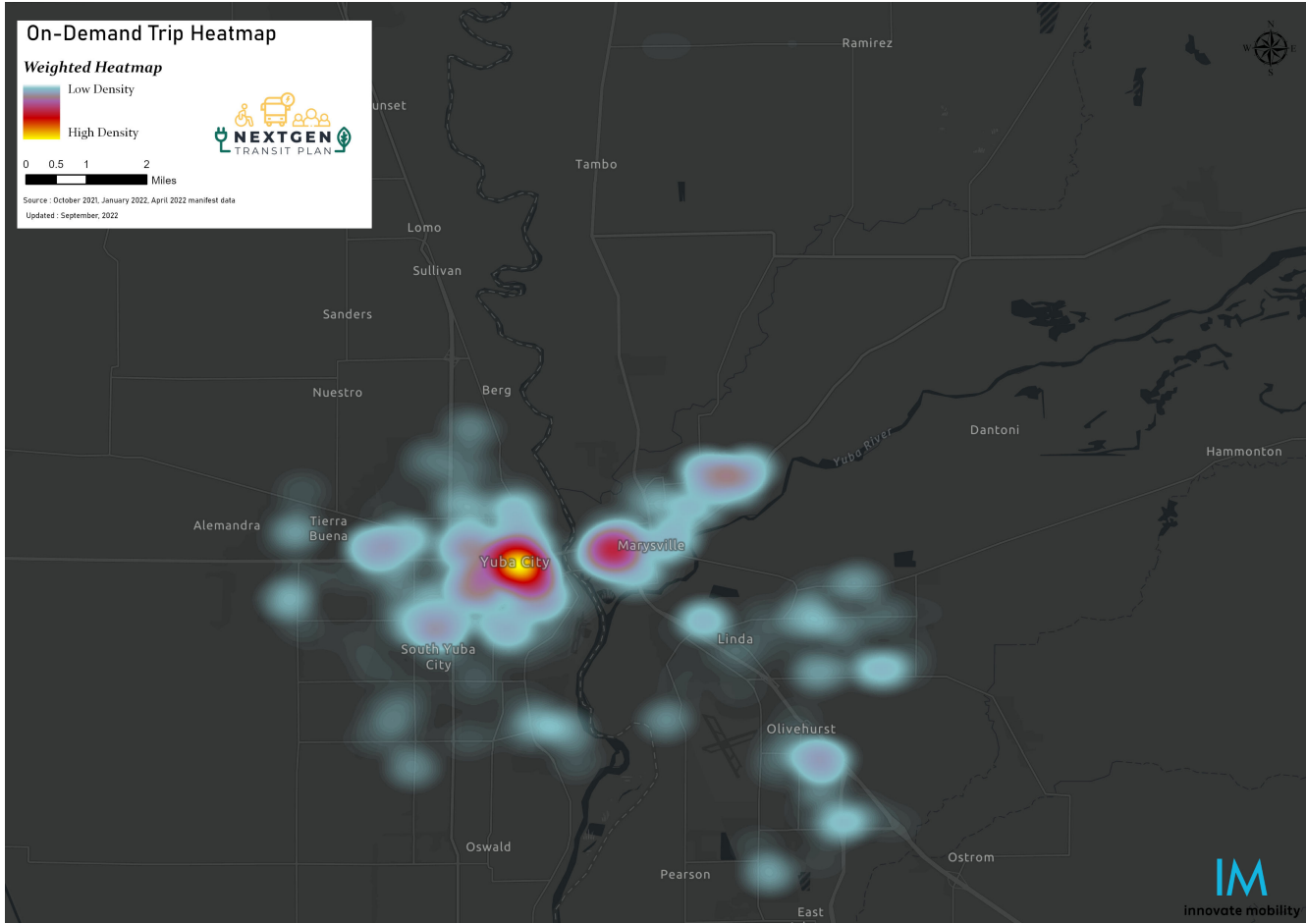
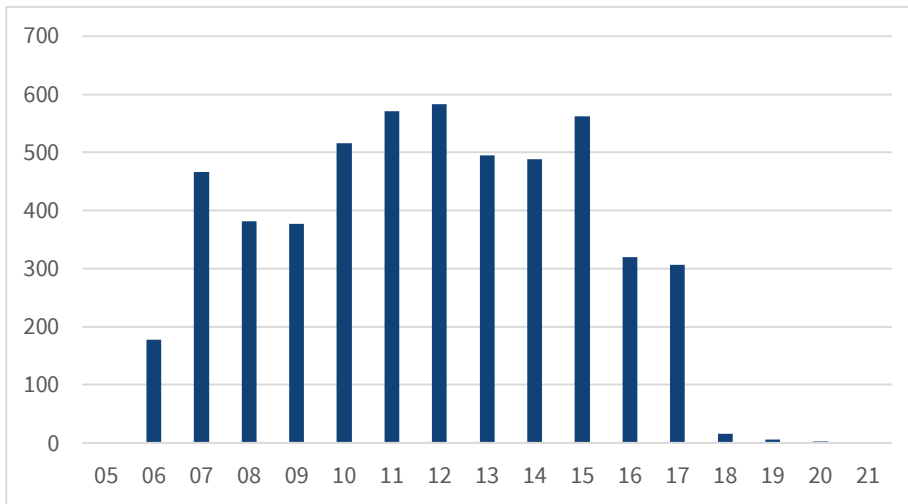


Figure 119 - On-Demand Pickups and Drop Offs

The highest concentration of dial-a-ride trips takes place within and around Yuba city, with smaller concentrations in Marysville and Olivehurst. Given that dial-a-ride service is limited during the day to seniors 65+ and those with disabilities, it does not provide as much flexibility as an on-demand service that is open to the general public throughout the day would. That said, generally speaking, non-restricted on-demand services are expensive to operate based on number of rides per hour, compared with the cost to operate the service. Depending on Yuba-Sutter Transit's overall goals and the recommendations developed in the following sections, a shift in the balance between on demand and fixed route services might be something to consider.

RURAL SERVICE

Rural service in the Yuba-Sutter region largely serves the areas of the Foothills, Live Oak and Wheatland. We can see that many trips takes place during mid-day, with slight peaks in the AM and PM peak hours. This is partially an artifact of the route schedules, which have trip frequencies limited at 2-3 trips per day. These trips are likely to be a mix of commuting trips along with shopping and other midday trips such as medical, or other appointments. Trips are also spread fairly evenly across days of the week, with no trips on weekends when rural services are not operated. Given that there



is no weekend or late-night service, it is difficult to determine how great the demand would be for these trips on the rural routes. If rider feedback indicates a desire for this type of service, there may be options for an on-demand type shuttle service, or other supplementary options.

Figure 120 – Rural Route Activity by Time of Day

Time Period	Proportion
Early AM	12%
AM Peak	14%
Midday	67%
PM Peak	6%
Evening	0%

Table 16 - Proportion of Trips by Time Period

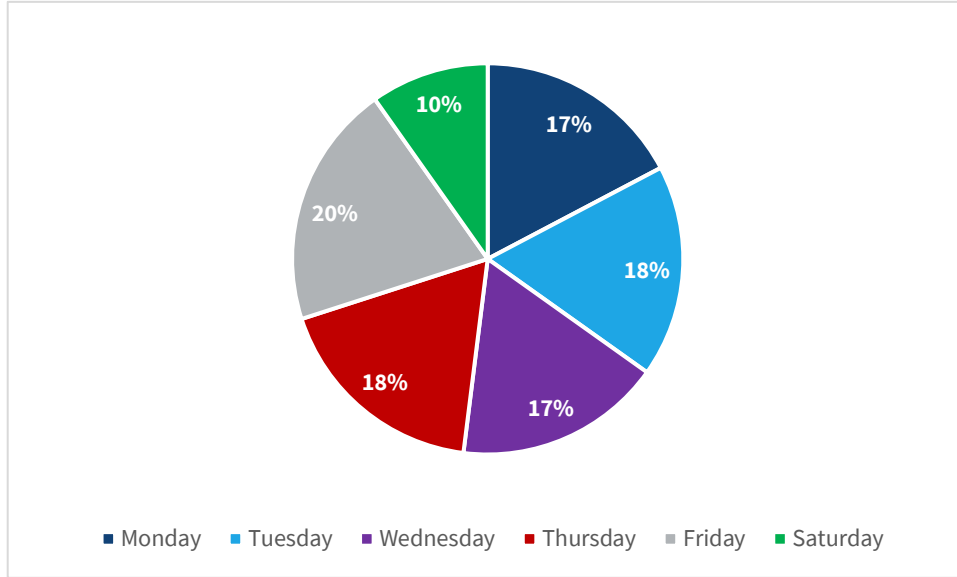


Figure 121 – Rural Route Activity by Day of Week

Overall, ridership on rural service has largely returned to pre-pandemic levels and in some cases has even increased.

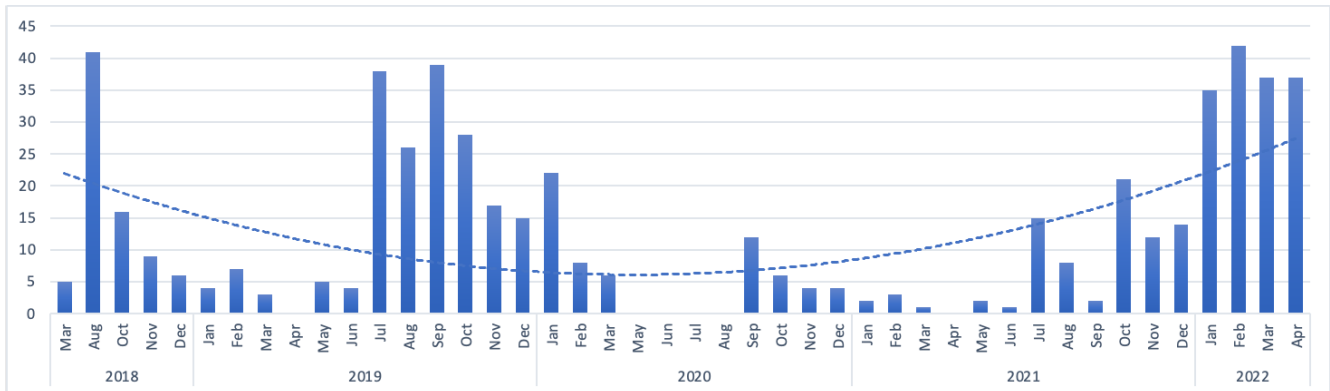


Figure 122 - Rural Service Ridership by Month



Origin/Destination Analysis



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INTRODUCTION

A key component to designing future services for Yuba-Sutter Transit is to understand travel patterns. As previewed in the Travel Patterns section of the Existing Conditions Report, the NextGen Transit Plan takes a unique approach towards understanding travel patterns and predicting travel demand.

HOW TRANSIT IS PLANNED TODAY

Transit design and planning today is still based on very traditional means. Transit agencies try and work with developers and land use specialists to understand where future population growth in their service area will be. Then, they plot a course through well-used thoroughfares and locate stops near major trip generators such as housing, schools, and employment centers. Unfortunately, working with developers and City Planners isn't as common now as it was as cities were developing, and, as a result, transit agencies are often playing catchup when designing their services to meet the needs of new travel demands. This is the main reason why many transit systems in the U.S. do not undergo major service changes.

UNDERSTANDING TRAVEL DEMAND TO BETTER DESIGN TRANSIT

Since smartphones became ubiquitous, more data is available that can be used to create new apps and solutions to make everyday life easier. More recently, that data is being utilized to better design and operate transit systems. The NextGen Transit Plan is employing these data to better understand travel patterns to ensure any recommendations are based on actual travel patterns in the region today. The Existing Conditions section focused on how travel has changed since the pandemic. This section focuses on 2022 travel patterns and will provide the groundwork for the recommendations that ultimately are drafted.

The data used for the analysis herein is procured and analyzed to ensure that user privacy and equity are taken into consideration. The data utilized is generated from both smartphones and non-smartphones to ensure that as large of sample can be obtained. This data is then cross referenced against population data from the 2020 Census and the Mobility Vulnerability Index presented in the Existing Conditions section. This cross-referencing ensures that vulnerable populations are not undercounted.

Once the raw data has been compiled it is disaggregated and anonymized automatically. As a result, the data is only accurate to approximately 1/10th to ¼ of a mile. This ensures that we do not have exact data on addresses or devices utilized.

Finally, proprietary algorithms to determine trip origin and destinations are applied against the raw data to create trips. This data is then mapped, geo-analyzed, and scaled across the entire service area to fully understand travel patterns.

TRIP GENERATION

The first step in understanding travel patterns is to locate trip generators. The GPS and Location Based Service (LBS) data referenced earlier has been aggregated and grouped to understand where trips start and end. In the trip density map below, the most common trip generators are assembled as a heat map. The lighter the color (to yellow) the more intense the trip generation is. This map provides the NextGen Transit Plan sufficient data to begin creating trips.

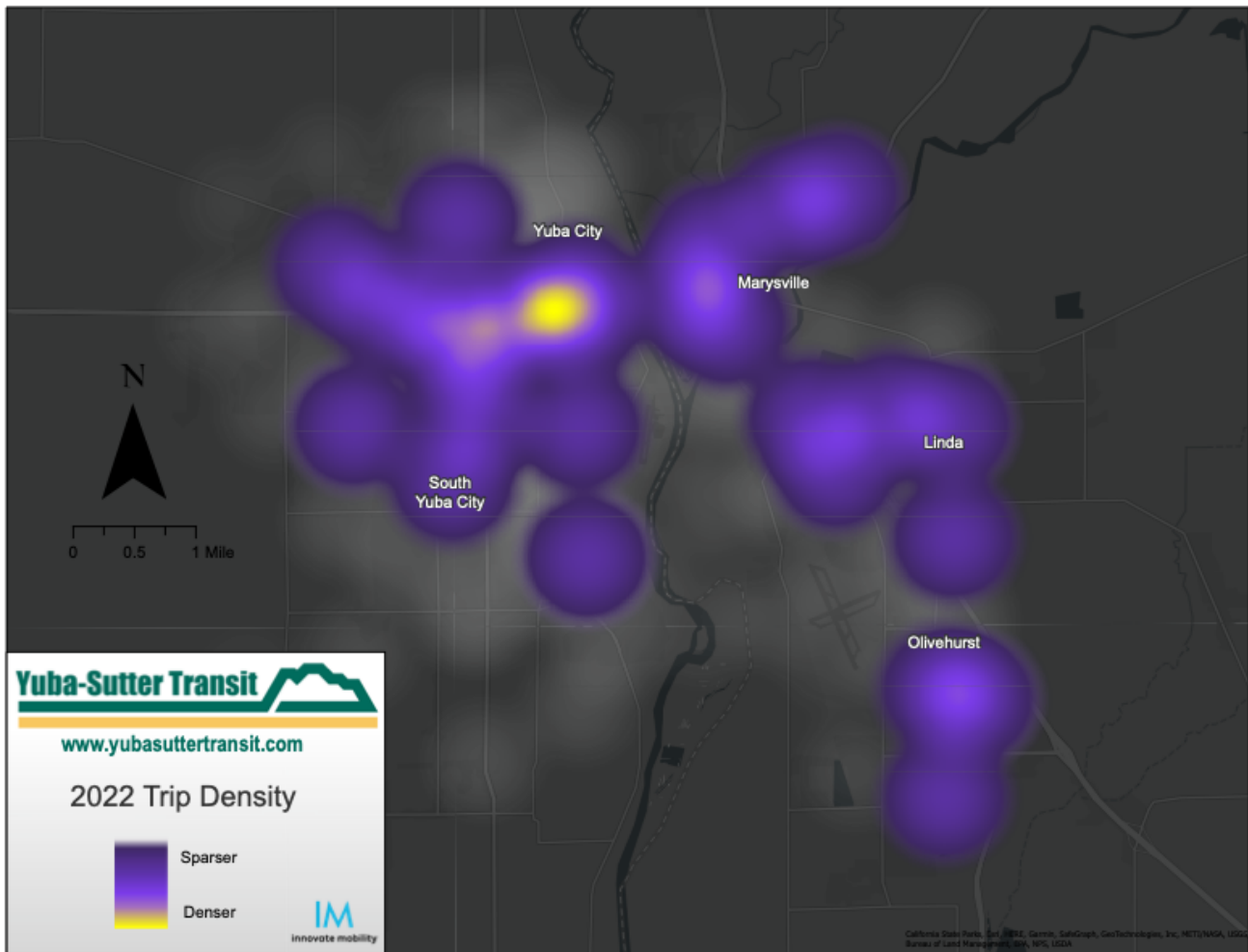


Figure 123 - All Day (0700-2000) Trip Distribution

TRIP GENERATION BY TIME OF DAY

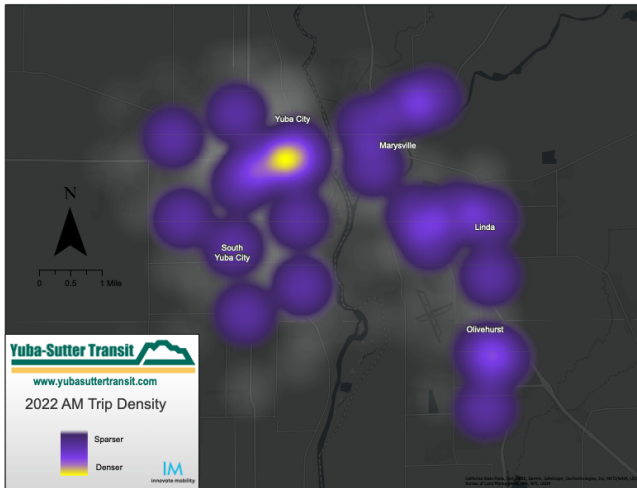


Figure 126 - AM Peak Trip Distribution

During the AM Peak (06:00-09:59), Yuba City has the highest density of trips occurring within the city itself during AM peak times. There is also a concentration of trip near Marysville, Linda and Olivehurst, while nearby surrounding areas have somewhat lower trip densities.

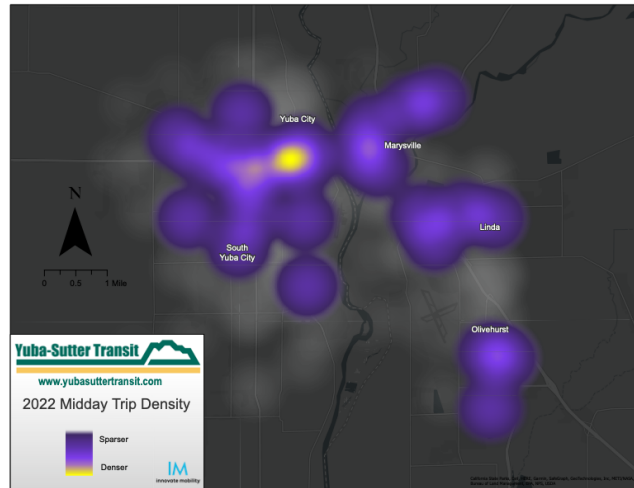


Figure 124 - Midday Trip Distribution

In the midday (10:00-15:59) there is more trip distribution concentrated in Central Yuba City and between Yuba City and Marysville, however distribution in Linda is only around the Yuba College area.

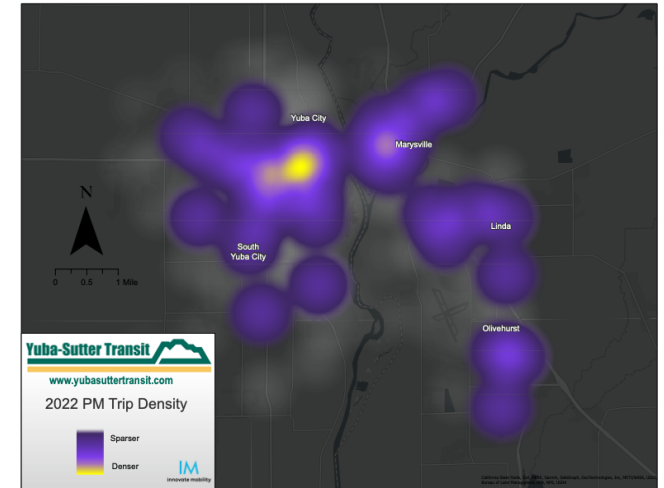


Figure 125 - PM Peak Trip Distribution

In the PM Peak (16:00-19:59) trip distribution mimics AM Peak patterns with slightly more distribution between Yuba City and Marysville.

MAJOR TRIP GENERATORS BY TYPE

The Figure 5 map shows the top 20 trip generators in the Yuba-Sutter region in order of trips that started or ended in that location. The top trip generator in the core of the region is the retail and residential area located near the intersection of the Garden Highway and River Oaks in South Yuba City followed by trips to and from the area near Lindhurst High School. Not surprisingly, the highest trip generators are largely residential areas, schools, employers, shopping areas and medical offices.

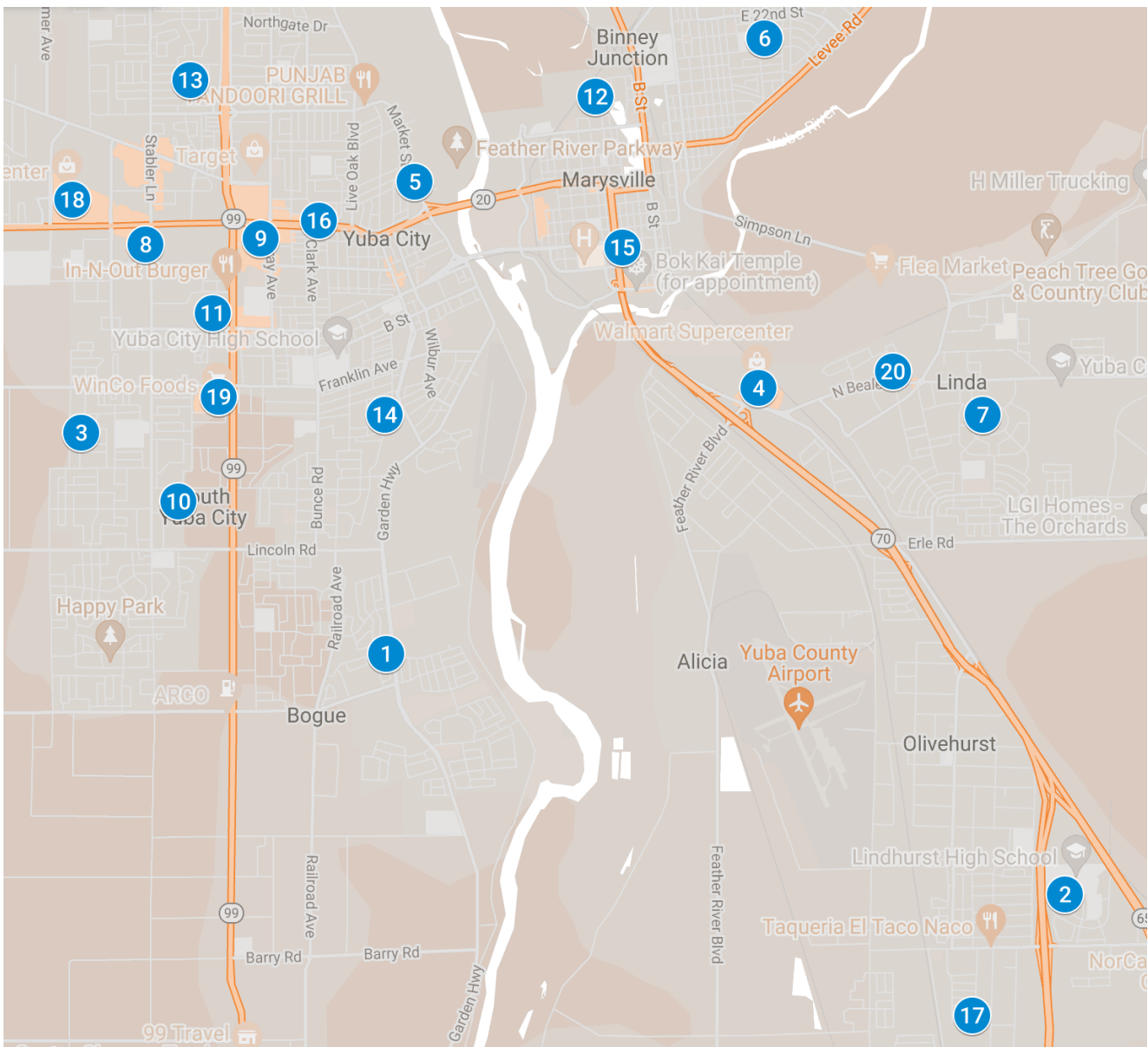


Figure 127 – Top 20 Trip Generators

1. Garden Hwy/River Oaks – Retail/Residential
2. Lindhurst High School – School/Residential
3. Harding Rd/Woodleaf Dr - Residential
4. Walmart Linda - Retail
5. Plumas St/Del Norte Avenue - Medical
6. E 19th St/ Del Pero St - Residential
7. Park Circle - Residential
8. Sam’s Club - Retail
9. Colusa Hwy/Gray Ave - Retail
10. Richland Rd/Estate Drive - Residential
11. Raley’s and Kohl’s Yuba City - Retail
12. Ellis Lake Dr - Residential
13. Coats Dr/Christifer Ln - Residential
14. Plumas Blvd/Franklin Ave – Medical/School
15. E Street – Retail/Medical
16. Colusa Ave/Clark Ave – Retail/Residential
17. Deaton Dr/ Black Angus Way - Residential
18. Walmart Yuba City - Retail
19. WinCo Foods Yuba City - Retail
20. Park Ave/Shasta Way - Residential

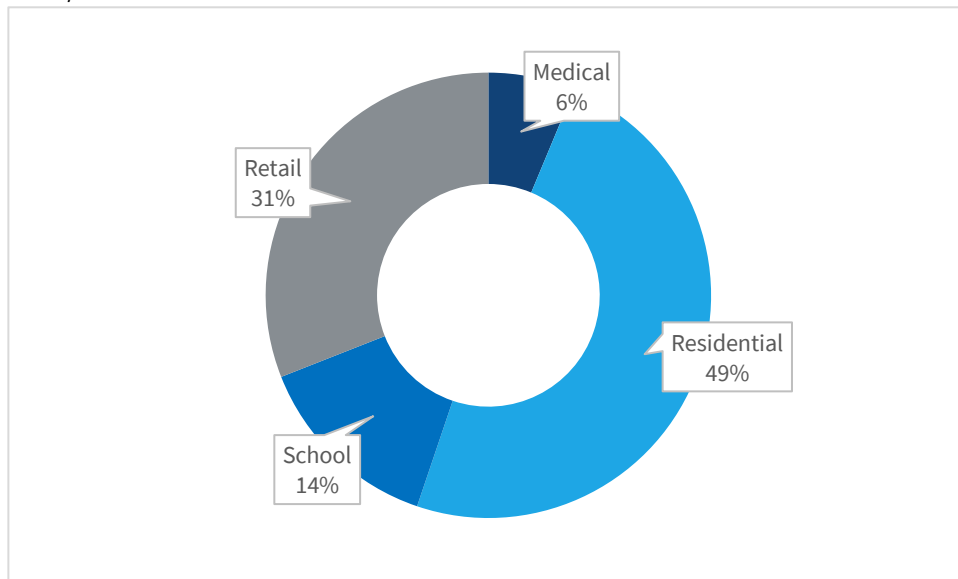


Figure 128 – Trip Generator by Type

Figure 6 shows the breakdown of trip generator by type. Given that a majority of trips start and end at home, it makes sense that residential areas account for more than half of trip generators. Additionally, when looking at typical busy times in the core area, it’s clear that many trips are to and from retail.

Table 17 - Average Time and Distance per Trip Type

Type	Average Distance (mi.)	Average Travel Time (min.)
Medical	3.4	8.32
Residential	5.2	11.61
School	5.2	11.19
Retail	3.9	9.03

For the largest categories of trip generators, the average distance of each type of trip, and average time it takes to complete that trip are listed in Table 1 above. This is calculated using GPS and LBS data, and includes all modes of transportation, including car, bus, biking, and walking.

CORE AREA SPATIAL ANALYSIS

The second step of understanding demand after identifying generators is to group these datasets into trips. The NextGen Transit Plan utilized proprietary algorithms to understand and link trips. This data is tested against millions of points to ensure that the trips created are accurate. Once deemed to be accurate, the trips are then mapped to fully understand demand across the region. This section focuses on the core area of Yuba City, Marysville, Linda and Olivehurst. When looking at the core area, it is clear that the majority of trips occur within Yuba City.

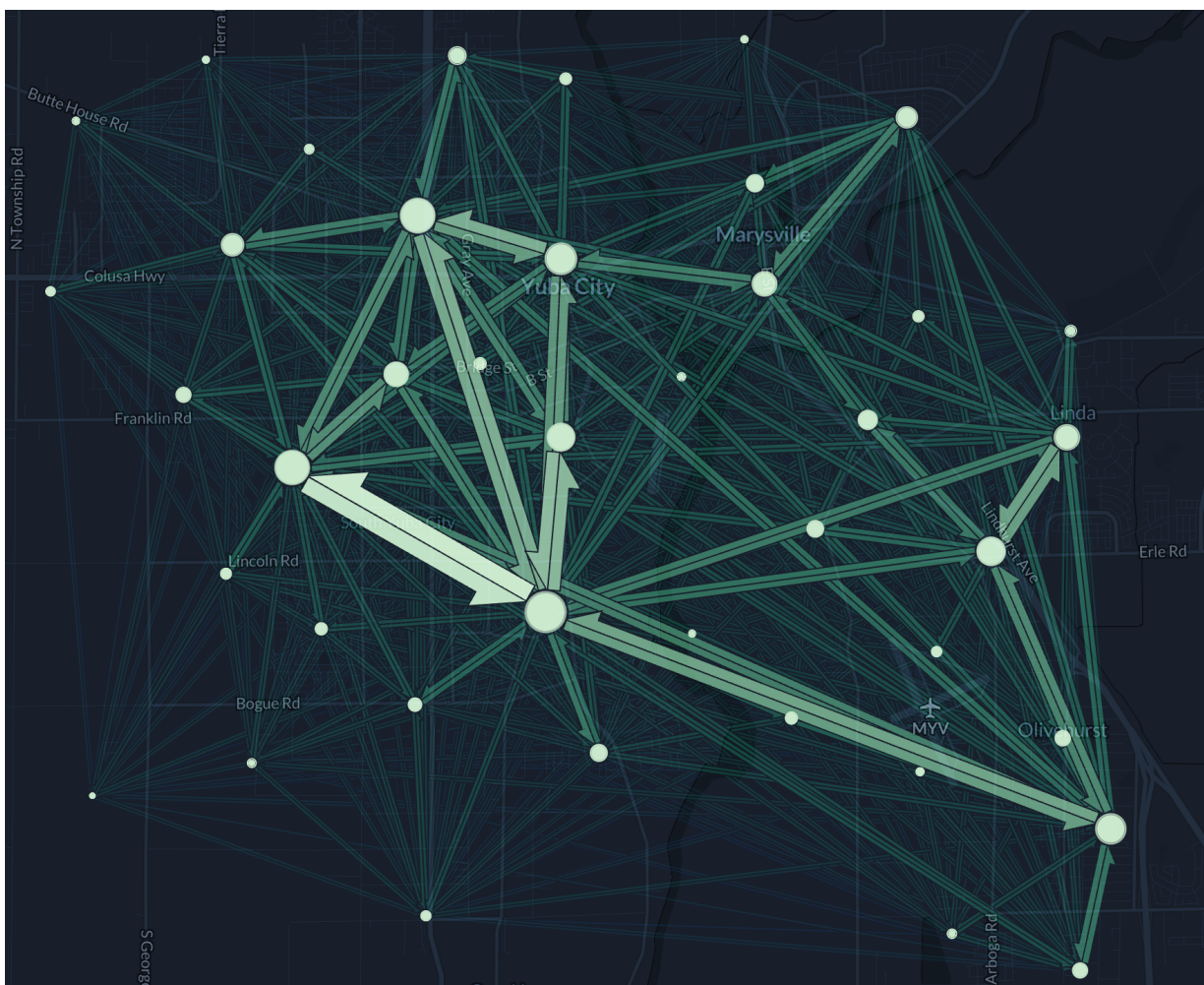


Figure 129 - Spatial Distribution of All Core Area Trips

In all, over 432,000 daily trips are taken in the core of the Yuba-Sutter Transit service area. The highest proportion of these trips occur between 4pm and 6pm each day. This indicates school and commute related trips, while there are also a large portion of trips occurring between 1pm and 6pm, indicating that this area has a strong retail and services employment sector.

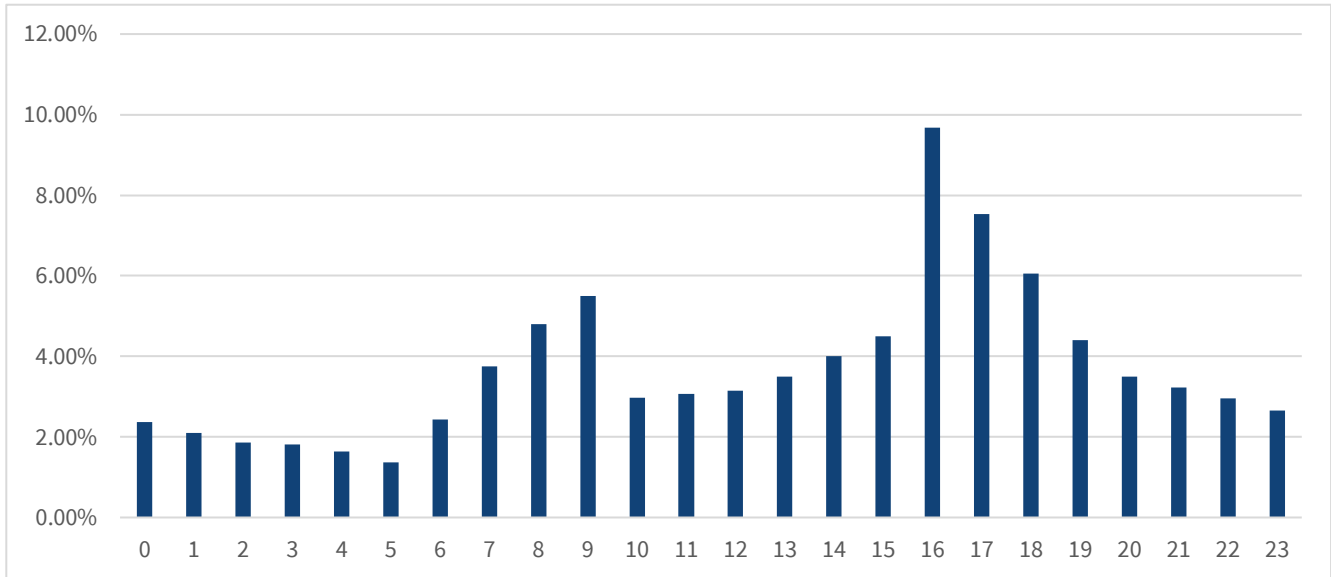


Figure 130 - 2022 Trip Distribution by Hour

Looking at trip distribution across the region, it is clear that travel within and to Yuba City is the highest, while travel within (trips that both start and end) in Marysville, Linda, and Olivehurst is much lower. This indicates that many trips starting in Marysville, Linda and Olivehurst have destinations in Yuba City and vice versa.

Table 18 - Trip Distribution by City

Travel	% of Trips that start or end in	% of Trips that start and end in
Yuba City	62%	50%
Marysville	9%	2%
Linda	16%	7%
Olivehurst	13%	6%



Figure 133 - AM Peak Spatial Distribution

When reviewing the trip generators for the region, it is clear that during the AM Peak, there is a high frequency of trips between the residential areas in Yuba City, North Yuba City, Linda and Marysville, and the Garden Highway/River Oaks area in Yuba City, the Lindhurst High School area, and the Medical Buildings near Plumas St/Del Norte Avenue in Yuba City. These trips include travel across all modes, including car trips, and are most likely to be commuting and school drop off trips.



Figure 132 - Midday Spatial Distribution

On average, mid-day trips are similar geographic distribution to AM Peak trips, however there is slightly a higher frequency of trips between the North Yuba City residential area, and the Garden Highway/River Oaks area, as well as between that area and the Lindhurst High School area. New travel patterns to Linda from South Yuba City also appear during the midday.



Figure 131 - PM Peak Spatial Distribution

Similar to the AM Peak there are a lot of commute trips between employment and residential areas. There is also an increase in the number of shopping trips within Yuba City to destinations like Raley's and Kohls, Walmart [which one?], and Colusa Ave/99 Shopping, and the E Street Shopping area.

TRAVEL PATTERN CHANGES

As shown in the Existing Conditions section, travel patterns since the pandemic began have changed. Post-pandemic, there is more travel in the mid-morning and early afternoon, however, there is less travel in the peak periods. This indicates that more people are working from home and traveling during what used to be considered “off-peak” times.

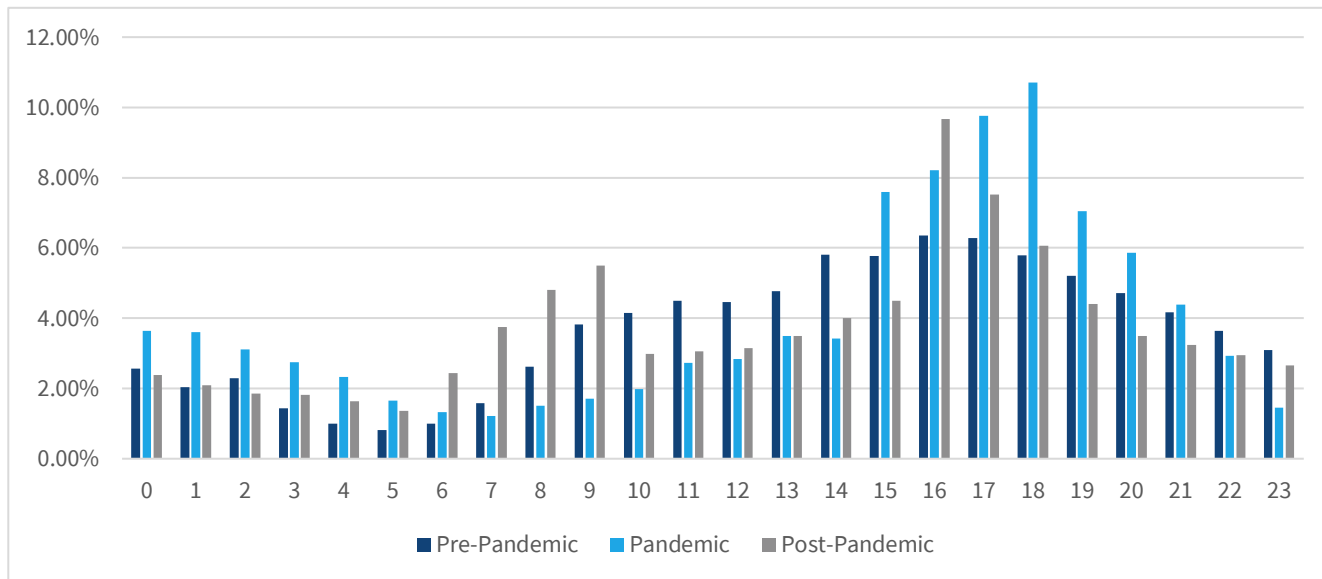


Figure 134 – Travel Demand by Time of Day

Table 19 - Travel by Time of Day by Period

	Pre-Pandemic	Pandemic	Post-Pandemic
AM Peak	9.02%	5.75%	16.48%
Midday	35.81%	30.27%	30.87%
PM Peak	21.98%	33.38%	21.48%

While travel across time periods have changed, the amount and intensity of travel patterns have also changed. Post-pandemic, there are approximately **22%** more daily trips than prior to March 2020. **62%** of all trips start **OR** end in Yuba City, while **50%** of all trips start **AND** end in Yuba City. There are new patterns to new developments in northern, western, and southeast Yuba City. Wheeler Ranch and other portions of Olivehurst including the Yuba County Airport also contain new trip generators.

COMMUTER TRIP SPATIAL ANALYSIS

Commuter trips represent approximately **12%** of all travel in Yuba and Sutter Counties. “Commuter” is defined as service from the two counties into the Sacramento central business district. Overall commuting from the core Yuba-Sutter region is down approximately **17%** when comparing 2019 to 2022. This is in line with the increased work from home data presented in the Existing Conditions section. While Yuba-Sutter Transit cannot spur commuting ridership based on improvements in service, as the Authority already provides high quality commuter service to and from downtown Sacramento, the goal of the NextGen Transit plan will be to find new destinations as well as improve first and last mile service to make commuting more seamless. It is anticipated that commuters will at some point return to central business districts around the country, however, it is more than likely that California, and specifically the state’s public sector commuters will come back slower and in fewer quantities. The section below compares 2022 trip patterns to 2019 patterns prior to the pandemic.

Table 20 - Commuter Trips by Time of Day and Direction

	2019	2022
AM Peak Outbound	682	1,072
Midday Inbound	2,180	1,184
PM Peak Inbound	1,770	1,586
Total	4,632	3,843

Pre-pandemic in 2019, more there were approximately 800 more daily trips from Yuba and Sutter Counties to and from the Sacramento area total, with many more trips inbound to Yuba and Sutter counties during midday. Midday trips coming into Yuba and Sutter counties are down nearly 50% in 2022 from what they were pre-pandemic. In 2022, both the outbound trips from Yuba and Sutter Counties, as well as the inbound trips were spread relatively evenly between AM, midday and PM peak. This does indicate that there are still people commuting, however, they are choosing to drive rather than take the bus.

Table 21 - Commuter Share of Trips

	Outbound AM Peak		Inbound Midday		Inbound PM Peak	
	2019	2022	2019	2022	2019	2022
North Yuba City	31%	45%	31%	21%	18%	28%
South Yuba City	20%	3%	24%	28%	19%	42%

Marysville	3%	3%	14%	12%	6%	2%
Linda	10%	33%	9%	18%	6%	9%
Olivehurst	17%	8%	10%	9%	6%	10%
Plumas Lake	5%	8%	3%	11%	1%	9%

In 2019, during the AM Peak, the highest percentage of trips heading to Sacramento begin in North Yuba City, followed by trips beginning in South Yuba City, Olivehurst and Linda. In 2022, North Yuba City once again leads with the largest percentage of AM outbound trips, however commuters from Linda are the second highest number traveling to Sacramento. In terms of outbound trips, South Yuba City and Olivehurst saw the biggest drops in 2022. With Plumas Lake seeing an increase which could be in part due to the new developments in that area.

Outbound commuting from South Yuba City dropped dramatically, while inbound during the midday and PM Peak both saw increases. It is possible that these are midday inbound trips from Sacramento rather than commuters as there is no balance of outbound and inbound commuting for South Yuba City in 2022.

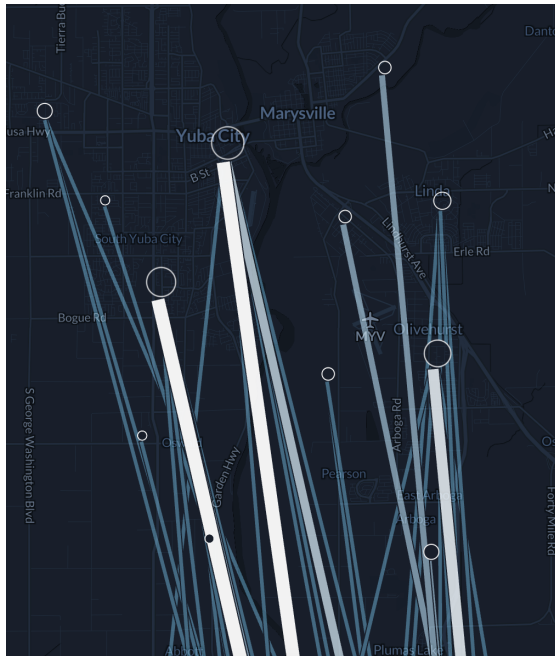


Figure 136 - 2019 Outbound AM Peak Trips

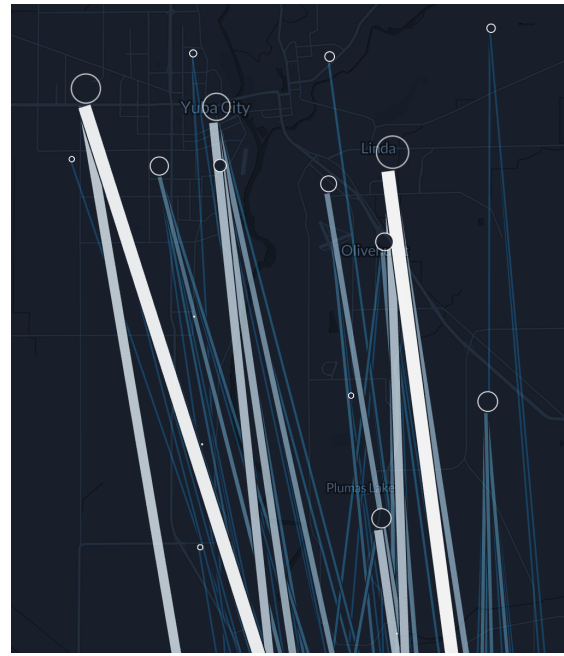


Figure 135 - 2022 Outbound AM Peak Trips

Overall, it is clear that commuting from the Yuba-Sutter core area to Sacramento has dropped significantly. As stated earlier, the goal of the NextGen Transit Plan as it relates to Yuba-Sutter Transit’s Commuter services is not to enhance service further, but rather to better connect riders to pick up and drop off points. Ridership on commuter services around the country has not rebounded. In fact a recent article in the San Jose Mercury News discussed how Los Angeles area transit ridership has surpassed San Francisco Bay Area ridership. Northern California commuter ridership lags behind the rest of the country in terms of recovery from pandemic-era lows. San Francisco has one of the lowest office occupancy rates in the nation, and Sacramento mimics San Francisco.

Yuba-Sutter Transit operates inbound Midday trips to meet the demand for early AM workers as well as those working split shifts or those are seeking medical, social and other services in Sacramento. Midday transit service has proven to be successful, even seeing a larger rebound post-pandemic than the AM Peak and PM Peak service. While midday inbound trips in 2022 dropped more than the rest of day, South Yuba City, Linda and Plumas Lake now make up a bigger percentage of overall inbound commuters than in 2019.

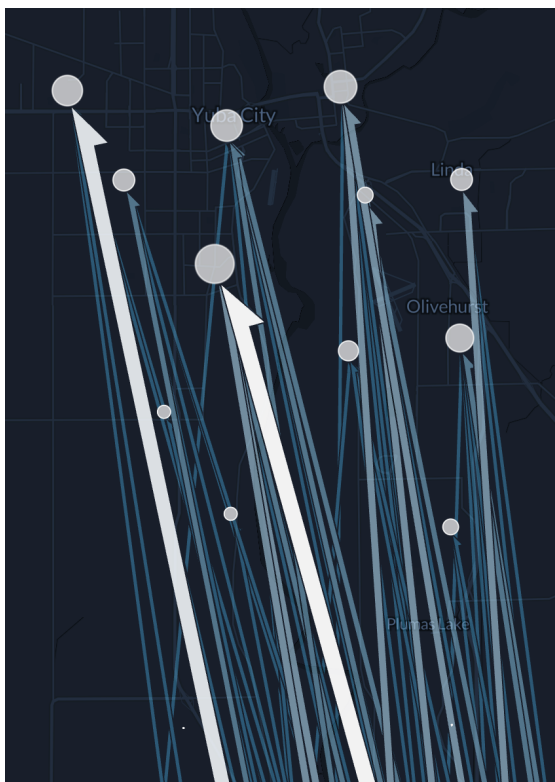


Figure 138 - 2019 Midday Inbound Trips

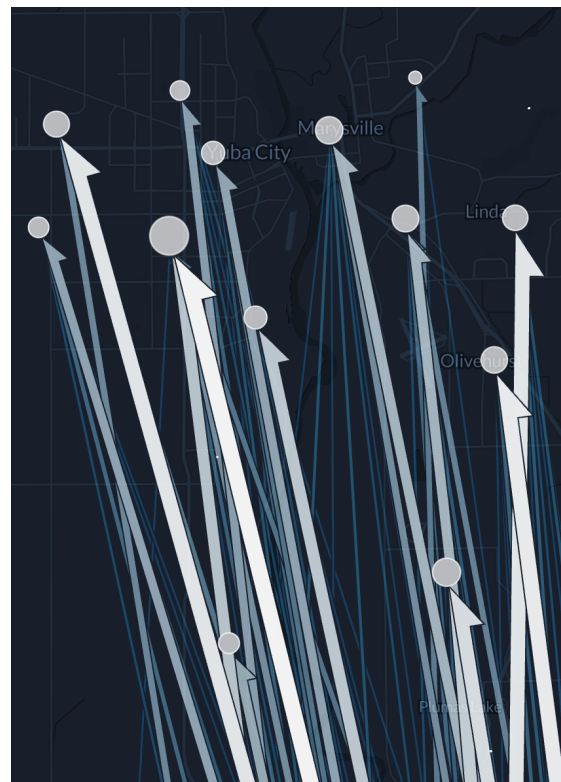


Figure 137 - 2022 Midday Inbound Trips

RURAL AREA SPATIAL ANALYSIS

Yuba-Sutter Transit offers a mix of in-advance scheduled route deviation and fixed route trips into rural areas in the region. These areas include Live Oak, the Foothills and Wheatland. Each of these areas has a mix of rural, and detached single-family residences. While the density to support traditional high-frequency bus service does not currently exist, there is a distinct need for service into these areas.

LIVE OAK

Located directly north of Yuba City via Hwy 99, Live Oak is a 3-square mile city with a population of 9.3k as of 2021. The almost 50% Hispanic or Latino population is mostly over 18 and live in owner-occupied housing. Most residents are still in the labor force and have an average commute to work of just under 30 minutes. 80% of the population lives above the poverty line and the median household income is approximately \$58,000 per year.

Looking at trip patterns to and from Live Oak, we can see that the highest number of trips occur between Live Oak and Central Yuba City, followed closely by travel to South Yuba City. There is some travel to Olivehurst. The primary travel times from Live Oak is in the AM Peak. Return trips are highest during the PM Peak period. This indicates a heavy commuting flow for the City.

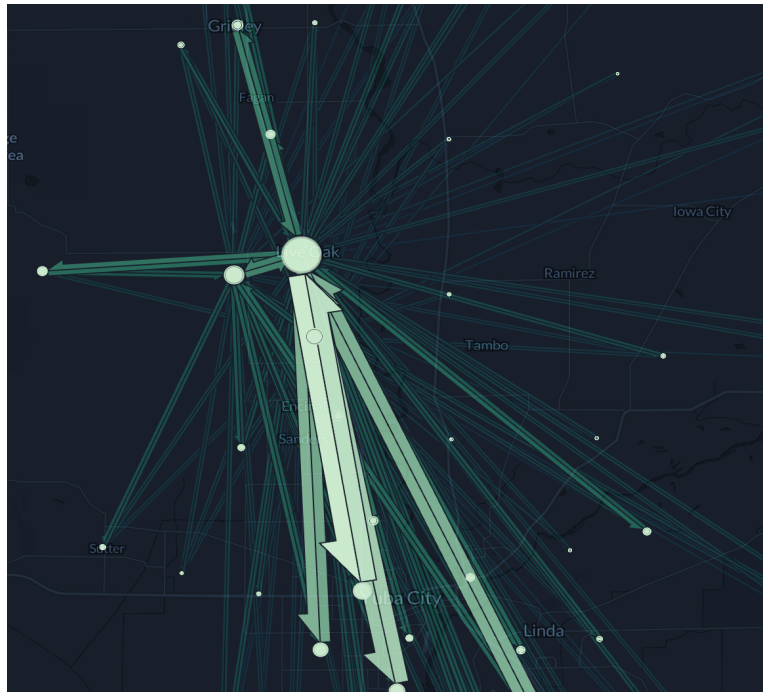


Figure 139 - Live Oak Spatial Trip Distribution

FOOTHILLS

The Foothills refers to the communities of Brownsville, Oregon House, Willow Glen and Loma Rica. Located northeast of Marysville, the Foothills of Yuba County are between 400-2,500 feet in elevation with an average population of 1,500 people per community. Loma Rica is the most populous at just under 3,000 residents.



Figure 140 - Foothills Spatial Trip Distribution

The majority of trips to and from the Foothills communities go to Linda, presumably for shopping at Walmart. Marysville and Yuba City have the next highest number of trips, followed by Olivehurst. The majority of trips in these areas start and end in Dantoni, which is just east of Marysville. Similar to Live Oak, the majority of trips to the Foothills communities occur during the AM and PM Peak periods.

WHEATLAND

With a population of approximately 3,600, and a size of 8.1 square miles, Wheatland is a small rural city located southeast of Olivehurst. The median age of residents is 40 and the median household income is

approximately \$67,000. The population grew almost 10% between 2014 and 2019, before dropping in 2020.

The Wheatland area draws trips from a much more widespread catchment area, coming largely from the Northwest. There is some concentration of trips originating in Yuba City, Linda, and Sheridan, and other areas. The biggest trip patterns are to and from Central Yuba City, followed by Linda and then Olivehurst. Travel is fairly even throughout the day indicating both a robust commute and non-commute pattern.

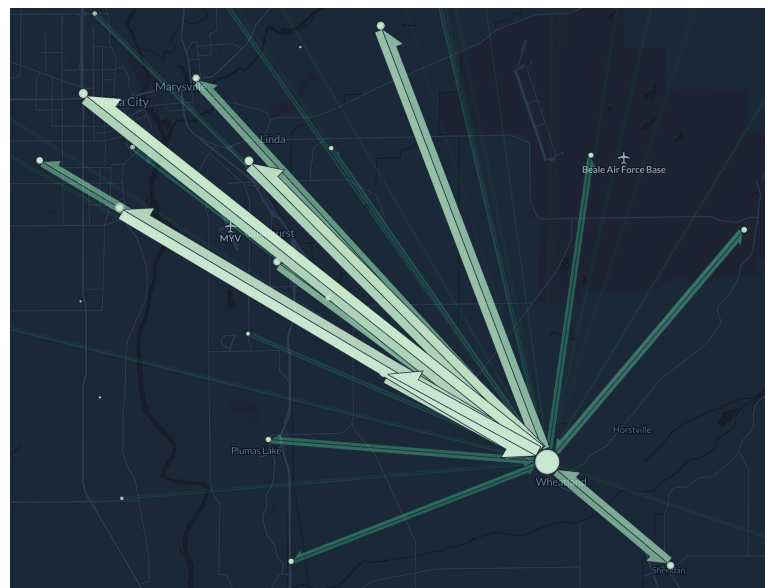


Figure 141 - Wheatland Spatial Trip Distribution

The rural communities represent approximately 14% of all trips to and from the Yuba-Sutter core area. The majority of these trips are to Yuba City, with South Yuba City seeing slightly more trips to and from its destinations. Travel to and from Linda, specifically to the Walmart is next highest with peak travel to Olivehurst following closely.

Table 22 - Rural Region Origin and Destination Breakdown

Region	% of All Trips	% to Central Yuba City	% to South Yuba City	% to Marysville	% to Linda	% to Olivehurst
Live Oak	5%	15%	20%	4%	3%	9%
Wheatland	3%	10%	11%	6%	10%	9%
Foothill	6%	8%	6%	9%	7%	5%

The rural communities represent regions that are growing slowly yet have sufficient population and demand to potentially indicate a need for more transit service. However, the form and function of this transit service could be different than traditional fixed route or the advance reservation required for route deviated trips. These regions could be potentially serviced using on-demand microtransit shuttles allowing residents to quickly and easily connect to the core area and also travel within their communities.



Bus Stop Analysis



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INTRODUCTION

The Yuba-Sutter Transit service area includes 276 bus stops across the region. This includes stops with full amenities like shelters, seating, and schedule information all the way to more basic stops consisting of only a Yuba-Sutter Transit sign.

This bus stop analysis will review bus stops within the Yuba-Sutter Transit service area. It will also make recommendations to improve existing stops as well as identify some guidelines for future stops or for upgrading existing stops as funding becomes available.

Frequently bus networks grow organically, and stops are introduced or moved to accommodate requests, respond to safety issues, or react to individual developments. Many agencies never take a wholistic look at their bus stop inventory which means locations may slowly stop serving their intended purpose or potential passengers are just outside of walking distance. This analysis will make recommendations to help keep Yuba-Sutter Transit's stops cohesive and allow them to support maximum access for the citizens of the Yuba-Sutter Transit service area.

BUS STOP SITING AND FOOTPRINT

ENVIRONMENTAL CONTEXT

The environmental context of a bus stop is an accounting for the areas surrounding it. Environmental context includes things like the stop's visibility, surrounding land use, roadway design, connectivity, and local demographics. All these things combine to create an environmental context for a stop which helps shape how well it will be used. Positive environmental factors like a nearby activity center, other transit connections, or a well-designed roadway can all help to increase transit usage at a particular stop.

TRANSIT SERVICE CONTEXT AND STOP SPACING

Another factor to consider when deciding a bus stop location is the context of the overall transit service. This includes things like stop spacing, transfer activity, and expected boarding volume. High boarding volume might justify a larger stop footprint, for example, while a transfer stop could be helped with additional passenger amenities. Stop spacing should also be considered throughout site selection – if stops are too close to one another they slow the route down, making it less effective and less desirable to riders.

LOCATION RELATIVE TO INTERSECTION

When siting a bus stop there are several options for its placement relative to an intersection. One option is to place the stop on the near side of the intersection, meaning before the stoplight or other traffic controller. This has the benefit of fewer stops but creates a conflict with drivers trying to turn right and limits visibility for drivers turning out of the perpendicular crossing. Another option is the far-side stop which encourages passengers to cross behind the bus and allows opportunity for the bus to pull back into a break in traffic. However, far-side stops can potentially create more traffic which could block the intersection.

Lastly, mid-block stops are an option to provide direct service to a popular trip generator without interacting with intersection traffic. Mid-block stops however limit riders' ability to cross safely and require more curb space to stop and start the bus.



Figure 142 - Definition of Stop Placement

CURBSIDE BUS STOP CONFIGURATIONS

The configuration of a curbside bus stop should also play an important role in site selection for bus stops. Options such as bus stops in travel lanes can work well in low-speed environments or on streets with light traffic but can create a safety concern on busy high-speed roadways. A bulb-out or bump-out style of stop is another option. The bulb-out is an extension of the sidewalk out to the travel lane which can improve the pedestrian experience but has similar safety concerns to a standard in-lane stop. Stops located in parking lanes or on shoulders and out of the travel lane can improve the safety aspect but require giving up parking which may be an issue in crowded downtowns. Bus bays or cut-outs are another style option.

These allow the bus to pull out of traffic and into a protected bay along the road. This type of stop is great for riders and good for safety but means the bus must navigate traffic to re-enter the travel lane.

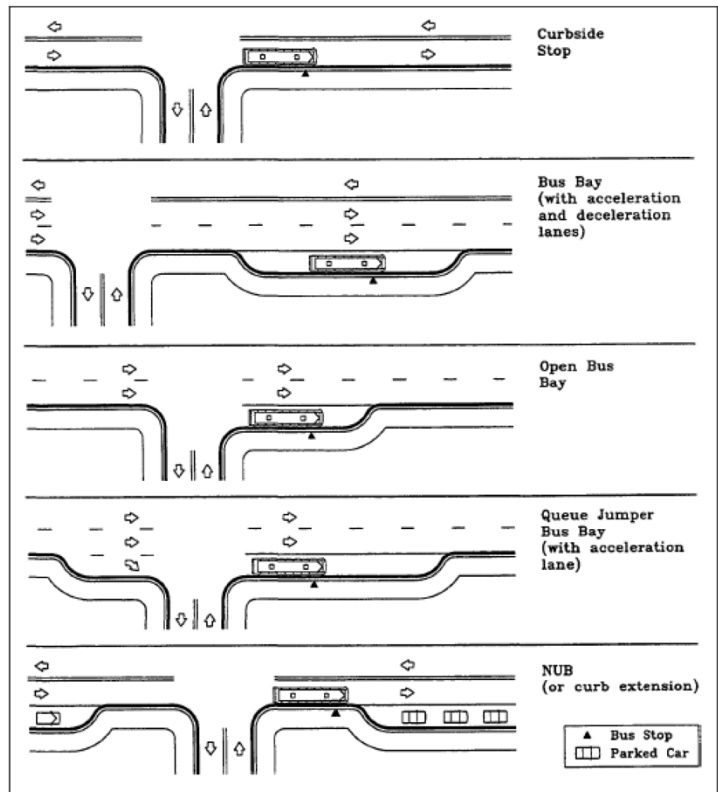


Figure 143 - Bus Stop Configurations

OPTIMIZING BUS STOP LOCATIONS

All of the above factors should come into play when deciding a new bus stop location. Often stop placement happens organically as service grows or as requests are made from the public. To ensure strong bus stops that help service rather than create delays or safety concerns these factors should all be considered. A wholistic approach should be taken when identifying a site which includes the stop's environment, transit service context, placement relative to an intersection, and the configuration of stop to be implemented.

Stop changes can be disruptive to riders, operators, and even administrators. To combat this, it is recommended that these guidelines be followed when new route changes occur or as part of a greater system reconfiguration rather than being used to alter single stops sporadically. Public input is also crucially important throughout this process and will help ensure buy-in from the public and elected officials.

BUS STOP ELEMENTS

ACCESSIBILITY

All bus stops must follow general design principals which include minimum accessibility requirements such as a landing pad and an accessible path for bus users and other pedestrians connecting the bus stop elements provided. Information at bus stops and information terminals must also meet accessibility requirements.

PASSENGER LANDING PADS

Passenger landing pads are an important safety and accessibility feature of any bus stop. According to the Americans with Disabilities Act (ADA) bus stops must have a boarding and alighting area that meets all the criteria below:

- Bus stop boarding and alighting areas shall have a firm, stable surface.
- Bus stop boarding and alighting areas shall provide a clear length of 96 inches minimum, measured perpendicular to the curb or vehicle roadway edge, and a clear width of 60 inches minimum, measured parallel to the vehicle roadway.
- Bus stop boarding and alighting areas shall be connected to streets, sidewalks, or pedestrian paths by an accessible route.
- Parallel to the roadway, the slope of the bus stop boarding and alighting area shall be the same as the roadway, to the maximum extent practicable. Perpendicular to the roadway, the slope of the bus stop boarding and alighting area shall not be steeper than 1:48 (~2%).

BUS STOP SIGNS

Bus stop signs are the basic identifying feature of every bus stop. They should include at a minimum the agency logo, applicable route names, and contact information for the agency. Other options to include are destination information and a stop ID if applicable.

Bus stop signs must also comply with ADA. The requirements include specific text requirements and state that signage must have contrasting background and text colors.

Ideally bus stop signs are mounted on their own posts and are at least 80” from the ground to avoid conflicts with pedestrians. The sign must also not protrude into the roadway or get too close to the roadway that a bus might hit it when pulling into or out of the stop.

TRASH AND RECYCLING

Providing trash (and recycling at busier stops) receptacles is a convenient feature for bus riders. It also helps to cut down on litter around bus stops. Trash receptacles should be close to any shelter and out of the way of pedestrians using the sidewalk. Receptacles may be a freestanding style or affixed to the bus stop sign pole.

LIGHTING

Lighting is vital for making passengers feel comfortable and safe while waiting for a bus at night. Lighting also helps drivers spot waiting passengers at night. Many areas with bus stops are already well-lit at night by streetlights or lighting from adjacent buildings. In cases where other lighting is not available solar powered lighting built into a bus shelter roof is a convenient and inexpensive option. Standalone solar powered lights are also available. These systems collect solar energy during the day and use an outdoor rated battery to provide power to the light after dark.

SEATING

Seating is one of the easiest ways to improve passenger comfort at a bus stop. After the bus stop sign, it is often the next step up in creating a higher tier bus stop. Benches are the typical type of seating seen at bus stops, but seating can take many forms such as a low wall or the pedestal style seats seen at many of Yuba-Sutter Transit stops. Seating should be designed to be functional, but not encourage loitering. This can be helped by using seat dividers on bench-style seating.

SCHEDULES AND MAPS

The placement of schedules and maps at bus stops can help greatly with the understanding of a transit system. Different agencies approach this in various ways. Some systems show the entire system's schedules and maps if room allows while other agencies post only the stop times relevant to that individual stop. Others simply provide headways times and do not include detailed times or maps.

SHELTER

As bus stops become more well used a shelter could be justified. A bus shelter helps protect riders from the elements like direct sunlight, rain, and wind. Shelters are a great addition that can improve the comfort of riders and reduce the frustration that can come from waiting on a late bus. Shelters are also an attraction for potential riders who might choose not to ride due to comfort concerns.

REAL-TIME SIGNAGE

An upgrade to traditional schedules, real-time signage is being more prevalent throughout transit systems. These signs provide arrival estimates based on bus GPS (or AVL) systems to keep passengers informed. Real-time information helps to boost rider confidence in the system and reduces unnecessary customer service calls when a bus is running late. Once reserved for built up environments, with the cost of solar power and mobile data systems coming down it is now feasible to install real-time signage in more places.

ADDITIONAL AMENITIES

While the above amenities are examples of more common features, there is no upper limit to the amenities which a system can use to encourage ridership and improve the rider experience. Additional amenities which can be added to bus stops include:

- Bicycle racks or lockers
- Pavement markings
- Mobility hub elements (bikeshare/scooters, parking, electric vehicle charging, etc.)
- Mobile device chargers
- Restrooms
- Wi-Fi
- Wayfinding to nearby destinations
- Transit ticket/pass sales
- Other commercial vendors (coffee, newspaper, etc.)

Some of these amenities may seem extreme but consider that even a popular train station with restrooms, a café, and parking still boils down to a transit stop.

RIDERSHIP

When discussing transit ridership and travel trends in 2022 it is impossible to ignore the incredible impact that COVID-19 has had on public transit. Across the country transit ridership has dropped significantly as people are reluctant to use public transit and remote work has become much more widespread than it was in 2019. Despite the negative impact this has had on transit agencies like Yuba-Sutter Transit, the pandemic also allows a unique view into where bus service may be a true necessity and where new travel demand patterns continue to support transit usage.

Specifically for bus stops, this means we will examine the difference between ridership recorded in 2019 and 2022 for every stop in the Yuba-Sutter Transit network. If a stop declined in ridership, it may be indicative that those former transit users are now utilizing a different mode to travel or no longer making that trip. Where bus stop ridership remained constant or increased, this may indicate new travel patterns are increasing usage there or the riders in that area are particularly reliant on Yuba-Sutter Transit to make their necessary trips. Figure 3 below displays the top (green pins) and medium (yellow) stops when comparing 2022 data with pre-pandemic data.

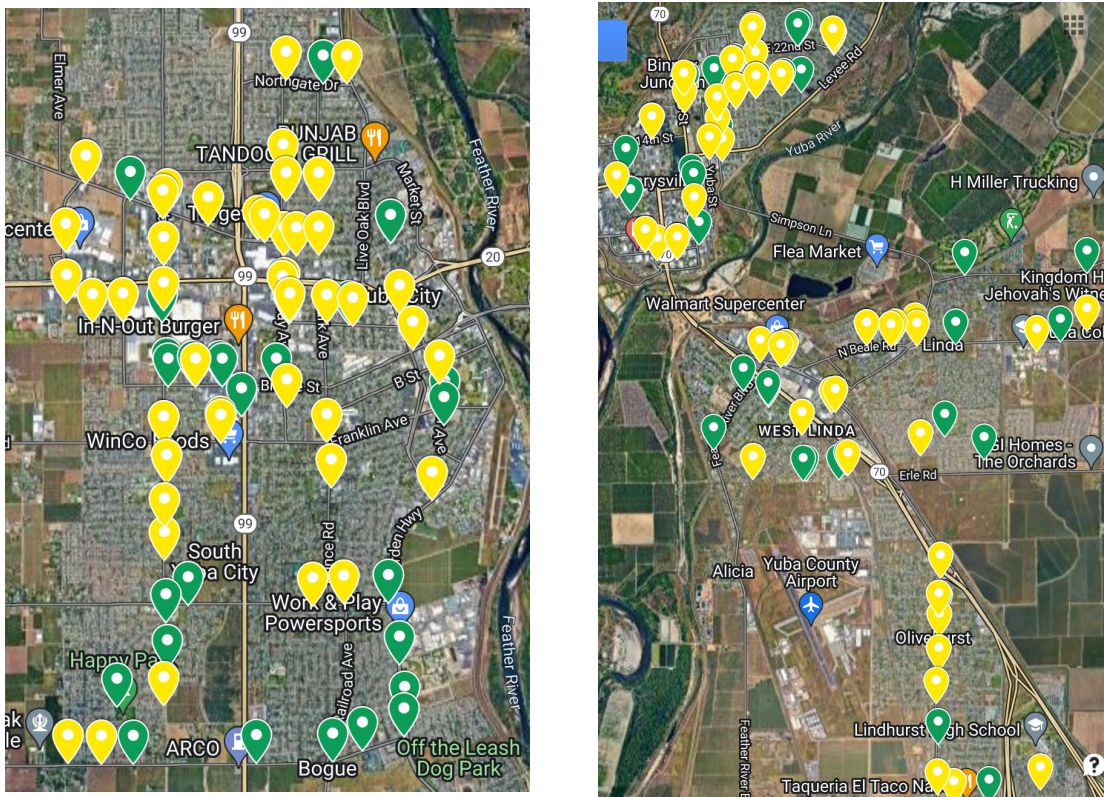


Figure 144 - Map of 2022 stop-level ridership

HIGH POST-PANDEMIC RIDERSHIP

While the overall network saw ridership decline over 40% between 2019 and 2022, some stops in the Yuba-Sutter Transit network did not experience any ridership drops or saw an increase. These stops may indicate that travel patterns have shifted towards these locations or new developments since 2019 have triggered more travel demand in these areas. High ridership areas seem to be scattered across the Yuba-Sutter Transit service area but are more decentralized than stops which lost the most ridership as most stops experienced declines. Specifically stops in Northeast Marysville have performed better than most of the Yuba-Sutter Transit service area. Stops in South Yuba City and some parts of Linda are also performing better than other areas.

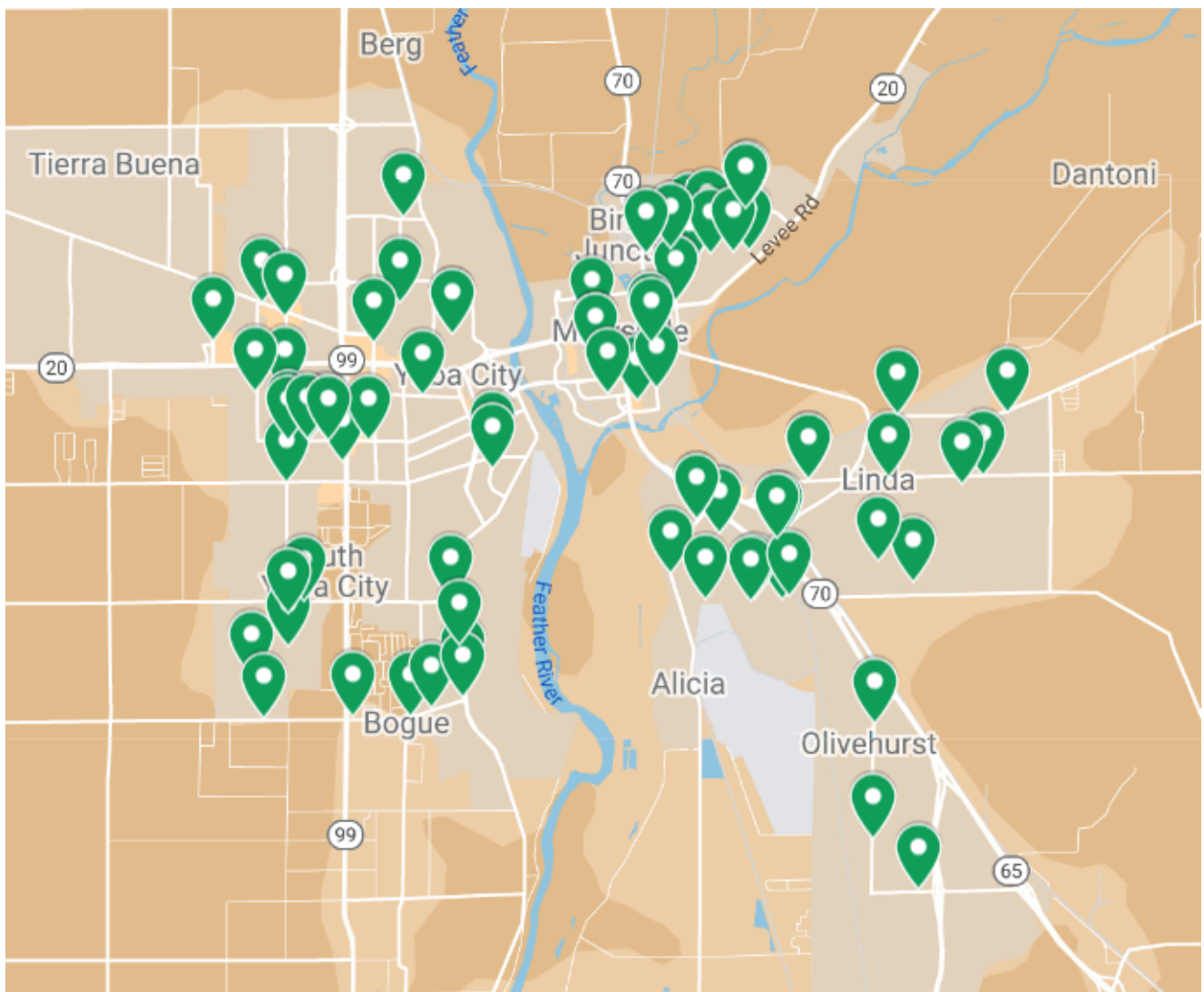


Figure 145 - Map of stops which did not experience any ridership loss between 2019 and 2022.

MEDIUM POST-PANDEMIC RIDERSHIP

While some stops show a marked increase or decrease in ridership compared to 2019 levels, many stops in the Yuba-Sutter Transit network come in at around the average of the system as a whole. These stops lost between 0% and 50% of their ridership in 2022 compared to 2019. These stops are generally spread throughout the Yuba-Sutter Transit service area, though the area between central Yuba City and South Yuba City shows a high concentration of these stops along with the low ridership stops mentioned above. Many of the stops getting close to Tierra Buena are also in the medium category.

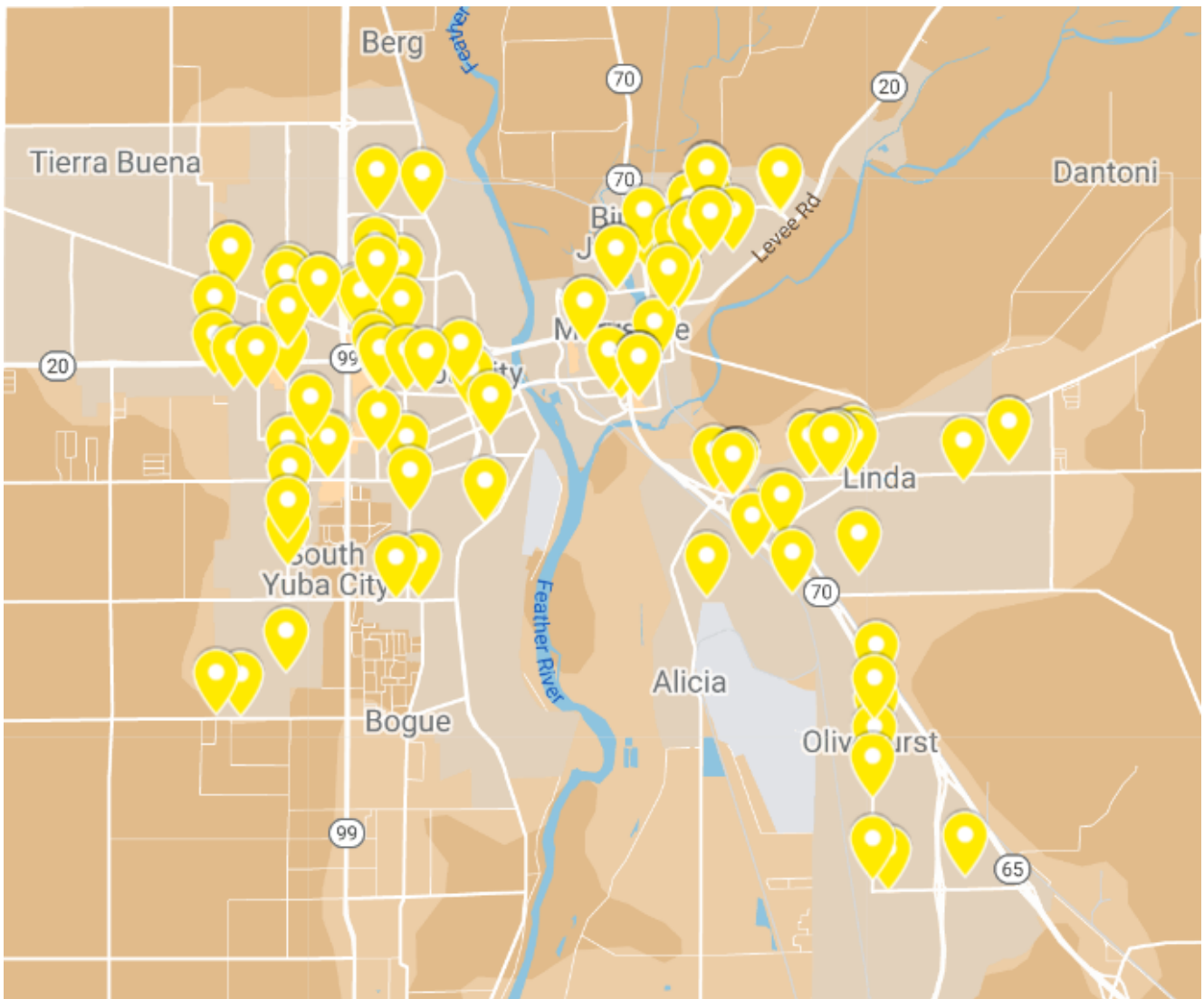


Figure 146 - Map of stops which saw 1-50% ridership decreases from 2019 to 2022

LOW POST-PANDEMIC RIDERSHIP

Unfortunately, some stops of the Yuba-Sutter Transit service area have seen significantly decreased ridership compared to pre-pandemic levels. These stops lost 50% or more of their ridership between 2019 and 2022. These stops are generally spread throughout the system. Some areas where ridership drops seem more prevalent are around central Yuba City, Olivehurst, and the area between central Yuba City and South Yuba City.

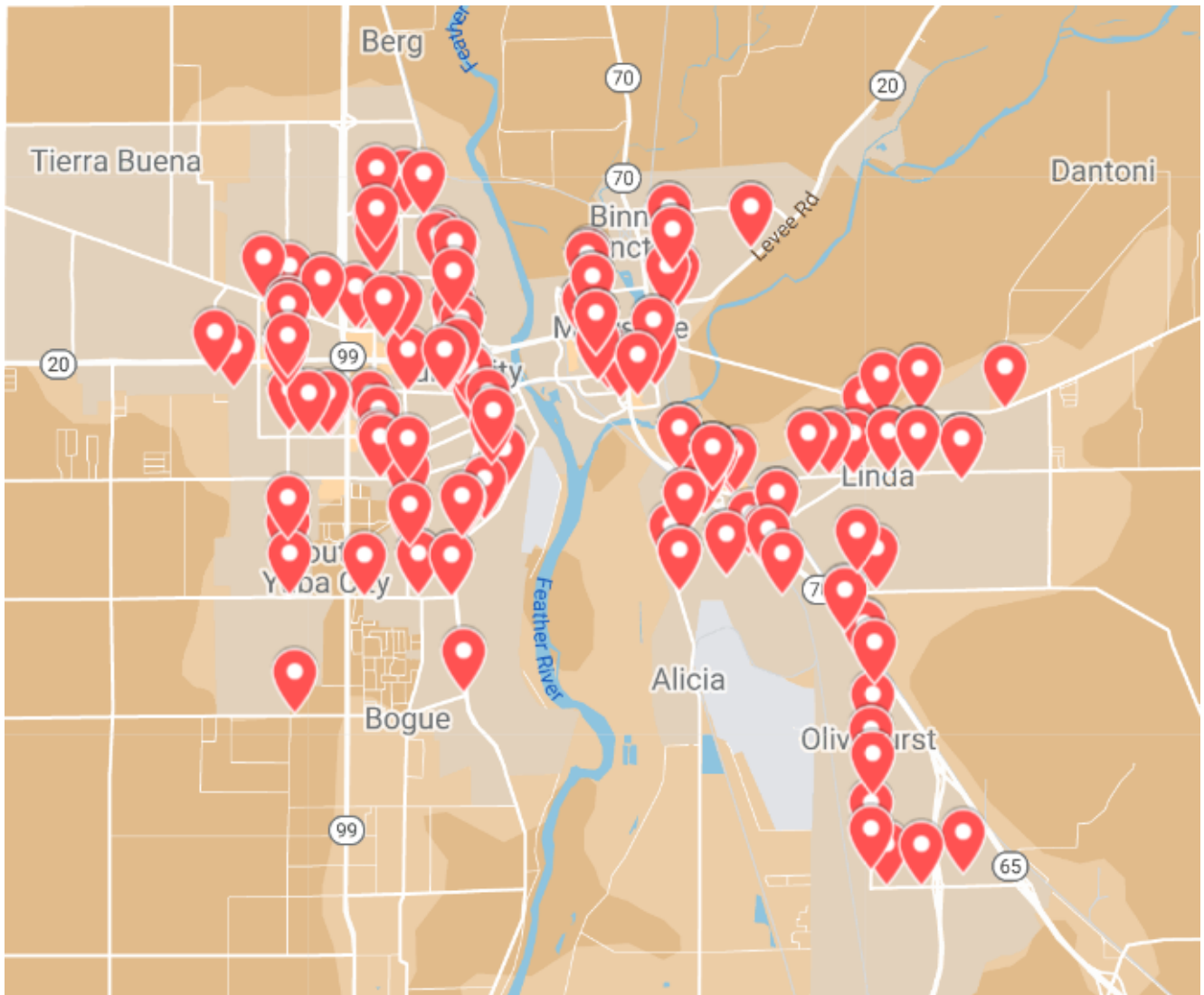


Figure 147 - Map of stops which saw 50% or more ridership decrease from 2019 to 2022

BUS STOP SPACING

Equally important to the design and function of a bus stop is the spacing between stops on a transit route. When stops are spaced too far apart people may be reluctant to use transit due to the walking time involved to get to a stop. On the other hand, stops that are spaced too close together can make travel times longer than necessary and inconvenience other drivers on the road or create undue risks by stopping too frequently in traffic.

The ideal distance between bus stops on a local route in an urban environment is about 0.1 to 0.3 miles. This distance means that most people will be well-within a quarter-mile walking distance to a bus stop no matter where they are along a route. However, it also ensures that spacing is far enough apart that it does not create a safety risk or severely impact travel time.

In reviewing the bus stop data for Yuba-Sutter Transit, it seems most of the bus stops along each route remain under 0.3 miles apart from each other, ensuring easy access for people traveling to and from points along each route. Stops are also mostly at least 0.1 miles from the previous stop which means Yuba-Sutter Transit is not making too many unnecessary stops.

Following is a database of stop distances by route with ridership measurements from 2019 and 2022. Points where the distance between stops is greater than 0.3 miles is highlighted. Yuba-Sutter Transit staff should examine these areas and ensure that stops are not spaced too far between potential destinations. It may be that many of the highlighted stops are in less densely populated areas, meaning additional stops are unnecessary. Detailed stop spacing by route is included in Appendix II.

FUTURE BUS STOPS

As Yuba-Sutter Transit modifies service in the future all of these aspects should be considered to help build a comfortable and successful yet efficient system. Identifying proper stop placement and the right amenities for a stop can help strike that balance.

As Yuba-Sutter Transit continues to monitor ridership at a stop level they should identify where stops fall in the hierarchy of their system. High ridership stops near local activity centers, for example, should take a precedence for future capital improvements and additional amenities. Existing assets at stops that have significantly decreased in ridership could be repurposed or relocated to stops that have overtaken them in importance.

To help make these decisions wisely Yuba-Sutter Transit should follow a basic pattern for future stop enhancements. By considering the ridership and environmental factors identified earlier, Yuba-Sutter Transit can rank stops by their importance to the system and then follow a prescribed design guide to determine what features make sense at which bus stops. Placing stops into four categories of Premium, Major, Moderate, and Basic, for example, and defining what amenities each entail is a potential solution.

Bus Stop Element	Premium Stop	Major Stop	Moderate Stop	Basic Stop
Accessibility	X	X	X	X
Landing Pad	X	X	X	X
Bus Stop Sign	X	X	X	X
Trash/Recycling	X	X	X	
Lighting	X	X	X	
Seating	X	X	X	
Schedules/Maps	X	X		
Shelter	X	X		
Real-Time Signs	X			
Additional Amenities	X			

Figure 148 - Example of simple stop design guidelines

Yuba-Sutter Transit staff should identify if the creation of more in-depth guidelines is something that they can take on internally. If not, it is recommended that Yuba-Sutter Transit work with an outside consulting agency to create a formal set of bus stop design guidelines that is tailored to the specific needs and environment of the agency. This document could be used going forward to efficiently allocate limited capital resources and maintain a cohesive bus stop identity system wide.

Below are examples of potential bus stop tiers.



Figure 149 - An example of a Premium bus stop in London, UK



Figure 150 - An example of a Major stop (Yuba Co. Government Center and I & 9th Streets)



Figure 152 - Figure 18 - An example of a Moderate stop (Arboga Road and Jay Street)



Figure 151 - Figure 19 - An example of a Basic stop (Forbes Ave and Orange St)



Next Generation Transit Facility Analysis



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OVERVIEW

The California Air Resources Board (CARB) adopted the Innovative Clean Transit (ICT) regulations in December 2018 requiring all public transit agencies to transition to 100 percent zero-emission bus (ZEB) fleets with a statewide goal for a full transition by 2040. For Yuba-Sutter Transit, the ICT regulation requires beginning January 1, 2026, that 25 percent of all new buses purchased must be ZEBs until January 1, 2029, when 100 percent of all new buses purchased must be ZEBs.

In July 2021, Yuba-Sutter Transit Authority Board of Directors adopted a ZEB Conversion Policy Statement committing to 100 percent conversion to ZEBs by 2035 if sufficient funding is available by 2025 to construct a new facility and finance incremental cost of all replacement and / or expansion buses purchased thereafter. The current fleet replacement plan would result in the complete turnover of the revenue vehicle fleet between 2026 and 2033.

TIMELINE FOR TRANSITION OF THE FLEET TO ZERO-EMISSION BUSES

The graph and table below³ reflect Yuba-Sutter Transit’s Zero-Emission Plan adopted by the Board in May 2022.

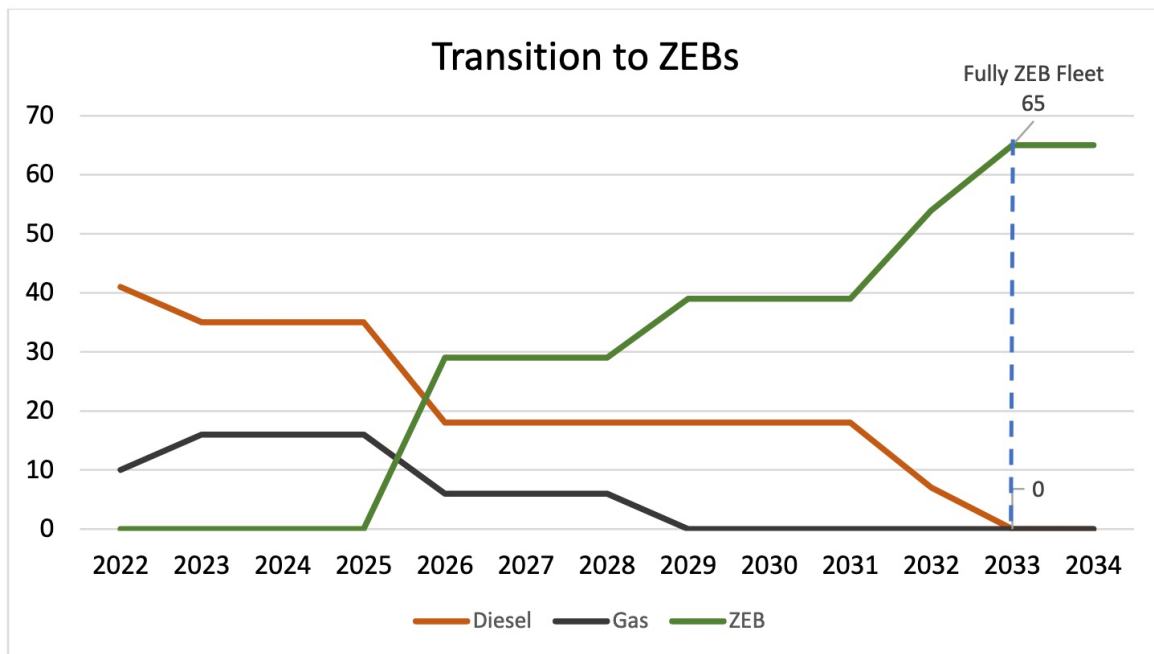


Figure 153 - ZEB Transition (pursuant to sufficient funding)

³ Source: Zero-Emission Fleet Transition Plan, Yuba-Sutter Transit, May 2022

Table 23 - Estimated Cost of ZEB Transition

Year	Number of ZEB Purchased	Percentage ZEB	Facility/ZEB Bus Types	ZEB Bus Fuel Types	Required BEB Range	Estimated Cost Per ZEB	Total Cost
2025			Next Generation Transit Facility				\$47,500,000
2026	6	100%	Over-the-Road Bus	Battery Electric	200	\$1,300,000	\$7,800,000
2026	13	100%	Standard Bus	Battery Electric	200	\$1,000,000	\$13,000,000
2026	10	100%	Cutaway	Battery Electric	125	\$250,000	\$2,500,000
2029	10	100%	Cutaway	Battery Electric	125	\$250,000	\$2,500,000
2032	15	100%	Standard Bus	Battery Electric	200	\$1,000,000	\$15,000,000
2033	11	100%	Over-the-Road Bus	Battery Electric	200	\$1,300,000	\$14,300,000
Total	65						\$102,600,000

While the facility will be developed to operate BEBs, future use of alternative zero-emission technologies such as hydrogen fuel cell must not be precluded if they will be cost-competitive and result in benefit to the patrons.

CURRENT FACILITY OPERATING CONSTRAINTS

The current 3.2-acre transit operations, maintenance, and administration facility at 2100 B Street in Marysville, is just adequate to operate the current fleet of 51 buses. Studies have shown that at best, the facility may be able to accommodate replacement of 12 buses to ZEBs. The proposed widening to Highway 70 by Caltrans, which includes modifications to the Binney Junction Railroad overcrossing will require temporary construction easements on the current facility site and impact two-thirds of the bus parking spaces. Ingress and egress of buses from the facility will also be affected by the highway construction. While the exact project schedule is not known at this time, it is anticipated that the project could start sometime in 2024. Caltrans is proposing to construct a retaining wall at the Yuba-Sutter facility to reduce the impact. However, if the NGTF Project schedule would enable moving the buses to the Avondale Avenue site at some time during the Highway 70 construction, it may be possible to avoid building the retaining wall if the project could be sequenced accordingly.

NEXT GENERATION TRANSIT FACILITY

Considering the transition to ZEBs and the constraints at the current facility, Yuba-Sutter Transit evaluated 16 potential sites, identified 3 sites for further analysis, and recommended a 19.72-acre site at 6035 Avondale Avenue in Linda as the preferred site⁴. A program level conceptual layout was prepared for the proposed Next Generation Transit Operations, Maintenance, and Administration Facility (NGTF). After conducting an appraisal and a Phase 1 Environmental Site Assessment (ESA), Yuba-Sutter Transit purchased the site in July 2021.

In view of the ZEB conversion timeline and the Caltrans construction activity, it is important that the NGTF project delivery process begin as soon as possible. Yuba-Sutter Transit has been assembling funds⁵ required for the development of the NGTF and, based on the program level cost estimates⁶, funds may be available to complete essential elements of the project early to minimize the impacts due to the Highway 70 widening project.

Important considerations in establishing the program include:

- Resilience – to continue operations during natural disasters and extreme weather events by ensuring the installation of:
 - Redundant electrical systems
 - Onsite energy generation and storage
 - Partnering with PG&E to create a microgrid
 - While the new facility will be set up for Battery Electric Buses (BEBs), it must not preclude considering any zero-emission technology if it becomes cost effective.
- Sustainability – to reduce the regional carbon footprint by:
 - Installing employee and public chargers to encourage ZEV use
 - Minimizing energy demands through efficiency of systems and solar power generation and storage.
- Compliance with Yuba-Sutter Transit ZEB Conversion Policy

⁴ Source: Yuba-Sutter Transit Resilient Next Generation Transit Facility Plan, Prepared by WSP, February 2021

⁵ Source: 2022 FTA-5339 Buses and Bus Facilities Source Funding; Year of Expenditure – Yuba-Sutter Transit Authority

⁶ Source: Modified Budget from the 2021 Resilient Next Generation Transit Facility Plan (Using base-year 2021 dollars) – Yuba-Sutter Transit

- Developing a schedule to install chargers as ZEB fleet size increases
- Power generation and storage installed for ultimate project and connected to the grid.
- Employee training
 - Operators and maintenance staff training for the ZEBs
 - Facility maintenance staff training to ensure optimum functioning of the facility.

PROGRAM LEVEL LAYOUT OF THE NGTF

The figure below⁷ illustrates a program level layout of the NGTF at the 19.72-acre site at 6035 Avondale Avenue in Linda. The layout was merely an exercise to verify that the site can accommodate the functional requirements of the bus operations, maintenance, and administration activities.



Figure 154 – Next Generation Transit Facility Rendering

⁷ Source: Zero-Emission Fleet Transition Plan, Yuba-Sutter Transit, May 2022

TRANSIT-RELATED / ORIENTED DEVELOPMENT

The southern boundary of the site is along N Beale Road and the longer side of the site abuts Avondale Avenue. The NGTF activities are expected to require between 10-to-12 acres on the site. This will leave approximately 7-to-9 acres available to Yuba-Sutter Transit to be used for transit-related activities. While the rendering shows the NGTF activities along N Beale Road, Yuba-Sutter Transit may wish to consider transit-related development on the south side of the site with access from N Beale Road and locate the NGTF on the northern part of the site with access on Avondale Avenue.

DEVELOPMENT OF THE NGTF

Yuba-Sutter Transit estimates the total cost of developing the NGTF to be \$45.36 million for the facility. \$30.94 million are currently available to fund the project. The project will be completed in two phases. Phase 1 is estimated to cost \$29.71 million and will consist of the project components required to be completed to enable the buses to be parked, fueled, washed, and maintained at the new facility. The Plans, Specifications and Estimates (PS&E) will be prepared for the entire project so Phase 2 can be completed when the required funds are available. Table 2 itemizes the project activities and components and categorizes them by phase. An appropriate delivery method could be selected which will give Yuba-Sutter Transit to have the flexibility for the phased development.

Table 24 – NGTF Cost Estimate (Program Level)⁸

Ph	activity	COST \$ m	COST \$ M
1A	ENVIRONMENTAL Planning, AND PS&E		5.02
	Environmental Doc / Mitigation	0.61	
	Plans, Specifications and Estimates (15%)	4.42	
1B	PHASE 1 CONSTRUCTION ELEMENTS		24.69
	Grading, Drainage, Utilities, Landscape / Irrigation, Fencing, Stormwater, Frontage Improvement (Shelter / Lighting), Off-site Improvements	7.76	
	Paving – Bus, employee, and visitor parking	3.33	
	Fuel Canopy and Building	0.43	
	Wash Canopy and Building	0.69	
	Bus Maintenance Building	4.23	
	Shop Equipment	1.20	
	Furnishings	0.38	
	Contractors General Conditions and Fee (12%)	2.16	

⁸ Source: Summarized and reordered from: Modified Budget from the 2021 Resilient NGTF Plan (Using Base Year 2021 Dollars), Yuba-Sutter Transit (Note: Added CM Services Cost)

	Construction Contingency (10%)	1.80	
	Community Outreach	0.01	
	Construction Manager (First Phase Construction)	2.70	
PH 1	NGTF ENV PLANNING, PS&E AND PHASE 1 CONSTRUCTION		29.71
PH	ACTIVITY	COST \$M	COST \$M
2	PHASE 2 CONSTRUCTION ELEMENTS		15.65
	Administration and Operations Building	3.63	
	Photovoltaic Panels	2.58	
	Mobility Hub / Public EV Charging	0.15	
	Initial Build-out – BEB Charging	4.31	
	Furnishings (Office Areas)	0.75	
	Contractor’s General Conditions and Fee (12%)	1.37	
	Construction Contingency (10%)	1.14	
	Construction Management (Second Phase)	1.71	
TOTAL	NEXT GENERATION TRANSIT FACILITY		45.36

Table 3 – NGTF Funding Currently Available (August 2022)⁹

Federal / State / Local	Funding Source	\$ million	\$ million
State and Local	State Strategic Growth Council Affordable Housing and Sustainable Communities Grant Program (AHSC)	\$8.50	
	State of Good Repair	\$1.00	
	Low Carbon Transit Operations Program (LCTOP)	\$1.71	

⁹ Source: 2022 FTA 5339 Buses and Bus Facilities Source of Funding, Yuba-Sutter Transit Authority

	Sale of Existing Transit Facility	\$2.50 ¹⁰	
	Total State and Local		\$13.71
Federal	FTA – 5311 (Rural)	\$0.36	
	FTA – 5311 Rural Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA)	\$0.97	
	Rebuilding American Infrastructure with Sustainability and Equity (RAISE)	\$15.00	
	Total Federal		\$16.33
TOTAL FUNDING CURRENTLY AVAILABLE			\$30.94

PROJECT DEVELOPMENT PHASES AND TIMELINES

Caltrans is expected to begin construction on the Highway 70 widening project some time in 2024. It is proposed that Caltrans will construct a retaining wall at the current Yuba-Sutter Transit facility site to minimize the impact on bus parking. Approximately two-thirds of the bus parking spaces are likely to be temporarily lost to accommodate the construction easements required for the Highway 70 project. Unless the NGTF is available by this date, Yuba-Sutter Transit must find alternatives to park the buses, and continue to fuel, wash, and maintain the buses at the current site. This arrangement would be disruptive to the efficient operation of the fleet. Furthermore, the maintenance facility must be upgraded to maintain and repair the ZEBs when they are added to the fleet beginning in 2026.

Two conceptual project delivery schedule alternatives are developed which reflect developing the NGTF in two phases. The first alternative assumes an early start to the project delivery activities beginning with procurement of CEQA / NEPA and 15 percent design services in Q3 of 2023. The bus parking spaces which would be built as a part of Phase 1 of the project would be available by Q4 of 2024 under this alternative. The fuel, wash and maintenance buildings would be completed by Q1 of 2025. This early start alternative could enable buses to move-in to the new facility by January 2025. Construction of Phase 2 of the project can be started when additional funds become available.

¹⁰ Yuba-Sutter Transit could consider selling and leasing back the property while the NGTF is under construction.

The second alternative assumes these activities starting in Q2 of 2023. The move-in for buses under this alternative would be at the end of Q1 or early Q2 of 2025. Depending on the progress of the Highway 70 widening project, this delay relative to the first alternative may present operational challenges to Yuba-Sutter Transit. However, once the Contractor is on board, it may be possible to try and accelerate the completion of essential elements.

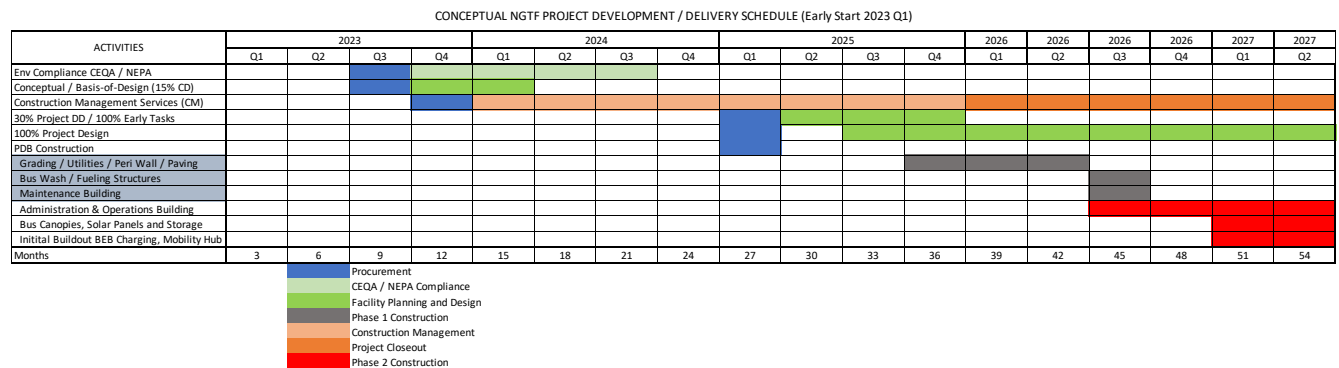
The schedules allocate approximately 3 months for procurement of each of the services. A Progressive Design-Build (PDB) delivery method is considered which will engage the contractor and the contractor’s engineer of record (EOR) from the beginning of the design development (DD) phase. This would enable starting different stages of construction as designs are completed and approved by the agency having jurisdiction. The schedule would have to be tightly managed to avoid delays.

A PDB delivery method offers greater flexibility and cost and schedule certainty which will allow Yuba-Sutter Transit to phase / stage the construction of the NGTF based on availability of funds. Typically, the agency would negotiate a Guaranteed Maximum Price (GMP) with the contractor at the completion of the DD Stage (30% to 50%). There may be minor changes between the GMP and the final price at 100% design, based on additional inputs from agencies having jurisdiction, owner requested items, or changes in codes. The PDB method would allow the contractor to complete 100% design of the Phase 1 components while the Phase 2 components are being design. The contractor can also obtain permits for footings and foundations during the design process. These efficiencies are considered in the schedules presented in Table 4.

NGTF PROJECT DEVELOPMENT SCHEDULE

The chart and table below illustrate the conceptual schedule:

Table 4 - Conceptual Project Development Schedule



15% Conceptual Design (CD) Effort – 6 months

- CD would include preferred layout of the NGTF Project with Basis of Design (BOD) / Performance Specifications and Rough Order of Magnitude (ROM) Cost Estimate
- CD would also include potential alternatives for the additional land on the site and road map to develop this portion of the property
- Typically, 3 to 5 alternatives for the NGTF would be explored, 2 to 3 feasible alternatives analyzed in greater detail, and a preferred alternative recommended.

Environmental Assessment (EA) Effort would begin concurrently with the 15% Effort so the CD can be used in development the document

- The EA would include assessment of impacts due to the NGTF Project as well as the alternative developments for the additional portion of the site
- The EA would culminate in documents to comply with the California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA)
- The documents would discuss identification, analysis, measures to mitigate adverse impacts, and the Mitigation Monitoring and Reporting Program (MMRP)
- Typically, the process would analyze impacts of feasible alternatives including a "Do Nothing" alternative.
- If all adverse impacts can be mitigated, the Document will result in a "Mitigated Negative Declaration" under CEQA and "Finding of No Significant Impact" (FONSI) under NEPA.
- In case of unmitigable adverse impacts, the EA will result in an "Environmental Impact Report" (EIR) under CEQA and "Environmental Impact Statement" (EIS) under NEPA.
- The agency to which the project belongs would be the "lead agency" and other agencies having jurisdiction and some other stakeholders would be "responsible agencies".
- The lead agency and the responsible agencies will review and approve the document after receiving public comments and in public meetings. 3 to 4 months may be required after the final draft document is prepared to complete the approval process.
- FTA will review the NEPA document and issue a "Record of Decision" accepting the environmental document. This process must be completed before a full funding grant agreement (FFGA) is executed.
- Other state and local funding agencies may also have to accept the documents prior to release of funds.

It would be beneficial to bring a Construction Manager (CM) on board prior to releasing the solicitation of bids or proposals for design and construction services. The CM would be able to assist Yuba-Sutter Transit Authority in assembling the solicitation. The CM would also remain after gainful occupancy of the project to close out the construction documents, including record drawings, warranties, change orders and final accounting of the project to satisfy FTA's Triennial Audit requirements.

- The CM will be onsite 100% of the time when the construction contractor is working and will be responsible for Quality Assurance (QA), project budget and project schedule and will report to the Yuba-Sutter Transit Authority Project Manager.
- The CM will be supported by a document control / project administration specialist who will maintain all project documents.
- The CM Team will also include inspectors for various elements of construction such as CMU Walls, concrete, welding, etc., a scheduler to verify and track the contractor's schedule, and geotechnical engineers to verify compaction, etc. The mandatory inspections are typically included in the specifications.

A Progressive Design Build (PDB) delivery method will be beneficial for this project. A PDB Contractor will have a qualified design consultant on the team experienced in design of Transit Operations, Maintenance and Administration Facilities who will also be the Engineer of Record (EOR).

- The PDB Contractor's EOR will take the construction documents from 15% design to 100% design.
- The benefits of the PDB delivery method is that the contractor's input is available all through the design process and the means and methods to be used during design. This can result in cost-effectiveness, best value, and certainty of cost and schedule.
- A Guaranteed Maximum Price (GMP) is typically negotiated at the completion of the PE / DD Phase at between 30% to 50% design depending on the complexity of the project. A contingency under the control of the Authority is set aside to address change orders due to unknown site conditions, requirements of agencies having jurisdiction, or owner requested items.
- A PDB approach will allow Yuba-Sutter Transit Authority to prioritize construction activities to accommodate phased move-ins that may be required to avoid or minimize the impacts due to Caltrans' Highway 70 widening project.

- The PDB RFP could state that Notices to proceed for different construction packages will be based on the availability of funding. The construction cost will be known to a reasonable level of confidence at the completion of the PE / DD Phase.

This schedule is based on Yuba Sutter Transit’s expected timeline of earliest start in Q1 of 2023 and completion of Phase 1 by end of 2024.

– List of Tasks / Activities

2023 Q3

- Prepare and release RFP for CEQA / NEPA Compliance Documents and 15% Conceptual Design (CD)
- Award CEQA / NEPA Compliance Document and 15% CD Contract

2023 Q4

- Prepare and release RFP and Award CM Services Contract

2024 Q2

- Complete 15% CD and Basis-of-Design
- Prepare and release RFP and Award contract for PDB Services

2024 Q2

- Complete CEQA / NEPA Process
- Receive ROD from FTA
- Complete 100% Design for Phase 1 and negotiate price 2024 Q4
- Complete 100% Design for Phase 1
- Negotiate Phase 1 Construction Price

2025 Q2

- Complete PE / DD (30% to 50% Design) for Phase 2
- Negotiate Guaranteed Maximum Price (GMP) for Phase 2
- Begin Phase 1 Construction (Grading, utilities, perimeter wall)

2025 Q4

- Complete 100% Design for Phase 2
- If funding for Phase 2 available negotiate price and issue NTP for Phase 2
- Complete Construction of Grading / Utilities / Perimeter Wall / Paving

2026 Q2

- Start Construction of Phase 2: Bus Wash, Fueling, Maintenance and Administration Building
-
- Complete construction of fuel, wash and maintenance buildings (some bays may be operational, other interior work may be ongoing – current facility maintenance building may be required to continue for a short while)
- Obtain completion and partial occupancy of the project to park, fuel, and wash buses

2027 Q2

- Move Administration, and all operations to new site
- Move buses to the new site.
- Receive BEB orders
-

If funding for Phase 2 is available, and construction begins as shown in the schedule, it is anticipated that the project would be completed in its entirety by early 2027.

POSSIBLE USE OF AVAILABLE PARCEL OF LAND

The land at 6035 Avondale Avenue in Linda measures 19.72 Acres with full access to the entire site. It is expected that the NGTF would require approximately ten (10) to twelve (12) acres for its development. The balance of the site can be used to develop transit-related activities. The remnant parcel could be 7-to-9 acres in area and be available for Transit Oriented Developments, including mixed use developments with housing, retail uses and parking.

The NGTF will be a resilient and sustainable development and Yuba-Sutter Transit's effort is to be a catalyst in reducing carbon footprint in the region. To this end, Yuba-Sutter Transit wishes to explore installing public rapid-charge stations / mobility hub for public EV users. The charging stations can be connected to the solar panel power generation and the storage systems on site so that they will not be affected by power disruptions due to natural disasters. Retail uses can be developed to serve persons using charging stations.

JOINT DEVELOPMENT AGREEMENTS

Yuba-Sutter Transit would continue to own the remnant parcel of land after the development of the NGTF. This parcel could then be leased to private entities to develop the type of transit oriented, sustainable development acceptable to Yuba-Sutter Transit. Transit agencies have entered into joint development agreements with private entities in the vicinity of urban and regional rail and BRT stations. There are incentives such as reduced parking requirements that will make it attractive for developers to invest in these projects. Market conditions and financial analyses will be required to identify potential uses for the parcel. The CEQA document to be prepared for the NGTF may consider alternatives for the parcel. Supplemental environmental analysis may be required when the parcel is developed.

To enhance the value of the remnant parcel, Yuba-Sutter Transit may wish to develop the NGTF in the northerly portion of the site and keep the transit-oriented development and the mobility hub on the south side with access from N Beale Road. The NGTF could have its access for the buses and other vehicles on Avondale Avenue which is a cul-de-sac. Additionally, a use that would create a symbiotic relationship could include a public hydrogen fueling station with access along Avondale Ave. Yuba-Sutter Transit could reap the benefits of having a mixed battery electric/hydrogen fleet with a reliable convenient fueling option without the significant capital investment needed in building and owning hydrogen generation or storage.

While the transit-oriented development on the parcel would be scaled to reflect the land area, market conditions, and Yuba-Sutter Transit’s vision for it, some examples of similar projects are included here for information only.

EXAMPLE 1 – CITY OF RALEIGH UNION STATION BUS FACILITY PROJECT (RUS)

Located in the city’s Warehouse District, the new RUS Bus: Raleigh Union Station development weaves together a bus facility and



mixed-use residential, hotel, and office towers marking the downtown skyline. The design creates a unique and dynamic place that integrates the neighborhood’s historic character and enlivens every inch of the street level with shops, restaurants, and public plazas. The vertically integrated design for RUS Bus: Raleigh Union Station provides convenient access and connectivity to the city’s transit network while acting a valuable address for residents and visitors alike.

RUS Bus will provide direct connections on several existing and future GoTriangle and GoRaleigh bus routes to the existing Amtrak service and future commuter rail service included in the Wake and Durham County transit plans.

Slated for completion in mid-2025, RUS will provide the community with unparalleled access and connectivity to major transportation routes and networks both locally and regionally. The transportation facility will include off-street transit space for local and regional buses as well as pedestrian and bicycle enhancements alongside a new pedestrian bridge connecting RUS to Raleigh Union Station and infrastructure to support a future Bus Rapid Transit station.

EXAMPLE 2 – GRAND RIVER STATION – LACROSSE WISCONSIN



Grand River Station is a joint development project in the historic downtown area of LaCrosse, Wisconsin, containing a primary passenger terminal and 8-bus transfer facility. It is the central hub for downtown La Crosse's transit system. The facility houses 15,000 square feet of retail space, 5,000 square feet of housing amenities, 96 parking stalls and 84 residential units. The Grand River Station contains the City's Regional Transit Center, 92 market rate and mixed-income rental apartments, ground floor retail space, and parking. There are 15 apartments that cater to artists and entrepreneurs and are designed with live/workspace.

The retail included on this level, along with the convenience of the transit center, enhances the already rich amenity package for Grand River Station's residents. The new facility allows for a more central location, more spaces for buses to park and will make it more convenient for LaCrosse transit system users. Along with the 8-bay bus loading facility, the Grand River Station contains a climate-controlled passenger waiting area, passenger information center, a transit utility office, an on-street trolley bus stop and bicycle racks and lockers. The station was completed utilizing Federal Transit Administration Section 5309 policies and procedures.

EXAMPLE 3 – SEQUOIA STATION, REDWOOD CITY, CA

Sequoia Station is a once-in-a-generation opportunity to plan for the future of regional transportation and to transform Redwood City’s downtown core by putting high-impact housing, retail, childcare, and jobs directly on rail. The redevelopment will provide Redwood City residents and visitors with new walkable and family-friendly dining and entertainment, inviting public open spaces, walkable and bikeable streets that connect downtown to the surrounding neighborhoods, on-site childcare, and a modernized and community-serving retail experience.

Sequoia Station aims to create a project that supports Redwood city’s vision for the Transit District – as well as the City’s goals for creating an inclusive community and advancing equity. Building a sustainable community where residents of all income levels can access resources including safe, affordable housing, mobility, jobs, high-quality schools, and food is key to the Sequoia Station project team’s redevelopment strategy. The team aspires to

advance equity by building hundreds of high-quality affordable homes directly on transit, providing lower income residents improved access to critical resources.

Sequoia Station is the largest affordable housing project in Redwood City’s development pipeline and will deliver 631 new homes, 254 (40%) of which will be affordable to very low, low, and moderate-income households. The project also unlocks critical transportation upgrades by advancing the El Camino Real Corridor Plan with bike and pedestrian improvements and supporting Caltrain’s 2040 Business Plan with the dedication of approximately 1-acre of land for track expansion and future grade separation projects.



Conclusion

This document identifies a development schedule for the NGTF to minimize the impact to bus operations due to Caltrans' project to widen Highway 70 and modify the Binney Junction Railroad Overcrossing. Yuba-Sutter Transit has adopted a policy to convert the entire fleet of buses to Zero-Emission Buses (ZEBs) by 2035. The California Air Resources Board (CARB) adopted the Innovative Clean Transit (ICT) regulations requiring total transition to ZEBs by 2040.

Yuba-Sutter Transit has acquired a 19.72-acre site located at 6035 Avondale Avenue in Linda and has estimated the cost of developing the Next Generation Transit Facility (NGTF) at approximately \$45.36 million. \$30.04 million are currently available to develop the project. Approximately \$29.71 million would be required to construct the essential components to park, fuel, wash and maintain the buses at the NGTF. Additional funding of approximately \$15.32 million will be required to complete the remaining components of the project.

The NGTF will be a resilient and sustainable development that will accommodate parking, maintenance, operations, and administration of a 100 percent ZEB fleet. While the facility will be constructed to accommodate BEBs, alternative zero-emission technologies will not be precluded when they become cost-competitive and will result in greater benefits to the patrons than BEBs. A connected microgrid powered by solar panels with battery storage will satisfy the entire energy needs of the facility including charging the BEBs.

Construction on the Highway 70 widening project is expected to begin in 2024. Caltrans will require temporary construction easements through the current site that would impact two-thirds of the bus parking and affect ingress and egress of vehicles at the site. Caltrans will be building a retaining wall at the current facility site to minimize the impacts on bus parking. However, if the essential components of the NGTF are available by end of 2024 or early 2025, Caltrans may be able to sequence its project such that constructing the retaining wall would not be necessary, and the impacts on bus operations would be avoided.

Two alternatives of a conceptual level schedule are included which attempt to complete the essential components early to avoid impacts on bus operations due to Caltrans' project. While it is primarily a programmatic level conceptual schedule, it appears reasonable that the essential components could be completed by end of 2024 or early 2025 if the delivery process begins early in 2023.

A Progressive Design Build (PDB) delivery method is considered which will engage the contractor and the engineer of record to take the project from a 15 percent basis of design / conceptual design to 100 percent design and construction. This will allow the completion and occupancy of the project in stages and provide certainty of cost and schedule. The PDB contractor will have the flexibility to design, and value engineer the project, and incorporate means and methods to provide best value to the satisfaction of Yuba-Sutter Transit.

The NGTF activities can be accommodated in an area of ten to twelve acres of the 19.72-acre site. On the remaining 7-to-nine acres, Yuba-Sutter Transit may wish to consider transit-oriented and sustainable developments.

After conducting a market demand and financial analysis Yuba-Sutter Transit could consider joint development agreements with private entities to install public rapid charge stations, and develop parking, retail, and

mixed-use activities. A joint development agreement would identify terms and conditions of the land-lease for the parcel which would continue to be owned by Yuba-Sutter Transit. Transit agencies have entered into joint development agreements with private entities for the development of land in the vicinity of urban and regional rail, and BRT Stations. In some cases, the developers will receive incentives such as reduced parking requirements as a part of the agreement. To enhance the value of the parcel, Yuba-Sutter Transit may consider developing the NGTF on the northern part of the site with access on Avondale Avenue, and the remaining parcel would be on the south side of the site with access from N Beale Road.

While the scale and scope of the transit-oriented and sustainable development would be determined by Yuba-Sutter Transit based on market research and financial feasibility, a few examples are presented for other cities for information. The CEQA document developed for NGTF can consider alternative scenarios for the parcel, and potentially complete a supplemental environmental assessment when the development is under consideration.



Non-Emergency Medical Transportation Potential Analysis



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EXECUTIVE SUMMARY

Because a significant proportion of paratransit riders are older, have disabilities and/or use the service to access healthcare services, and because many of these people qualify for government-sponsored healthcare services such as those provided by Medicare, Medicaid and Medi-Cal, a number of transit agencies around the country have enrolled as Non-Emergency Medical Transportation (NEMT) providers through state Medicaid agencies, Medicaid Brokers and other agencies responsible for providing NEMT on behalf of the Centers for Medicare and Medicaid Services (CMMS).

In recent years, Yuba-Sutter Transit's demand for paratransit services have fallen, and although service levels are once again increasing, costs are also increasing. Given these factors and the potential revenues associated with the delivery of NEMT services on behalf of the CMMS, Yuba-Sutter Transit staff requested an analysis of the potential opportunities and challenges associated with the establishment of Yuba-Sutter Transit as an NEMT provider.

Innovative Mobility subcontracted with Accessible Avenue, an accessibility-focused consulting and training firm to conduct preliminary research on the potential opportunities, challenges and possible benefits and drawbacks of Yuba-Sutter becoming an NEMT provider. Accessible Avenue contacted Modivcare, the Transportation Broker responsible for the oversight and delivery of NEMT trips in the Sacramento region to learn about the process for credentialing as an NEMT provider, the reimbursement rates that might be obtained for delivering NEMT trips and other factors that might impact Yuba Sutter Transit's decision regarding NEMT service delivery. Accessible Avenue also evaluated recent Yuba Sutter Transit paratransit data (including NTD data from 2018, 2019 and 2020 as well as trip-level data from three recent months) to make some preliminary projections about the potential operational and financial implications of Yuba Sutter Transit participating as an NEMT provider. Accessible Avenue used these data to develop a series of recommendations.

In short, the decision about whether or not to become an NEMT provider comes down to the following key questions:

- Can Yuba Sutter Transit seek reimbursement from the Centers for Medicare and Medicaid Services to offset the costs (or part of the costs) of trips Yuba Sutter Transit already provides, or must Yuba Sutter Transit provide NEMT trips to anyone who wishes to use Yuba Sutter Transit for NEMT services? To the extent that Yuba Sutter Transit can limit its involvement to trips taken by ADA certified customers, the decision to provide NEMT services would be attractive. Alternatively, if Yuba Sutter Transit is required to provide trips

to “new” and especially non-ADA certified customers, becoming an NEMT provider represents financial and operational risk.

- Does the amount of revenue that Yuba Sutter Transit can receive from the CMMS for delivering NEMT trips exceed, or at least offset, any additional administrative or operational costs created by participating as an NEMT provider?

What is the magnitude of administrative and operational changes that Yuba-Sutter Transit would need to make in order to gain and maintain credentialing as an NEMT provider, and is the potential reward worth the level of effort that would be required of Yuba-Sutter Transit staff and paratransit contractor?

The “Findings” and “Recommendations” section of this report go into greater detail for these and other questions. The “Notes” section includes links to a number of additional resources that may be of value should Yuba-Sutter Transit staff wish to deepen its understanding of the structure, policies and procedures governing the NEMT ecosystem here in Northern California.

EXISTING CONDITIONS

Yuba-Sutter Transit provides pre-scheduled, shared-ride origin-to-destination paratransit services (referred to as Dial-a-Ride) for people with disabilities who are unable, because of disability or disabling health conditions, to independently utilize fixed-route Yuba-Sutter Transit services for some or all trips, for older adults age 65 and above, and members of the general public who are able to reserve trips on a space-available basis. Service is operated by the agency’s contracted service provider utilizing its own personnel and agency-provided facilities, vehicles and technology.

Like most transit agencies, Yuba-Sutter’s paratransit services, which are delivered by highly trained drivers utilizing ADA compliant, wheelchair-accessible vehicles and an array of technologies designed specifically for the delivery of paratransit, represent the costliest service that the agency provides to its customers. According to data provided to the Federal Transit Administration National Transit Data base (NTD) Report, Yuba-Sutter Transit provided more than 72,000 unlinked paratransit trips at a total cost of just under \$2.2 million during 2018, resulting in average cost per trip of \$29.89. Demand for service dropped in 2019, resulting in an average trip cost of \$31.57, and in 2020 (which was impacted by the COVID-19 health emergency), demand dropped to 46,466 unlinked passenger trips and a total cost of just under \$2 million and an average cost per trip of \$42.66. (The following table provides NTD data for Yuba-Sutter paratransit services for 2018, 2019 and 2020—the most recent year for which data is currently available).

Table 25 -Paratransit Statistics

	2018	2019	2020
Vehicles in Fleet	10	10	10
Unlinked Trips	72,073	66,060	46,466
Total Vehicle Service Hours	27,730	26,695	21,951
Revenue Service Hours	25,267	24,254	19,876
Trips/Revenue Hour	2.85	2.72	2.34
Total Miles	366,590	349,543	286,813
Revenue Miles	323,378	308,403	248,301
Average Trip Length	4.49	4.67	5.34

Gross Operating Cost	\$2,154,433	\$2,085,426	\$1,982,397
Cost/Trip	\$29.89	\$31.57	\$42.66
Cost/Revenue Hour	\$85.27	\$85.98	\$99.74
Cost/Revenue Mile	\$6.66	\$6.76	\$7.98

In 2020, approximately 5% of the cost of Yuba-Sutter Paratransit trips were recovered from passenger fares of \$3 for trips throughout the day and \$2 for trips taken after 6:00 p.m. The balance of service costs was covered by state and local operating funds.

NEMT AS A POSSIBLE FUNDING SOURCE FOR PARATRANSIT

Because a significant proportion of paratransit riders are older, have disabilities and/or use the service to access healthcare services, and because many of these people qualify for government-sponsored healthcare services such as those provided by Medicare, Medicaid and Medi-Cal, a number of transit agencies around the country have enrolled as Non-Emergency Medical Transportation (NEMT) providers through state Medicaid agencies, Medicaid Brokers and other agencies responsible for providing NEMT on behalf of the Centers for Medicare and Medicaid Services (CMMS). One example is the Golden Empire Transit District in Bakersfield whose paratransit system branded as “Get-a-Lift” or GAL for short allows ADA certified riders to utilize GAL for NEMT trips. The benefit for GET is that the reimbursements for NEMT services provided offsets a portion of GAL’s operating expenses. (To learn more about the Get-a-Lift system, visit <https://www.getbus.org/get-a-lift-services>).

Given the declining demand for paratransit, coupled with the rising cost of delivering service and the potential revenues associated with the delivery of NEMT services on behalf of the CMMS, Yuba-Sutter Transit staff requested an analysis of the potential opportunities and challenges associated with the establishment of Yuba-Sutter Transit as an NEMT provider.

RESEARCH AND ANALYSIS APPROACH

Recognizing the technical nature of the issues surrounding whether or not to take on the effort of becoming an authorized NEMT provider, Innovative Mobility subcontracted with Accessible Avenue, an accessibility-focused consulting and training firm led by Ron Brooks, an almost 30-year veteran of the accessible transit and paratransit industry. Mr. Brooks has designed and directed paratransit services for a number of transit agencies around the country, some of whom have provided NEMT services. Accessible Avenue also works with other consultants who possess additional expertise relevant to this subject. Accessible Avenue’s approach for answering this portion of the Scope of Work was as follows:

- Accessible Avenue evaluated three months of Yuba-Sutter Transit paratransit operating data to identify trips to or from the addresses of known medical destinations in order to determine the potential number of present customers whose trips might be reimbursable by CMMS. Yuba-Sutter Transit provided a list of forty addresses where medical services are provided. This approach does not account for other trips to or from other locations where medical services are available, but it was the best data source available, given the time and scope of this project.

- Accessible Avenue contacted Modivcare, the Transportation Broker for the Sacramento Region to gather information about the requirements for gaining approval to provide NEMT trips, about the administrative and operational requirements for remaining in good standing as an NEMT provider, and the reimbursement rates for providers.
- Accessible Avenue provided the information and analysis contained in this portion of our report.

SUMMARY OF FINDINGS

The findings enumerated below are not conclusive, but they are suggestive of the potential benefits and possible challenges for Yuba Sutter Transit to seek authorization as an NEMT provider and for providing service.

ENROLLMENT REQUIREMENTS

Yuba Sutter Transit, as a public transportation provider, would be eligible to contract with the current Medi-Cal broker. The steps and timeline for credentialing would need to be determined by Yuba-Sutter Transit and the Broker.

The process for certifying as an NEMT provider is subject to change but includes, among others, the following required activities and deliverables:

- The parties must complete a Service Agreement/Contract.
- Yuba-Sutter Transit must review and agree to the Broker's guidelines for operating and administering service.
- Yuba Sutter Transit must successfully complete an online credentialing process which includes:
 - Submitting documentation of required insurance.
 - Delivery of driver and administrative personnel lists.
 - Completing and providing criminal background checks for drivers and some staff.
 - Addressing any other local requirements established by the California Department of Health Care Services or the Broker.
 - Yuba-Sutter Transit must work with the Broker to ensure that all staff who will work on the NEMT service complete training on all Broker-provided technologies for credentialing drivers, accepting and processing assigned trips, verifying rider eligibility, billing and for all other administrative or procedural matters.
- Yuba-Sutter Transit must establish data management practices that ensure compliance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and any other information and data privacy and security requirements.
- Yuba-Sutter Transit must pass a successful on-site visit by the Broker's provider credentialing team.

The level of effort required to complete the process for onboarding as an NEMT provider is not known. It would be based on a more in-depth on-sight assessment of the current manner in which Yuba Sutter Transit stores, manages and secures rider, trip and other information, on an evaluation of Yuba-Sutter Transit's current driver background screening and staff training programs and on an assessment of Yuba-Sutter Transit's approach for documenting service and any other data required for billing NEMT trips.

OPERATIONAL CONSIDERATIONS

As a longtime provider of ADA paratransit, it is likely that Yuba-Sutter Transit should be able to deliver NEMT service with only minimal changes to operating procedures. However, unlike ADA paratransit, every single Medi-Cal trip must be pre-authorized to ensure customer eligibility and that the trip is a medically necessary trip for a Medi-Cal reimbursable purpose. Even with pre-authorization in place, it is highly likely (based on the direct experience of almost all NEMT providers that CMMS will deny reimbursement for as many as five or ten percent of trips already provided. Over time, this percentage will stabilize, and any provider (including Yuba-Sutter Transit) should consider it as a "cost of doing business."

Given the need for pre-authorization, there is probably a need to adjust trip booking procedures as follows:

- Riders requesting trips would need to identify trip purposes in order to capture potential NEMT trips. (In the past, the Federal Transit Administration and FTA consultants conducting ADA compliance reviews have indicated that it is unacceptable (and perhaps illegal) to compel riders to disclose the reasons for which they are taking ADA paratransit trips, so a methodology would need to be implemented whereby customers have the option of either disclosing or not disclosing trip purposes.)
- Customers requesting NEMT trips would need to book far enough in advance for Yuba-Sutter Transit to submit requested trips for pre-authorization. Otherwise, the trips may not be able to be reimbursed.

ONGOING BROKER OVERSIGHT

In addition to day-to-day operations, Yuba-Sutter Transit would be subject to ongoing oversight from the Broker. Specific duties for Yuba-Sutter Transit would include:

- Submittal of monthly data reconciliation reports
- Participation in administrative and operational audits by the Broker

FINANCIAL IMPLICATIONS

A key question to be answered is whether or not any additional operational and administrative costs would be overcome by new revenues resulting from the reimbursement of authorized NEMT trips. At this stage, the answer to this question is unknown.

- The actual cost of a paratransit trip was \$42.66 in 2020 and likely to climb in the future. Accessible Avenue was unable to obtain current Broker reimbursement rates for Medi-Cal trips, but it is almost certainly less than Yuba-Sutter Transit's average paratransit trip cost. Thus, it would be financially advantageous to get currently provided trips reimbursed, but it would not be financially advantageous to take on new trips which would continue to be subsidized by Yuba-Sutter Transit, all be it at a lower level.
- Based on data provided by Yuba-Sutter Transit for three non-consecutive months of service (October of 2021, January of 2022 and April of 2022), approximately five percent of Yuba-Sutter Transit paratransit trips began or ended at one of the forty addresses where medical services are located. Given that data from other agencies typically shows that 25% or more trips are for medical purposes, it is likely that the actual percentage of medical trips is much higher than five percent. Nevertheless, only a fraction of riders are Medi-Cal eligible, and only some of their trips are reimbursable under CMMS rules.
- The level of effort that would be required to achieve and maintain credentialing is unknown. The incremental administrative and operational costs for overseeing, managing and delivering NEMT trips is also currently unknown.

Ultimately, when assessing the financial implications of becoming an NEMT provider, the question to be answered is whether new revenues from reimbursements for NEMT trips are sufficient to offset increased administrative costs and/or increased service demand. The impact of new demand for service is also impacted by the extent to which current service capacity can absorb new trips. Here are the specific questions to be answered:

- How many current trips are potentially reimbursable as Medi-Cal trips? The answer is unknown, but research conducted by APTA and others suggests that medical trips typically comprise about 25% of overall service demand. The percentage of these trips which are Medi-Cal reimbursable is unknown and depends on a range of variables including the percentage of current and future riders who are enrolled in Medi-Cal and whose trips would qualify for reimbursement.
- How much new demand for service might be created were Yuba-Sutter Transit to begin providing NEMT trips, and how many of these trips could be absorbed within current system capacity? The drop in demand for service since 2018 suggests that there is unutilized system capacity which would be an argument in favor of taking on new NEMT trips. On the other hand, the actual cost to provide service is increasing and likely to continue doing so. This fact, coupled with industrywide driver shortages, may make the addition of new services less attractive—at least for the short term.

- To what extent do NEMT reimbursement rates cover the cost of service? In 2020, Yuba-Sutter’s cost per trip was \$42.66. Although Accessible Avenue was unable to obtain actual trip rates from the Transportation Broker, it is likely that reimbursement rates from CMMS would be no more than \$25 per trip. If the trips that Yuba-Sutter provides are by current riders and/or using existing service capacity, this reimbursement rate would partially offset current service costs, but if Yuba-Sutter is providing new trips that are generating new costs, serving as a NEMT provider would result in negative financial consequences.
- What percentage of NEMT trips are likely to be refused for reimbursement by the CMMS? It is a well-known fact that some trips (even though they have been pre-authorized) are ultimately denied by CMMS for reimbursement for a host of reasons, all of which are beyond the control of the provider. For example: a Medi-Cal subscriber may request a trip to a pharmacy that is related to a medically necessary treatment (which is reimbursable) only to visit the grocery store next to the pharmacy—a trip that is not reimbursable. The percentage of trips that are not reimbursed could be as high as five or ten percent.
- Does enrollment or operation as an NEMT provider create new administrative costs or burdens that cannot be offset by program revenues? The impact of NEMT rules and procedures impact administrative procedures and costs will depend on the extent to which the agency needs to change or strengthen existing personnel screening, training, data management and data security practices. For the sake of argument, it is wise to assume at least some adverse financial impact to the administrative costs of service delivery.

PROJECTING FINANCIAL IMPACTS

There is not enough data to make firm projections about financial impacts. Nevertheless, we are presenting the following two scenarios to illustrate the range of potential financial outcomes.

- Scenario #1 assumes that Yuba-Sutter Transit seeks reimbursement from CMMS for those trips it currently provides that are reimbursable by Medi-Cal. These are the assumptions upon which Scenario #1 is based.
 - Total trips are shown for October, 2021, January, 2022 and April, 2022. (Accessible Avenue had trip-level data for these three months, so they are being used for evaluative purposes only.)
 - Annualized trips are based on the sum of the three months for which Accessible Avenue had data, multiplied by four. (The result is a projected trip total that equates to 2019 service levels.)
 - 25% of those trips are medical trips.
 - 10% of medical trips are reimbursable under Medi-Cal rules.
 - Gross trip costs are \$42.66 (Yuba-Sutter Transit’s cost per trip in 2020)
 - Yuba-Sutter Transit receives \$20 per Medi-Cal trip provided, and Yuba-Sutter Transit reimburses for 90% of these trips.

- Scenario #2 assumes that Yuba-Sutter Transit seeks reimbursement from CMMS for those trips it currently provides that are reimbursable by Medi-Cal plus an additional 20 trips per weekday. These are the assumptions upon which Scenario #2 is based.
- Total trips include the actual number of one-way trips provided in October 2021, January, 2022, and April, 2022 plus an additional 440 one-way trips per month, which equates to 20 one-way trips per weekday.
 - Annualized trips are based on the sum of the monthly trip totals multiplied by four. (This total equates to 2018 service levels.)
 - 440 one-way trips plus 25% of the remaining trips are medical trips.
 - 440 one-way trips plus 10% of the remaining medical trips are reimbursable under Medi-Cal rules.
 - Gross trip costs are \$42.66 (Yuba-Sutter Transit’s cost per trip in 2020)
 - Yuba-Sutter Transit receives \$20 per Medi-Cal trip provided, and Yuba-Sutter Transit reimburses for 90% of these trips.

Table 26 - Scenario #1

Month	Total One-Way Trips	Medical Trips	Medi-Cal Reimbursable Trips	Total Gross Service Cost	Reimbursed by CMMS	Net Cost to YST
October 2021	5,847	1,462	146	\$249,433	\$2,631	\$246,802
January 2022	5,205	1,301	130	\$222,045	\$2,342	\$219,703
April 2022	5,605	1,401	140	\$239,109	\$2,522	\$236,587
Annualized	66,628	16,657	1,666	\$2,842,350	\$29,983	\$2,812,368

Table 27 - Scenario #2

Month	Total One-Way Trips	Medical Trips	Medi-Cal Reimbursable Trips	Total Gross Service Cost	Reimbursed by CMMS	Net Cost to YST
January 2022	6,287	1,902	586	\$268,203	\$10,551	\$257,652
January 2022	5,645	1,741	570	\$240,816	\$10,262	\$230,553
April 2022	6,045	1,841	580	\$257,880	\$10,442	\$247,437
Annualized	71,908	21,936	6,946	\$3,067,595	\$125,023	\$2,942,573

RECOMMENDATIONS

It appears that if Yuba-Sutter Transit is able to obtain reimbursement from CMMS for the eligible trips it already provides, and if Yuba-Sutter Transit is able to become a credentialed NEMT provider with only minimal changes to existing operations and administrative practices, seeking NEMT certification may be warranted. However, there are a number of uncertainties that should be addressed before deciding whether or not to seek NEMT certification. Here are the steps we recommend that Yuba-Sutter Transit pursue prior to making any longer term decisions about NEMT certification.

1. Schedule a meeting with the Transportation Broker serving the Yuba-Sutter region (currently Modivcare) and obtain answers to the following questions:
 - What is the current reimbursement rate, and are the rates negotiable?
 - Would Yuba-Sutter Transit be able to establish limits on the areas where it operates, on the hours during which it operates and/or the number of trips it provides?
 - Would Yuba-Sutter Transit be able to limit its participation to trips for customers who are current or future ADA certified Yuba-Sutter Transit customers?
2. Obtain sample NEMT trip data for the area where Yuba-Sutter Transit is considering the delivery of NEMT service. Yuba-Sutter Transit should obtain the following data for each NEMT trip provided (whether reimbursed by CMMS or not) during a specified time period (ideally at least three months).
 - Trip date
 - GPS locations for pick-up and drop-off addresses
 - Pick-up and drop-off times
 - Service mode, e.g. ambulatory or non-ambulatory
 - Amount reimbursed by CMMS

Having this level of data would enable Yuba-Sutter Transit to evaluate the potential service impacts, costs and amount of reimbursement the agency would be likely to receive from CMMS. Having data for denied trips would also be helpful for projecting the amount of provided service which would not be reimbursed.

3. Yuba-Sutter Transit should request the Broker to evaluate customer eligibility data provided by Yuba-Sutter Transit to determine which customers might also be taking NEMT trips with other providers. If Yuba-Sutter Transit were to become an NEMT provider, Yuba-Sutter Transit should expect that the customers might shift some or all of their NEMT trips to Yuba-Sutter Transit.
4. If based on these initial conversations, NEMT certification appears attractive, Yuba-Sutter Transit should meet with the Broker to determine the required steps for Yuba-Sutter Transit to gain certification. This step would likely require the Transportation Broker to visit Yuba-Sutter Transit for the purposes of evaluating data management practices and data security and to conduct driver safety and training files, vehicle maintenance records and a representative sample of Yuba-Sutter Transit vehicles. The goal for this step is for Yuba-Sutter Transit to obtain a list of any needed changes to existing administrative or operational practices prior to onboarding as an NEMT provider.
5. If Yuba-Sutter Transit is interested in pursuing NEMT certification, the agency should consider conducting a limited duration pilot with existing riders as a means of evaluating the actual impacts on service operations.
6. If the Transportation Broker holds regular or occasional meetings with transportation providers, Yuba-Sutter Transit may want to consider joining a meeting to get a deeper understanding of the relationship between the Broker and its providers. While not required, the quality of the Broker's relationships with providers may indicate the quality of the working relationship Yuba-Sutter Transit and the Broker would enjoy if and when Yuba-Sutter Transit joins the NEMT program.
7. Yuba-Sutter Transit may also want to consider meeting with one or two current NEMT providers and with staff from Golden Empire Transit to learn more of their experiences with the program. The goal of these meetings would be to learn more about the day-to-day realities of providing NEMT trips, of the Broker's approach to ongoing program oversight, on-site inspections, oversight of billing and reporting processes, and other qualitative aspects of participation in the NEMT program.

NOTES

There are a number of NEMT focused resources that may assist Yuba-Sutter Transit staff in deepening its understanding of NEMT transportation, and particularly any differences between NEMT service and other forms of demand-response transportation that the agency already provides. Here are a few web-based sources of information that may be relevant for Yuba-Sutter Transit.

- Centers for Medicare and Medicaid Services (CMMS) – <https://www.cmms.gov> - CMS serves the public as a trusted partner and steward, dedicated to advancing health equity, expanding coverage, and improving health outcomes.
- California Department of Health Care Services – <https://www.dhcs.ca.gov> – The Department of Health Care Services oversees the delivery of NEMT on behalf of the Centers for Medicare and Medicaid Services (CMMS). This includes selection and oversight of the Transportation Broker.
- Modivcare – <https://www.modivcare.com> – Modivcare is the Transportation Broker responsible for oversight of NEMT services within the Sacramento region, including Yuba and Sutter Counties. This includes credentialing and oversight of NEMT providers, and the brokering of NEMT trips.
- List of approved NEMT providers within the State of California
- <https://www.dhcs.ca.gov/services/medi-cal/Documents/List-of-Approved-Nonmedical-Transportation-Providers.pdf>

Frequently Asked Questions for Medi-Cal Non-Medical Transportation Providers - https://www.dhcs.ca.gov/services/medi-cal/Pages/Transportation_Provider_FAQ.aspx



Transit Technology Review



innovate mobility

INTRODUCTION

The need for advancements in transit technology has become increasingly important in recent years due to several factors. One of the main challenges facing traditional transportation systems is increasing demand. As cities continue to grow and populations become more urbanized, the demand for transportation services has risen significantly. To meet this demand, transit agencies must find ways to improve the efficiency and capacity of their services, while still maintaining high levels of service quality.

Another challenge facing traditional transportation systems is aging infrastructure. Many transit systems were built decades ago and are in need of significant upgrades and modernization. This requires significant investment in new technology and infrastructure to ensure that transit systems can meet the needs of modern society.

Environmental concerns are also driving the need for advancements in transit technology. The transportation sector is a significant contributor to greenhouse gas emissions, which contribute to climate change. To address this, transit agencies are looking for ways to reduce emissions and promote sustainability through the use of clean energy technologies such as electric and hydrogen fuel cell buses.

To address these challenges, transit agencies and transportation providers are turning to technology to improve the efficiency, effectiveness, and sustainability of their services. Advancements in operations, passenger information, fares, and other areas have enabled transit agencies to offer more efficient, personalized, and sustainable transportation options to their customers.

For example, computer-aided dispatch and vehicle location technology allows transit agencies to optimize routing and scheduling in real-time based on demand and traffic conditions. Passenger information technologies such as TransitApp, CityMapper, and Moovit provide real-time transit information to passengers, including arrival times, route planning, and service disruptions. Contactless payment systems and other fare technology advancements provide a more convenient and secure way for passengers to pay for transit services.

Microtransit technology advancements such as on-demand routing and scheduling, real-time vehicle tracking, and mobile booking and payment provide more efficient and personalized transportation options. Clean energy advancements such as electric buses, hydrogen fuel cell buses, and alternative fuels help to reduce emissions and promote sustainability.

Despite these advancements, there are also challenges and pitfalls that transit agencies may encounter when deploying new technology. These can include technical challenges, cost overruns, and resistance from customers and employees. However, with careful planning and implementation, transit agencies can successfully deploy new technology and improve the efficiency, effectiveness, and sustainability of their services.

OPERATIONAL ADVANCEMENTS

COMPUTER-AIDED DISPATCH (CAD)

Computer-aided dispatch (CAD) and vehicle location technology have become essential tools for transit agencies to improve operational efficiency and provide a better passenger experience. This report will focus on the most recent advancements in CAD and vehicle location technology.

CAD systems use real-time data to optimize transit operations, including scheduling, dispatching, and vehicle routing. The latest CAD systems are now integrating machine learning algorithms to improve decision-making processes. For example, a system called Transit Signal Priority (TSP) uses machine learning algorithms to predict the optimal time for a transit vehicle to arrive at a traffic signal, improving transit speed and reducing delays. Another example is the integration of CAD systems with passenger information systems, allowing real-time information to be communicated to passengers through digital displays and mobile apps.

VEHICLE LOCATION TECHNOLOGY

Vehicle location technology uses GPS and other sensors to track the location and movement of transit vehicles. The latest advancements in vehicle location technology include the use of real-time location data to optimize vehicle routing and reduce transit travel times. Transit agencies are also using vehicle location data to improve passenger safety, with systems that can automatically detect when a transit vehicle is involved in an accident or is in a potentially hazardous situation. Additionally, transit agencies are implementing predictive maintenance systems that use vehicle location data to identify maintenance issues before they occur, reducing downtime and improving operational efficiency.

Yuba-Sutter Transit utilizes DoubleMap for its vehicle location technology. This system also provides passenger counting and a small measure of CAD. Modern CAD and vehicle location technologies have become essential tools for transit agencies to improve operational efficiency and provide a better passenger experience. The latest advancements in CAD systems are integrating machine learning algorithms to optimize transit operations, and the latest advancements in vehicle location technology are using real-time data to optimize vehicle routing and improve passenger safety.

The industry's focus on enhancing operational efficiency, improving passenger safety, and reducing travel times is driving innovation and leading to a more sustainable and connected transit system. A more modern system to dispatch and locate Yuba-Sutter Transit's vehicles could improve operational performance and customer information. However, with the recommendations to deploy on-demand technology, a traditional CAD system is not necessary. Yuba-Sutter Transit could deploy a technology such as Swiftly to monitor vehicle location.

Swiftly is a transportation technology company that provides real-time transit data, analytics, and communication tools to transit agencies. The company's platform is designed to help transit agencies improve operational efficiency, reduce costs, and enhance the customer experience.



Swiftly's platform includes several features, including real-time vehicle tracking, predictive arrival times, and passenger information displays. These features help transit agencies to optimize their services, reduce wait times, and provide better information to passengers. The platform also includes data analytics tools that allow transit agencies to track ridership, service performance, and other key metrics. This data can be used to optimize transit operations and improve service quality.

One of the key benefits of Swiftly's platform is its ease of integration with existing transit systems. The platform is designed to work with a wide range of transit technologies, including automatic vehicle location systems, fare collection systems, and scheduling systems. This makes it easy for transit agencies to implement the platform and start realizing the benefits of real-time data and analytics.

Swiftly's platform also includes communication tools that allow transit agencies to send real-time service alerts and other information to passengers via text message, email, or push notifications. This helps to improve the customer experience by providing passengers with up-to-date information about their trips.

Overall, Swiftly is a leading provider of real-time transit data, analytics, and communication tools. Its platform helps transit agencies to improve operational efficiency, reduce costs, and enhance the customer experience by providing real-time data and analytics that can be used to optimize transit operations and improve service quality.

ON-DEMAND/MICROTRANSIT TECHNOLOGY

The most recent trend in technology in public transit has been the growth of the on-demand/microtransit space. This technology has significant benefits including:

- **Improved Service Quality:** Microtransit technology can help transit agencies to provide better service to their customers by offering on-demand, flexible, and personalized transportation options. This can help to attract new riders and retain existing ones, leading to increased ridership and revenue.
- **Increased Efficiency:** Microtransit technology can help transit agencies to optimize their services by routing vehicles based on demand, reducing empty miles, and providing more efficient transportation options for passengers. This can help to reduce costs and improve the overall efficiency of the transit network.
- **Expanded Service Coverage:** Microtransit technology can help transit agencies to expand their service coverage to areas that are not currently served by traditional fixed-route transit. This can help to improve access to transportation for underserved populations and reduce congestion on the roadways.
- **Better Data and Analytics:** Microtransit technology can provide transit agencies with better data and analytics on ridership, demand, and service performance. This information can be used to optimize transit operations, improve service quality, and make data-driven decisions about future investments in transit infrastructure.
- **Improved Sustainability:** Microtransit technology can help transit agencies to reduce their environmental impact by offering more efficient transportation options and reducing the number of single-occupancy vehicles on the roadways. This can help to improve air quality, reduce greenhouse gas emissions, and promote sustainable transportation options.

There is no doubt that the deployment of microtransit technology can help transit agencies to improve service quality, increase efficiency, expand service coverage, obtain better data and analytics, and promote sustainability. By leveraging these benefits, transit agencies can improve the overall transit experience for their customers and better serve their communities. These are some of the reasons why the plan recommends a large deployment of microtransit throughout the service area.

The microtransit industry has seen several advancements over the past five years in terms of technology, which have improved the efficiency and effectiveness of these services significantly. Here are some of the key advancements:

- **Real-time Vehicle Tracking:** Real-time vehicle tracking technology has improved significantly over the past 5 years, allowing microtransit providers to track the location of their vehicles in real-time and make more informed decisions about route optimization and scheduling.
- **Mobile Booking and Payment:** Mobile booking and payment technology has become more advanced, allowing passengers to book and pay for rides using their smartphones. This technology has made it easier for passengers to access microtransit services and has streamlined the booking and payment process for providers.
- **Integration with Transit Networks:** Microtransit providers have become more integrated with existing transit networks, allowing passengers to access these services in conjunction with traditional public transit options. This integration has made it easier for passengers to access microtransit services and has improved the overall efficiency of the transit network.
- **On-Demand Routing and Scheduling:** On-demand routing and scheduling technology has become more advanced, allowing microtransit providers to optimize routes in real-time based on demand and traffic conditions. This technology has improved the efficiency of microtransit services and has reduced wait times for passengers.
- **Data Analytics and Machine Learning:** Data analytics and machine learning technology have become more advanced, allowing microtransit providers to analyze data on ridership, traffic, and other factors to optimize their services. This technology has improved the efficiency and effectiveness of microtransit services and has allowed providers to make data-driven decisions about their operations.

Microtransit technologies have improved over the past five years, making these services more efficient, effective, and accessible. By leveraging real-time vehicle tracking, mobile booking and payment, integration with transit networks, on-demand routing and scheduling, and data analytics and machine learning, microtransit providers have been able to improve the customer experience, reduce costs, and increase ridership.

Several companies are currently providing their technology to public transportation agencies in the on-demand/microtransit market. The following companies are potential technology providers that will play a key role in implementing the Yuba-Sutter Transit hybrid fixed route/on-demand system proposed in this plan. These include:

Via: Via is a transportation technology company that provides on-demand shared ride services for public transit agencies, corporations, and private organizations. Via's platform uses algorithms to optimize routes and reduce wait times, and it offers a range of services, including microtransit, shuttle services, and paratransit.



Here are some of the key features and benefits of Via:

On-Demand Transportation: Via provides on-demand transportation services that allow passengers to book rides in real-time using a mobile app or web-based platform. This allows transit agencies to offer flexible transportation options that can be tailored to the needs of individual riders and can help to reduce wait times and improve the overall customer experience.

Efficient Routing and Scheduling: Via uses advanced algorithms and machine learning to optimize vehicle routing and scheduling in real-time based on demand, traffic conditions, and other factors. This allows transit agencies to offer more efficient transportation options that can reduce costs and improve the overall efficiency of the transit network.

Multi-Modal Integration: Via integrates with other modes of transportation, such as traditional public transit, bike-share, and car-share services, to provide passengers with seamless transportation options. This can help to reduce congestion on the roadways and promote more sustainable transportation options.

Advanced Data Analytics: Via provides transit agencies with advanced data analytics and reporting tools that allow them to analyze ridership, demand, and service performance in real-time. This information can be used to optimize transit operations, improve service quality, and make data-driven decisions about future investments in transit infrastructure.

Customizable Branding and Marketing: Via allows transit agencies to customize the branding and marketing of their microtransit services, including the design of the mobile app, vehicle branding, and marketing materials. This can help to promote the microtransit services to potential riders and increase awareness of the transit agency's brand.

With Via, transit agencies, businesses, and communities have access to on-demand, flexible, and efficient transportation options. By leveraging advanced algorithms and machine learning, multi-modal integration, and advanced data analytics, Via can help transit agencies to improve service quality, increase efficiency, and promote sustainable transportation options.

RideCo is a transportation technology company that provides on-demand, shared ride services for public transit agencies, universities, and corporations. RideCo's platform uses algorithms to optimize routes and reduce wait times, and it offers a range of services, including microtransit, shuttle services, and paratransit.



RideCo's microtransit service is designed to complement existing fixed-route services by providing on-demand transit options in areas with low demand or where fixed-route services are not cost-effective. The service uses a fleet of vehicles, such as vans or minibuses, and allows passengers to book rides through a mobile app. Passengers can pay for rides using their credit or debit cards, and the app displays real-time information about ride availability and estimated pick-up and drop-off times.

RideCo's platform also includes advanced analytics and reporting features that allow transit agencies to track ridership, trip patterns, and service performance. This data can be used to optimize transit operations, improve the customer experience, and reduce costs.

As a leader in the microtransit market, RideCo offers advanced technology solutions that help transit agencies provide more efficient and cost-effective transit services.

Ecolane is a software company that provides demand-response transit scheduling and dispatch software solutions. The company's platform is designed to help transit agencies optimize their operations by improving route efficiency, reducing costs, and enhancing customer service.



Ecolane's software is used by transit agencies of all sizes, from small, rural systems to large, urban systems. The platform offers a range of features, including automated scheduling, dispatching, and real-time tracking of vehicles. The software is also designed to be user-friendly, with a simple, intuitive interface that makes it easy for dispatchers to manage transit operations.

Ecolane's platform is customizable, allowing transit agencies to tailor the software to their specific needs. The platform also includes advanced reporting and analytics features that allow transit agencies to track ridership, service performance, and other key metrics.

Ecolane offers a wide range of features and capabilities that can help transit agencies improve their operations and provide better service to their customers.

Spare Labs is a Canadian-based technology company that offers a range of transportation services, including on-demand transit, paratransit, and microtransit. The company's platform uses machine learning algorithms to optimize transit operations and reduce costs.



Spare Labs has very similar technology to Via and RideCo but also provides flexible contract structures. Spare Labs offers flexible contract structures that can be tailored to the needs and budget of each transit agency. This allows transit agencies to pay for the services they need, when they need them, and adjust their service levels as demand changes. Spare's technology also allows trips to be outsourced to TNC's during peak or overflow periods.

Other microtransit software technology providers include:

QRyde – Qryde Transportation Software is a transportation management software that helps transit agencies and other transportation providers to manage their operations more efficiently.

The Routing Company (TRC) – Based in Boston, MA, TRC is a growing microtransit software technology provider. TRC differentiates itself by being the only technology provider currently incorporating fixed route connections within its app. This provides seamless mobility throughout the system between modes.

TransLoc – TransLoc is a technology company that provides transit solutions for universities, municipalities, and private organizations. The company offers a range of services, including real-time transit tracking, demand-responsive transit, and microtransit.

DEPLOYING ON-DEMAND/MICROTRANSIT TECHNOLOGY

Assess Transit System Needs: The first step in deploying microtransit technology is to assess the transit system's needs. This involves identifying areas of the transit network where there is low demand or where fixed-route services are not cost-effective. It is also important to identify any gaps in service that can be filled with microtransit. The NextGen Transit Plan has completed this as part of the Existing Conditions report and System Analysis.

Choose a Microtransit Provider: Once the transit system's needs are identified, the next step is to choose a microtransit provider. The provider should have a proven track record in delivering on-demand transit services and should be able to customize their services to meet the transit system's specific needs. The RFP process should not be evaluated only on price, but rather the entire solution including training, marketing support and deployment.

Develop a Service Plan: The transit system and microtransit provider should work together to develop a service plan that outlines the areas of the transit network that will be served by microtransit, the hours of operation, and the fare structure. The service plan should also include a marketing and communication strategy to inform passengers about the new microtransit service.

Launch the Microtransit Service: Once the service plan is developed, the microtransit service can be launched. The transit system and microtransit provider should work together to ensure that the service is reliable and meets the needs of passengers.

Monitor and Evaluate the Service: After the microtransit service is launched, it is important to monitor and evaluate its performance. The transit system should collect data on ridership, trip patterns, and customer satisfaction to ensure that the service is meeting its goals. Based on the data collected, the transit system and microtransit provider can make adjustments to the service to improve its performance.

Expand the Microtransit Service: If the microtransit service is successful, the transit system may consider expanding the service to other areas of the transit network. This could involve adding more vehicles or increasing the hours of operation.

PASSENGER INFORMATION ADVANCEMENTS

In order to provide seamless transit experiences, advancements in passenger information have become increasingly important. Real-time passenger information is becoming more widely available, allowing passengers to track the location of their transit vehicle and estimate arrival times. In addition, transit agencies are implementing mobile ticketing systems, making it easier for passengers to purchase and store tickets on their mobile devices. The use of contactless payment methods has also become more prevalent, reducing the need for physical tickets and cash transactions. Currently Yuba-Sutter Transit utilizes DoubleMap for passenger information. There are a variety of new providers who have made advancements in the space including the following:

Transit, previously known as TransitApp, is a mobile app that provides real-time transit data, trip planning, and multimodal options for public transit users. The app offers real-time vehicle tracking, arrival predictions, and service alerts, as well as a user-friendly interface for planning and booking trips. Transit also offers features like bike-share integration, multimodal trip planning, and user-generated feedback. Some of Transit's features include:



Real-time Transit Data: Transit provides real-time transit data, including vehicle locations, arrival predictions, and service alerts. This information is updated in real-time and allows transit users to plan their trips more efficiently and avoid delays.

Multimodal Trip Planning: Transit offers multimodal trip planning, which allows users to plan trips that involve multiple modes of transportation, such as bus, train, bike, and walking. The app provides detailed directions, including walking directions to transit stops and bike-share locations.

User-Friendly Interface: Transit has a user-friendly interface that makes it easy for users to plan and book trips. The app has a clean design and intuitive navigation, which helps users find the information they need quickly and easily.

Integration with Other Transit Technologies: Transit can be integrated with other transit technologies, such as on-demand technologies, to provide a comprehensive view of the transit network. This integration allows transit agencies to provide real-time data and information to passengers, which improves the customer experience and increases ridership.

Bike-Share Integration: Transit also integrates with bike-share programs in some cities, allowing users to find and reserve bikes through the app. This feature promotes multimodal transportation and provides users with additional transportation options.

In general, Transit provides real-time transit data, trip planning, and multimodal options to public transit users. By using Transit, transit users can plan their trips more efficiently, avoid delays, and access multiple modes of transportation. Transit agencies can use Transit to improve the customer experience, increase ridership, and provide better information to passengers.

CityMapper is a mobile app that offers real-time transit data, trip planning, and multimodal options for public transit users in major cities around the world. The app provides real-time vehicle tracking, arrival predictions, and service alerts, as well as a user-friendly interface for planning and booking trips. CityMapper also offers features like bike-share integration, multimodal trip planning, and user-generated feedback. CityMapper provides the same features as Transit, with the addition of:



Citymapper

Real-time Crowdsourced Information: Citymapper also incorporates crowdsourced information from users to provide real-time information about the transit network. This includes information about delays, crowds, and other potential disruptions, which helps users plan their trips more efficiently and avoid delays.

With Citymapper, public transit users have access to real-time transit data, trip planning options, and multimodal options. By using Citymapper, transit users can plan their trips more efficiently, avoid delays, and access multiple modes of transportation. Transit agencies can use Citymapper to improve the customer experience, increase ridership, and provide better information to passengers. CityMapper was recently acquired by Via.

Moovit is a popular mobile app that provides real-time transit data, trip planning, and multimodal options for public transit users in over 3,000 cities around the world. In addition to the benefits of Transit and CityMapper, here are some of the key features and benefits of Moovit:



moovit

Accessible Transit Directions: Moovit offers accessible transit directions, which help users with disabilities plan trips that are suitable for their needs. The app provides information about accessible transit options, including wheelchair-accessible routes and facilities.

With Moovit, public transit users have access to real-time transit information, trip planning, and multimodal options. By using Moovit, transit users can plan their trips more efficiently, avoid delays, and access multiple modes of transportation. Transit agencies can use Moovit to improve the customer experience, increase ridership, and provide better information to passengers.

FARE TECHNOLOGY ADVANCEMENTS

Transit fare technology has come a long way in recent years, with advancements in payment methods, fare collection systems, and ticketing technology. These advancements include:

Mobile Ticketing: Mobile ticketing has become increasingly popular among transit riders. It allows passengers to purchase and store transit tickets on their smartphones, eliminating the need for physical tickets or cash transactions. Mobile ticketing systems can also provide real-time passenger information and trip planning features. Transit agencies are now partnering with mobile payment providers to offer mobile ticketing options, such as Apple Pay and Google Wallet.



Contactless Payment: Contactless payment systems, such as Near Field Communication (NFC) and Radio Frequency Identification (RFID), have also become more prevalent in the transit industry. Contactless payment systems allow passengers to tap their payment cards or smartphones on a reader to pay for their fares. Transit agencies are partnering with payment providers to implement contactless payment systems, such as Visa and Mastercard, allowing riders to use their credit or debit cards to pay for transit fares. The next Connect card technology deployment will include contactless payment.

Fare Collection Systems: Fare collection systems have become more efficient and reliable with the implementation of smart card technology. Smart cards use microchips to store value and can be reloaded with funds for future trips. Transit agencies are also implementing open payment systems that allow passengers to pay for fares with contactless payment methods or mobile devices.

Ticketing Technology: Ticketing technology has also advanced, with the implementation of self-service kiosks and ticket vending machines that can print out tickets and reload smart cards. Transit agencies are also testing facial recognition technology for fare payment, which would eliminate the need for physical tickets or payment cards.

CASHLESS FARE COLLECTION

Transit systems around the world are considering doing away with accepting cash on vehicles as major airlines have. There are benefits to this transition including:

1. **Convenience:** Contactless payment methods such as NFC and RFID are quick and easy to use, allowing passengers to simply tap their payment card or smartphone on a reader to pay for their fares. This eliminates the need to carry cash or physically purchase tickets, making the transit experience more convenient for passengers.
2. **Efficiency:** Contactless payment reduces transaction times and speeds up the boarding process, allowing transit vehicles to move more efficiently and reducing delays. This is particularly beneficial during peak travel times when there is a high volume of passengers.
3. **Reduced costs:** Contactless payment systems are less expensive to operate than cash-based systems. The cost of handling and processing cash, including counting, sorting, and transporting, can be significant. Moving towards contactless payment reduces these costs and allows transit agencies to allocate resources more efficiently.
4. **Improved safety:** Cash handling can be a safety issue for transit employees, especially when dealing with large amounts of cash. Moving towards contactless payment reduces the need for cash handling and improves safety for both passengers and employees.
5. **Better data tracking:** Contactless payment systems can provide valuable data for transit agencies, including information on passenger travel patterns and trends. This data can be used to optimize transit routes, schedules, and fare structures, improving operational efficiency and providing a better transit experience for passengers.

Due to the large potential of cash transactions, there are also things transit systems should consider including:

1. **Exclusion of Unbanked Populations:** Moving towards contactless payment systems may exclude individuals who do not have access to bank accounts or credit cards. These individuals may rely on cash to pay for their fares and may be left behind in a cashless system.
2. **Additional Costs:** While contactless payment systems are less expensive to operate in the long run, the initial implementation costs can be significant. This can be a barrier for smaller transit agencies that may not have the resources to make the transition to contactless payment.
3. **Technical Issues:** Contactless payment systems rely on technology, which can be prone to technical issues and outages. If the system experiences a technical failure, passengers may be unable to pay for their fares, causing delays and inconvenience.
4. **Privacy Concerns:** Contactless payment systems may raise privacy concerns for some passengers. Some individuals may be uncomfortable with the idea of their payment and travel data being tracked and stored by transit agencies or payment providers.
5. **Education and Awareness:** Moving towards contactless payment requires education and awareness campaigns to inform passengers about the new payment methods and how to use them. This may be a challenge for transit agencies, particularly if they serve diverse communities with different levels of technological literacy.

Fare technology advancements have made transit payment more convenient and efficient for passengers. The implementation of mobile ticketing, contactless payment, smart cards, and self-service kiosks has improved the transit experience and reduced transaction times. As the transit industry continues to evolve, the focus on improving fare technology will remain a priority, with the goal of providing a seamless, hassle-free payment experience for transit riders.

OTHER TECHNOLOGIES

Autonomous Vehicles: One of the most significant operational advancements in transit technology is the implementation of autonomous vehicles. Autonomous vehicles have the potential to improve efficiency, reduce operational costs, and enhance safety. In 2021, Waymo launched its fully autonomous ride-hailing service in Phoenix, Arizona, making it the first company



to offer a commercial service with fully autonomous vehicles. Additionally, transit agencies are implementing predictive maintenance systems to identify maintenance issues before they occur, reducing downtime and improving operational efficiency. While autonomous vehicles are definitely being rolled out, they are not doing so in any meaningful fashion in the U.S. At a certain point, as the technology allows for higher speeds, safer operations, and larger vehicles, Yuba-Sutter Transit could look into electric autonomous vehicles.

Clean Energy Advancements: The transit industry is moving towards cleaner and more sustainable energy sources. Many transit agencies are investing in electric buses, reducing greenhouse gas emissions and noise pollution. In addition, some transit agencies are testing hydrogen fuel cell technology, which has the potential to provide long-range, zero-emission transit. Solar panels are also being installed on transit stations and rooftops to generate renewable energy.

Social Media Advancements: Social media has become an essential tool for transit agencies to communicate with passengers. Transit agencies are using social media platforms such as Twitter and Facebook to provide real-time service updates, respond to passenger inquiries, and receive feedback. Some transit agencies are also implementing chatbots to provide automated responses to common passenger questions.

Advancements in transit technology are rapidly changing the transit industry. Autonomous vehicles, real-time passenger information, clean energy sources, and social media communication are all playing a significant role in shaping the future of transit. The industry's focus on enhancing operational efficiency, improving the passenger experience, and reducing environmental impacts is driving innovation and leading to a more sustainable and connected transit system.



Service Recommendations, Ridership Estimation, and Deployment Plan



innovate mobility

INTRODUCTION

At its onset, this plan has looked at data to substantiate changes and investment into transit for the Yuba and Sutter regions. Beyond external data, the plan project team has worked to better understand the existing system, how it operates, and how it meets the need of current riders. Finally, combining the internal and external data, the plan has endeavored to build a service framework to attract new riders, better meet the needs of current riders, and generally provide a more beneficial transit experience.

This section lays out the structure for the service recommendations resulting from the data collected throughout the project, staff input, public engagement, and sound transit planning practices. When fully implemented, the proposed changes will result in ridership coming closer to pre-covid levels on a per vehicle service hour basis, fare revenues exceeding previous highs, and a greater service coverage area and span. Prior to providing details in the recommendations, this plan will address the information used to guide the project team to developing those recommendations. This starts with a review of two key transit metrics:

Coverage vs Frequency

Coverage is often defined as the area a transit system covers, this plus a ½ mile walkshed are considered the catchment area for the service.

Frequency is defined as how often buses arrive. This is more of a customer experience indicator as often customers who are required to wait long times for buses will choose other modes.

These two indicators act in a push/pull fashion. With greater coverage (and cost) acting as an inhibitor to faster, more frequent service, and vice versa. One of the reasons why most systems in the United States have seen declining ridership isn't for a lack of coverage, it is because the service is not fast enough and doesn't provide a sufficiently good experience compared to other modes.

For the plan recommendations, we will address both coverage and frequency, but also address two additional areas to attract new riders:

Experience and Access

Providing customers expansive coverage that results in greater access with fast, frequent service will result in a greater experience. However, doing these under the auspices of an existing budget, or a constrained financial position, is the challenge this plan aims to solve.

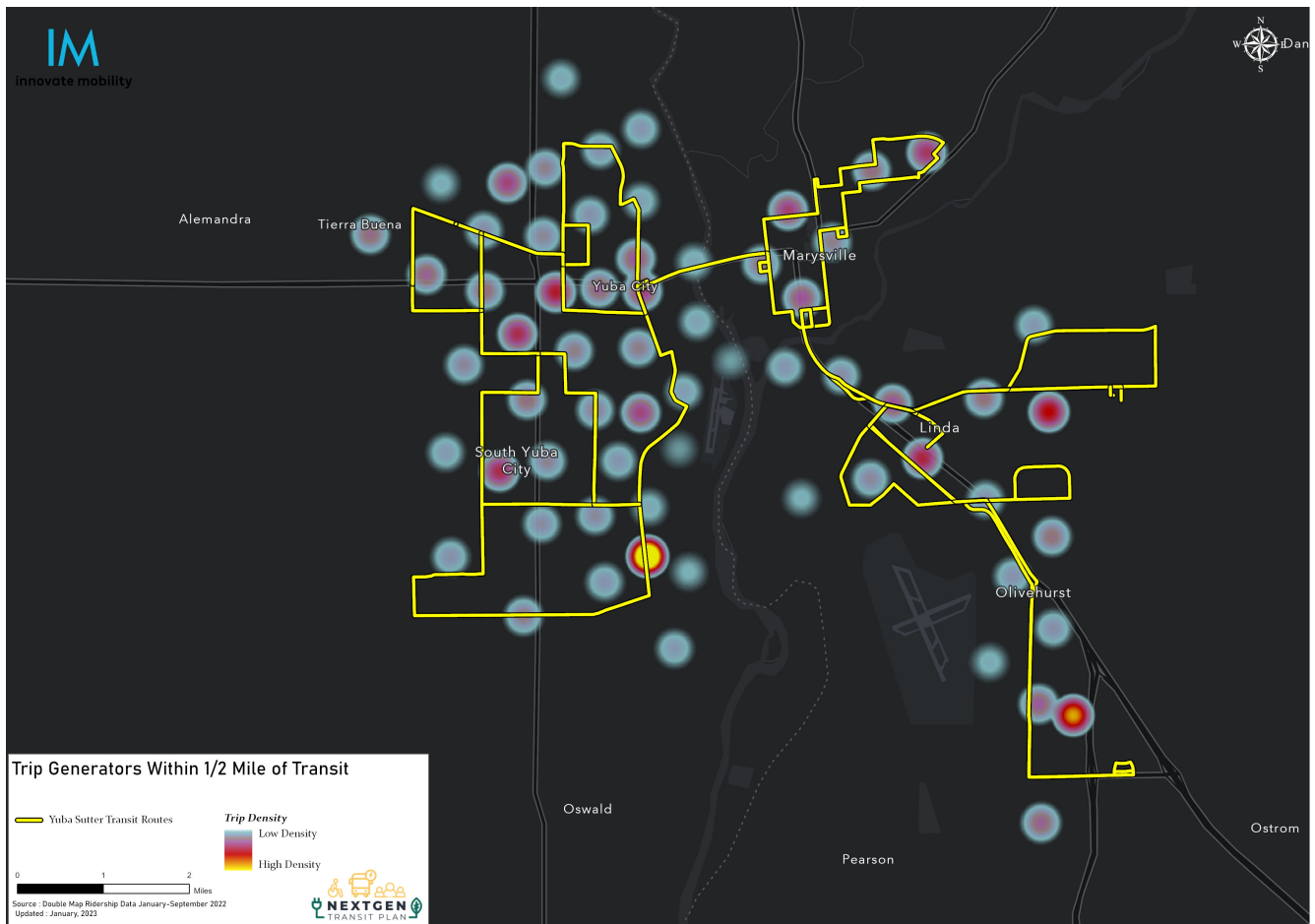
TRAVEL PATTERNS

This plan has used cellular data to understand travel patterns in Yuba and Sutter Counties as well as to major destinations in Sacramento and Roseville. The function of this analysis is to understand travel patterns. Knowing when people travel, how often, and where they go is key to designing services that will meet those needs.

TRIP GENERATION

The first step in understanding travel patterns is to understand what the trip generators, or major origins/destinations, are in the service area. We use a ½ mile walkshed around these trip generators to determine how convenient the service is for riders wishing to go to those locations.

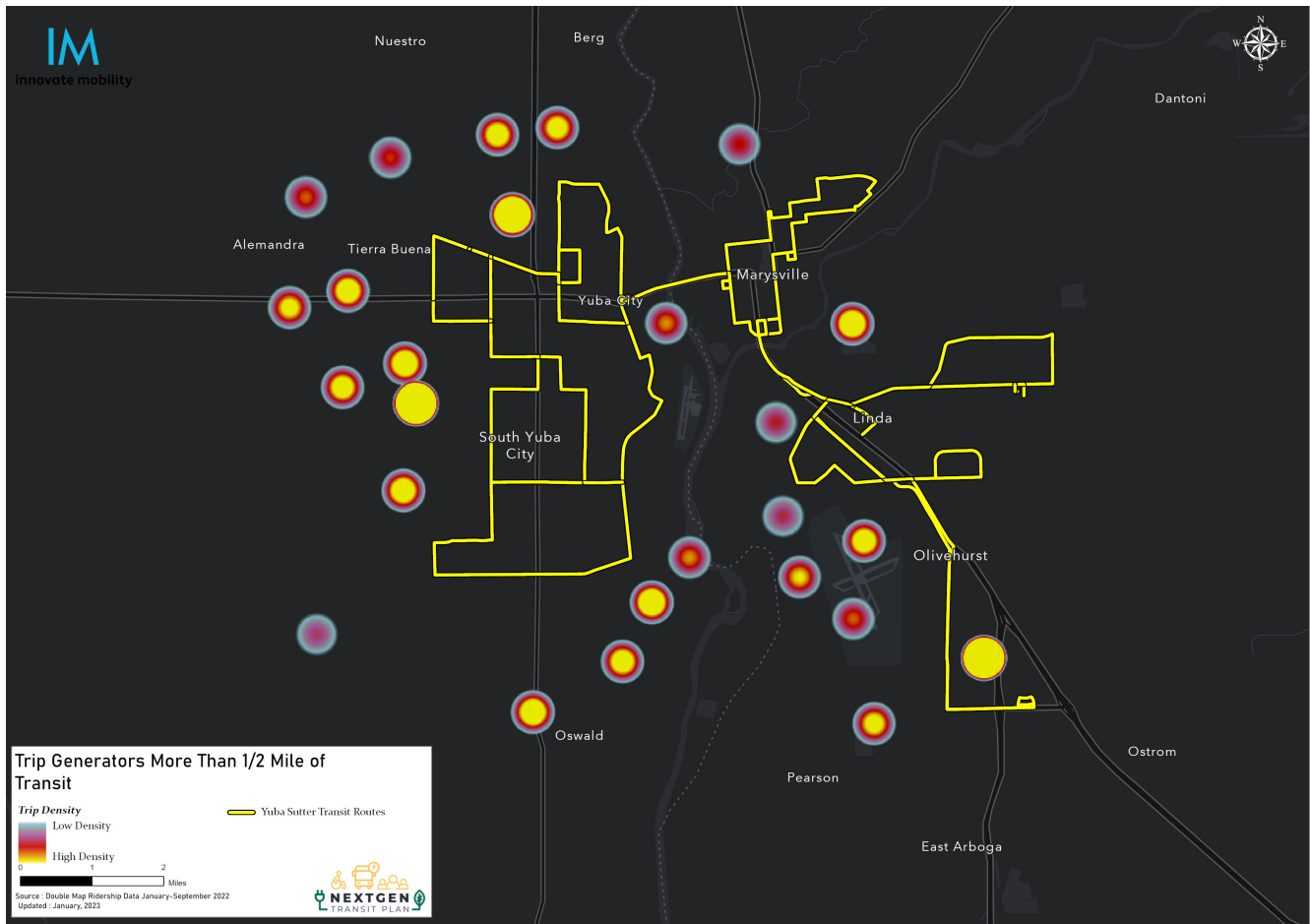
Figure 155 - Trip Generators Accessible by Existing Transit



As shown above Yuba-Sutter Transit’s system provides convenient access to a number of high-density trip generators in the region.

Conversely, the project team also looked at which trip generators are not covered by existing transit.

Figure 156 - Trip Generators Greater than 1/2 Mile from Transit

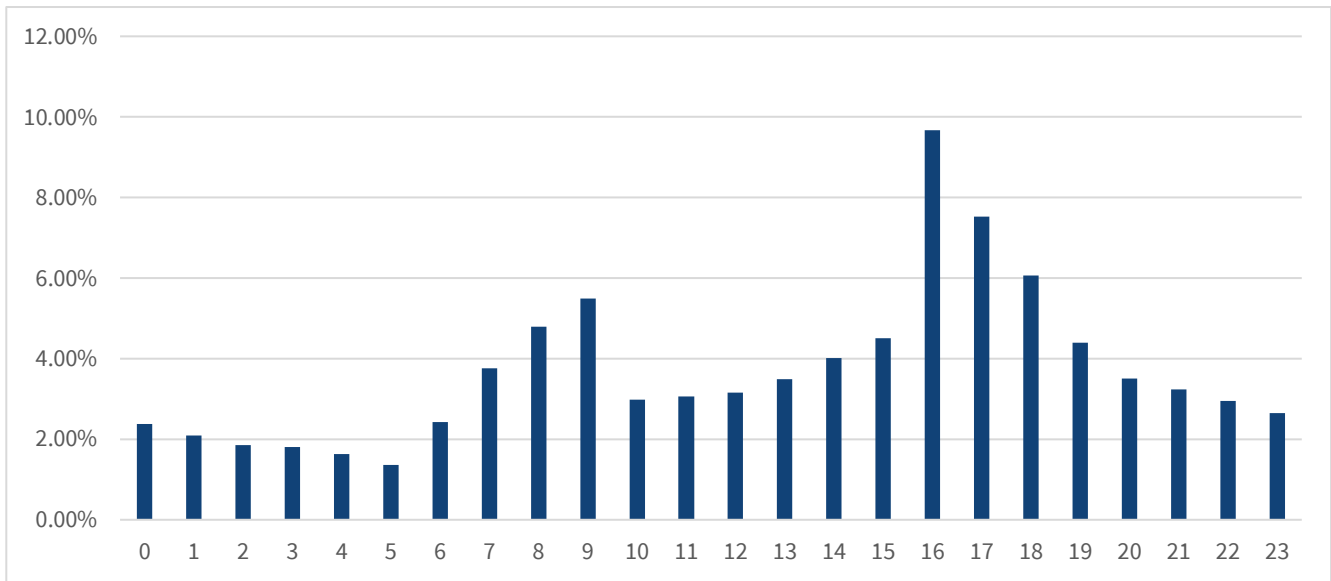


As shown above, there are a number of trip generators that are greater than 1/2 mile from existing transit. Many of these unserved areas are in newly developed regions indicating that the system has not kept up with population growth and economic development.

TRAVEL BY TIME OF DAY

When reviewing travel patterns by time of day, it is clear that travelers in the Yuba and Sutter regions are moving more in the middle of the day than at typical AM and PM peak periods.

Figure 157 - Travel by Time of Day



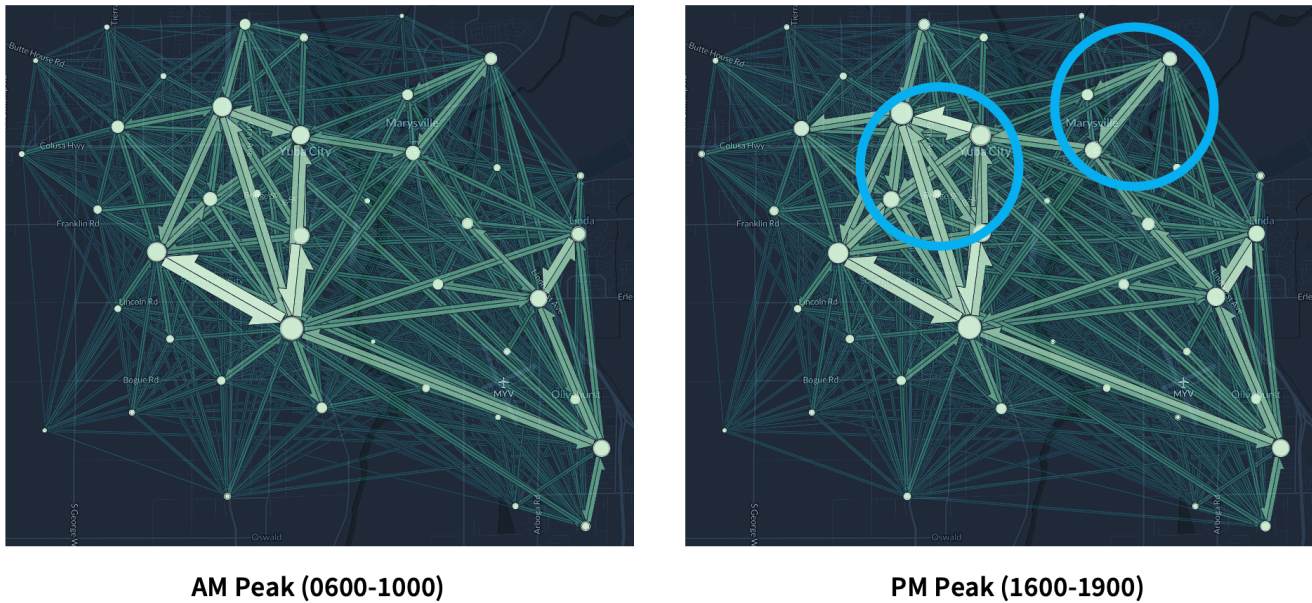
Travel patterns have also changed since the pandemic. For the Yuba and Sutter regions specifically, travel in the morning hours (6am-10am) has increased dramatically and is higher than even the pre-pandemic period. Whereas travel during the midday (10am-4pm) and PM Peak (4pm-6pm) has stayed relatively steady. One item of note is that there are approximately 18% more trips being made every day now compared to the pre-pandemic period indicating a greater work from home population in addition to the shifting travel times mentioned earlier.

Table 28 - Trip Proportion by Time of Day

	Pre-Pandemic	Pandemic	Post-Pandemic
AM Peak	9.02%	5.75%	16.48%
Midday	35.81%	30.27%	30.87%
PM Peak	21.98%	33.38%	21.48%

This data shows that improving service during the AM peak and expanding service hours can help capture a greater proportion of riders.

Figure 158 - Travel Patterns by Time of Day



Within the day travel patterns do change from morning to afternoon, intensifying in North Yuba City and Marysville. Looking at both geospatial travel demand as well as temporal travel demand provides key insight into travel patterns for the region.

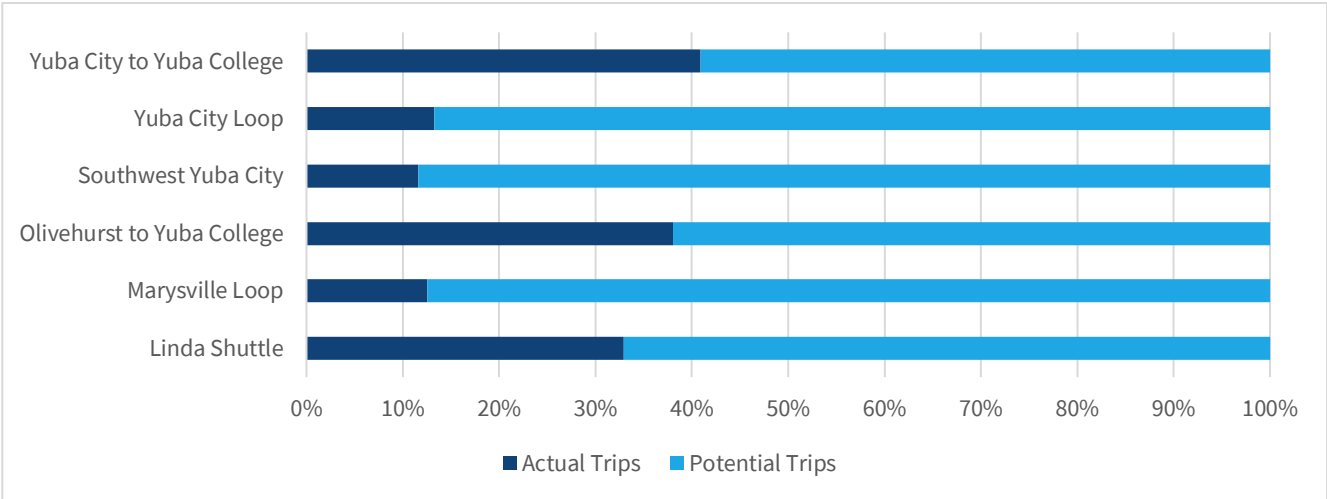
TRANSIT POTENTIAL

The chart below provides an overall comparison of the total number of trips that can be completed using transit, compared to the actual number of trips being taken on transit. Potential trips are derived from calculating total population within ½ mile of each stop and total travel demand within ½ mile of existing stops and comparing them to the actual number of trips taking place on transit.

Compared to the other Routes, the Yuba City to Yuba College Route is the best performing with over 40% of all potential transit trips translating into actual trips, followed closely by the Olivehurst to Yuba College Route. It is not surprising that there is higher transit use to and from campus destinations, given that staff and students must purchase parking permits to park on campus during most of the day.

Since all of these are “eligible” trips, in that they are close enough to existing transit stops and Routes, we can assume that there are other factors besides proximity to transit that prevent people from taking transit, such as wait times, familiarity or understanding of the transit network, access to a personal vehicle etc.

Figure 159 - Existing Transit Usage Compared to Potential Transit Usage



SERVICE FRAMEWORK

Given the data presented above, the following four guiding principles helped focus the project team on the service recommendations:

- **Improve Rider Experience:** Provide better information, faster travel time, and connections to previously unserved areas.
- **More Regional Connections:** Connect more communities that are farther away and create a network where riders can seamlessly travel to these locations.
- **Improve Local Access:** Serve new, growing areas and connect them with fast, modern, cost-effective transit solutions.
- **Improve Operating Performance:** Reduce delays from bridge crossings and speed up Routes to ensure layover time and expected travel times.

Based on the above guiding principles, the following framework supports the service recommendations. The framework below defines the new service types and the expected performance standards.

Figure 160 - Service Framework Recommendations

	Crosstown	Community	Commuter
Segment Overview	Crosstown Services service the major communities of Yuba City, Marysville, Linda and Olivehurst	Community services connect smaller, more distant areas with the Crosstown. These services will be technology enabled allowing riders to book online (or via telephone). Paratransit eligible customers will get curb-to-curb service, all others will get connections to mobility hubs and major transfer points.	Peak only outbound and return service to major regional locations. Connect to Crosstown and Community services at hubs.
Performance Standards	12-20 PAX per hour 15%+ farebox recovery 0.75-2 seat turnover per trip	3-7 PAX per hour 10%+ farebox recovery 20%+ trip sharing	25-30 PAX per hour 25%+ farebox recovery 0 seat turnover
Span of Service	6:30am-8:00pm Weekdays 8:00am-6:00pm Saturdays	6:30am-8:00pm Weekdays 8:00am-6:00pm Saturdays	5:20am-5:30pm Weekdays
Frequency/Wait/Travel Time	30-minute frequency	15-30-minute wait time 10-30-minute travel time	Commuter services arrive at pre-scheduled times.
Other	Connects to other segments at mobility hubs	Non-paratransit customers cannot travel to destinations on Crosstown Services (other than to hubs)	
Vehicles req. (at full plan)	5 fixed route	10-11 On Demand+2 Flex+2-3 DAR	8 Commuter Buses

As this is a major functional change, the following section describes each mode and how it is different from today's service framework:

- **Crosstown Service** – This service type replaces what is currently known as “fixed-route”. It will be referred to as both fixed-route and crosstown as they are interchangeable throughout the rest of the report. What is important is the guiding criteria behind what constitutes a crosstown service. Crosstown services should traverse more than one city or community and provide connections at major stops known as “super stops” or “mobility hubs”. These are locations where the Community services can transfer to these Routes. Stop spacing will be based on population density and should operate and no higher than a 30-minute frequency.
- **Community Services** – The Community services segment encompasses what is currently known as “Dial-a-Ride” and “Rural” services. The current dial-a-ride system provides daytime service to ADA-eligible customers **within ¾ of a mile of existing fixed-routes**. Yuba-Sutter Transit goes beyond this ¾ mile requirement with its current dial-a-ride service and includes seniors as an eligible population. As Yuba-Sutter Transit launches its future on-demand zones this will also be under the banner of “Community” services. These services are designed for short point to point service connecting riders to longer crosstown Routes. They also serve less dense populations such as Live Oak, the Foothills, and Wheatland. These services generally operate in an on-demand fashion or flex routing as the current rural service is operated.
- **Commuter Services** – The last criteria of service is Yuba-Sutter Transit’s existing Commuter service. Apart from the expansion to a new destination (Roseville Galleria Transit Center) and consolidation of some schedules, no changes are recommended to this service criteria.

SERVICE RECOMMENDATIONS

IMPLEMENT YUBA CITY COMMUNITY ON-DEMAND ZONE

A core part of this plan is the introduction of new on-demand zones throughout Yuba and Sutter Counties. The largest zone would operate in Yuba City and replace Routes 2 and 5.

- 4-5 Vehicles – Monday-Saturday
- Average wait times of 15-20 minutes
- Will connect to crosstown service at Alturas & Shasta/Walmart
- Average trip length is 2.4 miles
- New areas north of Butte House Rd, West of Harter Rd and South of Bogue Rd would now have general public service.
- New service to Yuba College Sutter Center

According to travel demand data, over 30% of all trips take place within Yuba City. This new Community service would cover that travel demand and help riders get throughout the system quicker than before.

Deploying this zone includes the cancellation of Routes 2 and 5. While these Routes are well used, they are mainly ridden to feed current Route 1. These two Routes have the third and fourth highest subsidy per passenger of all the Routes in the system at \$8.85 and \$11.17 respectively.

Ridership on both Routes has also not recovered to pre-pandemic levels and aside from stops where transfers to Route 1 can be made, ridership remains 30-60% below 2019 levels. Route productivity is also below average with Route 2 averaging 9.7 passengers per hour and Route 5, 7.9.

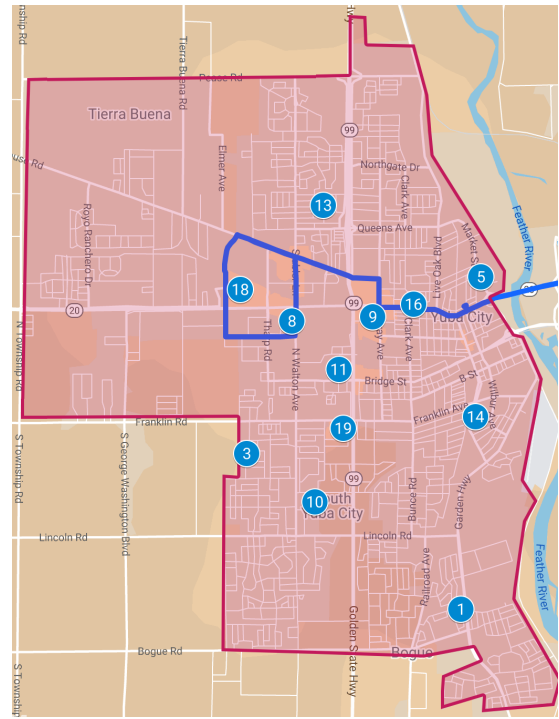


Figure 161 - Yuba City Community Service

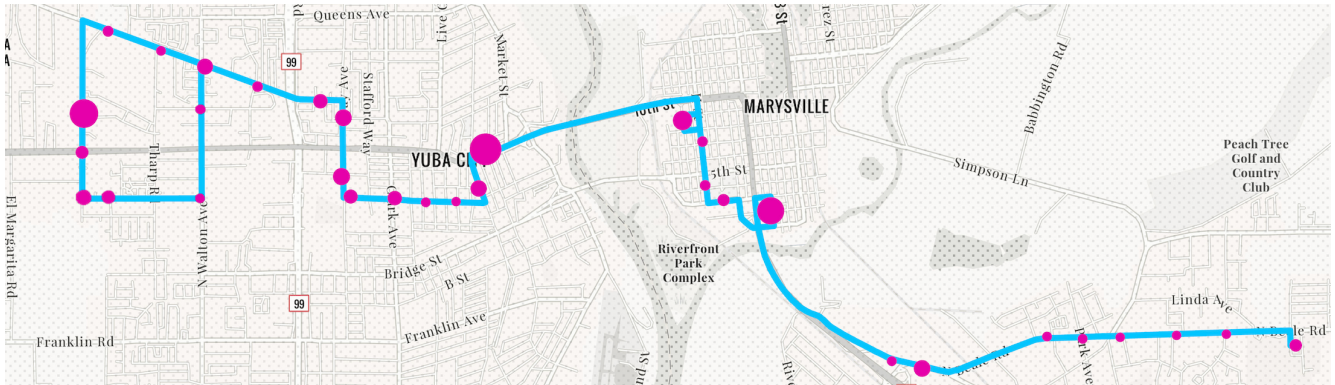


Figure 162 - Yuba City Travel Patterns

STREAMLINE ROUTE 1

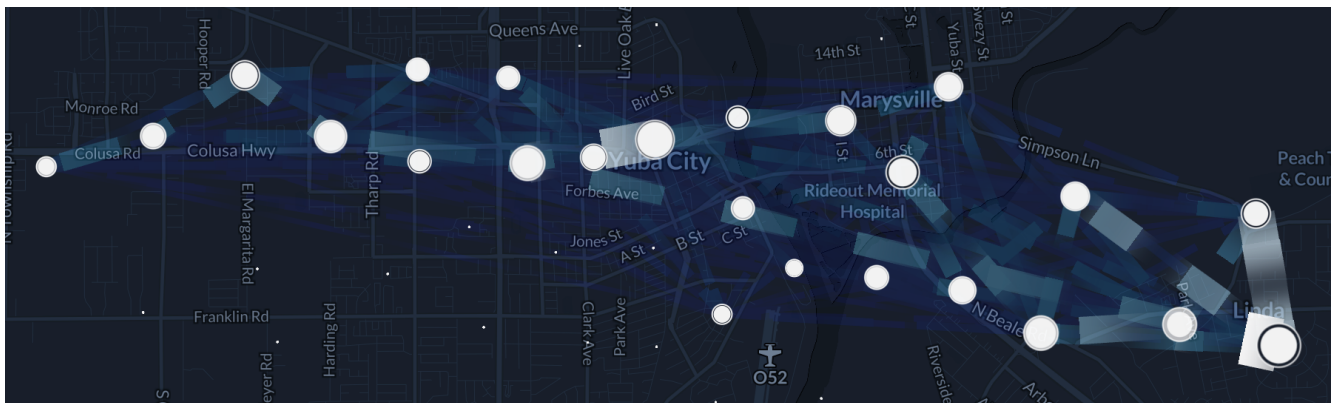
Route 1 is Yuba-Sutter Transit's most productive Route averaging 11.4 passengers per hour and for the most part, ridership on Route 1 is back to pre-pandemic levels.

Figure 163 - Existing Route 1 Ridership



Travel on Route 1 is primarily between Alturas and Shasta and Marysville continuing to Yuba College. Shorter trips are made within Yuba City shopping centers.

Figure 164 - Route 1 Travel Patterns



Under the proposed routing, stops on Forbes and Gray in Yuba City and D and 2nd in Marysville would be removed allowing the Route to travel faster. Travel times between major trip generators would reduce by 10-17% each way. Riders traveling to Yuba College would save approximately 30 minutes per day.

Figure 165 - Proposed Route 1 Routing



The Yuba City Community on-demand service would provide transfers at major stops along Route 1. And in an effort to not cannibalize either service, riders wishing to start and end their trips within ¼ mile of Route 1 would be instructed to use crosstown service rather than the on-demand service.

IMPLEMENT MARYSVILLE COMMUNITY ON-DEMAND ZONE

As described earlier, the plan calls for new Community on-demand zones throughout the service area. Marysville is a good example of where an on-demand zone would operate successfully allowing riders to travel throughout the city and transfer to Crosstown services easily. The profile of the zone would be as follows:

- 2 Vehicles – Mon.-Sat.
- 2% of all daily trips occur within Marysville
- Average trip length is only 1.65 miles
- Route 4 ridership is mostly concentrated between the Yuba Gov’t Center and North Beale transit center.
- Ridership to Marysville High and McKenney intermediate school may need a tripper for morning and afternoon release times during the school year.
- Connections to Foothills and new commuter services will be made at Yuba Gov’t Center hub.



Figure 167 - Marysville Community Zone

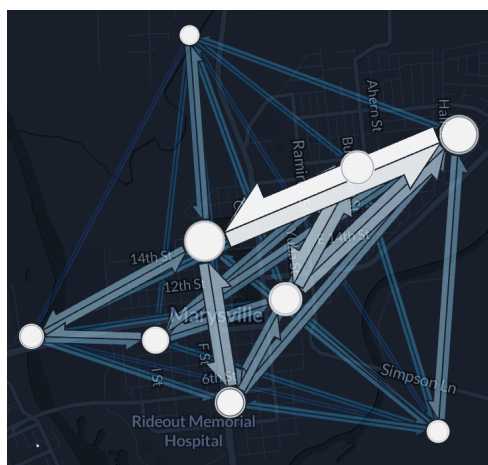


Figure 166 - Marysville Travel Patterns

Travel patterns in Marysville shows strong east to west movement, and the current Route 4 does not meet those needs. As a result, the plan recommends replacing Route 4 with this new citywide on-demand zone. Route 4 has the highest subsidy per passenger at \$14.23. Route productivity is also the lowest of Yuba-Sutter Transit’s existing services at 6.4 passengers per hour. Ridership on the Route is back to pre-pandemic levels, however, this Route was underperforming prior to the pandemic.

IMPLEMENT LINDA COMMUNITY ON-DEMAND ZONE

Linda is a smaller unincorporated community in the service area, however, three major trip generators, the North Beale Transit Center, Yuba College and Yuba County HHS are in the area. The profile of the zone is as follows:

- 2 Vehicles – Mon.-Sat.
- 1.7% of all daily trips occur within Linda Zone
- Average trip length is 1.9 miles
- Provides faster more frequent connections to Yuba College and North Beale Transit center
- Replaces Route 6 and expands general public service to all of Edgewater and east Linda to Griffith Road

Travel patterns within the city show trips between the Edgewater area and East Linda. Currently, Route 6, provides coverage in that area, however, it requires tremendous out of direction travel for potential riders.

The new Community service would allow riders to travel in any direction and as a result significantly reduce travel time to major trip generators in the area. The new Community zone would connect riders to new Crosstown Routes connecting riders to Marysville, Yuba City and Olivehurst quickly and conveniently.

This new zone would replace Route 6. This route currently averages 7.4 passengers per hour at a subsidy per passenger of \$12.09.

Figure 168 - Linda Community Service

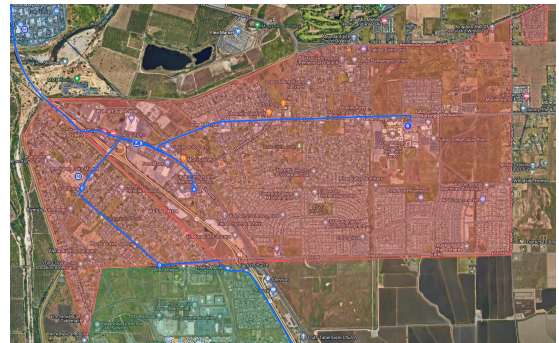
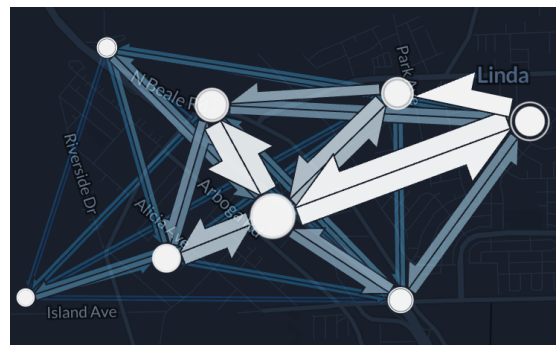


Figure 169 - Linda Travel Patterns



RE-ALIGN ROUTE 3

The current Route 3 is Yuba-Sutter Transit’s second most productive Route averaging 10 passengers per hour at a subsidy per passenger of \$8.49. Route 3 currently overlaps Route 1 along North Beale. With the new Community zone in Linda and the elimination of Route 4, this Route needs to be re-aligned to serve the Peachtree Clinic/Yuba County HHS. This rerouting will provide direct access to Olivehurst residents to the medical offices located here. Moving the Route from Arboga road to Alicia Avenue provides more coverage to east Linda residents.

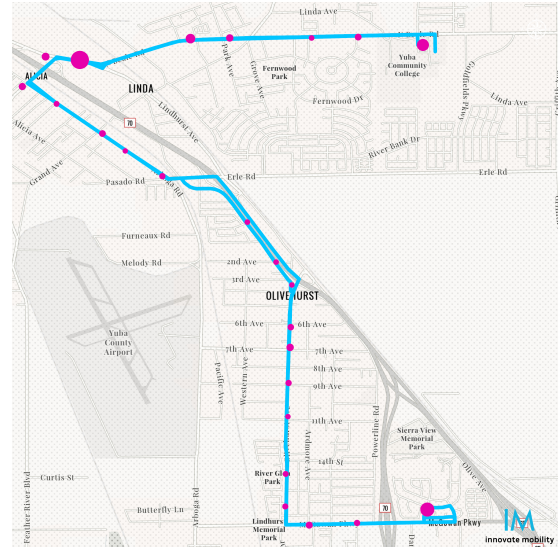


Figure 170 - Existing Route 3 Ridership

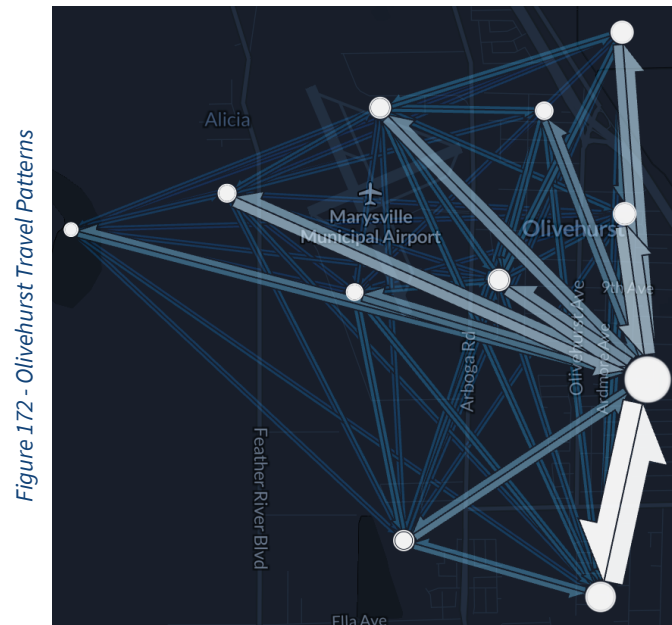


Figure 172 - Olivehurst Travel Patterns

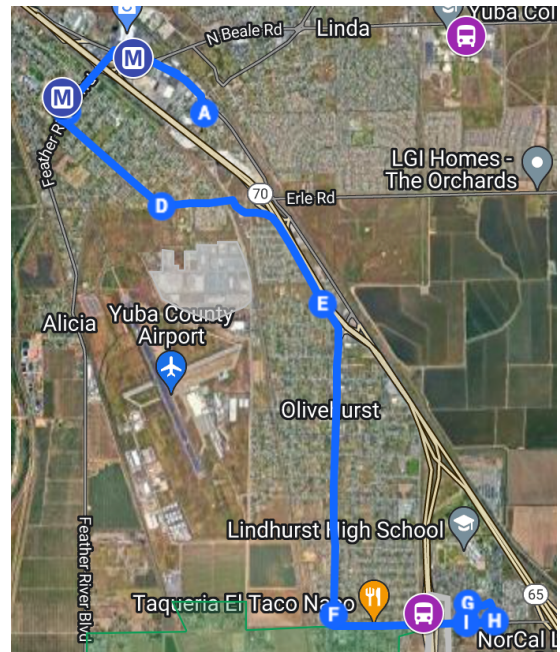


Figure 171 - Linda-Olivehurst Crosstown Service

Travel patterns in Olivehurst show a need for travel along Arboga which the new Route 3 would continue to provide.

IMPLEMENT OLIVEHURST COMMUNITY ON-DEMAND ZONE

As shown in the travel patterns above there is still a need beyond the existing Route 3 to provide greater coverage within Olivehurst. There is also a growing community within and near Wheeler Ranch in the south that has no service currently. The profile of the zone would be as follows:

- 2 Vehicles – Mon.-Sat.

- 1% of all daily trips occur within zone
- Connects to McGowan Park and Ride hub
- Average trip length is 3.71 miles – higher than other zones
- Growing areas of Wheeler Ranch and North Arboga would be covered by this zone
- Connections to new Commuter service
- Service to Yuba County Airport Industrial Park

This new zone would greatly expand coverage within Olivehurst and provide easy connections to Crosstown Route 3 allowing riders wishing to travel beyond the zone throughout the service area. This zone also has potential for service increases as currently undeveloped parcels are sold and developed upon.

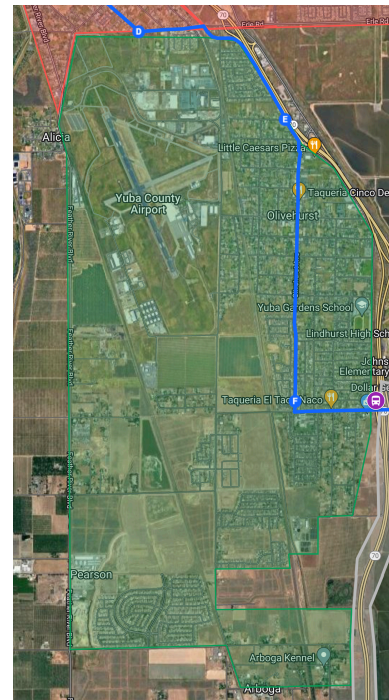


Figure 173 - Olivehurst Community Zone

IMPLEMENT NEW COMMUTER SERVICE TO ROSEVILLE

As shown earlier, commuter ridership has been the slowest to return since the pandemic began. With that in mind, the project team is recommending reallocating resources from the existing commuter schedule to the Galleria Transit Center in Roseville. This new Route would connect riders from Yuba and Sutter counties to Placer County Transit and Roseville Transit services allowing for even greater regional connections.

The service profile of the new Route would be as follows:

- 1 AM and 1 PM trip would operate from Yuba County Gov’t Center to McGowan Park and Ride to Wheatland to Galleria Transit Center in Roseville to transfer to Placer County and Roseville services.
- Trip timings would be designed to target Roseville arrival and departure times to simplify transfers for riders. The first Roseville trip would depart at 6:20am from Marysville, arriving in Roseville by 7:25am in order to facilitate these transfers. The PM trip would leave Roseville at 5:35pm, arriving back in Marysville at 6:40pm.
- Second AM and PM trips could be added based on demand at a future date.

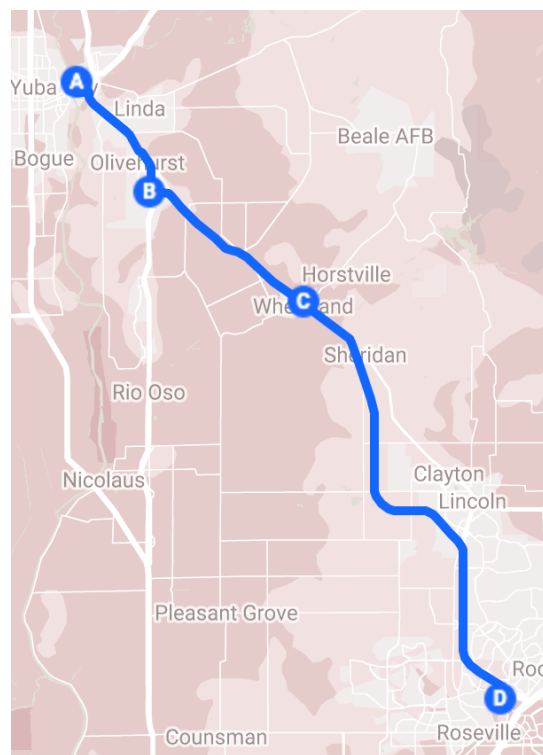


Figure 174 - New Roseville Commuter Service

SUPPORT VOLUNTEER DRIVER PROGRAM IN THE FOOTHILLS

The plan reviewed in detail what are currently known as “rural” services to Live Oak, Wheatland and the Foothills. With the Live Oak and Wheatland services being externally funded, no changes are being recommended to those services. In the Foothills, there is a need for extensions to the existing service to Dobbins and Challenge. Doing so with Yuba-Sutter Transit’s buses would create additional cost without material benefit. The plan calls for Yuba-Sutter Transit supporting the organization of a volunteer driver program in Challenge and Dobbins to connect to the existing Foothills Community service. Following is a quick overview of a typical volunteer driver program:

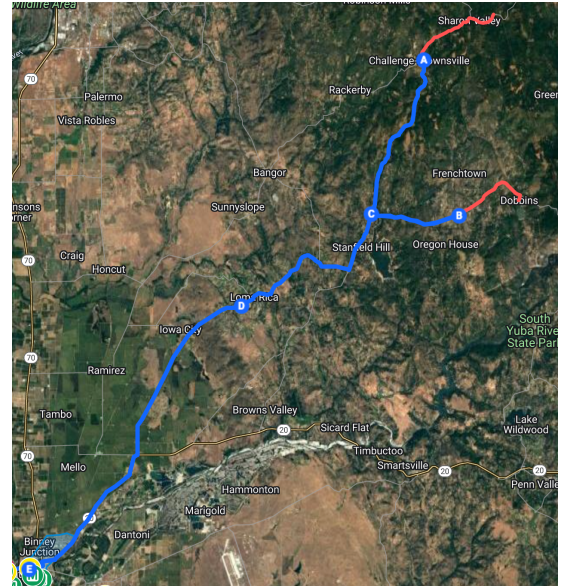


Figure 175 - Wheatland Volunteer Driver Program

- Volunteer drivers provide individuals in need of transportation with a means of connecting to and from existing transit services.
- Volunteer driver vehicles must be safe, dependable and clean. Volunteer drivers use all different types of vehicles from small subcompacts to large SUVs.
- Volunteer drivers typically provide rides three to four times per week. Rides vary in length and frequency, depending on the needs of riders and driver availability.
- Volunteer drivers are required to provide enough insurance to allow them to drive legally in the state of Minnesota.
- Volunteer drivers submit mileage reimbursement forms for all rides provided and receive reimbursement directly from the cities in which they operate.

Yuba-Sutter Transit’s role in supporting these programs would be to provide connecting technology and administrative support to the areas to be served.

SUMMARY OF RECOMMENDATIONS

These concepts were chosen from an exhaustive list of options including increased fixed-routes, decreased commuter service, serving new areas, etc. Ultimately, these concepts were settled on because, when combined, they address the four themes discussed previously in the best manner.

DEPLOYMENT PLAN

The plan calls for a phased rollout of changes beginning with a preparatory phase beginning in July 2023. All major changes would be concluded by FY2028 coinciding with the construction completion of Yuba-Sutter Transit's NextGen Transit Facility. Details as to the costing of each phase can be found in the Cost Estimation section of this report.

PHASE 0 – JULY 1, 2023

This phase is about preparing for the deployment of the major service changes by procuring new technology and beginning the recruitment of new staff. The major tasks in this phase are as follows:

- Transit technology continues to evolve at a rate faster than before. As a result, the plan calls for the recruitment of a Transit Technology Manager. Yuba-Sutter Transit is staffed leanly and major changes such as those envisioned by the NextGen Transit Plan call for simultaneous deployment of technology, and service. This combined with the new facility dictates a need for the recruitment of a Transit Technology Manager – the position is planned to come on board by Q2 FY 2024.
- Given the heightened need for community involvement when deploying a large-scale change such as that envisioned by the plan, we are recommending recruiting a Community Relations Manager as well. This position can be delayed to Q4 or later but should be brought on prior to the start of roll out of the Community on-demand zones.
- The plan also calls for beginning the procurement for the technology necessary to support the transition from fixed-route to on-demand service. The technology has become much more widely available in the past 10 years with more than 10 prospective vendors.
- Finally, in Phase 0, it is recommended that Yuba-Sutter Transit consolidate its existing commuter services. This consolidation will include removing the trips that are no longer operated from the schedule as well as reducing one AM and PM trip from the existing schedule to transition it to the new Roseville service which will launch in Phase 1. There is adequate capacity in the commuter schedule to carry current passenger loads as well future loads should ridership on these services grow.

PHASE 1 – AUGUST 1, 2024

Phase 1 of the plan includes major changes in Yuba City including the deployment of the first on-demand Community Zone and expanding the span of service to 8pm on weekdays. The major tasks in this phase are as follows:

- In Yuba City, the plan recommends streamlining Route 1 to reduce total travel time between Yuba City and Yuba College by up to 20%. In addition, in this phase, the plan recommends deploying the first Community on-demand zone in Yuba City. This zone will replace the existing Routes 2 and 5.
- In Phase 1, the plan recommends deploying new service to the Roseville Galleria Transit Center. The plan calls for one initial trip to be funded by the commuter service consolidation that took place in Phase 0. A second trip can be funded through an intercity grant that Yuba-Sutter Transit can apply for. If this application is successful, the Authority would launch the Roseville service with two trips.
- Yuba-Sutter Transit to begin procurement of 10 electric 14-16 seat “cutaway” buses. These buses are expected to cost between \$350,000 and \$450,000 per vehicle. This procurement is in line with the authority’s fleet replacement plan. The expected delivery time of these vehicles is 18-24 months coinciding with the full deployment of the plan. Yuba-Sutter Transit will begin construction of its NextGen Facility in Summer 2025 with an expected completion date in Fall 2027. Should this schedule change, the authority would need to consider alternatives to the electric vehicles as there will be no charging infrastructure to support these vehicles.
- Finally, in Phase 1, the plan calls for the elimination of the evening Dial-A-Ride service. With the deployment of the Yuba City Community on-demand zone and the expansion of the span of service to 8pm, and the current limited utilization of the evening DAR – the change will not result in a material impact.

Figure 176 - Phase 1 Proposed Changes

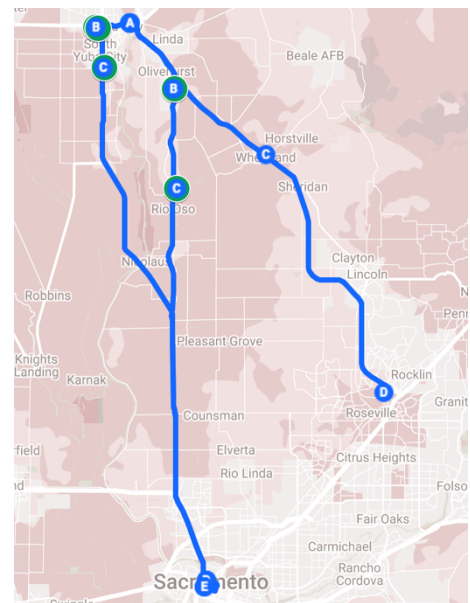
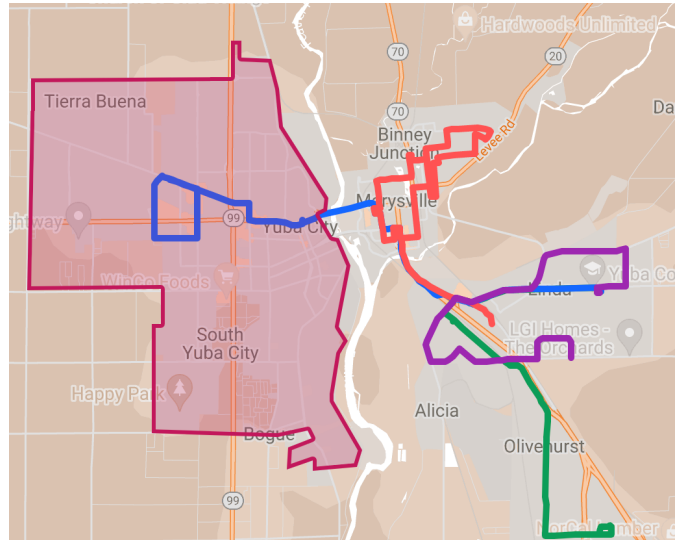


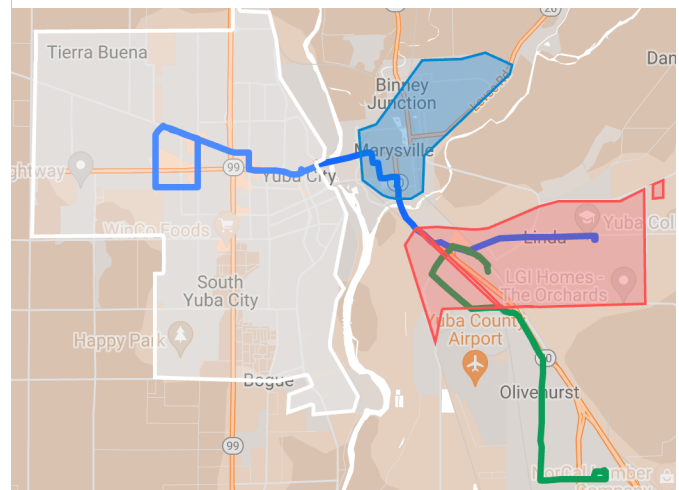
Figure 177 - Phase 1 Commuter Service Map

PHASE 2 – JULY 1, 2025

Phase 2 includes an expansion of the Community on-demand zones to Marysville and Linda and supporting the volunteer driver program in Challenge and Dobbins. The major tasks in this phase include:

- New Community on-demand zones in Marysville and Linda that will replace Routes 4 and 6 in those communities. With these new zones, Route 3 will be truncated at Peachtree Clinic/HHS providing riders from Olivehurst a direct Route to this location.
- With the near full deployment of the Community on-demand zones, the existing DAR/ADA service will be comingled with the new on-demand services providing ADA-eligible residents of Yuba and Sutter Counties a faster and better experience.

Figure 178 - Phase 2 Proposed Changes

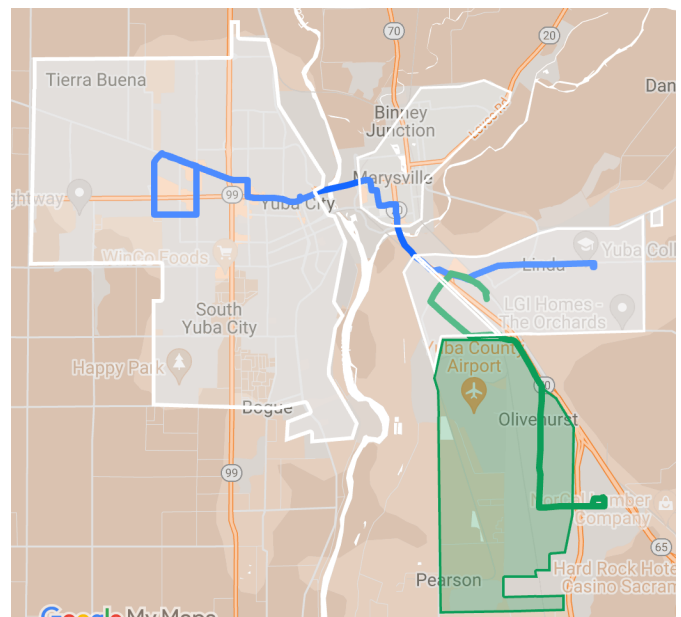


PHASE 3 – JULY 1, 2026

The final phase of the plan recommends the creation of a Community on-demand zone in Olivehurst and expansion of the Roseville service (if necessary and if not funded in a previous phase).

- The final Community on-demand zone in Olivehurst provides residents of that area expanded services over Route 3 increasing the coverage of Yuba-Sutter Transit's services.
- Should the Roseville service be successful, phase 3 of the plan calls for an additional trip to and from the Roseville Galleria Transit Center. This would only be necessary if the grant application the Authority is pursuing is not successful.

Figure 179 - Phase 3 Proposed Service Changes



STAFFING ANALYSIS AND RECOMMENDATIONS

As shown in the peer review section of this report, Yuba-Sutter Transit has operated fairly lean since its creation. This is due in part to a number of reasons including:

- Responsible and cross-trained staff able to handle multiple functions.
- A beneficial partnership with a reliable transit operator.
- Minimally complicated systems and services.

However, as public transit evolves, and as this plan has called for a modernization of services, Yuba-Sutter Transit will also need to review its staffing in order to ensure the service operates in a fashion riders are accustomed to.

In conducting this analysis, the project team has reviewed transit systems across the United States with similar service profiles paying specific attention to the following key criteria:

- Service area population between 125,000-165,000
- Peak operating fleet between 25-35 vehicles
- Operating expenses per peak vehicle between \$185,000-\$225,000
- Hours per peak vehicle between 2,250-2,900
- Miles per peak vehicles between 35,000-50,000

Using these criteria allows peers to be selected independent of service level. This is key as the goal here is to determine the level of work required to operate these types of systems regardless of mode.

Using National Transit Database information for the years between 2015-2020, the following systems were selected:

City of Albany, GA	Beaver County Transit Authority, PA	The Tri-State Transit Authority, WV
County of Lackawanna Transit System, PA	Lower Rio Grande Valley Development Council, TX	Pasco County Board of County Commissioners, FL
City of Pueblo, CO	Greenville Transit Authority, SC	City of Wichita, KS
Williamsburg Area Transit Authority, VA	Gary Public Transportation Corporation, IN	City of Everett, WA
Sioux Area Metro, SD	City of Montgomery, AL	
Housatonic Area Regional Transit, CT	City of Waco, TX	

These agencies all operate their own services and as such their annual operating costs will be higher than Yuba-Sutter Transit.

Currently, Yuba-Sutter Transit operates with 5 FTE. They are all in the administration team. All operations and maintenance personnel are employed by Storer Transportation. When compared to the peer agencies selected, each agency had an average of 7.52 administrative employees.

In the past three years, several of the preceding agencies have launched new technologies:

- Sioux Area Metro – Mobile Ticketing
- Beaver County Transit – New facility and buses
- Greenville Transit Authority – Major service expansion
- Gary Public Transportation Corporation – Service expansion and new on-demand services
- City of Everett, WA – TOD near bus stations

These are all projects that Yuba-Sutter Transit intends to embark upon in the coming years. As such, this plan calls for adding two FTE as part of the lead up to deployment of the plan.

The two positions would be as follows:

TRANSIT COMMUNITY OUTREACH COORDINATOR

This is a coordinator level position that develops internal and external marketing to promote Yuba-Sutter Transit and would be entrusted with creating and maintaining working relationships and ongoing communications with media outlets, partner agencies, state, local, and federal officials, and other key stakeholders in support of the transit system and multimodal initiatives. The position would be an advocate for customers and ensure accurate and timely information is available across all communications platforms.

The ideal candidate would have experience in crafting messages to elected officials and stakeholders to educate them on the value, contributions, and impact of transit on their communities. This position would be tasked with the capacity to continue the expansion of Yuba-Sutter Transit's communications, platforms, and delivery mechanisms. The Community Outreach Coordinator would be a project manager who develops a cohesive engagement strategy and proactively executes public engagement campaigns to support those strategies.

Key responsibilities of the role would include:

- Increasing awareness and utilization of services and programs and assisting in the launch of on-demand services
- Developing communication and marketing programs that respond to community interests and organizational goals
- Responding to questions and inquiries from customers and the general public.
- Planning and executing community outreach events.
- Developing strategies to communicate transit's value
- Providing emergency communications regarding transit operations

Essential functions:

- Planning, organizing, and implementation of the design and content of marketing and communication materials including promotional programs, marketing campaigns e-news, press releases, and transit branding for a wide variety of print and electronic platforms
- Distribution of information and eliciting input about transit programs and services;
- Development, execution, and assessment of promotional strategies to expand and promote awareness of the transit and its services.
- Development of methods to increase customer engagement and satisfaction;
- Development and regular contact with the public and community groups;
- Making presentations to the public, private, and community groups regarding transit services and special projects, including leading efforts to respond to media inquiries;
- Analyzing data to understand evolving community needs, interests, and aspirations;
- Employing a variety of measurements and assessment tools to ensure marketing efforts;
- Identifying nonusers and development of strategies to engage them with services;
- Identifying underused services and development of methods to increase awareness and usage;

This position will lead the public engagement portion of the launch of on-demand services throughout the counties.

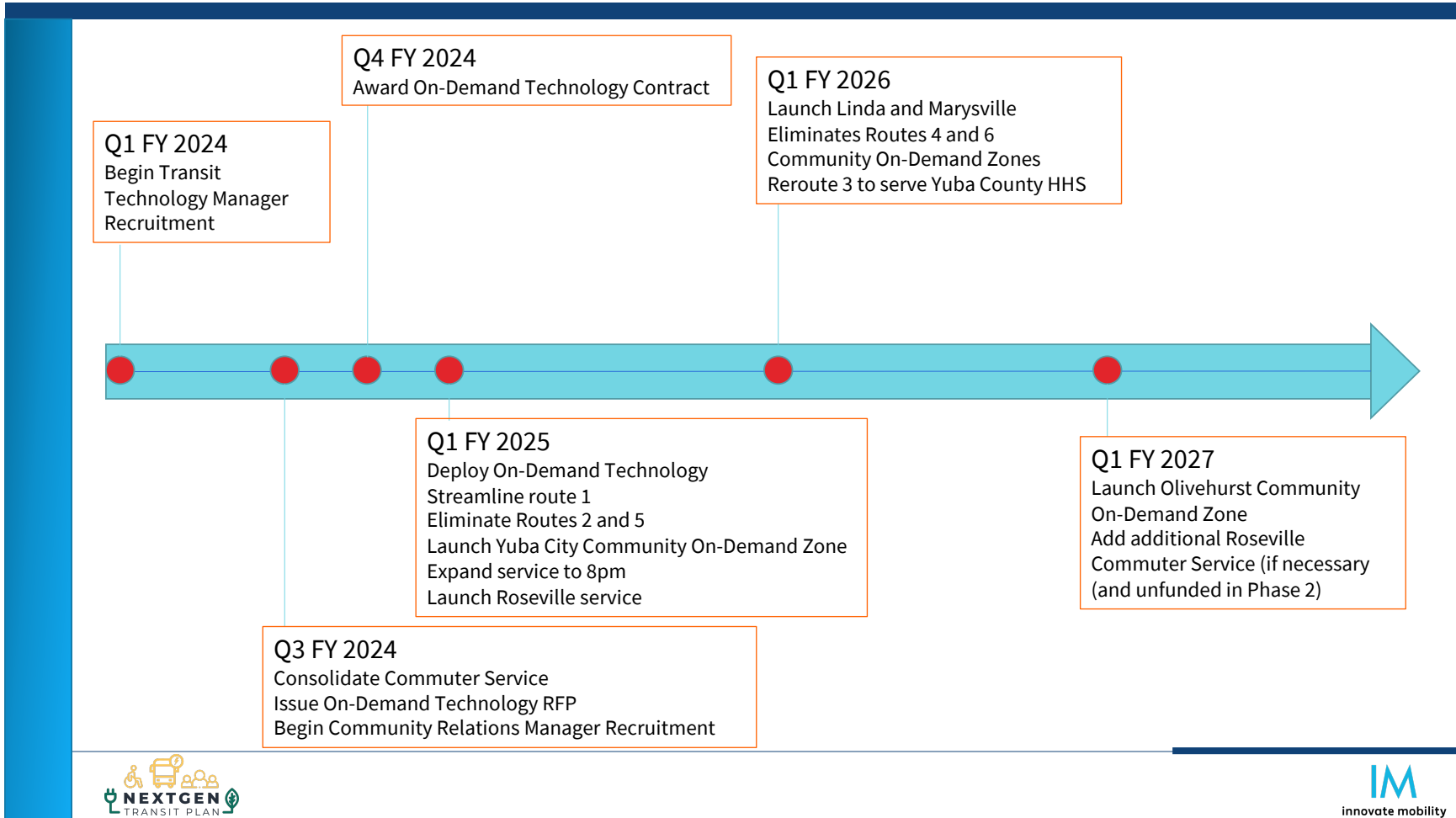
TRANSIT TECHNOLOGY COORDINATOR

With technology becoming more and more prevalent in today's transit system – this includes in-office, on-bus, and at-facility technology. The plan is recommending adding a second FTE to manage onboard and facility technology as well as managing the deployment of the on-demand solution and supporting systems.

Key responsibilities of the role would include:

- The Transit Technology Manager will manage all in-office technology, on-board Intelligent Transportation Technology (ITS), facility technology, Customer Communication Technology, and Ticket Vendor Technology;
- Responsible for maintaining an efficient, economical, and secure program for the repair, servicing, preventative maintenance, and system administrator of all electronic fare collection equipment, automatic vehicle location, video camera equipment, electronic signs, bus stops, kiosks, transfer plaza signs and radio systems;
- Researches and proposes technology opportunities - including schedule, scope, and budget;
- Creates Request for Purchase (RFP) documentation for new technology acquisition;
- Develops and provides training to end users to support technology use;
- Manages the diagnosis, repair, and preventative maintenance of all bus technology equipment;
- Manages vendor relationships for reporting and correcting any issues with technology;
- Maintains appropriate inventories of parts, materials, and supplies;
- Performs and approves any database deployment of the fleet;

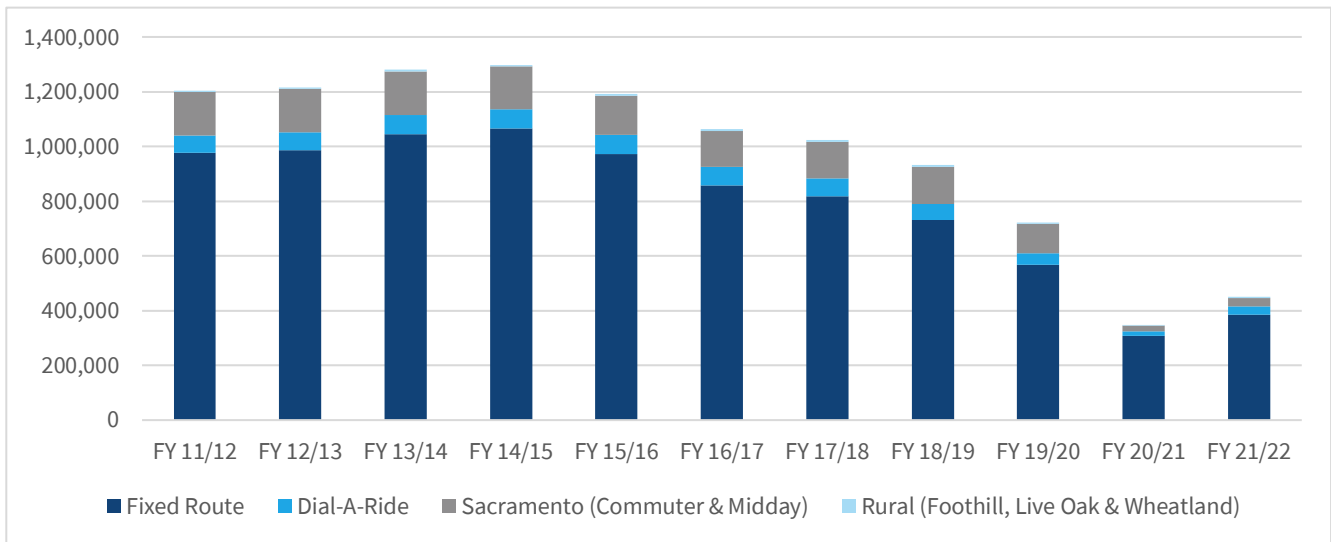
DEPLOYMENT TIMELINE



RIDERSHIP ESTIMATION

This section covers ridership estimation for the proposed changes in the plan. To set a baseline, a review of existing ridership was completed. Like many other agencies throughout the country, COVID-19 had a significant impact on Yuba-Sutter Transit’s daily ridership across the entire network. Overall, Yuba-Sutter Transit’s ridership is projected to be 46% below pre-pandemic (FY 18/19) levels in FY 22/23. This does represent a 44% improvement over FY 20/21 totals. Commuter services have been hit the hardest in terms of ridership drops. Commuter ridership is projected to be 72% below FY 22/23 levels. This represents a 90% improvement over FY 20/21, indicating some riders are coming back. On the fixed-route side, ridership is projected to be 41% below pre-pandemic levels. This does represent a 40% improvement over FY 20/21. Similarly, ridership on dial-a-ride services is projected to be approximately 51% below FY 19/20, but is over 65% higher than FY 20/21 indicating riders are returning to the service.

Figure 180 - Passenger Trips by Mode by Year



The plan calls for a dramatic change in the types of services (new on-demand service) offered and a restructuring of modes (Community, Crosstown, and Commuter). Under the proposed plan, ridership would begin rising with Phase 0 and continuing to increase regularly as more demand services are added and travel patterns are met.

Ridership is projected to increase 20% in the first year of the plan as new Yuba City services are launched (FY 2025). By deploying on-demand zones throughout the service area, Yuba-Sutter Transit is projected to see a 40% increase in ridership. To note: The addition of new on-demand services and the changes recommended in this plan will not add any meaningful service hours. In other words, the system will operate more effectively. Productivity systemwide should increase 30-40%. With the fare plan proposed in the Cost Estimation section of this report, both average fares and farebox recovery are projected to increase. While ridership is not projected to return to pre-covid levels during the plan, this is more of a result of current work from home patterns and less service being operated. There is no data to support that work from home levels will drop appreciably during the plan period, however, anecdotally more and more employers are requiring employees to be in the office 3-5 days per week. Should this occur, Yuba-Sutter Transit would see a gradual annual increase of approximately 50,000 trips which would return ridership to FY 14/15 levels before the end of the plan period.

Beyond the next three years, the plan models increasing service each year in line with population and demand growth.

Table 29 – Plan Projected Ridership and Service Levels

	Ridership	Hours	Miles	Fare Revenue	Annual Cost	Productivity	Average Fare	Cost per Hour	Farebox Recovery	Subsidy per Passenger
FY25	607,413	76,781	1,153,083	\$998,337.47	\$ 9,159,499	7.9	\$1.64	\$119.29	11%	\$13.44
FY26	634,515	75,354	1,152,478	\$956,944.06	\$ 9,198,562	8.4	\$1.51	\$122.07	10%	\$12.99
FY27	759,147	75,268	1,268,463	\$1,116,342.10	\$ 9,578,984	10.1	\$1.47	\$127.27	12%	\$11.15
FY28	762,285	76,397	1,282,271	\$1,170,096.42	\$ 10,014,349	10.0	\$1.53	\$131.08	12%	\$11.60
FY29	787,804	77,543	1,291,895	\$1,209,268.37	\$ 10,240,799	10.2	\$1.53	\$132.07	12%	\$11.46
FY30	807,687	78,706	1,301,745	\$1,239,788.56	\$ 10,472,369	10.3	\$1.53	\$133.06	12%	\$11.43
FY31	828,159	79,887	1,311,825	\$1,271,213.34	\$ 10,709,175	10.4	\$1.53	\$134.05	12%	\$11.40
FY32	850,754	81,085	1,322,136	\$1,305,895.25	\$ 10,951,336	10.5	\$1.53	\$135.06	12%	\$11.34
FY33	865,157	82,301	1,332,682	\$1,328,003.45	\$ 11,198,973	10.5	\$1.53	\$136.07	12%	\$11.41



Cost Estimation



innovate mobility

INTRODUCTION

The overall goal of the NextGen Transit Plan is to allocate transit resources to provide existing and future riders with the best experience under a set of financial constraints. Initially, the plan set forth three targets for financial modeling; those were:

- 1) A marginal (5-10%) increase in inflation-adjusted operating costs
- 2) An unconstrained financial plan
- 3) A cost neutral plan

The service recommendations presented earlier were arrived at with a combination of items 2 and 3 above. Ultimately, the future demand-based system recommended allows Yuba-Sutter Transit to grow with population and economic development. In other words, the overall expansion of the system (and associated costs) will occur as demand develops.

The proposed service plan increases both coverage – the overall addressable service area and frequency – the timeliness of the service along with the overall transit experience and does so at an inflation-adjusted cost that is in line with historical budget increases.

This cost estimation plan includes both the methodology to determine the overall efficiency of the service plan, along with the requisite benefits from deploying the service, i.e. new riders and new areas served.

OPERATING COSTS

As stated previously, it was Yuba-Sutter Transit’s goal to redesign service and reallocate existing operational costs with a potential for increasing costs as necessary. The service plan is predicated on increased costs at the beginning of the plan and adjusting costs for inflation. The following table breaks down the major cost drivers of the plan and their anticipated spend date:

Table 30 - Operating Cost Items

Phase.Quarter	Date	Change	Anticipated Cost
FY 2024			
0.1	July 2023	Recruit Transit Technology Manager	\$0.00
0.1	September 2023	Hire Transit Technology Manager	\$104,167
0.1	September 2023	Consolidate Commuter Service	-\$165,269
0.2	January 2024	Recruit Community Relations Manager	\$0.00
0.3	March 2024	Hire Community Relations Manager	\$41,667
0.3	March 2024	Award On-Demand Technology Contract	\$25,000
FY 2024 Total		\$5,565	
FY 2025			
1.1	July 2024	Deploy On-Demand Technology	\$30,450
1.1	July 2024	Full year of staffing costs (annual)	\$250,000
1.1	July 2024	Previous phase service changes	-\$198,293
1.1	August 2024	Streamline route 1. Launch Yuba City Community On-Demand Zone and cancel routes 2,5 and Evening Dial-A-Ride	-\$34,092
1.1	August 2024	Extend service to 8pm (annual)	\$288,750
1.1	September 2024	Launch Roseville Service (2 runs)*	\$583,188
FY 2025 Total		\$920,003	
FY 2026			
2.1	July 2025	On-Demand Technology	\$57,600
2.1	July 2025	Previous phase service changes	\$715,721
2.1	July 2025	Full year of staffing costs (annual)	\$250,000
2.1	August 2025	Launch Linda and Marysville Community On-Demand Zones and cancel routes 4,6.	\$47,579

FY 2026 Total		\$1,070,900	
FY 2027			
3.1	July 2026	Full year of staffing costs (annual)	\$250,000
3.1	July 2026	Previous phase(s) service changes	\$767,725
3.1	August 2026	Launch Olivehurst Community On-Demand Zone. Additional software licenses.	\$213,101
3.1	August 2026	On-Demand Technology	\$72,000
FY 2027 Total		\$1,302,726	

* - Yuba-Sutter Transit will be applying for a competitive grant to expand the Roseville service. Should this application be successful, the Authority could add a second run to the service.

The above table does not include inflation adjustments that are expected to average \$260,000 per year over the life of the plan. Additionally, in FY 2028, Yuba-Sutter Transit is expected to rebid its operating contract and will see between a 7.5% and 10% increase resulting in an additional \$225,000 per year over the life of the plan.

SERVICE PLAN COSTING AND OPERATIONS PROJECTIONS BY PHASE

The following tables break down the service costs by type for the first three years of the plan.

Table 31 – FY 2025 - Phase 1 Service Costing

	Weekday Cost	Saturday Cost	Annual Cost	Annual Hours	Annual Miles
Route 1	\$ 1,364,146	\$ 272,829	\$ 1,636,975	13,113	196,700
Route 3	\$ 688,625	\$ 137,725	\$ 826,350	6,557	104,906
Route 4	\$ 668,969	\$ 133,794	\$ 802,763	6,557	85,236
Route 6	\$ 701,728	\$ 140,346	\$ 842,074	6,557	118,020
DAR/Rural	\$ 1,964,870	\$ 392,974	\$ 2,357,843	21,173	169,380
Commuter	\$ 934,814	\$ -	\$ 934,814	8,325	232,801
On-Demand	\$ 1,335,735	\$ 267,147	\$ 1,602,883	13,113	236,040
		Annual Totals	\$ 9,003,702	75,395	1,153,083
		Cost per Hour	\$ 119.42		

Table 32 - FY 2026 - Phase 2 Service Costing

	Weekday Cost	Saturday Cost	Annual Cost	Annual Hours	Annual Miles
Route 1	\$ 1,374,117	\$ 274,823	\$ 1,648,940	13,113	170,473
Route 3	\$ 1,050,931	\$ 210,186	\$ 1,261,117	6,557	98,350
DAR/Rural	\$ 1,568,347	\$ 313,669	\$ 1,882,017	16,468	131,740
Commuter	\$ 1,485,380	\$ -	\$ 1,485,380	12,949	243,661
On-Demand	\$ 2,743,674	\$ 548,735	\$ 3,292,409	26,227	472,079
		Annual Totals	\$ 9,569,863	75,314	1,103,303
		Cost per Hour	\$ 127.07		

Table 33 - FY 2027 - Phase 3 Service Costing

	Weekday Cost	Saturday Cost	Annual Cost	Annual Hours	Annual Miles
Route 1	\$ 1,450,550	\$ 290,110	\$ 1,740,660	13,113	196,700
Route 3	\$ 732,294	\$ 146,459	\$ 878,752	6,557	104,906
DAR/Rural	\$ 972,647	\$ 194,529	\$ 1,167,176	9,865	78,923
Commuter	\$ 1,532,045	\$ -	\$ 1,532,045	12,949	297,836
On-Demand	\$ 3,550,292	\$ 710,058	\$ 4,260,350	32,783	590,099
		Annual Totals	\$ 9,578,984	75,268	1,268,463
		Cost per Hour	\$ 127.27		

CAPITAL COSTS

FLEET REQUIREMENTS

The overall plan doesn't change the number of peak vehicles dramatically, however, the vehicles by mode will change mainly in the shift from fixed route and dial-a-ride to the on-demand service.

Table 34 - Peak Fleet Requirements

Service	FY 2023 (current)	FY 2024	FY 2025	FY 2026	FY 2027
Crosstown/Fixed Route	12	12	10	8	5
Dial-a-Ride/Rural	12	12	10	7	6
Commuter	7	6	8	8	8
Community On-Demand	0	0	4	9	11
Total	31	30	32	32	30

The majority of the expenses expected by the Authority are for fleet and the new facility. The NextGen Transit plan recommendations augment the fleet replacement plan as outlined in the following table. The full fleet replacement plan is included in the appendix.

Table 35 - Capital Plan

Year	Replacement	Expenses/(Savings)
FY 2025	Procure 11 ZEB Paratransit/Cutaway	\$5.25M
FY 2026	Mobility Hub and SuperStop deployment <ul style="list-style-type: none"> • Alturas and Shasta • North Beale 	\$4M
FY 2026	Procure 13 Fixed Route	(\$6.5M)
FY 2026	Procure 10 Paratransit/Cutaway	(\$1.6M)
FY 2030	Procure 10 Paratransit/Cutaway	(\$1.6M)
FY 2032	Procure 5 ZEB Fixed Route	\$5.5M
FY 2032	Procure 15 ZEB Fixed Route	(\$15M)
FY 2033	Procure 6 ZEB Paratransit/Cutaway	\$3M
Total NGTP Capital Requirements/Changes		(\$6.95M)

FARE OVERVIEW AND RECOMMENDATIONS

Yuba-Sutter Transit employs a robust fare and ticketing system known as Connect Card and also accepts cash on board.

LOCAL FIXED ROUTE FARES

The fare structure for single ride rural and fixed route service is distributed by fare type as follows:

Table 36 - Local Fixed Route Fares

Criteria	Fare	Daily Cap
Non-Discount Single Ride	\$1.50	\$3.00
Senior (age 65+)/Disabled/Youth/Medicare Single Ride	.75¢	\$1.50
Children (age 4-under)	Free with paying adult (limit 2)	

Yuba-Sutter Transit offers a daily cash fare cap (or daily pass) for Connect Card users on the local fixed route system. Once the Connect Card has been used for two cash fare trips in one day, no additional fare will be deducted for additional trips for the remainder of the day. Using a Connect Card to pay cash fare is the only way to access the daily cap. Transfers are no longer issued to any passengers.

Regarding multi-use tickets and passes, Yuba-Sutter Transit provides a variety of options for its riders including:

Table 37 - Passes and Ticket Sheet Costs

Criteria	Fare	Term/Rides Allowed
Non-Discounted Monthly Pass	\$30 (discounted to \$10 until July 2024)	Monthly/Unlimited
Senior/Disabled/Youth Monthly Pass	\$15 (discounted to \$5 until April 2024)	Monthly/Unlimited
Ticket Sheets (valid on all services)	\$10-\$15	20 tickets (\$0.50 and \$0.75)

DIAL-A-RIDE FARES

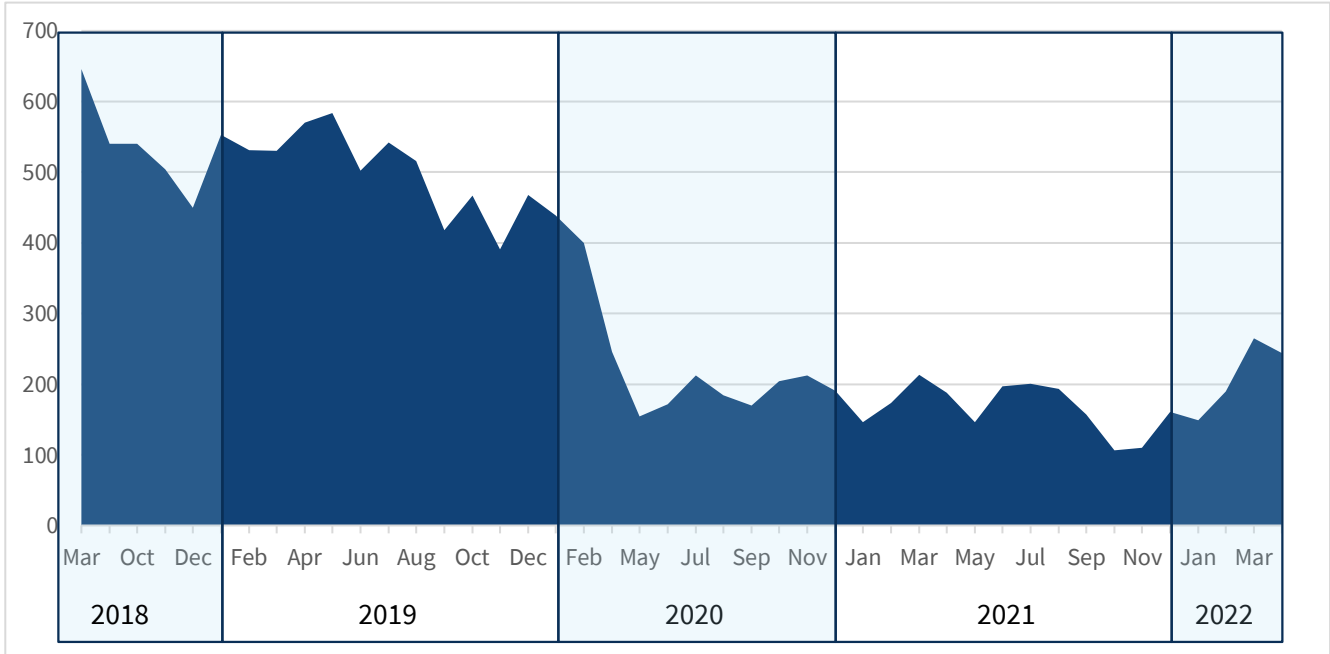
Yuba-Sutter Transit employs a Dial-A-Ride service for ADA and Medicare eligible customers and also opens the service up to seniors 65+. Fares for the service include:

Table 38 - Dial-a-Ride Fares

Criteria	Fare
Disabled and ADA-eligible Single Ride	\$3.00 (\$2.00 after 6pm)
Medicare Cardholders Single Ride	\$3.00 (\$2.00 after 6pm)
Seniors (Age 65+) Single Ride	\$3.00 (\$2.00 after 6pm)
Youth Single Ride	N/A (\$2.00 after 6pm)
Non-Discount Single Ride (only eligible after 6:00pm)	N/A (\$4.00 after 6pm)

Yuba-Sutter Transit’s Dial-a-Ride service is open to all riders after 6pm – this is known as evening dial-a-ride. The evening dial-a-ride service extends the Authority’s weekday service span by approximately 3 hours. Ridership on evening dial-a-ride is relatively scant. With the recommended extension of the fixed-route, dial-a-ride and on-demand service span to 8:00pm, the plan is also recommending cancelling the weekday evening dial-a-ride service.

Figure 181 – Monthly Evening Dial-a-Ride Ridership



COMMUTER SERVICE FARES

Yuba-Sutter Transit’s Commuter service only runs on weekdays and generally in the peak direction (to Sacramento in the morning and back in the afternoon). The plan recommends expanding the commuter service to the Roseville Galleria Transit Center to connect with Placer County’s and the City of Roseville’s transit services. Yuba-Sutter Transit’s current commuter fare structure is as follows:

Table 39 - Commuter Service Fares

Criteria	Fare
Non-Discount Single Ride	\$4.50
Senior/Disabled/Youth (Midday only) Single Ride	\$2.25
Monthly Commuter Pass	\$135.00
Monthly Combined Pass (including SacRT)	\$185.00

RURAL SERVICE FARES

Yuba-Sutter Transit’s rural service only runs to the communities of Live Oak, Wheatland and the areas of the Foothills including Brownsville, Oregon House, Willow Glen, and Loma Rica. The service operates on weekdays only, with the Foothills service only operating Tuesdays, Wednesdays and Thursdays. The service operates in a combination of advanced reservation, scheduled, and flex. Yuba-Sutter Transit’s current rural fare structure is as follows:

Table 40 - Rural Service Fares

Criteria	Fare
Non-Discount Single Ride	\$3.00
Senior/Disabled/Youth Single Ride	\$1.50
Children (age 4-under)	Free with paying adult (limit 2)
Non-Discounted Pass	\$30 (discounted to \$10 until June 2024)
Senior/Disabled/Youth Pass	\$15 (discounted to \$5 until April 2024)

ON-DEMAND SERVICE FARE PEER REVIEW

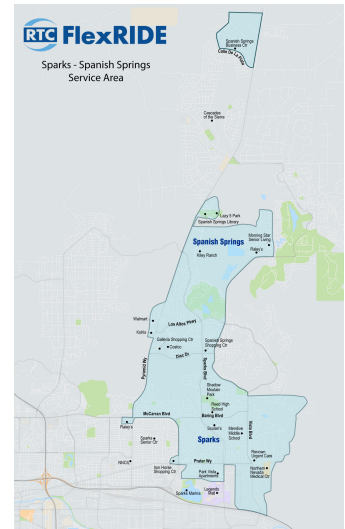
As the NextGen Transit Plan calls for the deployment of Community on-demand zones, a peer review of local systems was conducted to determine the proper fare structure for Yuba-Sutter Transit's future services.

RTC FLEX RIDE – RENO, NV

RTC's FlexRIDE curbside-to-curbside public transit service is available in select areas of Sparks/Spanish Springs, Somersett/Verdi and the North Valley regions of the Reno, NV area.

Riders must schedule their ride at their desired travel time and the ride can be expected to arrive to the curbside closest to a prescribed location within 8-15 minutes. Fares are the same as the standard RTC RIDE fares: \$2 per ride, or \$1 per ride for people who qualify for reduced fares. Drivers do not accept cash. Only Token Transit or Bus Passes are accepted.

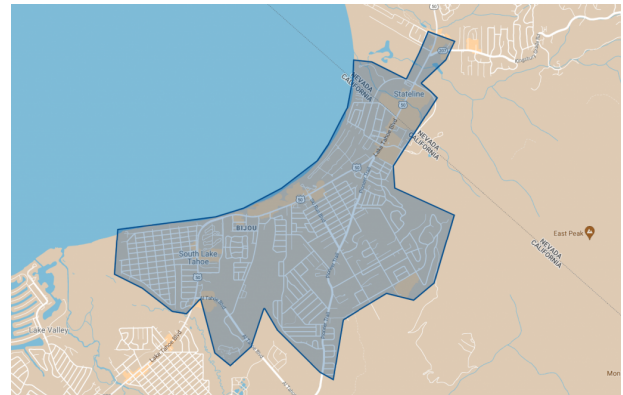
All trips must be booked at least 15 minutes prior to the close of the hours of operations to ensure transportation.



LAKE LINK – SOUTH LAKE TAHOE, CA

Lake Link is an on-demand rideshare service that riders utilize for trips within highly congested traffic areas within Stateline, Nev. and South Lake Tahoe, Calif. Riders use a mobile app to book their trips in real-time.

Dedicated branded ADA accessible vans with bike racks will pick up and drop off riders at any location within the service area.



The service operates between 7am-9pm Monday-Sunday. Currently the Lake Link system is free, but initially a \$3 fare was proposed.

SACRT SMART RIDE – VARIOUS COMMUNITIES, SACRAMENTO, CA

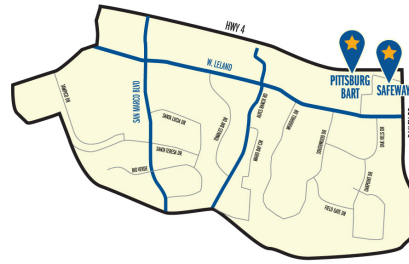
SmaRT Ride service is only available within each designated service zone. SmaRT Ride shuttles cannot travel outside the service boundaries. Citrus Heights-Antelope-Orangevale offers curb-to-curb service where passengers are picked up and dropped off at the address they indicated when scheduling.

All other service areas offer corner-to-corner service where passengers are picked up and dropped off at the nearest corner or ‘virtual bus stop,’ which is usually within a block or two of their pickup or drop-off location. The Downtown Core (north of S Street, west of 20th Street in downtown Sacramento) is a limited stop zone, where Smart Ride will pick up and drop off at specific destinations as noted on the map. SacRT does provide free service to students under a funding program.

If you are:	Your fare is	Single	Daily Pass
Age 19 – 61	Basic	\$2.50	\$7.00
Senior (age 62+)	Discount	\$1.25	\$3.50
Person with Disabilities	Discount	\$1.25	\$3.50
Student (Grades K -12)*	Discount	\$1.25	\$3.50

TRIMYRIDE – TRIDELTA TRANSIT – ANTIOCH, CA

TriMyRide is a flexible and dynamic on-demand shuttle service operating in neighborhoods near the Antioch BART Station and Pittsburg Bay Point BART Station. TriMyRide operates Monday thru Friday from 5am to 8pm. The service uses small, neighborhood-friendly shuttle buses that easily maneuver on residential streets. TriMyRide operators undergo the same background screening as other Tri-Delta Transit operators, and all vehicles are equipped with surveillance cameras to ensure safe transport. The shuttle buses are wheelchair accessible and accommodate people with disabilities. The cost to ride is \$2 per trip. Payment may be made through the app or with cash. The low-cost makes Tri-Delta Transit’s TriMyRide more affordable than traditional ride-hailing services, which could cost riders more than three times the amount for a similar trip.



ON-DEMAND FARE SUMMARY

In the preceding cases, all the agencies in question charged the same fare as the local bus service. No discounts are offered for the various on-demand services.

FARE STRUCTURE SCENARIOS

Yuba-Sutter Transit’s fares are well priced for the level of services provided. This plan calls for a restructuring of fares rather than any increases during the first three years of service deployment. This restructuring would align with the new types of services provided. To arrive at the proposed recommendations, the plan compared a number of different scenarios. The following tables summarize the various scenarios:

SCENARIO 1: CURRENT FARE STRUCTURE

Yuba-Sutter Transit has been offering significantly discounted monthly passes since the pandemic began. Subsidy funding for these discounts is set to expire in 2024, however there are alternative sources that could maintain the subsidy. Scenario 1 projects maintaining the discounts for monthly passes.

Table 41 - Scenario 1 - Maintain Existing Fares

	Ridership	Fare Revenue	Productivity	Average Fare	Farebox Recovery	Subsidy per Passenger
FY25	570,968	\$586,315.91	7.4	\$1.03	6%	\$15.02
FY26	585,242	\$590,705.59	7.8	\$1.01	6%	\$14.71
FY27	601,044	\$698,955.77	8.0	\$1.16	7%	\$14.77
FY28	612,464	\$714,629.96	8.0	\$1.17	7%	\$15.18
FY29	624,101	\$738,554.02	8.0	\$1.18	7%	\$15.23
FY30	635,959	\$757,194.06	8.1	\$1.19	7%	\$15.28
FY31	648,042	\$776,386.57	8.1	\$1.20	7%	\$15.33
FY32	660,355	\$797,568.36	8.1	\$1.21	7%	\$15.38
FY33	672,901	\$811,070.82	8.2	\$1.21	7%	\$15.44

Under this scenario, Yuba-Sutter Transit would not meet its requirements for farebox recovery ratio for any year of the plan and would need new funding sources to bridge the difference between the discount passes and the pass values. Fares from new riders would mostly offset any inflation related increases. Revenues as shown by the average fare remaining constant throughout the duration of the plan.

SCENARIO 2: RETURN MONTHLY PASSES TO PRE-PANDEMIC LEVELS

Scenario 2 models returning the monthly pass prices to \$30/\$15. With the new Community on-demand services projected to launch in 2024, it is anticipated that while less customers would potentially be purchasing passes, more customers would hit the daily fare cap due to more accessible services and a longer span of service.

Table 42 - Scenario 2 - Return Monthly Passes to Pre-Pandemic Levels

	Ridership	Fare Revenue	Productivity	Average Fare	Farebox Recovery	Subsidy per Passenger
FY25	565,259	\$661,930.95	7.4	\$1.17	7%	\$15.03
FY26	579,390	\$650,469.72	7.7	\$1.12	7%	\$14.75
FY27	595,034	\$763,253.97	7.9	\$1.28	8%	\$14.82
FY28	606,339	\$790,694.55	7.9	\$1.30	8%	\$15.21
FY29	617,860	\$817,165.06	8.0	\$1.32	8%	\$15.25
FY30	629,599	\$837,789.13	8.0	\$1.33	8%	\$15.30
FY31	641,561	\$859,024.48	8.0	\$1.34	8%	\$15.35
FY32	653,751	\$882,460.84	8.1	\$1.35	8%	\$15.40
FY33	666,172	\$897,400.48	8.1	\$1.35	8%	\$15.46

This scenario is not anticipated to result in significant fare elasticity, as any elasticity would be offset by improvements to the travel experience and service access. Under this plan, farebox recovery would still be below the required threshold with fares and ridership increases staying in line with inflation and other cost increases.

SCENARIO 3: INTRODUCE MONTHLY FARE CAPPING AND INCREASE FARES

Under this scenario, Yuba-Sutter Transit would transition away from monthly passes on Crosstown/fixed route and Community services. The Authority would instead create monthly fare caps. These fare caps would act as a makeshift pass and allow riders who ride frequently to still receive a discount for their patronage. Those who ride often (2-3 days per week) would see some level of capping and those who ride infrequently would pay the full fare for each ride. Discounts would still be offered to eligible riders under this scenario. This scenario includes increasing fares in line with the on-demand systems reviewed earlier. Under this option, fares would increase in FY27 when all the Community on-demand zones would be deployed.

Table 43 - Scenario 3 - Eliminate Monthly Passes and Introduce Monthly Fare Capping

	Ridership	Fare Revenue	Productivity	Average Fare	Farebox Recovery	Subsidy per Passenger
FY25	607,413	\$998,337.47	7.9	\$1.64	11%	\$13.44
FY26	634,515	\$956,944.06	8.4	\$1.51	10%	\$12.99
FY27	759,147	\$1,116,342.10	10.1	\$1.47	12%	\$11.15
FY28	762,285	\$1,170,096.42	10.0	\$1.53	12%	\$11.60
FY29	787,804	\$1,209,268.37	10.2	\$1.53	12%	\$11.46
FY30	807,687	\$1,239,788.56	10.3	\$1.53	12%	\$11.43
FY31	828,159	\$1,271,213.34	10.4	\$1.53	12%	\$11.40
FY32	850,754	\$1,305,895.25	10.5	\$1.53	12%	\$11.34
FY33	865,157	\$1,328,003.45	10.5	\$1.53	12%	\$11.41

The proposed fare structure would be as follows:

Table 44 – Comparing Proposed Fares to Existing Fares

Fare	Current Fares	FY 2025 Fares	FY 2027 Fares
Crosstown Single Ride/Discount	\$1.50/\$0.75	\$1.50/\$0.75	\$2.00/\$1.00
On-Demand Single Ride /Discount	N/A	\$1.50/\$0.75	\$2.00/\$1.00
Daily Cap/Discount *	\$3.00/\$1.50	\$5.00/\$2.50	\$6.00/\$3.00
Monthly Cap (30-days)/Discount *	N/A	\$50.00/\$25.00	\$60.00/\$30.00
Commuter Single Ride	\$4.50	\$4.50	\$5.00
Commuter Midday Single Ride/Discount	\$4.50/\$2.25	\$4.50	\$5.00
Commuter Monthly Pass/Combined	\$135/\$185	\$135/\$185	\$150/\$200
DAR Single Ride	\$3.00	\$3.00	\$4.00
Evening Dial-a-Ride/Discount	\$4.00/\$2.00	N/A	N/A
Rural Single Ride/Discount	\$3.00/\$1.50	\$3.00/\$1.50	\$4.00/\$2.00
Monthly Pass	\$30/\$15 (temporarily discounted to \$10/\$5)	N/A	N/A

* - Daily and monthly caps do not apply to Dial-a-Ride, Rural, and Commuter fares

Under this proposal, farebox recovery would increase 28% over the base scenario, however, it would still be below the required threshold. This could be offset by inflation being below the expected level and elasticity not materializing. Both are realistic options as the plan includes conservative estimates for both items. Ridership is projected to increase 23% and fares are projected to increase by 56% under this proposed plan over the current fare structure.

RECOMMENDED FARE STRUCTURE

The plan recommends implementing Scenario 3 with a fare increase to proposed levels in FY 27 when the Olivehurst Community on-demand zone launches. In addition to the fare increase, the plan recommends the following changes.

- Eliminate monthly passes and introduce fare capping for monthly (30-day) fares. This must coincide with the future contactless payment technology deployment currently under consideration.

- Increase commuter single ride and monthly fares and eliminate midday discounts. While this is a small change, it would create consistency and simplicity in the structure by reducing fare complexity.

The proposed fare structure would be as follows:

Table 45 - Proposed Fare Structure

Fare	FY 2025	FY 2027
Crosstown Single Ride/Discount	\$1.50/\$0.75	\$2.00/\$1.00
On-Demand Single Ride/Discount	\$1.50/\$0.75	\$2.00/\$1.00
Crosstown/On-Demand Daily Cap/Discount	\$5.00/\$2.50	\$6.00/\$3.00
Crosstown/On-Demand Monthly Cap (30-days)/Discount	\$50.00/\$25.00	\$60.00/\$30.00
Commuter Single Ride	\$4.50	\$5.00
Commuter Midday Single Ride/Discount	\$4.50/\$2.25	\$5.00/NA
Commuter Monthly Pass/Combined	\$135/\$185	\$150/\$200
DAR Single Ride	\$3.00	\$4.00
Rural Single Ride/Discount	\$3.00/\$1.50	\$4.00/\$2.00

NEXTGEN TRANSIT PLAN COST ESTIMATION

Overall service levels are not projected to increase dramatically over the life of the plan. Any service increases are designed to keep up with population growth and increasing demand. Utilizing the operating cost projections above and the fare recommendations presented earlier, the following table outlines costing for the plan along with key performance indicators.

Table 46 - NextGen Transit Plan Costing and Revenue Estimation

	Ridership	Hours	Miles	Fare Revenue	Annual Cost	Productivity	Average Fare	Cost per Hour	Farebox Recovery	Subsidy per Passenger
FY25	607,413	76,781	1,153,083	\$998,337.47	\$ 9,159,499	7.9	\$1.64	\$119.29	11%	\$13.44
FY26	634,515	75,354	1,152,478	\$956,944.06	\$ 9,198,562	8.4	\$1.51	\$122.07	10%	\$12.99
FY27	759,147	75,268	1,268,463	\$1,116,342.10	\$ 9,578,984	10.1	\$1.47	\$127.27	12%	\$11.15
FY28	762,285	76,397	1,282,271	\$1,170,096.42	\$ 10,014,349	10.0	\$1.53	\$131.08	12%	\$11.60
FY29	787,804	77,543	1,291,895	\$1,209,268.37	\$ 10,240,799	10.2	\$1.53	\$132.07	12%	\$11.46
FY30	807,687	78,706	1,301,745	\$1,239,788.56	\$ 10,472,369	10.3	\$1.53	\$133.06	12%	\$11.43
FY31	828,159	79,887	1,311,825	\$1,271,213.34	\$ 10,709,175	10.4	\$1.53	\$134.05	12%	\$11.40
FY32	850,754	81,085	1,322,136	\$1,305,895.25	\$ 10,951,336	10.5	\$1.53	\$135.06	12%	\$11.34
FY33	865,157	82,301	1,332,682	\$1,328,003.45	\$ 11,198,973	10.5	\$1.53	\$136.07	12%	\$11.41

As presented in the deployment plan and ridership estimation section, under the plan, ridership is projected to double over the life of the plan compared to FY22 and the current service profile. Productivity and average fare revenue are also both projected to increase.



Marketing and Branding Strategies



innovate mobility

INTRODUCTION

As Yuba-Sutter Transit launches its new service modes and expands into Roseville, it is important to use the opportunity to rethink the existing brand and employ some new marketing strategy best practices.

This section of the NextGen Transit Plan includes a review of the existing brand and marketing strategies as well as some best practices to reach out to communities as the new service is being prepared for launch. A marketing and branding review is an important part of a holistic look into a transit agency's public persona. The outward identity of an agency can heavily impact how it is perceived by the public which in turn can have an effect on ridership, engagement, and even funding.

BRANDING REVIEW

Generally, Yuba-Sutter Transit has a strong brand with good brand recognition. The Yuba-Sutter Transit logo and brand are easily identifiable across the service area. Using a consistent color palette throughout all areas of the transit system has helped encourage this brand recognition. Bright green stops and benches help riders find their way and encourage potential riders to take a look. The dark Yuba-Sutter Transit green buses are easily identified and include contact information for the agency on all sides.

In addition, Yuba-Sutter Transit informational pieces are straightforward and simple to understand. The Ride Guide and System Map is a vital information source for experienced riders and potential riders alike. It presents the Yuba-Sutter Transit schedule simply and contains all the important need-to-know information to help riders reach their destination.

While the Yuba-Sutter Transit brand is strong and has good recognition, it could potentially improve with an update to some aspects. In particular, Yuba-Sutter Transit rider information obtained through social media, the website, or the Doublemap smartphone app. Many transit agencies today are updating these areas to attract new riders and improve public perception of bus transit. A fresh coat of paint could revitalize the Yuba-Sutter Transit system in the eyes of potential riders and encourage people to rethink their travel habits.



Figure 182 - Current Ride Guide

YUBA-SUTTER TRANSIT LOGO

Yuba-Sutter Transit is the primary provider of public transportation for Yuba and Sutter Counties. For many, its logo and branding mean “public transit.” The iconic Yuba-Sutter Transit logo is visible on the agency’s vehicles, bus stop signs, informational materials, and website.



Figure 183 - Yuba-Sutter Transit Logo

The logo itself has Yuba-Sutter Transit’s two-tone color scheme of green and gold that is prominent elsewhere in its brand as well. The transit system’s name is accompanied by an iconic image of a mountain representing the local landscape and mountainous rural areas that some of its riders call home. The use of this two-tone color scheme elsewhere in the branding has a positive effect of presenting all aspects of Yuba-Sutter Transit as a singular service. The inclusion of the mountain in the logo helps remind people that Yuba-Sutter Transit is their hometown public transit service.

Throughout Yuba-Sutter Transit’s branding the agency incorporates the same mountain logo and green and gold color scheme. This presents a cohesive image of the service and helps tie all their capital assets together. The green is especially noticeable on buses and bus stops and helps people to immediately recognize these as being a part of their transit system.

YUBA-SUTTER TRANSIT WEBSITE

Yuba-Sutter Transit’s website is the place where current and potential riders can find anything they need to know about Yuba-Sutter Transit. The website hosts up to date schedules and maps, newsletters, service bulletins, and information on planning studies and future changes. Many of today’s transit users depend on digital content from agency websites like Yuba-Sutter Transit’s for all their transit information, so special attention is warranted to keep that information up to date and useful.

Yuba-Sutter Transit’s website starts at the top with a useful translation feature that can automatically translate the page into one of the many languages supported by Google Translate. Beneath the translate feature is prominently displayed any current service bulletins. These can include stop closures, route detours, or notices about potential delays.

Below the bulletin is Yuba-Sutter Transit’s logo, a search tool, and the page’s main navigation tabs. Below that is the featured content including linked images advertising new fare pricing and real-time bus tracking. The main portion of the page includes links to recent news, a trip planning tool, a calendar of events, and links to access other features of the website.

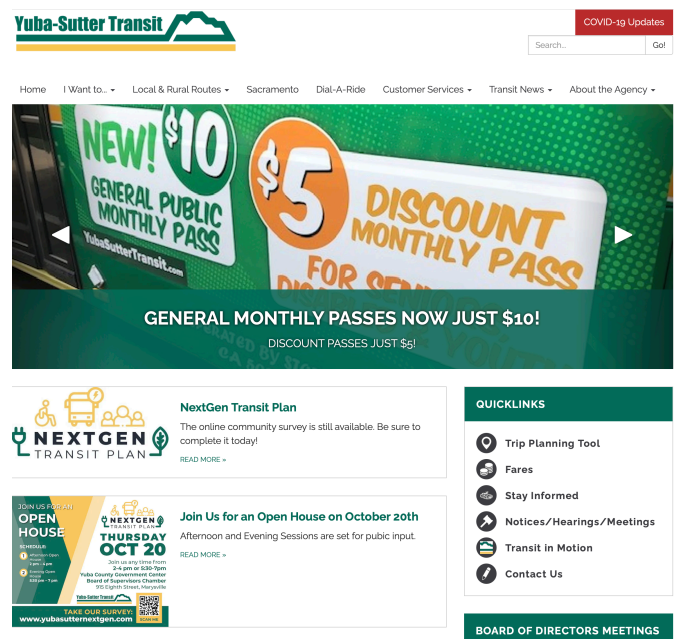


Figure 184 - Website Homepage

Each navigation tab directs to important information to help people understand and use the Yuba-Sutter Transit system. Local and rural routes have their own tab as does Sacramento commuter service and Dial-A-Ride service.

Yuba-Sutter Transit’s website is compatible with both desktop and mobile devices.

BRANDING AND WEBSITE COMPARISONS

THE VINE – NAPA VALLEY, CA

The Vine, a service of Napa Valley Transportation Authority, is one example of a transit brand that has embraced a modern aesthetic with a recent modernization. The Vine uses a wide range of bright colors to signify different routes and incorporates those colors into all of the agency’s branding, including their logo. Despite the eclectic look and modern design, riders still recognize The Vine as their own local transit agency.

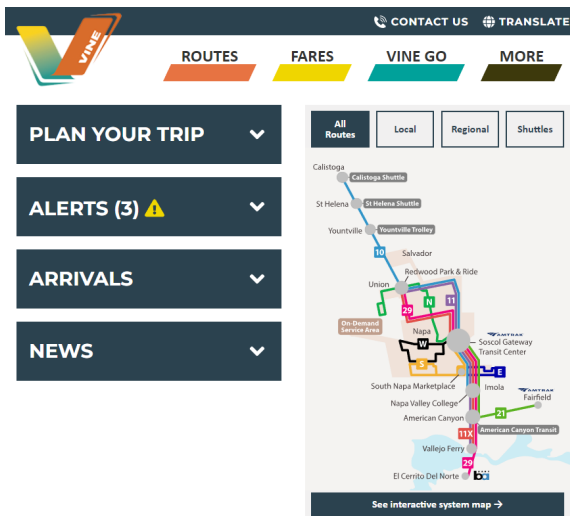


Figure 185 - Logo and Website of The Vine in Napa Valley, CA

MODERN AGENCY WEBSITES

Portland Tri-Met, known for its future-thinking ways has a website that is very user-focused. On the home page is a real-time location of all buses with the trip planner being the main area of interaction for users.

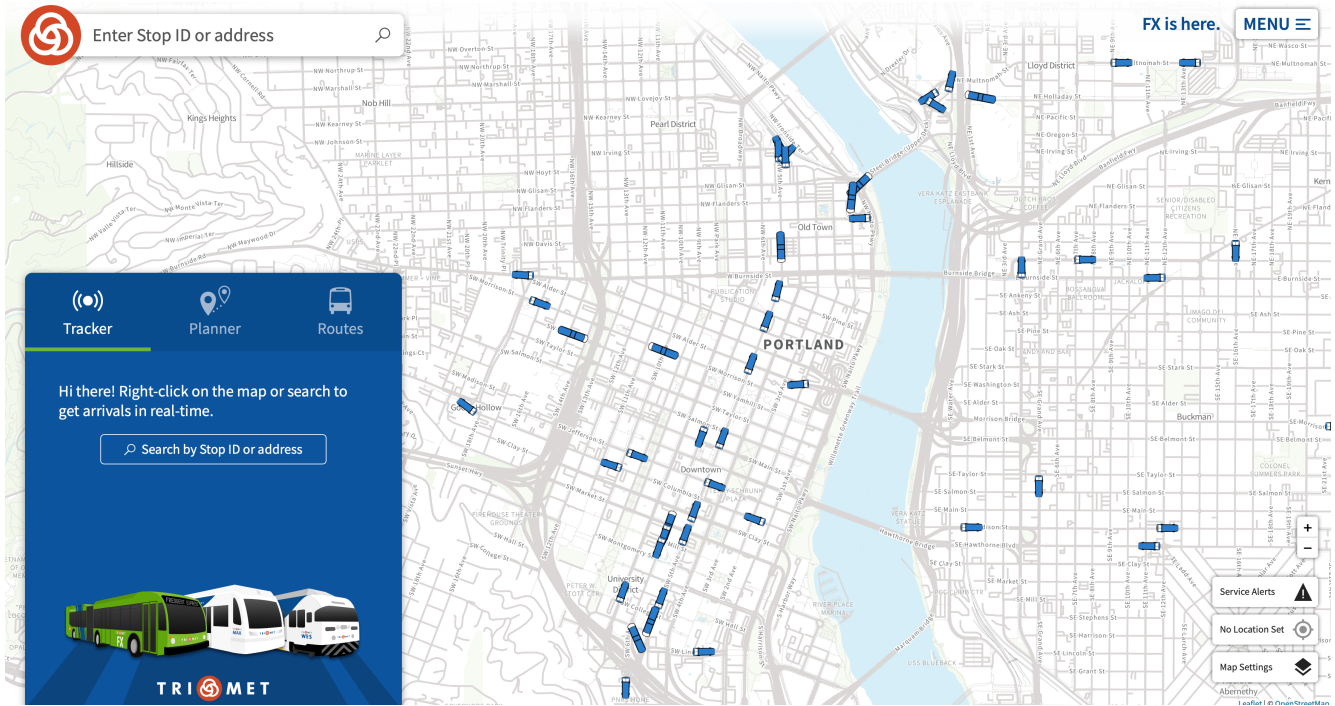


Figure 186 - Portland Tri-Met Website

Foothill Transit in Southern California doesn't take the approach of Tri-Met, but rather puts trip planning front and center on their homepage.



Figure 187 - Foothill Transit Website

SAMPLE BRANDING

The Yuba-Sutter Transit logo and brand color scheme are iconic to the service. They help signal to riders that they are in the right place or about to catch the right bus. However, it is also apparent that the brand has some areas to improve. Many of the branding aspects seem to be outdated compared to peers. Many agencies have chosen to reimagine their brand over the last several years to try and attract new riders with flashy and colorful designs.

Given Yuba-Sutter Transit’s ambition of building a NextGen Transit Facility, implementing this NextGen Transit Plan, we believe a modernization of the traditional logo would be appropriate. This modernization evokes a faster service that ties into the agency’s focus on electrifying its buses. While this is just a sample, we find that a logo such as this could tie in seamlessly with Yuba-Sutter Transit’s ambitions. It is recommended that the Authority complete a full branding exercise as part of the deployment of its NextGen ambitions.



Figure 188 - Sample Modernized Yuba-Sutter Transit Logo

When used on various media – the logo would look as follows:

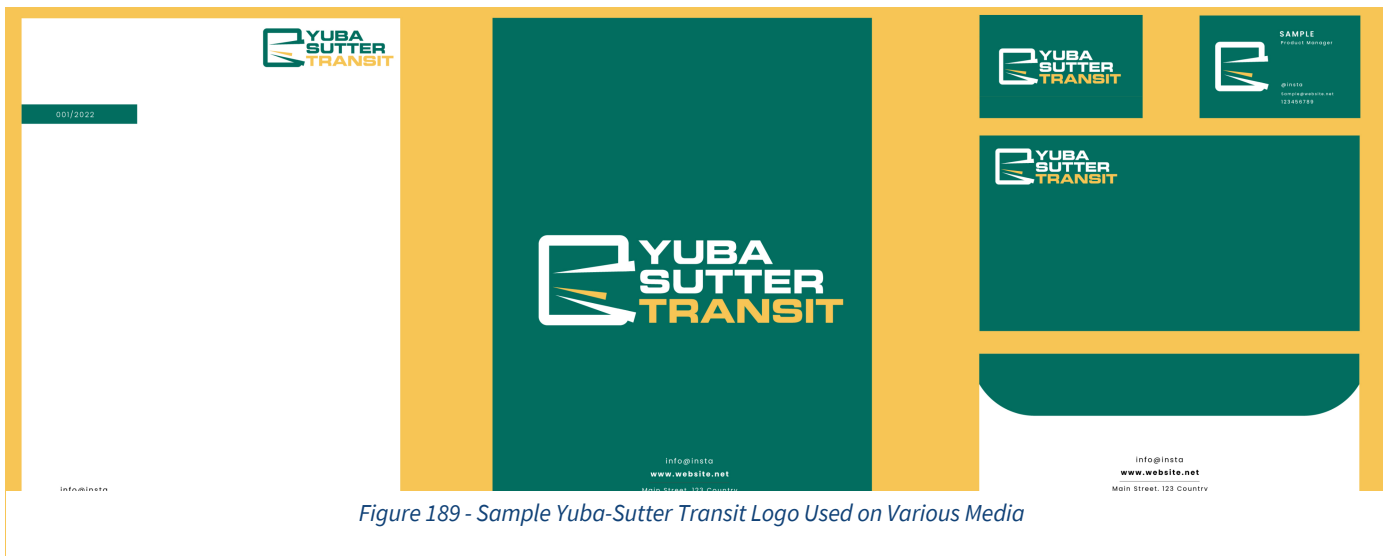


Figure 189 - Sample Yuba-Sutter Transit Logo Used on Various Media

The logo can easily be resized and even have an added background to utilize on Yuba-Sutter Transit’s Facebook page.



Figure 190 - Yuba Sutter Transit Sample Logo on Social Media

When comparing the modernized logo to the existing logo, the sample maintains the Authority’s iconic color scheme yet creates more flow and movement rather than the static version today.



NEW SERVICE BRANDING

The service recommendations for the NextGen Transit Plan call for creating three types of service. The services would be broken down operationally as the following:

Crosstown – This would be a traditional transit service operating on fixed schedules and stopping at fixed locations.

Community – This is an overarching umbrella service type that includes the current services known as “Rural” and “Dial-a-Ride” as well as the new on-demand services.

Commuter – This service would be identical to today’s service utilizing larger over-the-road buses to complete long haul, and generally peak-only trips to Sacramento and soon Roseville.

	Crosstown	Community	Commuter
Segment Overview	Crosstown Services service the major communities of Yuba City, Marysville, Linda and Olivehurst	Community services connect smaller, more distant areas with the Crosstown. These services will be technology enabled allowing riders to book online (or via telephone). Paratransit eligible customers will get curb-to-curb service, all others will get connections to mobility hubs and major transfer points.	Peak only outbound and return service to major regional locations. Connect to Crosstown and Community services at hubs.
Performance Standards	12-20 PAX per hour 15%+ farebox recovery 0.75-2 seat turnover per trip	3-7 PAX per hour 10%+ farebox recovery 20%+ trip sharing	25-30 PAX per hour 25%+ farebox recovery 0 seat turnover
Span of Service	6:30am-8:00pm Weekdays 8:00am-6:00pm Saturdays	6:30am-8:00pm Weekdays 8:00am-6:00pm Saturdays	5:20am-5:30pm Weekdays
Frequency/Wait/Travel Time	30-minute frequency	15-30-minute wait time 10-30-minute travel time	Commuter services arrive at pre-scheduled times.
Other	Connects to other segments at mobility hubs	Non-paratransit customers cannot travel to destinations on Crosstown Services (other than to hubs)	
Vehicles req. (at full plan)	5 fixed route	10-11 On Demand+2 Flex+2-3 DAR	8 Commuter Buses

Figure 191 - Proposed Service Framework

While these are the operational service types, the Authority should still brand these services separately for public understanding.

ACTION VERBS

Before we discuss branding, we want to provide an overview of something we are calling “Action Verbs.” These are terms that will be utilized throughout the branding recommendations below. They manifest themselves in helping the rider do what they want to do. They also create a sense of what the rider will attain by utilizing the service. Here are some examples:

Community – While “community” itself is not an action verb – the act of creating a community, or serving a community is. We will utilize this term in serving low population areas and helping them connect with shopping and jobs throughout the counties. The term “community” will also support new volunteer programs as they roll out.

Access - While “Access” has traditionally been a term used for ADA accessible transit – we are purposely recommending using this term for these routes as they provide access to the broader Yuba and Sutter counties.

Connect – This critical verb like “Access” represents the opportunity to connect with your fellow residents as in shared rides, and also allows riders to connect to other parts of the service area like never before.

Powered – Yuba-Sutter Transit will be undertaking a major step towards renewable clean energy by electrifying its fleet. The term “Powered” represents not only this electrification, but also a sense of agency that the Authority is giving to its riders.

FIXED ROUTE BRANDING

The proposed two crosstown routes will replace the existing Routes 1 and 3 connecting Yuba City with Linda through Marysville and Linda to Olivehurst respectively.

- It is recommended that the crosstown route traveling from Yuba City to Linda be branded as the **Green** route utilizing half of the logo color scheme.
- And the route traveling from Linda to Olivehurst be rebranded as the **Yellow** route utilizing the other half of the color palette.

RURAL ROUTE BRANDING

No service changes to the rural services are recommended, mostly due to their funding availability. However, the term “rural” strikes a note that is in contrast with “urban” or “suburban” and doesn’t portend the regional access these routes provide. Therefore, the plan recommends rebranding the “rural” services to the following:

- **Wheatland** – Wheatland **Community Access**
- **Live Oak** – Live Oak **Community Access**
- **Foothills** – Foothills **Community Access**

DIAL-A-RIDE BRANDING

The NextGen Service Plan calls for a rollout of new on-demand services which need their own brand, and a phasing out of dial-a-ride services. We recommend maintaining the dial-a-ride brand until the service is phased out in three-four years.

ON-DEMAND TRANSIT BRANDING AND ENGAGEMENT STRATEGIES

The most significant change called for in the NextGen Service Plan is the conversion of existing fixed routes into on-demand transit zones. These zones primarily operate in one of the major four cities spanning the service area and provide connections to the rest of the service area through the crosstown routes discussed earlier. These services are very different than the walk-up and go type of service that riders may be accustomed to. So, the branding of these new services must also accompany a community service and education plan. Following is a summary of the branding and preliminary community outreach best practices that the Authority should employ prior to launching these new services.

BRANDING

Many agencies are using the term “Go” or “Forward” or “Connect” for their on-demand transit services. Some options the Authority could use are as follows:

- **Yuba-Sutter Go**
- **Yuba-Sutter Connect**
- **Yuba-Sutter On-Demand**
- **Yuba-Sutter Microtransit**

Utilizing a type of branding above and this naming convention gives Yuba-Sutter Transit a modern solution to engage new riders and help connect existing riders.

TECHNOLOGY AND SERVICE DEPLOYMENT STRATEGIES

Deploying on-demand services is not as simple as using a new technology and giving riders an app. Following is a step by step set of best practices.

- 1) **Fully understand the technology** – This cannot be done during an RFP process. Also, many technologies are very similar, and technologists all believe that their solution is the be all end all hope to save transit. We recommend having an objective based set of thresholds that the technologists must adhere to. For example – instead of a timeline of activities – the technologists must provide a plan with deliverables. Such as a marketing and outreach plan as well as a training plan.
- 2) **Provide education on the new service and how it works** – This will require Authority staff to be in the field holding popup events at the major trip generators throughout the service area. If the technology company can support this program, it will be easier. However, it will be key to helping people understand the changes and how they work. The Authority should also plan on blanketing social media for weeks prior to the launch with videos and FAQs.

Drivers should be given cards in multiple languages that they can provide to riders about the changes.

- 3) **Training cannot be minimized but should also not be the center point of the project** – Dispatch and driver training will be necessary; however, Yuba-Sutter Transit shouldn't focus on too much training. Many of these tools are web-based and intuitive. Trainees should have two 30–45-minute sessions a few weeks prior to launch and be asked to bring their questions for the second training. Gamifying training could also be a benefit with employees competing with each other to gain the most knowledge.
- 4) **Community organizations should be involved in getting the word out** – The NextGen Transit team has built a list of community organizations. This list should be relied upon to help provide education to riders.
- 5) **A soft launch should be part of the timeline** – A one-week soft launch where select riders and staff can be used as a sort of “open-beta” to allow testing of the services. This will require fixed routes to operate on top of the new services, however, a soft launch can go a long way in smoothing out bugs prior to the actual launch.
- 6) **Data should be gathered and reviewed regularly** – A weekly meeting should be held upon launch of the service with the technology provider to ensure that the data is matching the service expectations and where there are issues. Drivers should be queried at the completion of each shift about issues they faced. After 3-4 weeks, the meetings can be held monthly, and then quarterly.

COMMUTER SERVICES BRANDING

As there are no major changes to the commuter services into Sacramento, there is no need for a change in branding. However, it is recommended that Authority work with riders to consolidate the commuter schedules prior to the launch of the Roseville service. The commuters have been the most responsive in terms of feedback as part of the NextGen Transit Plan, so online surveys, Facebook posts, etc, will help get feedback from riders. It is recommended that the Authority provides choices such as arrival times in Sacramento rather than receiving open-ended responses.

Prior to the launch of the service into Roseville, the Authority should engage residents, specifically those in Yuba County about their desire to travel to Roseville. This will help set the start and end times for the service as well as help market the service. Notifications should be placed at the Government Center, McGowan Park and Ride, Plumas Lake and Wheatland about the new service so potential riders can be made aware.

KEY RIDER ENGAGEMENT ELEMENT RECOMMENDATIONS

AUTHORITY WEBSITE

The Yuba-Sutter Transit website is presented well and maintains logos and colors that are consistent with branding used elsewhere in the system. This consistency is important to maintain the integrity of the Yuba-Sutter Transit brand.

The layout of the website makes sense, and the navigational options make it easy for people to find what they need. The prominent search option is also helpful.

The automatic translation feature built into the webpage ensures that accessibility is available for nearly anyone without Yuba-Sutter Transit staff needing to manually translate each page.

The accessibility of Yuba-Sutter Transit's DoubleMap real-time bus tracker is also a plus. Today real-time information is the standard for transit agencies nationwide. Making that information easy to find and readily available is vital to helping passengers become familiar with the system. It also cuts down on customer service calls.

In general, the Yuba-Sutter Transit website is laid out very traditionally with a vertical scrolling operation. There are a few areas where the website can be updated however:

- 1) The main reason visitors will come to the Yuba-Sutter Transit website is to obtain information on where their bus is. Using Portland Tri-Met's website as an example, restructuring the home page of Yuba-Sutter Transit with a real-time map could be a good way to quickly help riders.
- 2) Yuba-Sutter Transit's website does have a trip planning tool that utilizes google maps for trip routing directions which is good, however, it is at least three clicks and two page jumps before eventually getting the information a rider needs. Reorienting the center of the website to be destination based is another approach. Having an "I want to go" bar that quickly opens up the route map, next bus arrival, fare and travel time would go a long way to helping riders quickly get information on their trip.

First, the map and overall color schemes used in the Ride Guide make it appear older compared to more vibrant maps from their peers such as Corvallis (OR) Transit. The Yuba-Sutter Transit map in comparison has flatter graphics with less detail and lower contrast in addition to more muted colors which was once the standard for most transit agencies. Today transit maps often include brighter colors and terrain layers to help increase legibility and appear more attractive to potential riders.

One potential area for confusion is the inclusion of suspended trips in Yuba-Sutter Transit’s schedule. On Routes 2A and 2B there are several trips that are highlighted in red to indicate they are suspended until further notice. The inclusion of these trip times may be confusing for new riders.

Lastly, the Ride Guide is attempting to convey a lot of information in a single document. The “Fixed Route Service” and “Other Yuba-Sutter Transit Services” sections on the bottom of the second page present all users with a large amount of information which may only pertain to some riders. Reducing the amount of information included in the Ride Guide may allow for schedules and other information to be presented in a larger font. It could also lower the apprehension for new riders who are trying to understand the basics of the system. A second document may still be used in print or digitally to convey information that does not fit on the Ride Guide.

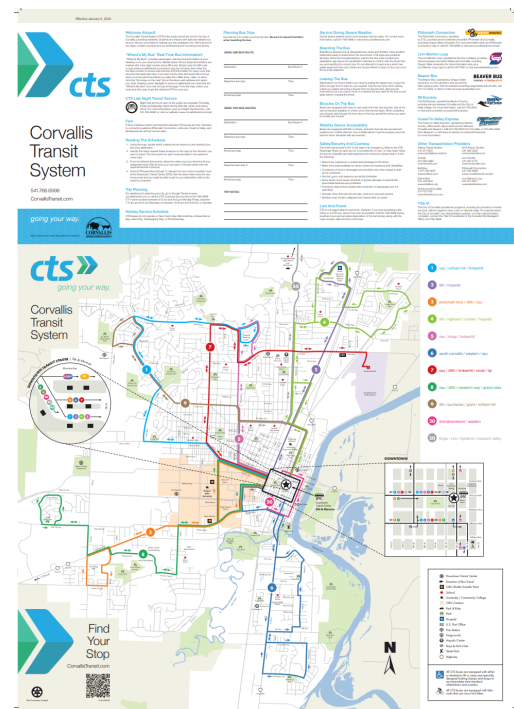


Figure 194 - System Map of Corvallis (OR) Transit

In general, the Yuba-Sutter Transit Ride Guide does a good job of conveying the important information a rider would need to understand the Yuba-Sutter Transit system. The guide includes a simplified map to help users navigate, schedules that are clear, and instructions on how to use the map and Yuba-Sutter Transit system. Minor updates can be made to improve legibility and make the Ride Guide look more modern or attractive.

With the simplification and new modes of service that are recommended in the NextGen Transit Plan, the Authority can do away with its complex ride guide and only include a system map of Community Access, Crosstown and Commuter routes along with the Connect zones. The other side of the ride guide can include fare and how to ride information.

MONTHLY NEWSLETTER

Many transit agencies struggle to get important information out to their riders. The broad audience of transit lends itself to a wide range of people who use it and need access to information about service changes, fare changes, or to simply stay involved with news that could impact them or fellow riders. Access to information through the internet, email, and even phone calls can be difficult for some transit users, but they rely on this information as much as others do.

To help reach their riders Yuba-Sutter Transit produces their monthly Yuba -Sutter Transit Newsletter. This is a helpful way to keep riders informed and get important notices out to the public. The newsletter is available on the Yuba-Sutter Transit website as well as on board buses. Yuba-Sutter Transit also partners with local community organizations to host the newsletter at places across the service area.

The newsletter contains various notices. These can include information about fare changes or upcoming holidays which impact service. It also contains information about local events and programs that can help transit riders such as a local senior dial-a-ride voucher program in one recent issue of the newsletter. It also acts as a possible avenue to collect public feedback on potential service changes. In a recent issue public engagement related to the NextGen Transit Plan was advertised. A public hearing about COVID-related service reductions was also advertised.

ASSESSMENT

The Yuba-Sutter Transit monthly newsletter is an incredibly helpful tool to keep riders up to date on important information. It allows people who may have no other access to information to remain up to date and invested in events which could impact them. Being made available on Yuba-Sutter Transit buses and at local organizations is a great way to make the newsletter available to all riders. One of the other major benefits of the newsletter is that it acts as a very thorough community relationship database. This has allowed Yuba-Sutter Transit to better inform and receive strong feedback on the NextGen Transit Plan.

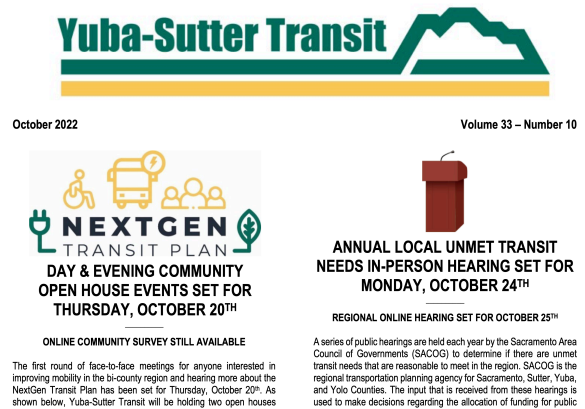


Figure 195 - Yuba-Sutter Transit Monthly Newsletter

One potential area of improvement is to utilize more colors and graphics in the newsletter to help it stand out more. In the busy lives of today’s transit riders, bright colors and eye-catching photos can help draw attention to the Yuba-Sutter Transit newsletter. This may present a challenge for an agency with limited time and resources, but even small updates could help.

An additional option to increase readership of the newsletter and even awareness of the Yuba-Sutter Transit system is to provide copies of the newsletter in even more places and ways. A more extensive, but potentially costly, option is to introduce direct mailings of the newsletter to households and businesses within the service area. This could be combined with other local government mailings to cut costs.

SOCIAL MEDIA AND RIDER ENGAGEMENT

Social media has been gaining prominence in public transit agencies in their communication strategies and daily management goals and performance metrics to guide their social media development, many are increasing their social media presence to better engage with their riders and the community. Public transit ridership and the amount of transit provided usually determine social media investments. Yuba-Sutter Transit does have an active Facebook page where they regularly post updates and information about the system and operation. The Authority also has an Instagram page with 314 followers.

Like Yuba-Sutter Transit, most agencies utilize social media to help answer questions and inform riders.



Figure 196 - Example of a Newsletter from Fairfax City, VA

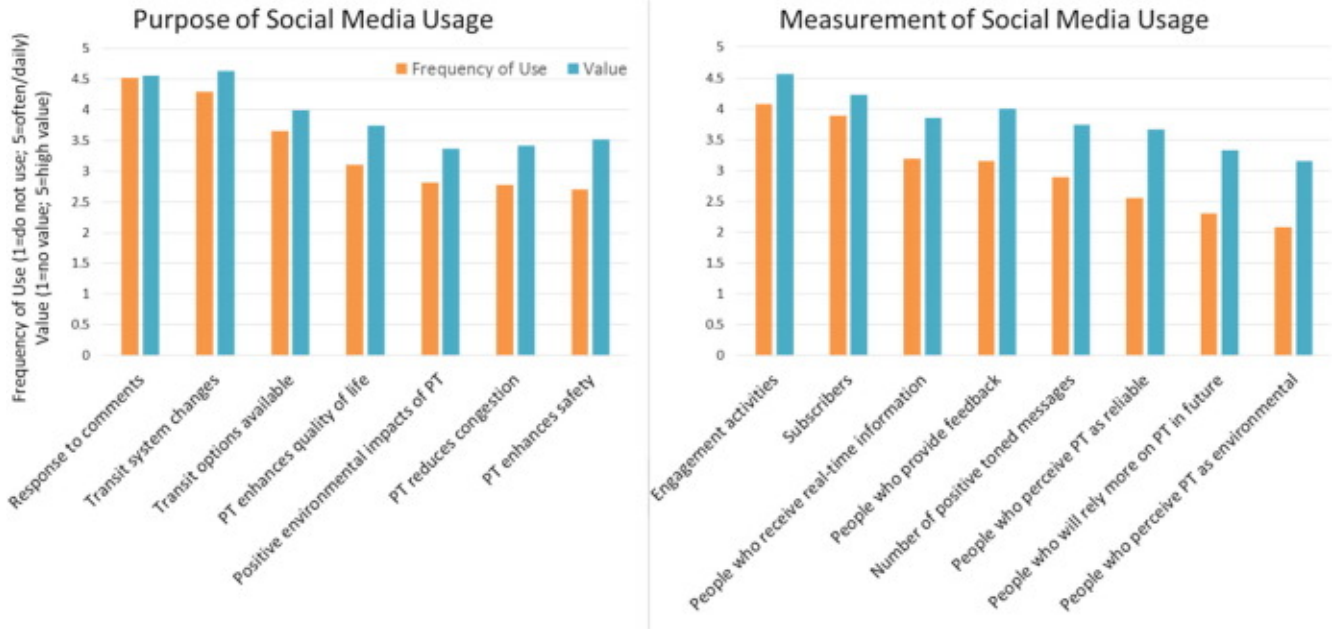


Figure 197 - Usage and Measurement of Social Media by Transit Agencies

ASSESSMENT

Yuba-Sutter Transit does not have a significant social media presence, and the Facebook page has 58 followers. However, social media presence is not necessarily something transit agencies need to focus on. Ideally, the goal is to create engagement by providing information about stop outages, reroutings, etc. Some strategies to engage the public are to regularly create promotions such as San Diego MTS’ “Why Choose Transit” campaign. As part of the campaign, MTS polled riders over social media to hear their thoughts and opinions on why they ride, and then featured them prominently in the campaign.

WHY CHOOSE TRANSIT?

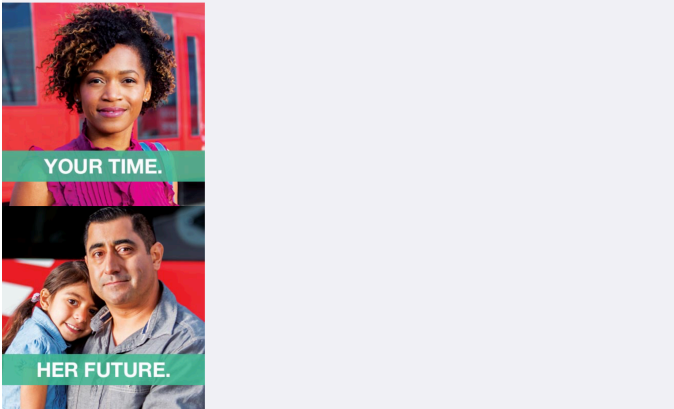


Figure 198 - San Diego MTS "Why Choose Transit" Campaign Website

Transport for London gave out virtual badges via a social media promotion to celebrate their employees and their riders. The “Small Words. Big Impact” campaign was recognized for helping reduce incidents and violence on public transit.



Figure 199 - TFL Small Words. Big Impact. Campaign



Mobility Hubs Analysis



innovate mobility

BACKGROUND

Mobility hubs are often defined as areas where a variety of sustainable transportation modes connect seamlessly. As such, hubs present an opportunity to integrate mobility options that utilize new transportation technology to help enhance user experience and travel resiliency to help cover first and last mile travel. Based on these existing definitions, the core components of mobility hubs include being near major transit stops and having close proximity to major trip generators in the Yuba and Sutter County regions.

To achieve this objective the NextGen Transit Plan first sets out to:

1. Provide common definitions and objectives of this concept to understand why and where hubs should be implemented in Yuba and Sutter and;
2. Determine essential hub elements, implementation methods, and challenges of mobility hubs are explored through case study research to form considerations for implementation.

WHAT IS A MOBILITY HUB?

“A location where mobility options are intentionally linked to one another and to amenities to make getting around Yuba and Sutter counties more convenient, seamless, and enjoyable for the purpose of advancing mobility, climate, and equity goals.”

Based on the different types of mobility hubs explored later in this section, hubs can also be located in lower dense areas that have potential for development. In summary, mobility hubs provide sustainable transportation and shared mobility services, often clustered around a major transit station to help cover first and last mile travel and provide a sense of travel resiliency to customers.

WHAT ARE MOBILITY CORRIDORS

Compared to mobility hubs, mobility corridors are a lesser-known concept. However, this concept is like mobility hubs in that they provide easy access to major transit areas. Additionally, as key corridors that connect major parts of the region, they are often highly congested with traffic. However, mobility corridors aim to integrate a variety of modes to promote the uptake of sustainable transportation options. The aim of mobility corridors is to prioritize transit, walking, and cycling options to and within urban centers. Some early initiatives to implement mobility corridors have focused on incorporating smart technology to explore the potential for autonomous vehicles and innovative infrastructure. In Sutter County, mobility corridors would be along Hwy 20 and Franklin Avenue. In Yuba County, corridors would be along North Beale and off McGowan Parkway.

MOBILITY HUB COMPONENTS

Based on these common definitions and classifications, there are core components that are required for an area to be considered as a mobility hub.

SURROUNDS A MAJOR TRANSIT DESTINATION

A major component of a mobility hub is that it has one or more modes of transit that serves the area. This core is surrounded by a larger area of influence – also referred to as the catchment area – that benefits from the services provided at the hub. Residential and employment areas are located within this catchment area to support the uptake of the services offered at the core.

PROVIDES SUSTAINABLE TRANSPORTATION OPTIONS

Mobility hubs include services and destinations that are available within a 5-minute walk, cycle, and drive. When reviewing mobility hub elements, many existing guidelines include walking, bike sharing, bicycling, car-sharing, ride hailing, and microtransit in addition to fixed transit services. Therefore, vehicle sharing options are highlighted as a key component to incorporate into mobility hubs.

IS IN AN AREA WITH RESIDENTIAL EMPLOYMENT AND TRIP DENSITY

The presence of trip activity is a key component of mobility hubs which is achieved from the surrounding residential and employment density.

OBJECTIVES OF MOBILITY HUBS

Mobility hubs are presented as a strategy to enhance sustainable and active modes of transportation through a user-oriented lens. Preliminary research regarding the definitions of mobility hubs helped inform the objectives of mobility hubs that can address core transportation needs and help guide their development. These resulting objectives are based on existing literature surround themes that improve travel experience through safety and placemaking initiatives, embrace future changes through flexibility, support sustainable transportation options, and allow for partnership opportunities in the transportation realm.

1. Provides efficient and seamless integration of transit options
2. Focuses on improving user experience of different modes
3. Ensures safety and security for all riders
4. Creates a sense of place through effective and meaningful placemaking strategies
5. Allows for flexibility to embrace technological innovations and foster resiliency
6. Addresses equity by considering accessibility to and availability of transit options in different neighborhoods
7. Create opportunities to form effective partnerships

An overarching goal of mobility hubs is to reduce greenhouse gas emissions resulting from single auto use across different areas, it is essential for mobility services to be available across different neighborhoods. As mobility hubs become increasingly common, the location of mobility hubs and the service area of hub elements must be accessible by residents from different neighborhoods. As a result, mobility hubs need to consider services that will help cover first and last mile travel for residents who reside outside the hub's area of influence, where there is a lack of service options. Equity also entails ensuring mobility hubs are in areas with various densities and are not conglomerated in urban cores. Another facet related to accessibility is the cost of these services. For mobility services to be viable for individuals across the social gradient, fare subsidizing programs and initiatives should be considered.

MOBILITY HUB ELEMENTS

This section explores the different hub elements that are considered necessary to meet the outlined objectives of mobility hubs. Although not all elements and amenities are required, this review will help understand the different forms a mobility hub can take. Therefore, existing case studies of each element are considered under this section. The considerations for implementing each amenity group were found from existing guideline documents and research regarding mobility hubs. As such, these considerations are a brief overview of what is found in existing research and are meant to guide the development of complete guidelines.

These mobility hub elements are categorized under the following topics:

1. Accessibility
2. Safety
3. Amenities
4. Weather Protection
5. Rider Information
6. Placemaking
7. Car Interface
8. Bike Interface
9. Enhanced Operations

While most elements above are self-explanatory, a few need a little more development as outlined below:

AMENITIES

Amenities refers to any objects that are placed in public spaces for a variety of purposes. Most commonly, these objects are intended to enhance pedestrian mobility by providing useful functions such as benches, trash cans, and lighting. At mobility hubs where different modes are interconnected and pedestrian movement is prioritized, the implementation of functional and aesthetic street furniture that respond to the needs of the community will influence pedestrian movement in a way that is safe and efficient.

Case Study – Jurong Singapore

This innovative bus shelter in Singapore features a variety of amenities that enhance customer experience while waiting for the bus. The bus stop provides sheltered seating, bicycle parking, collection of books, local art, bicycle parking, and a green roof. This bus shelter also incorporates technological features where travelers can download e-books through a QR code and charge their phones. Digital interactive boards are also installed that provide local news and weather information and

Experimental bus shelters in Singapore (Infocomm Media Development Authority/CityLab)



allows users to obtain real-time bus arrival information and plan their trip.

Case Study – Santa Monica, CA

Big Blue Bus shelters in Santa Monica were designed to accommodate bus stops in the transit system with a limited budget. The designers of these bus shelters realized that a one-size-fits-all approach was not appropriate, or economically viable as different stops had different ridership volume, shading, and available space. As a result, a kit of different parts was proposed that can be assembled into different clusters. These parts also utilize reclaimed and locally available materials to lower the cost as much as possible. To accommodate the needs of seniors, armrests and back supports were added on from the original design. Their design also addressed the concern of nearby storeowners who submitted concerns that large benches and shelters could block their storefronts.



RIDER INFORMATION

Rider information is vital to support the functions provided at mobility hubs. These services often provide information on transit schedules, wayfinding, and service availability to assist with route planning that utilizes different modes. As such, different information channels are explored in this section which are intended to help travelers make informed choices on which mobility service is most efficient and convenient for their trip. Additionally, the provision of real-time information on transit and other services can help improve user experience. These information services also relate to accessibility, as it can help provide children, seniors, and people with disabilities the same level of access to mobility hubs as other users.

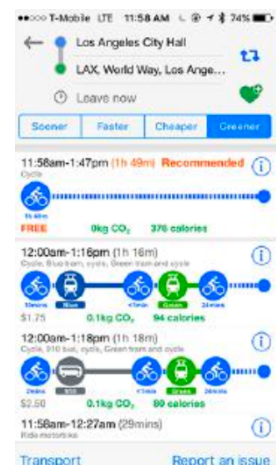
Case Study – Dublin Ireland

In Dublin, a real time passenger information system was implemented which updates passengers with expected arrival times of the bus. This system is updated every 30 seconds and calculates the expected arrival time by recording how long each bus takes to travel between stops. This helps inform riders on which bus route they should take and how long the waiting time is until the service arrives.



Case Study – Los Angeles, CA

The city of Los Angeles launched a journey planning app in partnership with Xerox. The Go LA app allows users to explore the shortest, cheapest, or greenest option for their trip. The app provides options for several modes to complete a trip including, ride hailing, ride sharing, walking, bicycling, driving, parking, public transit, and taxi options.



MOBILITY HUBS IN YUBA-SUTTER TRANSIT'S SERVICE AREA

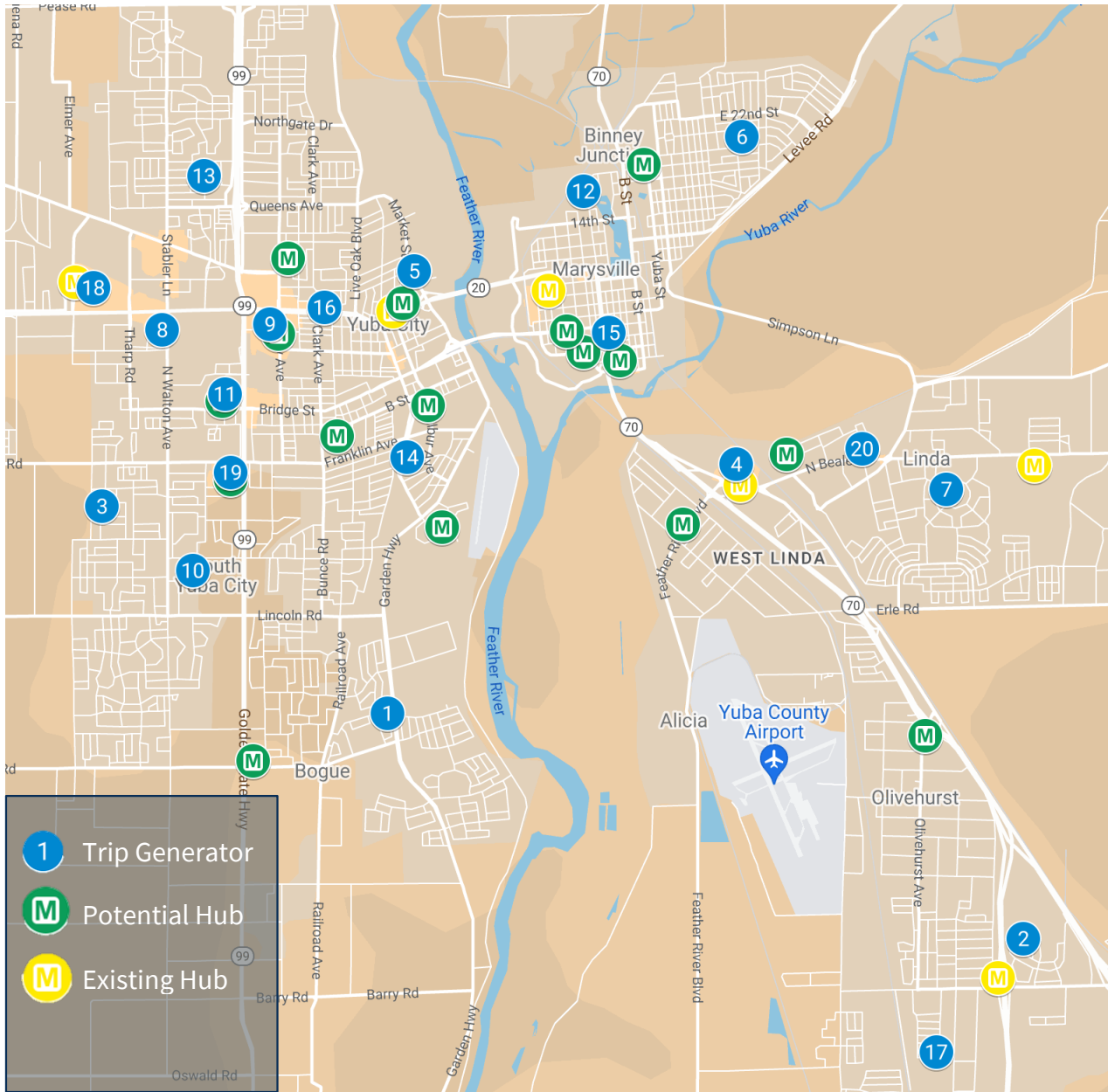


Figure 200 - Trip Generators

The existing hubs are within ¼ mile of over **69%** of all trips made in the service area. These hubs are either near major shopping centers or at Park and Rides. Which satisfies two of the elements of a hub as presented earlier.

POTENTIAL HUB ANALYSIS

Potential hubs were chosen based on their proximity to trip generators. This plan does not recommend constructing hubs at each of these locations, however, if one or more are implemented, especially in Yuba City – this hub plus other existing hubs would cover over 85% of all trips in the service area.

The third element of a mobility hub is population density, and by and large the existing and potential hubs are in the densest portion in the service areas.

YUBA CITY POTENTIAL HUB LOCATIONS

Yuba City accounts for approximately 58% of all trips taken within Yuba-Sutter Transit’s service area. These are ALL trips, not just those taken on transit. As such, this plan recommends reviewing a number of locations for potential mobility hubs:

- **Gray avenue** – With a major shopping center and other smaller retail businesses and being within 1 mile of HWY 20, a mobility hub along this corridor would allow Yuba-Sutter Transit to catch retail employees, shoppers, and even some riders traveling for medical appointments.
- **Perkins Way near existing Alturas and Shasta Terminal** – The Alturas and Shasta terminal will provide a major transfer point for future on-demand services to a new crosstown route (modified Route 1). The Perkins Way location (previously a DMV office) has ample acreage to locate a new mobility Hub.
- **Franklin Avenue** – Defined as a mobility corridor, a portion of Yuba City has a number of potential mobility hub locations. A hub could be placed at a shopping center location just west of HWY 99 has grocery stores, retail, and restaurants. Traveling east, a potential location could be at Yuba City High School allowing students to easily transfer from on-demand services. Finally, another potential hub could be closer to the eastern end of Franklin Avenue along B Avenue near the Fairgrounds.
- **South Yuba City** – In South Yuba City, two potential locations could provide differing levels of benefits based on rider type. One location could be at Richland Housing located just south of HWY 99 along Miles Avenue. This low-income community is significant as they

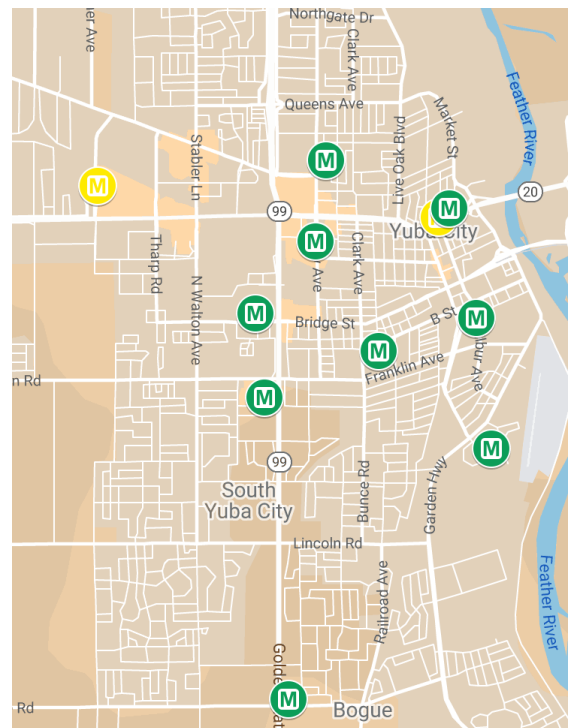


Figure 201 - Yuba City Potential Hub Locations

partnered with Yuba-Sutter Transit on a successful grant application for the Authority’s new facility. A second location in South Yuba City could be placed at or near the Bogue Park and Ride. Bogue Road currently represents the southern edge of Yuba-Sutter’s fixed route service area. While the on-demand zone will extend slightly further south, Bogue road will continue to be a boundary due to the lack of residential density past it. A hub at the park and ride that is currently serviced by the Sacramento routes and will also be served by the future on-demand service could provide a benefit to riders wishing to leave their cars at home and take on-demand to their commuter trip. It also can represent a significant connection point for residents of South Yuba City looking to travel north.

MARYSVILLE POTENTIAL HUB LOCATIONS

The current hub in Marysville is located at the Government Center. Additional hubs could be placed in the vicinity of Rideout Hospital allowing residents of the city or those traveling in from Yuba City, Linda or Olivehurst an easy place to transfer. Another potential hub location could be at Marysville High School allowing students and faculty to easily reach the major trip generator.

LINDA POTENTIAL HUB LOCATIONS

Linda currently has the greatest number of trip generators after Yuba City. With major shopping centers along North Beale, Yuba College and Edgewater Apartments, the number of trips generated in Linda are greater than Olivehurst and Marysville combined. With two major transit centers in the community already, Linda has established mobility hubs. Two potential hubs locations could be as follows:

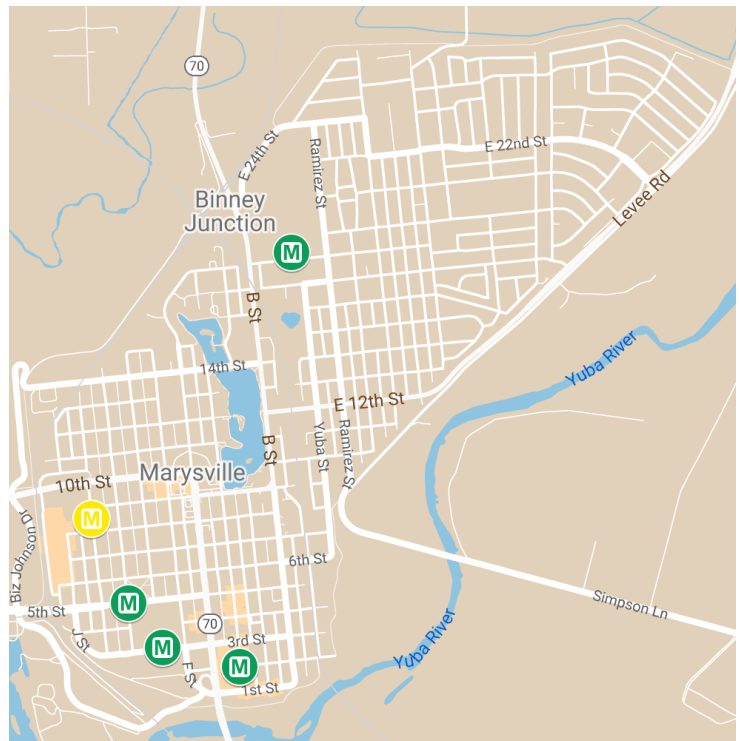


Figure 202 - Marysville Potential Hub Locations

- **Yuba-Sutter Transit NextGen Transit Facility** – Located along Avondale avenue, Yuba-Sutter Transit will have an opportunity to provide a destination at their new HQ for riders seeking information about their trip, transferring, purchasing passes, or in the future, new, potential micromobility modes.

- West Linda** – Currently there are no hubs in West Linda. However, with the construction of the Cedar Lane apartments along Feather River Blvd, a potential nearby mobility hub could provide residents an easy location to board the new Olivehurst Crosstown route, or request an on-demand trip.



Figure 203 - Linda Potential Hub Locations

OLIVEHURST POTENTIAL HUB LOCATIONS

Olivehurst is less dense than its neighboring cities and as such may not have as many mobility hub locations. An existing location would be the McGowan Park and Ride. Similar to the Bogue Road location discussed earlier, the existing park and ride would provide a high-quality placement for a mobility hub considering the trip generators that surround the southern edge of Olivehurst. Additionally, CalTrans has suggested an onramp pickup adjacent to the PnR. This would reduce operating costs and improve the rider experience. A second hub could be placed further north at the shopping center at the roundabout connecting Olivehurst Ave. and Powerline Rd.

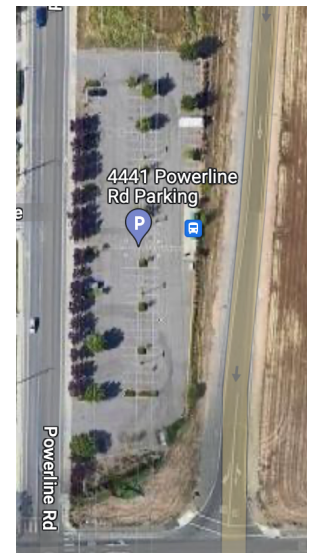


Figure 204 - Olivehurst Potential Hub Location

POPULATION DENSITY

When looking at the recommendations for the service plan and the existing and potential hub locations remarked throughout this section. It is clear that these potential hubs will only increase Yuba-Sutter Transit’s connectivity in its service area.

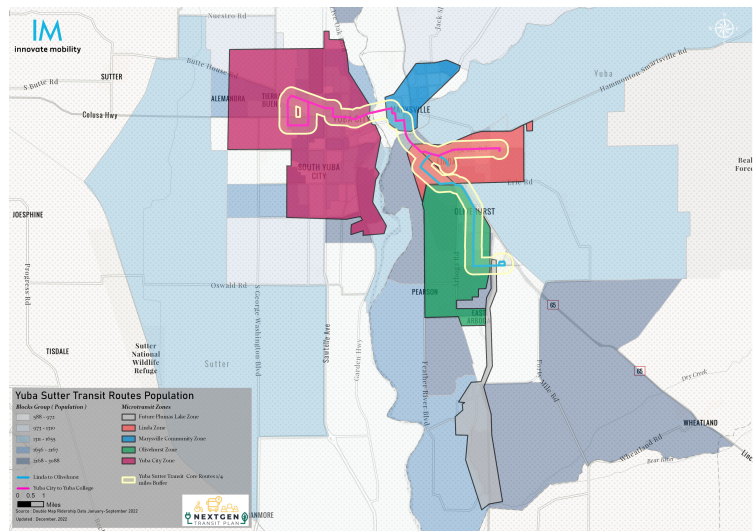


Figure 205 - - Population Density of Proposed Service Plan

TRAVEL DEMAND

Understanding travel demand is important to determine the placemaking and amenities that could be placed at potential mobility hubs. It is clear where potential mobility hubs can exist in Yuba City and Linda, however, Yuba County hub locations are a little less clear. When looking at travel demand there is significant movement from South Yuba City to Olivehurst and back. There is also travel between Olivehurst and Linda. Placing a mobility hub in the vicinity of the McGowan Park and Ride can be an option.



Figure 206 - Travel Demand to Potential Mobility Hubs in Yuba County

In summary, mobility hubs can provide a great benefit for current and new riders. There are elements that should be considered in each hub that vary based on population and levels of services provided, however, providing safe, reliable, fast transportation is a central need for all types of hubs. Reviewing travel demand, the proposed crosstown routes currently serve almost 70% of the travelers in the region. The plan recommendations call for connection opportunities at any of the potential mobility hubs listed above, which could increase travel access to the majority of the region with the addition of one or two more hubs.



Public Engagement Summary



innovate mobility

INTRODUCTION

As the public engagement was paramount to the development of the NextGen Transit Plan, the planning team offered multiple opportunities for current and potential transit riders in the Yuba-Sutter region to share their feedback. Thus, the team needed to create a dynamic and flexible Public Engagement Plan that invited representatives from stakeholder organizations and community members throughout the service area to participate during the planning process.

The purpose of the 7-month public engagement program was to:

- Build community awareness about NextGen Transit Plan and discuss public perspectives about the current transit system.
- Learn about anticipated local and regional transportation needs, issues, preferences, and concerns as they relate to the current fixed route, Dial-A-Ride, and commuter services.
- Engage with disadvantaged communities within the Yuba-Sutter Transit service area.
- Obtain informed input on draft recommendations for extended evening hours, Sunday service, increased frequencies, on-demand micro-transit, or expanded service areas.

Key milestones of the plan included:

1. Understanding existing conditions
2. Identifying transit user challenges and potential areas of improvement
3. Review initial transit recommendations
4. Review the draft plan

ENGAGEMENT STRATEGIES

Below is an overview and description of the strategies used during the engagement process.

PROJECT WEBSITE

At the initiation of the project, the engagement team created a website to keep the public informed and educated throughout the planning process. The website included a project overview, a list and timeline of most recent transit service upgrades, the ability to sign up for project updates, and information regarding the online questionnaire and workshops. The website can be accessed at

<https://www.yubasutternextgen.com/home>

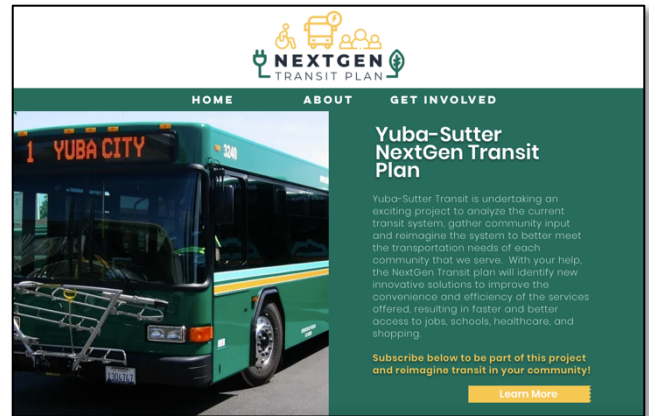


Figure 207 - Home page of the project website

STAKEHOLDER DATABASE

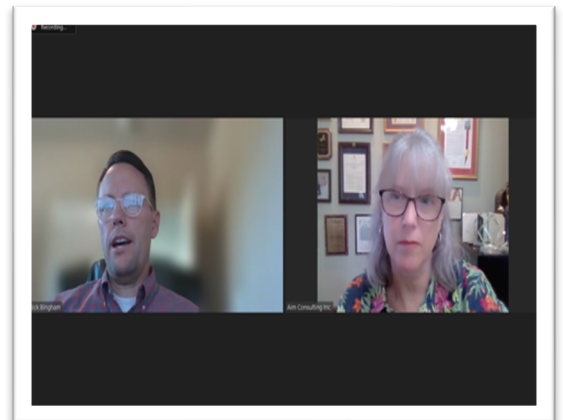
The engagement team created a stakeholder database of representatives from 66 key stakeholder organizations and groups that were involved in outreach and education around the plan. The purpose of this database was to inform these stakeholders of updates in the project, invite their involvement in key milestones of the public engagement, and to encourage them to share about the engagement efforts within their networks. These stakeholders represent key perspectives in Yuba-Sutter Transit's geographic service area, including those from the four member jurisdictions. Stakeholder contacts also included organizations that meet the following criteria: affordable housing advocates, community development, environmental concerns, education, economic and job development, transit and alternative transportation advocates, medical facilities, and social services agencies.

STAKEHOLDER FOCUS GROUP MEETINGS

Between July 18, 2022, and September 21, 2022, the engagement team hosted 13 one-on-one virtual meetings via Zoom with key stakeholder representatives. The purpose of the meetings was to connect with elected officials, City and County employees, and representatives from organizations serving current and potential transit riders who are low-income, disabled, or transit-dependent to learn about the needs of these communities.

INTERVIEW OVERVIEW AND PURPOSE

The NextGen Transit Plan will develop a Comprehensive Operational Analysis (COA)/Short Range Transit Plan (SRTP) that will improve the Yuba-Sutter Transit customer travel experience by reducing travel time, improving service frequencies and connections where possible, and introducing new and innovative transit options. The purpose of the interviews was to obtain the input of key stakeholder groups representing clients in economically disadvantaged, disabled, and/or transit dependent communities on service needs, as well as the leadership of jurisdictions served by Yuba-Sutter Transit.



STAKEHOLDER INTERVIEW LIST

Social Services Agencies

- Araceli Gonzales, Sutter County One Stop
 - July 18, 2022, at 9am via Zoom
- Dr. Tawny Dotson, President, Yuba College
 - July 22, 2022, at 4pm via Zoom
- Chaya Galicia, Yuba County Health and Human Services
 - July 25, 2022, at 3:30pm via Zoom
- Carl Sigmond and Carly Pacheco, FREED
 - August 2, 2022, at 12:30pm via Zoom
- Rick Bingham, Sutter County Health and Human Services
 - August 2, 2022, at 2:00pm via Zoom
- Terry Rhoades, Alta Regional Center
 - August 31, 2022 at 11:30am via Zoom
- Cathy LeBlanc, Camptonville Community Partnership
 - September 21, 2022 at 1:00pm via Zoom

MEETING FORMAT

The interview with each of the stakeholders was held online, through Zoom. Celia McAdam of AIM Consulting posed eight questions to the social services agencies, with one additional question about funding posed to the jurisdictions. The responses are separated by the two stakeholder categories and summarized below.

Question 1 - Are you familiar with the Yuba-Sutter Transit system? What is your overall satisfaction with the Yuba-Sutter Transit system? (0-10)

Ms. Gonzales of Sutter One Stop was unfamiliar with the system and could not provide a satisfaction rating. Dr. Dotson of Yuba College indicated a need for improvement in the service itself, while also praising the excellent staff. Ms. Galicia of Yuba County's Health and Human Services Homeless Program felt the service meets some needs but has definite gaps. Mr. Sigmond and Ms. Pacheco of FREED were very familiar with the service and have a grant for Dial-A-Ride vouchers. Mr. Bingham of Sutter County's Health and Human Services Mental Health Program gave a rating of 7 or 8 but noted that he is not on the front line like his staff. Ms. Rhoades of Alta Regional Center found the system to be very helpful and communicative for transporting clients. Ms. LeBlanc is aware of the system but notes that there is no service to Camptonville and limited service to the foothills, and her organization proposed ways to improve transit services to the Foothills.

Overall, the responses regarding the Yuba-Sutter Transit system were mixed. Some individuals, such as Dr. Dotson and Ms. Galicia, noted areas for improvement in the service, while others, such as Mr. Sigmond and Ms. Rhoades, found it to be helpful and communicative. Ms. Gonzales was unfamiliar with the system, while Mr. Bingham gave a positive rating but noted that he is not on the front line like his staff. Ms. LeBlanc highlighted the need for improved service to the Foothills.

Question 2 – Do you believe the transit system adequately serves the region? If so, what are the strengths in your opinion? If not, what are the weaknesses?

Ms. Gonzales praised the system for having many buses and being punctual but noted a lack of service to get to work in Sutter and Live Oak. Dr. Dotson criticized the current approach, emphasizing ridership per route, as inadequate for rural areas, suggesting the identification of populations who need transit. Ms. Galicia expressed concern about areas without transit coverage, particularly in the Foothills, Plumas Lake, and Wheatland. Mr. Sigmond and Ms. Pacheco pointed out the lack of transit coverage in rural areas, such as Camptonville, and encouraged the application of universal design in transit systems. Mr. Bingham identified Live Oak and Harmony Village Habitat for Humanity site as needing more transit service. Ms. Rhoades praised the service for making it easy to figure out routes but suggested the need for expanded hours of service. Ms. LeBlanc praised the system's willingness to work with the community and proposed working with Gold Country Stage to provide service to Camptonville.

The responses the Yuba-Sutter Transit system were generally mixed and identified areas for improvement. Many respondents pointed out the lack of transit coverage in rural areas and suggested the need for expanded service to these areas. There were also concerns about the adequacy of the current approach and a call for a shift in expectations to better serve the needs of rural areas. However, some respondents also praised the system's strengths, such as being punctual and easy to navigate. Overall, the sentiment was mixed but leaned towards a need for improvement in the system.

Question 3 – Do you believe there is enough service? If not, where do you think there should be more service?

Ms. Gonzales emphasized the need for more service for people to get to jobs in Sutter, Live Oak, and other areas, particularly for those who work late shifts. Dr. Dotson noted the need for transit service in rural areas, citing Yuba College's Sutter County Center as an example of a discontinued route due to insufficient farebox. Ms. Galicia reiterated the need for service in Plumas Lake, Wheatland, Sutter, Live Oak, Olivehurst, and Linda.

Mr. Sigmond and Ms. Pacheco stressed the need for service in Camptonville and outlying areas, particularly for the aging population, and the need for creative solutions to meet various abilities. Mr. Bingham suggested expanding Dial-A-Ride services to MediCal mental health populations to be reimbursable. Ms. Rhoades suggested that service to Live Oak and Plumas Lake would be helpful for the Center's clients. Ms. LeBlanc noted the need for more service in Camptonville and the foothills, with reasonable frequency and key route locations, and suggested a flexible van call service instead of a traditional fixed-route bus.

It was generally evident from the responses of the respondents that increased transit services were needed in a variety of areas. The majority of respondents agreed that there is a need for more transit services in rural areas, particularly for people working late shifts or those with disabilities. There were also suggestions for creative solutions to address the diverse needs of the population. Additionally, the sentiment was mixed regarding which areas needed transit service, with some respondents suggesting Sutter, Live Oak, Plumas Lake, Wheatland, Olivehurst, and Linda. Overall, the responses reflect a need for improved transit services that better meet the needs of the communities they serve.

Question 4 – Is transit and transit usage part of the decision-making for new policies at your organization?

Ms. Gonzales indicated that transit is not a priority for new One Stop policies. Dr. Dotson stated that transit is an important consideration for Yuba College's growth and location decisions since students may not have access to personal vehicles. Ms. Galicia noted that transit is a key consideration for Yuba County Health and Human Services projects, particularly their proximity to transit stops. Mr. Sigmond and Ms. Pacheco emphasized that transit plays a role in most of FREED's work, including office locations and client training. Mr. Bingham agreed that transit is important for Sutter County mental health programs, with services often paired with transit availability and hours. Ms. Rhoades stated that transit is a significant issue for the Alta Regional Center, considering transportation availability when assigning clients to day programs. Ms. LeBlanc emphasized that transit is a key issue for their community health non-profit, with accessibility being the primary consideration.

According to the responses from the individuals, transit services are considered by a number of organizations and programs. Most respondents agreed that transit accessibility is important for their organizations, with some considering it a key factor in decision-making. Some respondents, such as Dr. Dotson and Ms. Galicia, emphasized the importance of transit for their organizations' growth and project development. Others, such as Mr. Sigmond and Ms. Pacheco, highlighted the role of transit in their programs and training for clients. Overall, the sentiment was positive, indicating that transit services play a significant role in the success of these organizations and programs.

Question 5 – What, in your opinion, are the major transportation needs in the region? How can public transit address those needs?

Ms. Gonzales noted that many of One Stop's clients are transit dependent, and better coverage and more hours for transit would help address their needs. Dr. Dotson emphasized the role of transit in fostering economic development in a context of high gas prices and inflation. Ms. Galicia suggested more frequent transit service and Dial-A-Ride that accommodates immediate demand to address travel planning issues faced by those in generational poverty. Mr. Sigmond and Ms. Pacheco highlighted the need to be more creative and flexible in assessing transit needs and suggested that data generated from Google may not be representative of areas without transit. Mr. Bingham suggested the potential of scooters and rental bikes as a tie-in to the transit system. Ms. Rhoades suggested expanding routes and extending service hours into the evening to benefit clients. Ms. LeBlanc proposed the development of an independent transit system with a flexible van call service for local travel, but noted the need for creativity within funding structures. Overall, the responses suggest a need for more accessible, flexible, and creative transit solutions to address the diverse needs of communities.

Several of the responses indicated that there is a need for more accessible, flexible, and creative transit solutions to address various issues that communities face in a number of different areas. Many of the respondents highlighted the importance of transit for those who are transit-dependent, such as those who do not have a driver's license, those who are homeless, or those who cannot afford a car. There were also suggestions for more creative solutions to address the needs of those in generational poverty or those who face challenges in travel planning. Additionally, there were suggestions for incorporating alternative modes of transportation, such as scooters and rental bikes, to better serve the needs of communities. Overall, the responses reflect a need for more innovative and flexible transit solutions that better meet the diverse needs of communities.

Question 6 – How is the region recovering from the pandemic? Have you seen changes in mobility (traffic, travel times, etc.)?

Ms. Gonzales has not noticed any significant changes in traffic patterns at One Stop, while Dr. Dotson has seen data on changes to mobility and noted that Yuba College is struggling to fill positions due to high gas prices. Ms. Galicia noted that more people are working from home, potentially leading to a decrease in traffic. Ms. Pacheco has not noticed a difference in traffic on the roads, while Mr. Sigmond emphasized the concerns of the disabled community about travel and COVID safety on buses.

Mr. Bingham recognized that most Sutter County Health and Human Services staff are working from home, and Ms. Rhoades has not noticed much change in traffic patterns. Ms. LeBlanc felt that the area has come through the pandemic, but astronomical gas prices have had an impact on driving. Overall, the responses indicate mixed observations about changes to traffic patterns during the pandemic, with some noting significant changes and others noting that things seem to be back to normal.

The responses indicate that there is a mixture of observations about the changes to traffic patterns during the pandemic, based on the responses. Some respondents, such as Ms. Galicia, noted that more people are working from home and this has potentially led to a decrease in traffic. Others, such as Dr. Dotson, emphasized the impact of high gas prices on commuting and the struggle to fill positions. While some respondents, such as Ms. Gonzales and Ms. Rhoades, have not noticed significant changes in traffic patterns, others, such as Mr. Sigmond, emphasized concerns about COVID safety on buses. Overall, the responses suggest a complex and varied picture of changes to traffic patterns during the pandemic.

Question 7 – Do you believe there is enough service? If not, where do you think there should be more service?

The responses suggest that there are varying opinions on the adequacy of transit service in different areas. Supervisor Bradford feels that frequencies need to be improved to attract choice riders, and there isn't enough coverage in Plumas Lake, Wheatland, or Arboga. Mr. Peterson suggested improvements should target Plumas Lake and commuter service to Roseville and Sacramento State University. Mr. Schaad stated that there is sufficient service in Marysville, and any need might be for faster connections from east to west. Ms. Langley identified Harmony Village as needing transit service, and low-income and multi-family housing projects should be a target for additional service. Mr. Palmer found it hard to gauge service adequacy, and transit stop locations seem reasonable. Mr. Goodwin pointed out that Wheatland is changing, with significant affordable housing projects planned, which may need transit service. Overall, the responses suggest a need for improvements in coverage and frequencies in some areas and the need to consider the needs of low-income and senior communities.

The responses suggest that there are varying opinions on the adequacy of transit service in different areas. Some respondents, such as Supervisor Bradford and Mr. Peterson, suggest improvements in coverage and frequencies to attract more riders, particularly in areas like Plumas Lake and for commuter service. Others, such as Mr. Schaad and Mr. Palmer, feel that service in certain areas is sufficient or reasonable, and it may be hard to gauge service adequacy without input from residents. Ms. Langley suggests targeting low-income and multi-family housing projects for additional service, and Mr. Goodwin points out the changing needs in Wheatland with significant affordable housing projects planned. Overall, the responses suggest the need to consider the needs of different communities and to assess transit service adequacy with input from residents.

Question 8 – What do you believe is the biggest barrier to transit usage in the region? What might incentivize people to use transit more?

Ms. Gonzales cites a lack of understanding of how to use the system as a barrier to transit usage, but recognizes the efforts of Yuba-Sutter Transit to be helpful and responsive. Dr. Dotson believes that the lack of routes to where people are and where they need to go is the fundamental issue and that incentives like free passes will not be effective. Ms. Galicia notes a stigma associated with transit and suggests improving accessibility, hours of operation, frequency, and travel times to make transit more attractive. Mr. Sigmond and Ms. Pacheco agree that accessibility and education on how to use transit are the most significant transit issues they hear about.

Mr. Bingham suggests that most people with access to a car will not use transit due to short distances, less traffic, and less time-consuming. Ms. LeBlanc emphasizes that better frequency, stop locations, and routes are crucial to increase transit usage, especially with the high gas prices and concerns over climate change.

The responses indicate that there are several factors that affect transit usage in the Yuba-Sutter region. Ms. Gonzales suggests that a lack of understanding about how to use the transit system is a barrier, but she also recognizes Yuba-Sutter Transit's efforts to be helpful and responsive. Dr. Dotson believes that the lack of routes to where people need to go is the main issue and that incentives like free passes will not be effective. Ms. Galicia notes a stigma associated with transit and suggests improving accessibility, hours of operation, frequency, and travel times to make it more attractive. Mr. Sigmond and Ms. Pacheco believe that accessibility and education on how to use transit are the most significant issues. Mr. Bingham suggests that most people with access to a car will not use transit, and Ms. LeBlanc emphasizes the importance of better frequency, stop locations, and routes to increase transit usage, especially given high gas prices and climate change concerns. Overall, the responses highlight the need for improvements in accessibility, education, and infrastructure to make transit a more attractive and viable option for commuters in the region.

Question 9 – Are there other organizations that we should reach out to as part of this project?

Ms. Gonzales suggested reaching out to major employers and warehouses to potentially provide shuttles for shift work. Dr. Dotson recommended contacting homeless groups, Habitat for Humanity, and social services providers. Ms. Galicia did not have any suggestions, while Mr. Sigmond and Ms. Pacheco suggested several groups to contact, including Yuba-Sutter Senior Legal, the Regional Center, Family Soup, United Farmworkers, Sutter County One Stop, and the Homeless Consortium. Mr. Bingham recommended reaching out to Yuba County Health and Human Services, the court systems, food banks, and the hospital for input. Ms. Rhoades mentioned FREED and social services agencies should be contacted, and Ms. LeBlanc suggested reaching out to the Sutter Health Clinic and Ponderosa Park Senior Group in Brownsville, as well as the Foothill Food Pantry. Overall, the respondents provided a range of suggestions for organizations to contact, with a focus on groups that serve vulnerable populations, as well as major employers and social services providers.

SUMMARY

The responses suggest that there are varying opinions on the future of transit service in the Yuba-Sutter region. Some respondents, such as Ms. Gonzales and Mr. Sigmond, suggest that there is a need for more flexible, on-demand services like Dial-A-Ride that can accommodate diverse needs and schedules. Others, such as Mr. Schaad and Ms. Langley, suggest that improvements in coverage and frequencies are needed to attract more riders and serve communities with changing needs.

There is also a recognition that transit service is important for economic development and job access, as noted by Dr. Dotson and Supervisor Bradford. Overall, the responses suggest a need for more creative and flexible solutions that can address the diverse needs of the community, while also recognizing the important role of transit service in supporting economic growth and job access.

JURISDICTION INTERVIEWS

JURISDICTION INTERVIEWEES

- Gary Bradshaw, Supervisor District 4, Yuba County
 - August 24, 2022 at 10am via Zoom
- Mike Lee, Community Development Services Agency Director, Yuba County
- Dan Peterson, Public Works Director, Yuba County, and
- Sam Bunton, Assistant Public Works Director, Yuba County
 - August 25, 2022 at 9am via Zoom
- Jim Schaad, City Manager, City of Marysville
 - August 25, 2022 at 3pm via Zoom
- Diana Langley, City Manager, City of Yuba City
 - August 26, 2022 at 10am via Zoom
- Aaron Palmer, City Manager, City of Live Oak
 - August 29, 2022 at 11:30am via Zoom
- Jim Goodwin, City Manager, City of Wheatland
 - August 31, 2022 at 1:30pm via Zoom

Question 1 – Are you familiar with the Yuba-Sutter Transit system? What is your overall satisfaction with the Yuba-Sutter Transit system?

The responses from government officials regarding the Yuba-Sutter Transit service are generally positive, with most expressing familiarity with the service and praising the leadership of Keith Martin, the manager of the service. Supervisor Bradford of Yuba County has had experience as an alternate on the Yuba-Sutter Transit Board of Directors and found the commuter service useful with convenient stops. Mr. Lee of Yuba County Community Development Services, Public Works Director Dan Peterson, and Assistant Public Works Director Sam Bunton all had positive experiences with Yuba-Sutter Transit, praising its professionalism, organization, and support for the County's complete streets efforts. Mr. Schaad of the City of Marysville had a positive rating of 9 for the transit service's relationship with Keith Martin. While Ms. Langley of the City of Yuba City is familiar with the service, she finds it difficult to assess satisfaction. Mr. Palmer of the City of Live Oak feels Keith Martin has provided great leadership but has never heard from the public about the transit service, while Mr. Goodwin with the City of Wheatland is familiar with the service and has no issues, adding a very favorable rating for his dealings with Keith Martin.

Question 2 – Do you believe the transit system adequately serves the region? If so, what are the strengths in your opinion? If not, what are the weaknesses?

Supervisor Bradford, Mr. Peterson, and Ms. Langley discussed the need for better transit service to areas like Plumas Lake, East and West Linda, and Harmony Village. Mr. Schaad assessed that transit is serving the area fairly well and suggested alternative transit options like bicycle and pedestrian facilities. Mr. Palmer and Mr. Goodwin did not receive complaints about transit service and interpret this as service being adequate.

Question 3 – Is transit and transit usage part of the decision-making for new policies at your organization?

Supervisor Bradford stated that cars are the focus, and transit is a minor consideration. Mr. Lee recognized that while transit is not currently a focus, it probably will be in the future to comply with state and federal priorities. Mr. Peterson added that transit is a factor for transportation grant applications. Mr. Schaad stated that transit is not frequently a consideration in Marysville as it is built out, but it may change with more infill development. Ms. Langley expressed that transit is a priority and becoming more so with SB 743 vehicle miles of travel (VMT) requirements, climate change, and other regulations. She expressed concern about making transit more attractive as a mode of transportation. Mr. Palmer and Mr. Goodwin both agreed that transit is not a major issue for the City of Live Oak and Wheatland respectively.

Question 4 – What, in your opinion, are the major transportation needs in the region? OBJ How can public transit address those needs?

Supervisor Bradford stated that the Yuba-Sutter area is an affordable and convenient place to live. However, traffic congestion remains a challenge, which could be addressed by expanding options for transit riders. Mr. Lee emphasized the need for road projects in Yuba County but added that public transit would support multi-modal travel by providing bus stops and sidewalks. Mr. Schaad identified east-west travel as a major issue in Marysville and suggested that safer facilities for biking and walking would encourage more residents to use alternative modes of transportation.

Ms. Langley recommended focusing on key destinations, such as major employers or shopping areas, and redundant systems with different modes. Mr. Palmer noted that most people in Live Oak have their own vehicles, but seniors may need transit for basic services. Mr. Goodwin identified bottlenecks on SR 65 through Wheatland as a major traffic issue and suggested that the East Wheatland Expressway could benefit transit by providing faster service.

Question 5 – How is the region recovering from the pandemic? Have you seen changes in mobility (traffic, travel times, etc.)?

The individuals interviewed had varying observations about the impact of the pandemic on traffic. Supervisor Bradford noticed a reduction in traffic during the pandemic, but it has since returned to normal, and he identified the E Street Bridge as a bottleneck. Mr. Lee noted that traffic was reduced during the peak of the pandemic, but it seems to be back to normal now. Mr. Peterson added that schools have a significant impact on traffic in the Marysville area. Mr. Schaad mentioned that more telecommuting has reduced commuter traffic in Marysville, but there has been more non-work travel throughout the day. Ms. Langley saw a significant reduction in traffic during the pandemic, but levels have now returned, and she has noticed an increase in truck traffic, making Yuba City a hub for truck parking. Mr. Palmer stated that traffic is coming back, especially with school starting, and the addition of a third signal on SR 99 has helped. Mr. Goodwin noted that traffic has been consistent in Wheatland during the pandemic, particularly on SR 65, and there is a lot of traffic across SR 65 due to the location of all three schools on the west side.

Question 6 – What do you believe is the biggest barrier to transit usage in the region? What might incentivize people to use transit more?

Supervisor Bradford and Mr. Lee recognized the importance of transit in expanding transportation options, but convenience is the key factor for greater transit usage. Mr. Bunton suggested adding bike lanes and sidewalks to make transit more accessible. Mr. Schaad suggested electrification of transit and offering free transit to targeted groups. Ms. Langley proposed making bus stops more inviting, providing better shelter, and adding multi-lingual outreach and a real-time bus app. On the other hand, Mr. Palmer and Mr. Goodwin acknowledged that driving is preferred by people, and Live Oak doesn't have the density to make transit effective.

Question 7 - (Current Yuba-Sutter Board members) What is the level of interest in increasing funding for more service?

The officials in the meeting acknowledged that transit is not the highest priority in the region, and that people generally prefer road improvements. Mr. Lee and Mr. Schaad did not feel that more funding would change the priority given to automobiles. Ms. Langley noted that TDA funds go directly to Yuba-Sutter Transit, so there is no flexibility for additional funds, but she expressed support for seeking grants.

Question 8 - (Non-members) Would you want to officially be part of the Yuba-Sutter Transit organization if it meant having to contribute more money but having more say in service and probably an increased level of service?

Mr. Palmer expressed uncertainty about Live Oak's interest in joining Yuba-Sutter Transit due to tight funding, although communication with Keith Martin has been positive. Mr. Goodwin said that the Wheatland City Council would need to see the specific cost-benefit analysis before deciding whether to join Yuba-Sutter Transit.

The respondents had mixed sentiments about the Yuba-Sutter Transit system. Some expressed satisfaction with the current service and had good relationships with the system's management, while others felt that more needs to be done to improve the system, such as expanding service to low-income areas and increasing the attractiveness of transit as a mode of transportation. Some respondents noted traffic congestion as a significant issue, while others stated that driving is preferred over using transit in rural areas. Funding for transit was also a concern for some, with some acknowledging that additional funds may be needed to improve the system. There was some hesitation about formally joining Yuba-Sutter Transit, with some stating that their city council would need to see the cost-benefit in detail.

ONLINE SURVEY

The online questionnaire served as a forum for current transit passengers to share their travel behavior, recent bus trip information, preferred mode of transportation, and additional thoughts about the current Yuba-Sutter bus system and level of service. The survey included multiple-choice, ranking, and demographic questions. Participant responses are summarized in this document with graphs below.

The responses to the questions provide insights into the public transit usage, preferences, and concerns of the participants. Some key points that can be inferred from the data are:

1. About 23.5% of participants either rode or planned to ride the bus that day, with Route 1 being the most commonly used route.
2. The majority of participants start their trips between 6-10 am, and most found their bus on time.
3. About 67% of participants walked to the bus stop, and 69% regularly have access to a car for transportation needs.
4. Lack of available service routes, convenience/time, and the bus not going where they need it to were the most commonly cited reasons for not riding the bus more often.
5. Participants would like to see more frequent, direct, and expanded service, as well as later evening fixed route service and Sunday service.
6. Yuba-Sutter Transit's website was the most commonly used method for obtaining information about public transit services.
7. The majority of participants prefer personal automobiles as their mode of transportation.
8. Safety concerns were mostly related to insufficient lighting at bus stops, while cleanliness concerns were addressed in the open-ended responses.

Overall, the data suggests that there is potential for public transit service expansion, particularly in areas such as later evening and Sunday service, and that efforts could be made to improve the convenience and availability of service.

SURVEY RESPONSES

1. Around 17.62% of participants (80 people) rode the bus that day, with an additional 5.88% planning to ride later that day.

2. Route 1 was the most commonly used route, with 43% of participants using it. Route 2 had a 22% usage rate, and Routes 3, 4, and 5 combined had an 18% usage rate. Dial-A-Ride had a 9% usage rate. Sacramento had a 31% usage rate, Live Oak & Foothill had a 3% usage rate, and Wheatland had a 2% usage rate.
3. 50% of participants started their trip between 6-10 am, 31% started between 10-3 pm, 9% started between 3-7 pm, 5% started before 6 am, and 4% started after 6 pm.
4. 88% of participants found their bus on time that day.
5. 70 people responded to the open-ended question of where they started and ended their trip.
6. 68 people responded to the open-ended question of where they were coming from, and 71 people responded to where they were going.
7. 67% of participants walked to the bus stop, 7% biked, 10% were dropped off, and 13% drove to the bus stop.
8. 37% of riders transferred to another route that day, with 18 people clarifying how many transfers were made and to which routes.
9. 7% of participants ride public transit every day, 20% ride several times per week, 8% ride infrequently weekly, 9% ride infrequently monthly, 26% rarely ride, 2% were first-time riders, and 28% never ride.
10. 272 participants responded to the open-ended question of which surrounding community or destination they would take transit to if there was service.
11. 67% of participants get information about public transit services from the Yuba-Sutter Transit website, 18% use the DoubleMap App, 22% use brochures on the bus, and 11% use the map case at the transit center. 75 people responded with other methods of obtaining information.
12. 30% of participants prefer transit buses, 2% prefer taxi or ride-sharing services, 57% prefer personal automobiles, and 3% prefer bikes/scooters or walking. 13 people responded with "other."
13. 69% of participants regularly have access to a car for their transportation needs.
14. 89% of participants do not utilize a mobility aid, while 1.3% use a wheelchair and 1.3% use a scooter, and 4% use a walker.
15. 31% of participants stated that a lack of available service routes was what stops them from riding the bus more, while 1% cited cost, 24% cited convenience/time, 16% cited that the bus doesn't go where they need it to, and 11% cited hours of service. 50 participants responded with "other."

- 16.** 47% of participants pay for their bus fare with cash, 34% use a Connect Card Monthly Pass, 10% use a Connect Card Cash, 5% use a voucher/ticket, and 3% ride for free.
- 17.** On a scale of 1-5, with 5 being "very convenient," the average ranking for how convenient it is to pay for transportation was 3.6.

COMMUNITY WORKSHOPS

On Thursday, October 20, 2022, Yuba-Sutter Transit hosted a community open house about the NextGen Transit Plan, wherein participants had a chance to provide feedback on proposed priorities and ask questions of the project team. There were two different open-house opportunities: one from 2-4 p.m. and the other from 5:30-7 p.m. In between, from 4-5:30 p.m., the public was invited to attend the Yuba-Sutter Transit Board meeting, which included a presentation on the status of the NextGen Transit Plan. A total of 14 community members attended the meeting, which was located inside the Yuba County Government Center in Marysville right next to a transit stop to maximize accessibility.



PROJECT OVERVIEW

Starting in June 2022, Yuba-Sutter Transit started its Comprehensive Operational Analysis/Short Range Transit Plan called the NextGen Transit Plan. Yuba-Sutter Transit is the sole providers of public transit services throughout Yuba and Sutter counties and has been operating for over 40 years. This plan aims to shift the public transportation services in Yuba and Sutter counties to better fit the needs of its commuters by asking the following questions:

- Who are Yuba-Sutter Transit's current and potential customers?
- How is the overall system performing and what are areas for improvement?
- How can Yuba-Sutter Transit best serve its markets within its operational and financial capacities?

The major undertaking of the NextGen Transit Plan has been the online survey, which to date has received over 400 submissions. Hosting a community open house is another engagement effort to ensure all voices get heard as new changes get proposed.

OPEN HOUSE PURPOSE

The purpose of this community open house was to share information and receive input from community members on the Yuba-Sutter Transit NextGen Transit Plan. The open house updated community members on the status of the NextGen Plan, complemented the ongoing survey efforts, and created space to provide more detailed and one-on-one input than the survey's format allows. Representatives from Yuba-Sutter Transit and the project consultant team were available to discuss the project and answer questions.



PUBLICITY & NOTICING

AIM created a stakeholder database of 62 unique contacts spanning human services, large employers, education, elected/public officials, and more. Two rounds of personal phone calls were made to inform people about the open house and encourage their attendance, the first round on October 4-5 and the second on October 17. People in the stakeholder database also received two rounds of emails including the event flyer, wherein they were encouraged to share in their organization. Furthermore, the flyer and event information was shared via social media, including various Facebook groups specific to the Yuba-Sutter region.

OPEN HOUSE FORMAT

Fourteen community members attended the open house, which was organized as a series of trade-off stations where participants were given a “this or that” statement to cast votes and provide feedback. After receiving an information sheet at the welcome table, attendees were encouraged to make their way through five trade-off stations set up in a clockwise pattern around the room. Attendees ended their journey at a comment card table, encouraging attendees to provide input on the project. Project team members were available at each station and throughout the room to answer questions and discuss the project.



Members from the project team engage community members at each trade-off station during the event.

STATIONS

At each of the five stations, members of the project team were available to discuss the project and answer questions. The following list shows the information that was included at each station.

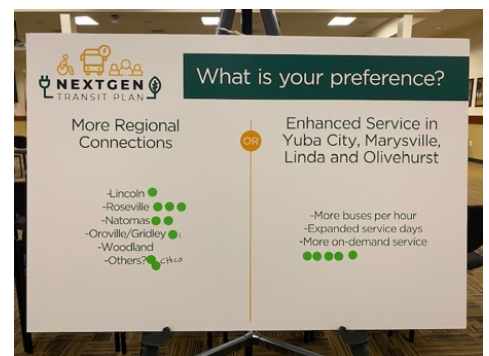
WELCOME TABLE

This station included sign-in sheets and an information sheet describing the project. People were also given come dot stickers to use at each station as a way to show their preference. Yuba-Sutter Transit also provided some informational materials, pens, and other goodies. Members of the project team were available to explain the open house layout.



STATION 1: More Regional Connections or Enhanced Service in Yuba City, Marysville, Linda, and Olivehurst?

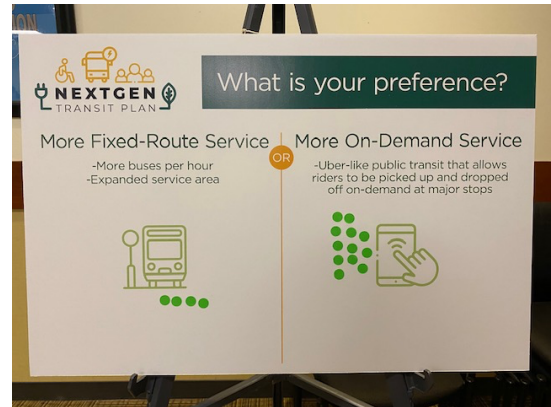
Participants were asked to use their dot stickers to demonstrate preference between more regional connections (and if so, where) or enhanced service in Yuba Linda, Marysville, Linda, and Olivehurst (which includes more buses per hour, expanded service days, and more on-demand service).



- The results show five for enhanced service compared to the nine for more regional connections. However, that nine broke down fairly evenly across the proposed places for connections, as follows: three for Roseville, two for Natomas, two written in Chico, one for Lincoln, and one (with an additional tally mark written in) for Oroville/Gridley.

STATION 2: More Fixed-Route Service or More On-Demand Service?

Here, participants were asked to use their dot stickers to demonstrate preference between more fixed-route service (which includes more buses per hour and expanded service area) or more on-demand service (which includes Uber-like public transit that allows riders to be picked up and dropped off on-demand at major stops).



- The results show a clear preference for more on-demand service with 12 stickers versus the four for more fixed-route service.

STATION 3: More Service During Existing Hours or Expanded Service to Start Earlier and End Later?

Within “More Service During Existing Hours,” multiple options were given: local fixed routes 6:30 a.m. to 6:30 p.m. on weekdays and 8:30 a.m. to 5:30 p.m. on Saturdays; from Foothills 6:30 a.m. to 12:30 p.m. on Tuesday, Wednesday, Thursday; from Live Oak 7 a.m and 12 p.m. on weekdays; from Wheatland on 10 a.m.



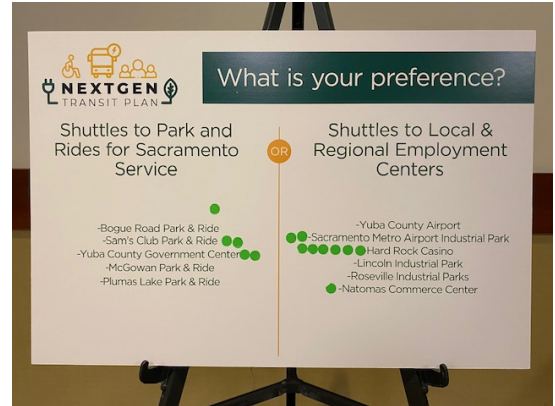
Wednesdays; Sacramento (first downtown stop) 6:15 a.m. to 5:10 weekdays; and Dial-A-Ride 6:30 a.m. to 9:30 p.m. weekdays and 8:30 a.m. to 5:30 p.m. Saturdays. Within “Expanded Service to Start Earlier and End Later,” a few examples were given: expanded local fixed route service to have more frequent buses, start earlier and end later, and/or more service days; Foothills service to have more service days; Live Oak & Wheatland service to start earlier and end later; Sacramento to start earlier and end later and/or more service days; and Dial-A-Ride to start earlier and end later and/or more service days.

- Five stickers were placed on “More Service During Existing Hours,” two on Dial-A-Ride and one each on local fixed routes, Foothills, and Sacramento.
- Thirteen stickers voted for “Expanded Service to Start Earlier and End Later,” with Dial-A-Ride getting seven of those votes. There were also two each for Foothills and Live Oak & Wheatland, and one each for Sacramento and expanded local fixed route service.

STATION 4: Shuttles to Park & Rides for Sacramento Service or Shuttles to Local & Regional Employment Centers?

Within “Shuttles to Park & Rides for Sacramento Service,” five options were given: Bogue Road Park & Ride, Sam’s Club Park & Ride, Yuba County Government Center, McGowan Park & Ride, and Plumas Lake Park & Ride.

Within “Shuttles to Local & Regional Employment Centers,” six options were given: Yuba County Airport, Sacramento Metro Airport Industrial Park, Hard Rock Casino, Lincoln Industrial Park, Roseville Industrial Park, and Natomas Commerce Center.



- Five people voted for Park & Ride Services for Sacramento, including two each for Sam’s Club Park & Ride and Yuba County Government Center. There was also one vote placed in general for this category, but it did not specify to which location.
- Out of the nine stickers for the shuttles to local and regional employment centers, there was a clear preference for the Hard Rock Casino (six). Additionally, there were two for Sacramento Metro Airport & Industrial Park and one for Natomas Commerce Center.

STATION 5: More Service in Existing Areas or Service in New Areas?

This last station asked preference between more service in existing areas or service in new areas, each option providing a map to visualize the option.

- Eight people demonstrated preference for more service in existing areas, whereas five desire service in new areas.



COMMENT CARD TABLE

Next to Station 5 was a table with comment cards to encourage community input on the Project, and a box to collect the cards.

COMMUNITY WORKSHOP #2

On Thursday, February 16, 2023, Yuba-Sutter Transit hosted its second community open house about the NextGen Transit Plan, wherein participants had a chance to provide feedback on proposed alternatives, participate in a feedback survey, and ask questions of the project team. There were two available times to attend the open house: one from 2:00-4:00 p.m. and the other from 5:00-6:30 p.m. In between, from 4:00-5:00 p.m., the public was invited to attend the Yuba-Sutter Transit Board meeting, which included a presentation on the status of the NextGen Transit Plan. A total of 20 community members attended the open house, which was located inside the Yuba County Government Center in Marysville, near a transit stop to maximize accessibility.



PURPOSE

The purpose of this second community open house was to update the community on the proposed transit alternatives, such as micro-transit; share new service zones and route updates; and receive input from community members on the Yuba-Sutter Transit NextGen Transit Plan. Representatives from Yuba-Sutter Transit and the project consultant team were available to discuss the project and answer questions.

PUBLICITY & NOTICING

AIM Consulting created and utilized a stakeholder database of 67 unique contacts spanning human services, large employers, education, elected/public officials, community members, and more. Three rounds of personal phone calls were made to inform stakeholders about the open house and encourage their attendance. The first round was on January 25, the second on February 1, and the third on February 13. People in the stakeholder database also received three emails, sent on the same days identified above. Emails included the event flyer and social media graphic and encouraged them to share in their organization. Furthermore, the social media graphic and event information was shared weekly via Facebook groups specific to the Yuba-Sutter region.



OPEN HOUSE FORMAT

The 20 community members who attended the open house were greeted at the welcome table and had the option of taking a handout that included proposed route updates for Yuba City, Marysville, Linda, Olivehurst, and Roseville (commuter options). The handout also included a link to a five-question feedback survey. After signing in and receiving a handout at the welcome table, attendees were encouraged to view the proposed routes on a larger scale on six display boards evenly spaced around the room. These exhibits provided them with the opportunity to see the maps in greater detail and point out any questions or comments they had for the project team. Attendees ended their journey at a comment card table, encouraging attendees to provide input on the project. Project team members were available at each station and throughout the room to answer questions and discuss the project.



Members from the project team engage community members at each station during the event.

ROOM LAYOUT

The following list details the layout of the room:

WELCOME TABLE:

This station included sign-in, transit route brochures, and a handout of the proposed route updates that were presented on the exhibit boards.

EXHIBIT 1: YUBA CITY COMMUNITY ZONE

- New coverage in South Yuba City Service to Yuba College – Sutter County Center
- Expanded Tierra Buena & North
- Yuba City coverage
- Connect to a faster crosstown route to reach Marysville and Linda
- Fast and direct service to Colusa

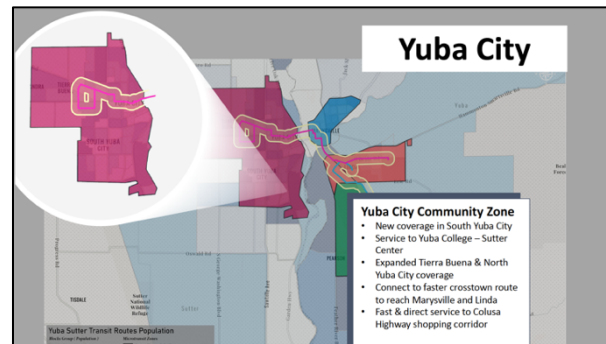


EXHIBIT 2: MARYSVILLE COMMUNITY ZONE

- Better coverage throughout Marysville
- Connect to faster service into Linda and through Yuba City
- Easily reach Yuba College
- and Walmart/Costco

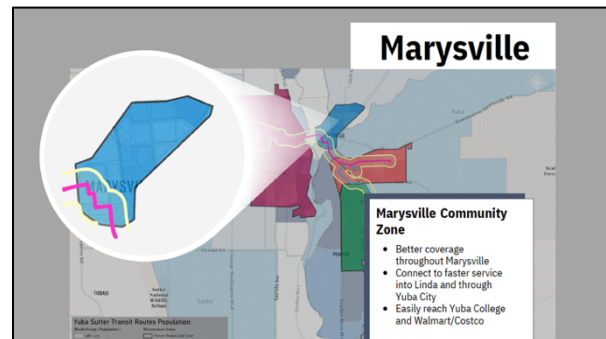


EXHIBIT 3: LINDA COMMUNITY ZONE

- Easier connections to Peachtree Health
- Faster service to Yuba College
- Expanded service to Edgewater and East Linda
- Easily reach Marysville and Olivehurst
- for fast connections to Sacramento
- and Roseville

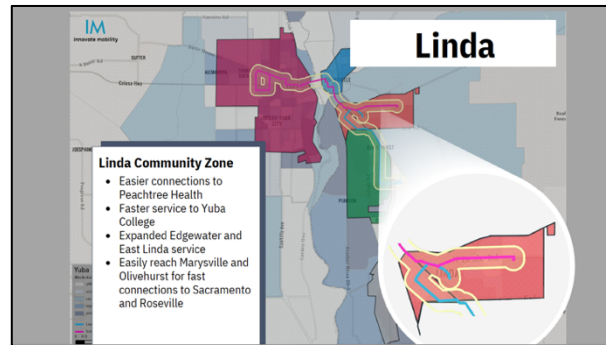


EXHIBIT 4: OLIVEHURST COMMUNITY ZONE

- Direct connection to Peachtree Health
- New coverage to Airport Industrial Park and North Arboga (Wheeler Ranch)
- Get to park and rides faster to reach Sacramento and Roseville
- Connect to Linda, Marysville, and Yuba City simply and quickly

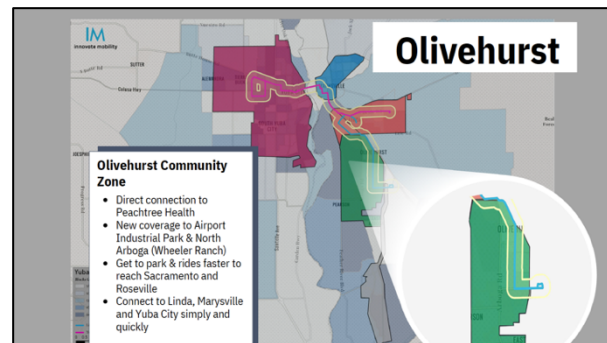


EXHIBIT 5: ROSEVILLE COMMUTER SERVICE

- Travel from Marysville, Olivehurst, and Wheatland directly to the Roseville Galleria Transit Center
- Easily connects to Placer County and Roseville service at the Galleria Transit Center
- One trip to Roseville in the morning and one evening trip back to Yuba County

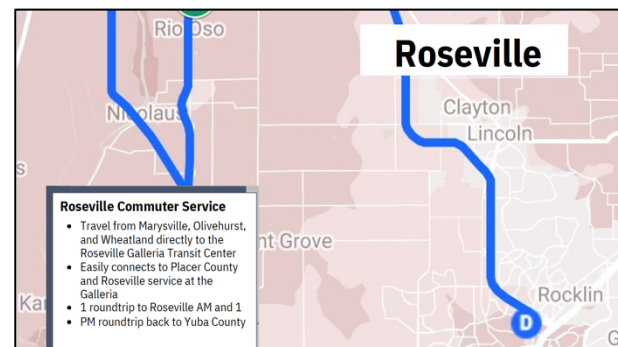


EXHIBIT 6: SERVICE PROPOSAL ALTERNATIVES

Improve Rider Experience

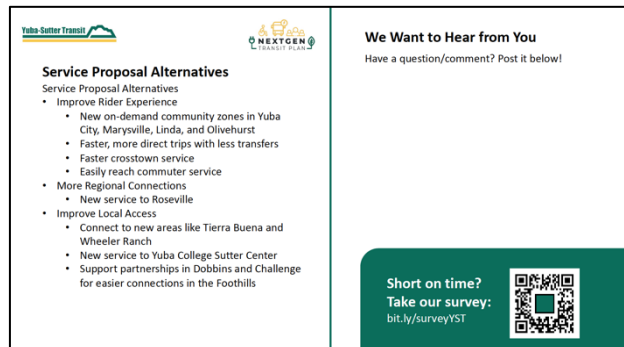
- New on-demand community zones in Yuba City, Marysville, Linda, and Olivehurst
- Faster, more direct trips with less transfers
- Faster crosstown service
- Easily reach commuter service

More Regional Connections

- New service to Roseville

Improve Local Access

- Connect to new areas like Tierra Buena and Wheeler Ranch
- New service to Yuba College Sutter Center
- Support partnerships in Dobbins and Challenge
- for easier connections in the Foothills



The right side of the board provided space for attendees to post questions/comments on a post-it note. They also had the option to scan a QR code which led to a feedback survey.

COMMENT CARD TABLE

Next to board # 6 was a table with comment cards and pens to encourage community input on the project, and a box to collect the cards. There were also 2 iPads that displayed the following survey to get feedback on the open house and the NextGen Transit Plan:

- Question 1: On a scale of 1 (do not understand) to 5 (well understood), how well do you understand the information presented at the Yuba-Sutter Transit open house?
- Question 2: On a scale of 1 (it does not meet my needs) to 10 (it meets my needs well), how does Yuba-Transit's current system meet your needs?
- Question 3: On a scale of 1 (not beneficial) to 5 (very beneficial) will the new changes benefit you?
- Question 4: What area are you most interested in learning more about? (check all that apply)
 - Options: Yuba City, Marysville, Linda, Olivehurst, Sacramento, Roseville, The Foothills, and Other

- Question 5: If you are interested in hearing about project updates for the NextGen Transit Plan, please provide your email address.

COMMUNITY INPUT

There were two community members who submitted feedback via comment cards and posted notes during the open house.

The following comments were submitted:

- “Thank you so much for the information and explanation. As a Yuba-Sutter rider, I am excited for all the new changes that will benefit the community. I know this will benefit those who rely on transit and want to use transit more”
- “Airport” (in regards to transit options to Sacramento International Airport)

There were three community members who participated in the feedback survey with positive responses.

PUBLIC ENGAGEMENT PLAN SCHEDULE

The following shows the overall schedule of public engagement activities over the seven months of the NextGen Transit Plan.

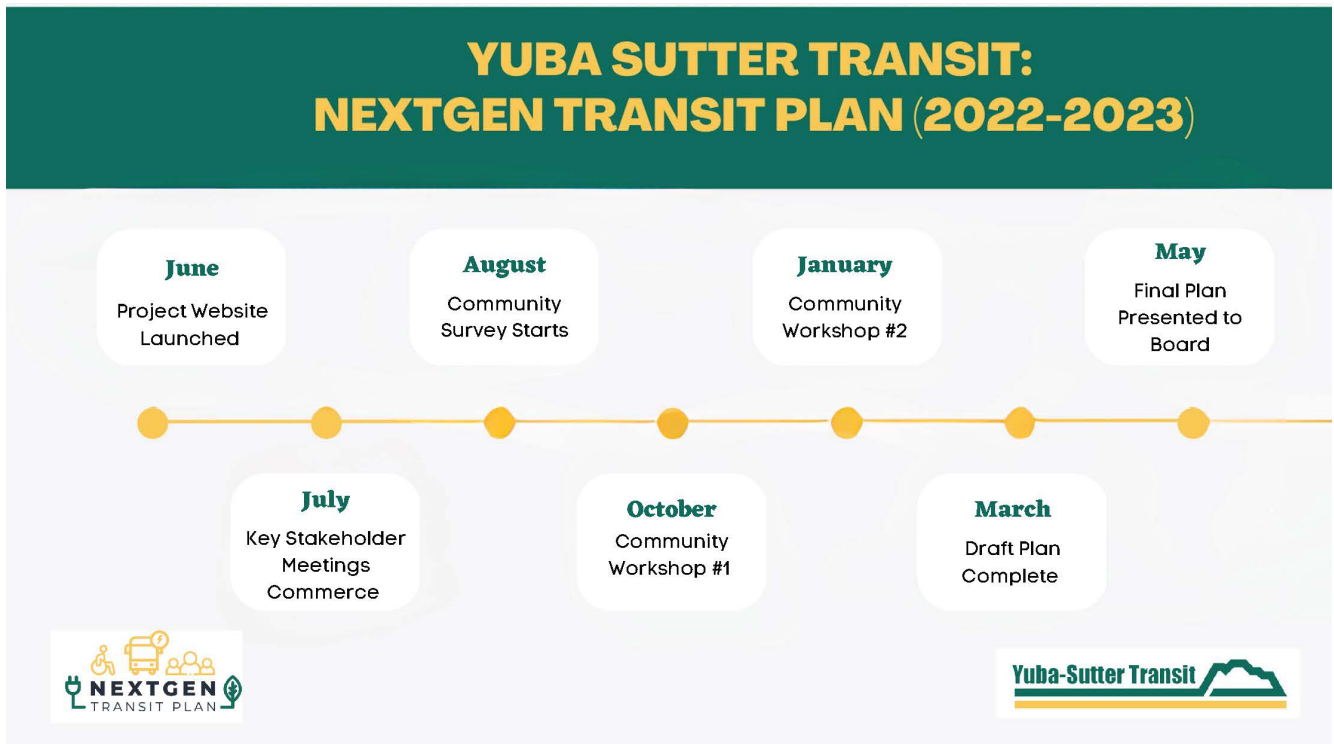


Figure 208 - Public Engagement Timeline

APPENDIX I – FUNDING SOURCES OVERVIEW

HISTORY & OVERVIEW OF THE CALIFORNIA TRANSPORTATION DEVELOPMENT ACT

In 1971, Governor Ronald Reagan and the California Legislature passed the Transportation Development Act (TDA) to provide a stable, long-term source of funding to counties for transit and non-transit related purposes. The bill, known as SB-325 or the Mills-Alquist-Deddah Act, improves existing public transportation services through a regional transportation plan.

The TDA has two major funding sources, the Local Transportation Fund (LTF), created in 1972 and the State Transit Assistance fund (STA), established in 1980. The LTF is derived from a 1/4-cent general sales tax and the STA is derived from sales tax on diesel fuel. Some counties can use LTF for local streets and roads projects if all transit needs are met. The STA Fund may not be used to fund administration, streets, or roads projects. The TDA marked the first instance in which the state used the sales tax, rather than an excise tax, to fund transportation.¹¹ To date, SB 325 generates annual revenues of \$1.8 billion for public transportation in California.

Four entities are responsible for implementing the TDA: The state government, Regional Transportation Agencies/local government, Transportation operators and Public Works departments.

TRANSPORTATION DEVELOPMENT ACT FUNDING: LTF & STA

Through the LTF and STAF, the Transportation Development Act (TDA) provides two major sources of funding for public transportation: The Local Transportation Fund (LTF) and the State Transit Assistance fund (STA). These funds are for the development and support of public transportation needs that exist in California and are allocated to areas of each county based on population, taxable sales and transit performance. Some counties have the option of using LTF for local streets and roads projects, if they can show there are no unmet transit needs.

11

A short history of transportation funding

http://stran.senate.ca.gov/sites/stran.senate.ca.gov/files/trans_funding_fact_sheet_oct_2016.pdf

The Transit Programs Branch provides oversight of the public hearing process used to identify unmet transit needs. It provides interpretation of and initiates changes or additions to legislation and regulations concerning all aspects of the TDA. It also provides training and documentation regarding TDA statutes and regulations. The branch ensures local planning agencies complete performance audits required for participation in the TDA.¹²

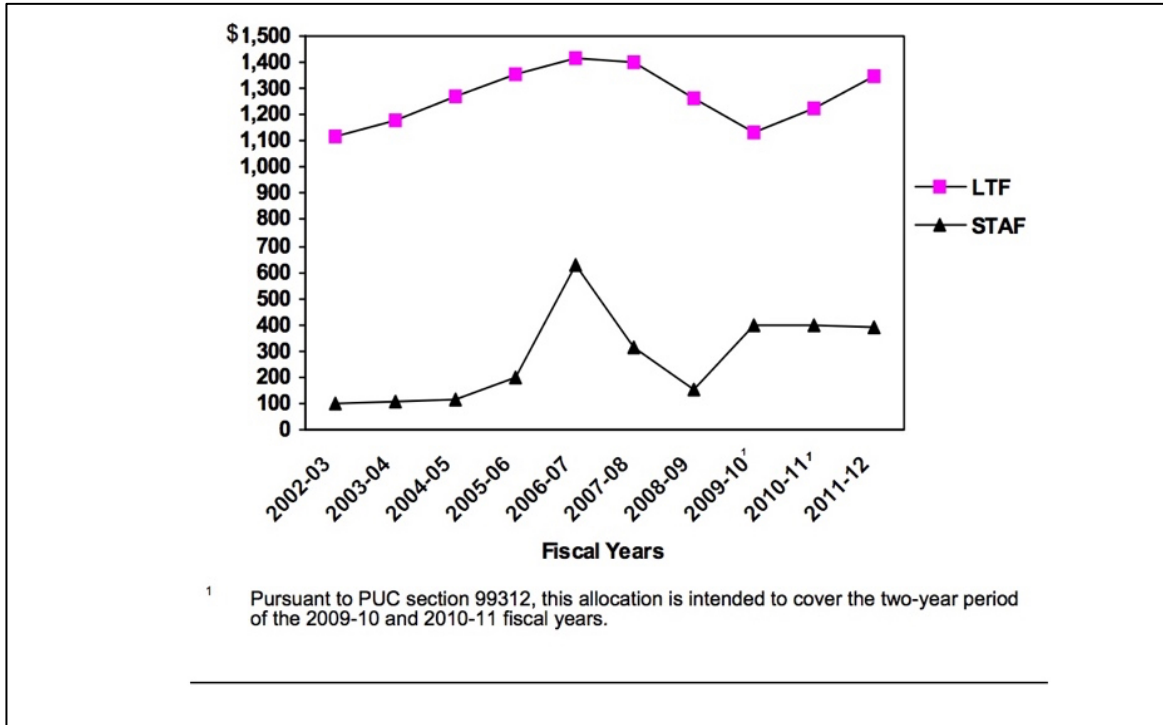


Figure 209 - LTA and STA Funding Comparisons

LOCAL TRANSPORTATION FUND (LTF)

LTF revenues are derived from 1/4 cent of the base 7.25% retail sales tax collected statewide. The State Board of Equalization returns the 1/4-cent to each county according to the amount of tax collected in that county.

¹² California Division of Transportation

<http://www.dot.ca.gov/hq/MassTrans/State-TDA.html>

LTF funds are distributed through a three-step process: (1) apportionment, (2) allocation, and (3) payment. One step does not always imply or require the next. Annually, the Transportation Planning Agencies (TPAs) determine each area's share of the anticipated LTF. This share is the area apportionment. Once funds are apportioned to a given area, they are available only for allocation to claimants in that area. Allocation is the discretionary action by the TPA, which designates funds for a specific claimant for a specific purpose. Payment is authorized by allocation instructions issued by the TPA, which may call for payment in a lump sum, in installments, or as funds become available.

STATE TRANSIT ASSISTANCE FUND (STA)

The State Transit Assistance (STA) program was created in 1979 and provides a second source of TDA funding for transportation planning, public transportation, and community transit purposes. Unlike LTF, STAF funds may not be allocated to fund administration, streets, roads, or pedestrian/bicycle facility purposes.

Planning and Development account. The money is appropriated to the State Controller for allocation by formula to each regional planning entity.

The formula is split into two equal funding areas: 50% of the funds for a Population-Based STA, calculated from the ratio of the population versus the entire state, and the remaining 50% is allocated according to the prior-year proportion of regional transit operator revenues compared with statewide transit operator revenues. STA allocations are deposited in each regional entity's STA fund. The process for allocation and payment of funds from the STA fund is similar to that for LTF.

REGIONAL TRANSPORTATION PLANNING AGENCIES & GOVERNING STRUCTURE

Every county in California is served by a regional transportation planning agency according to California law. RTPAs are known locally by several titles: local transportation commissions, county transportation commissions, councils of government, and associations of government. Counties with urbanized areas over 50,000 people also have Metropolitan Planning Organization (MPOs) to guide regional transportation planning. By law, both MPOs and RTPAs are required to develop an Overall Work Program (OWP) and regional transportation plan (RTP). Examples of these RTPAs are the Sacramento Area Council of Governments (for Yuba and Sutter Counties), as well as the Fresno Council of Governments and the Southern California Association of Governments.

Both the LTF and STA funding are administered by these RTPAs, which are better equipped to identify and address local transportation needs, conduct planning, assist local governments, and support the statewide transportation planning process in non-metro regions of California. States are provided the opportunity to designate RTPAs as a method for formalizing the engagement of officials from areas with a population size less than 50,000 as they incorporate rural transportation needs in the statewide transportation planning process.¹³

¹³ https://www.planning.dot.gov/documents/RTPO_factsheet_master.pdf



Figure 210 - MPO and RTPAs in California

In California, there are currently 44 RTPA, 18 of which are MPOs (with 50,000 people or more) or exist within MPO boundaries. The other 26 designated RTPAs have populations of less than 50,000 people. These regional agencies are responsible for planning, coordinating, and administering federal, state, and local funds that enhance their region’s multimodal transportation network.

As of 2013, California has 482 incorporated cities and 58 counties; each local government has authority over their roads, streets, and land-uses within their jurisdictional boundary. Local governments and transit operators nominate transportation projects for funding to their regional transportation planning organizations. County transportation authorities are responsible for developing expenditure plans for self-imposed, voter-approved, local sales tax measures.

REQUIREMENTS FOR LTF AND STA FUNDING

Funding from the LTF is a three-step process: (1) apportionment, (2) allocation, and (3) payment. Apportionment is the required division of available funds by population to jurisdictions within each county (cities and unincorporated portions of the counties). Once funds are apportioned to a given jurisdiction, they are available only for allocation to claimants for that jurisdiction.

Allocation is at the discretionary responsibility of the respective RTPA, who designates funds for a specific claimant for a specific purpose. Payment is authorized by the allocation instructions, which may call for payment in a lump sum, in installments, or as funds become available. Interest earned by SACOG on the moneys allocated to a claimant does not accrue to the project, but only accrues to the local transportation fund to be apportioned to future projects.

PERFORMANCE MEASUREMENTS

To ensure program compliance among TDA funding recipients, fiscal and performance audits are conducted on different schedules. Fiscal audits are conducted on an annual basis. They include transit operator’s expense-to-revenue ratio, known as farebox recovery. These are to ensure the fairness and accuracy of the financial statements retrospectively.

Performance audits are conducted every three years and analyze performance measures that verify the efficiency and effectiveness of California’s planning agencies and transit operators. Both fiscal and performance audits are conducted by entities designated by the transportation planning agency (other than itself), a county transportation commission, or an operator.¹⁴

¹⁴ https://www.transitwiki.org/TransitWiki/index.php/Transit_Development_Act

The California Department of Transportation receives copies of the performance audits of all RTPAs. Additionally, the Department receives certification from each Regional Transportation Planning Entity that required performance audits have been completed for all transit operators under the Entity's jurisdiction. According to state law, all RTPAs should receive and present to their governing boards, not only their own performance audit, but also the performance audits of all transit operators under their jurisdiction. The audit report should also be presented to the officials of each audited entity and be made available to the public.¹⁵

¹⁵ PAGBookfinal pdf pg 2

Sources

Transportation Development Act (TDA) website

https://sco.ca.gov/aud_transportation_development_act.html

California Division of Transportation

<http://www.dot.ca.gov/hq/MassTrans/State-TDA.html>

Transit Wiki

https://www.transitwiki.org/TransitWiki/index.php/Transit_Development_Act

<http://www.dot.ca.gov/paffairs/timeline.html>

What is a Regional Transportation Planning Agency?

While operators that receive funding under Article 4 of the TDA are required to have a performance audit, those claimants that receive funding under Article 4.5 or Article 8 are not statutorily required to have a performance audit, although it is encouraged that they do so.

The performance audit evaluates the efficiency, effectiveness and economy of the entity's according to the Comptroller General's "Standards for Audit of Governmental Organizations, Programs, Activities and Functions Programs." The performance audits must be conducted on a triennial (every three years) basis according to the schedule established by respective RTPA having jurisdiction over an operator.

Performance audits of an operator providing public transportation services includes the following performance indicators:

- Operating cost per passenger
- Operating cost per vehicle service hour
- Passengers per vehicle service hour
- Passengers per vehicle service mile
- Vehicle service hours per employee

CONSEQUENCES OF FAILING REQUIREMENTS

The State Controller's Office will not authorize any payment to a regional entity that is delinquent in its submission of a state transit assistance fund fiscal audit report.

https://www.planning.dot.gov/documents/RTPO_factsheet_master.pdf

Regional Transportation Planning Agencies

<http://www.dot.ca.gov/hq/MassTrans/Docs-Pdfs/Jarc-NF/Cycle%206/mportparevisedlist011312.pdf>

http://stran.senate.ca.gov/sites/stran.senate.ca.gov/files/trans_funding_fact_sheet_oct_2016.pdf

The TDA orders that in the case of an operator or transit service claimant failing to maintain, for a fiscal year, the ratio of fare revenues to operating cost required (for Yuba-Sutter Transit this figure is 14.6%), and if it is not the first year for which the claimant has failed to maintain that ratio which is considered the one-time grace year, the claimant's eligibility to receive Transportation Development Act funds would be determined as follows:

1. In the fiscal year that the claimant fails to maintain the required ratio, known as the “noncompliance year”, there is no change in eligibility.
2. In the subsequent fiscal year or determination year there is no change in eligibility, however the audited amount of the difference between the required and actual fare revenue to operating cost ratio as reported in the claimant's fiscal and compliance audit for the fiscal year for which the required ratio was not met must be determined.
3. In the third or penalty year, the operator's or transit service claimant's eligibility to receive monies from the local transportation and state transit assistance funds shall be reduced, for one year only, by the amount of the difference between the required fare revenues and the actual fare revenues for the fiscal year that the required ratio was not maintained.
4. A claimant subject to the penalty in this section shall demonstrate to the transportation planning agency, the county transportation commission.

APPENDIX II – BUS STOP SPACING

ROUTE 1 EASTBOUND

Stop Name	Ridership		Distance (Miles)	Latitude	Longitude
	2019	2022			
Walton Terminal at Sam's Club	40.99	19.47		39.1391	-121.6441
Lassen and Walton Avenue	1.03	0.03	0.07	39.1381	-121.6443
Lassen Boulevard and Tharp Rd.	6.27	4.62	0.24	39.1381	-121.6488
Lassen and Klamath - One-Stop / Feather River Academy	10.09	7.64	0.19	39.1381	-121.6523
Harter and Spirit Way - River Valley HS	7.54	5.91	0.20	39.1398	-121.6553
Harter Road and Walmart	39.23	30.93	0.32	39.1443	-121.6554
Butte House and Harter Parkway	2.99	2.41	0.44	39.1505	-121.6530
Butte House Rd. and Tharp Rd.	1.47	0.52	0.29	39.1490	-121.6479
Butte House Rd. and Stabler Ln. - Rite-Aid	15.04	10.31	0.24	39.1479	-121.6436
Butte House Rd. and Civic Center Blvd. - City Hall	8.37	2.12	0.29	39.1464	-121.6385
Butte House Rd. and Yuba Sutter Mall	12.78	8.18	0.34	39.1453	-121.6324
Gray Ave and Ainsley Ave - Yuba Sutter Mall	13.76	11.64	0.15	39.1440	-121.6302
Gray & Louise	20.57	12.68	0.30	39.1396	-121.6304
Forbes Ave. and Gray Ave. - Brannan Park	12.68	7.46	0.11	39.1381	-121.6295
Forbes Ave. and Clark Ave.	14.84	8.23	0.23	39.1380	-121.6252
Forbes Ave. and Orange St.	1.62	0.85	0.16	39.1377	-121.6222
Forbes Ave. and Almond St.	12.49	0.4	0.16	39.1377	-121.6192
Plumas St. and Church St.	22.87	11.44	0.14	39.1387	-121.6170
Alturas St. and Shasta St.	75.37	35.93	0.21	39.1417	-121.6164
Yuba Co. Government Center - I & 9th Streets	27.92	15.85	1.04	39.1438	-121.5972
H Street and 7th Street	1.08	1.9	0.15	39.1422	-121.5953
H Street and 4th Street	3.77	1.75	0.23	39.1390	-121.5950
3rd Street at Rideout Hospital	6.95	4.46	0.12	39.1378	-121.5933
D and 2nd (Departure)	46.53	28.42	0.25	39.1370	-121.5887
North Beale Road and Feather River Blvd.	9.21	0.5	1.00	39.1258	-121.5769
North Beale Road and Walmart - South Side	19.88	11.59	0.16	39.1252	-121.5740
North Beale Road and Lowe Avenue	3.67	0.5	0.67	39.1276	-121.5618
North Beale Road and Park Avenue	2.60	0.46	0.18	39.1274	-121.5584
North Beale Road and Hammonton-Smartville Road	0.34	0.22	0.20	39.1275	-121.5547
North Beale Road and Albrecht Avenue	0.39	0.11	0.29	39.1277	-121.5493
North Beale Road and Woodland Drive	2.45	0.07	0.26	39.1278	-121.5444
Yuba College Terminal	35.65	4.75	0.37	39.1269	-121.5377

Figure 211 - Route 1 Eastbound Stop Spacing

ROUTE 1 WESTBOUND

Stop Name	Ridership		Distance (Miles)	Latitude	Longitude
	2019	2022			
Yuba College Terminal	0.00	0.33		39.1269	-121.5377
North Beale Road and Woodland Drive	20.54	4.55	0.37	39.1278	-121.5444
North Beale Road and Albrecht Avenue	3.74	1.5	0.26	39.1277	-121.5493
North Beale Road at Alpine/Park	26.80	14.2	0.46	39.1277	-121.5578
North Beale Road and Lowe Avenue	21.63	21.19	0.22	39.1276	-121.5618
North Beale Road and Wal-Mart - North Side	109.76	66.83	0.64	39.1254	-121.5733
North Beale Road at Rio Inn	16.31	4.78	0.51	39.1281	-121.5821
D and 2nd (Departure)	32.41	19.53	0.71	39.1370	-121.5887
F Street and Second Street (Buttes Manor)	6.65	6.03	0.15	39.1369	-121.5915
3rd Street at Rideout Hospital	9.31	4.66	0.11	39.1378	-121.5933
H Street and 7th Street	3.25	0.8	0.32	39.1422	-121.5953
Yuba Co. Government Center - I & 9th Streets	80.69	34.53	0.15	39.1438	-121.5972
Alturas St. and Shasta St.	34.98	13.48	1.04	39.1417	-121.6164
Plumas St. and Church St. - Post Office	14.88	11.44	0.20	39.1388	-121.6168
Forbes Ave. and Almond St	10.89	1.15	0.14	39.1376	-121.6189
Forbes Ave. and Orange St.	1.23	1.41	0.20	39.1378	-121.6226
Forbes Ave. and Clark Ave. - Library	9.26	4.26	0.12	39.1378	-121.6249
Forbes Ave. and Gray Ave. - Brannan Park	5.62	3.37	0.25	39.1379	-121.6295
Gray & Louise	9.16	6.16	0.14	39.1399	-121.6301
Gray Ave and Ainsley Ave - Yuba Sutter Mall	2.76	3.79	0.28	39.1440	-121.6302
Butte House Rd. and Target Entrance	7.34	6.01	0.19	39.1455	-121.6331
Butte House and El Dorado Lane - City Hall	1.82	1.62	0.32	39.1468	-121.6389
Stabler Ln. and Butte House Rd. - Bel Air	8.62	7.44	0.28	39.1474	-121.6441
Stabler Ln. and Starr Drive - DMV	1.58	0.83	0.29	39.1432	-121.6440
Walton Terminal at Sam's Club	41.23	6.36	0.28	39.1391	-121.6441

Figure 212 - Route 1 Westbound Stop Spacing

ROUTE 2A

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Walton Terminal at Sunsweet	0.95	0.02		39.1394	-121.6438
Stabler Ln. and Starr Drive - DMV	1.36	0.46	0.31	39.1438	-121.6438
Butte House Rd. and Stabler Ln. - Rite-Aid	10.14	4.73	0.28	39.1479	-121.6436
Butte House Rd. and Civic Center Blvd. - City Hall	2.86	1.29	0.29	39.1464	-121.6385
Butte House Rd. and Yuba Sutter Mall	13.71	6.67	0.34	39.1453	-121.6324
Washington Ave and Gray Ave	2.51	1.54	0.29	39.1490	-121.6299
Washington Ave. and Clark Ave.	2.11	2.91	0.20	39.1490	-121.6261
Ainsley Ave. and Clark Ave.	1.31	0.37	0.34	39.1441	-121.6261
Ainsley Ave. and Yuba City Senior Center	14.41	3.89	0.14	39.1441	-121.6287
Gray Avenue and Queens Ave.	0.90	0.21	0.56	39.1521	-121.6300
Gray Ave., and Casita Dr. - April Lane School	18.03	3.13	0.20	39.1550	-121.6300
Northgate Dr. and Gray Ave.	2.56	0.50	0.34	39.1598	-121.6299
Northgate Dr. and Clark Ave.	2.81	2.98	0.23	39.1595	-121.6256
Northgate Dr. and Live Oak Blvd.	9.19	1.11	0.17	39.1593	-121.6224
Behavioral Health	5.37	3.46	0.39	39.1203	-121.5663
Queens Avenue and Live Oak Blvd.	9.99	2.65	0.41	39.1517	-121.6202
Plumas St and Alemar Way	3.11	0.79	0.15	39.1508	-121.6176
Plumas St and Sutter Estates	5.93	1.10	0.24	39.1474	-121.6177
Plumas Street and Ainsley Avenue	0.85	3.10	0.15	39.1451	-121.6178
Plumas St. and Fremont Medical Center	1.36	0.34	0.12	39.1434	-121.6178
Alturas St. and Shasta St.	22.45	10.75	0.14	39.1417	-121.6164
Plumas St. and Church St.	8.64	2.53	0.21	39.1387	-121.6170
Plumas and Bridge Street	8.29	2.71	0.24	39.1356	-121.6152
Plumas Street and B Street - Town Square	8.34	3.24	0.17	39.1332	-121.6145
Wilbur Ave and C Street - Gauche Aquatic Park	1.51	0.35	0.12	39.1326	-121.6122
Wilbur Ave. and Franklin Ave.	0.90	1.71	0.17	39.1303	-121.6115
Wilbur Ave. and Yuba City Charter	3.57	0.60	0.10	39.1289	-121.6118
Wilbur Ave. and Garden Hwy.	6.38	2.70	0.25	39.1256	-121.6099
Garden Hwy. and Percy Ave.	23.15	6.79	0.30	39.1220	-121.6130
Garden Hwy. and Winship Road - County Offices	7.23	0.45	0.23	39.1199	-121.6164
Lincoln Rd. and Garden Hwy.	2.36	5.05	0.50	39.1128	-121.6181
Lincoln Rd. and Railroad Ave.	10.35	2.48	0.27	39.1127	-121.6232
Clark Ave. and Richland Rd.	2.76	0.52	0.42	39.1187	-121.6248
Clark Ave and Julie Dr - St. Isadore's	8.04	1.96	0.32	39.1232	-121.6249
Franklin Road and Clark Avenue - Yuba City High School	6.63	4.93	0.28	39.1273	-121.6252
Gray Avenue and Franklin Road	1.10	0.29	0.24	39.1276	-121.6297
Gray Avenue and B Street	7.88	2.52	0.19	39.1304	-121.6298
Bridge St. and Gray Ave. - La Superior	4.02	2.01	0.16	39.1324	-121.6311
Bridge St and Raleys	11.60	2.13	0.34	39.1325	-121.6375
Bridge Street and JoAnn Way	1.00	0.16	0.17	39.1325	-121.6407
Walton Ave. and Bridge St.	1.91	0.57	0.16	39.1327	-121.6437
Walton Terminal at Sam's Club	8.99	8.46	0.44	39.1391	-121.6441

Figure 213 - Route 2A Stop Spacing

ROUTE 2B

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Walton Terminal at Sam's Club	42.07	12.84		39.1391	-121.6441
Walton Ave. and Bridge St.	3.39	0.65	0.44	39.1327	-121.6437
Bridge Street and JoAnn Way	0.29	0.56	0.16	39.1325	-121.6407
Bridge St. and Oji Way	12.31	5.06	0.19	39.1323	-121.6372
Bridge Street and N Barrett Rd	3.24	3.56	0.33	39.1322	-121.6310
Gray Avenue and B Street	5.15	3.35	0.14	39.1304	-121.6298
Franklin Road and Gray Ave.	1.34	0.24	0.22	39.1272	-121.6293
Clark Ave. and Franklin Ave. - Yuba City High School	4.01	0.64	0.24	39.1269	-121.6249
Clark Ave. and Julie Dr. - Hillcrest Plaza	2.39	1.50	0.25	39.1232	-121.6246
Bruce Rd. and Richland Rd.	1.29	0.52	0.35	39.1181	-121.6247
Lincoln Rd. and Railroad Ave.	10.73	2.82	0.38	39.1127	-121.6232
Lincoln Rd. and Garden Hwy.	8.16	2.14	0.27	39.1126	-121.6182
Garden Hwy. and Winship Road	3.05	0.51	0.50	39.1196	-121.6162
Garden Hwy. and Percy Ave.	7.39	7.11	0.24	39.1220	-121.6130
Wilbur Ave. and Garden Hwy.	7.39	3.45	0.31	39.1257	-121.6098
Wilbur Ave. and Fairview Mobile Home Park	4.77	4.77	0.23	39.1288	-121.6116
Wilbur Ave. and Franklin Ave.	2.39	0.39	0.10	39.1303	-121.6115
Wilbur Ave and C Street - Gauche Aquatic Park	1.00	0.62	0.16	39.1325	-121.6121
Plumas Street and Town Square	7.16	2.81	0.10	39.1330	-121.6139
Plumas and Bridge Street	4.05	3.36	0.19	39.1356	-121.6152
Plumas St. and Church St.	11.93	2.04	0.24	39.1387	-121.6170
Alturas St. and Shasta St.	33.96	7.54	0.21	39.1417	-121.6164
Plumas St. and Fremont Medical Center	1.62	0.50	0.14	39.1434	-121.6178
Plumas Street and Ainsley Avenue	0.52	1.07	0.12	39.1451	-121.6178
Plumas St and Sutter Estates	5.53	2.56	0.13	39.1471	-121.6175
Plumas St and Alemar Way	7.92	3.09	0.25	39.1507	-121.6174
Queens Avenue and Brundy Ct.	10.02	2.90	0.16	39.1521	-121.6197
Behavioral Health	0.00	1.69	0.41	39.1203	-121.5663
Northgate Dr. and Live Oak Blvd.	1.43	1.41	0.39	39.1595	-121.6229
Northgate Dr. and Clark Ave.	2.81	1.05	0.15	39.1595	-121.6256
Northgate Dr. and Gray Ave.	2.00	1.21	0.23	39.1598	-121.6299
Gray Ave., and Casita Dr. - April Lane School	21.85	10.18	0.36	39.1546	-121.6302
Gray Avenue and Queens Ave.	1.29	0.84	0.22	39.1515	-121.6302
Washington Ave and Gray Ave	2.72	2.21	0.17	39.1490	-121.6299
Washington Ave. and Clark Ave.	3.15	2.71	0.20	39.1490	-121.6261
Ainsley Ave. and Clark Ave.	0.95	0.60	0.34	39.1441	-121.6261
Ainsley Ave. and Yuba City Senior Center	4.67	3.02	0.14	39.1441	-121.6287
Butte House Rd. and Target Entrance	8.20	3.28	0.26	39.1455	-121.6331
Butte House and El Dorado Lane - City Hall	3.77	1.95	0.32	39.1468	-121.6389
Stabler Ln. and Butte House Rd. - Bel Air	7.06	3.86	0.28	39.1474	-121.6441
Stabler Ln. and Starr Drive - DMV	3.58	0.25	0.29	39.1432	-121.6440

Figure 214 - Route 2B Stop Spacing

ROUTE 3 NORTHBOUND

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Evelyn and Johnson Park	32.52	15.04		39.0787	-121.5372
McGowan Parkway and George Avenue	8.77	1.85	0.38	39.0772	-121.5440
McGowan Parkway and Ardmore Avenue - Olivehurst School	6.71	2.85	0.29	39.0773	-121.5494
Olivehurst Avenue and Beverly Avenue	4.26	2.49	0.14	39.0782	-121.5518
Olivehurst Avenue and 14th Street	3.10	3.63	0.38	39.0837	-121.5517
Olivehurst Avenue and 11th Avenue	4.84	3.82	0.32	39.0883	-121.5519
Olivehurst Avenue and 9th Avenue	7.23	2.45	0.21	39.0913	-121.5518
Olivehurst Avenue and 7th Avenue - Ella School	15.94	7.59	0.29	39.0955	-121.5517
Olivehurst Avenue and 6th Avenue - Ampla Health	16.26	8.22	0.16	39.0978	-121.5516
Chestnut Road and Olivehurst Avenue	8.32	5.06	0.29	39.1020	-121.5513
Chestnut Road and 2nd Avenue	1.35	0.49	0.17	39.1042	-121.5529
Chestnut Road and Catalpa Street	28.84	1.38	0.33	39.1083	-121.5560
Arboga Road and Pasado Road	4.13	2.19	0.57	39.1133	-121.5645
Arboga Road	1.16	0.00	0.26	39.1158	-121.5682
Arboga Road and Grand Avenue	6.32	2.26	0.21	39.1177	-121.5713
Arboga Road and Jay Street	0.39	0.52	0.33	39.1210	-121.5758
Arboga Road and Feather River Blvd - Feather River Center	3.74	1.49	0.18	39.1226	-121.5784
North Beale Road and Walmart - South Side	32.58	14.69	0.30	39.1252	-121.5740
North Beale Road and Lowe Avenue	4.84	1.43	0.67	39.1276	-121.5618
North Beale Road and Park Avenue	1.68	0.85	0.18	39.1274	-121.5584
North Beale Road and Hammonton-Smartville Road	0.52	0.21	0.20	39.1275	-121.5547
North Beale Road and Albrecht Avenue	0.00	0.11	0.29	39.1277	-121.5493
North Beale Road and Woodland Drive	2.52	0.21	0.26	39.1278	-121.5444
Yuba College Terminal	37.16	3.37	0.37	39.1269	-121.5377

Figure 215 - Route 3 Northbound Stop Spacing

ROUTE 3 SOUTHBOUND

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Yuba College Terminal	43.50	18.95		39.1269	-121.5377
North Beale Road and Woodland Drive	16.76	3.59	0.37	39.1278	-121.5444
North Beale Road and Albrecht Avenue	2.14	0.90	0.26	39.1277	-121.5493
North Beale Road at Alpine/Park	14.03	5.78	0.46	39.1277	-121.5578
North Beale Road and Lowe Avenue	10.79	12.15	0.22	39.1276	-121.5618
North Beale Road and Wal-Mart - North Side	46.67	36.80	0.64	39.1254	-121.5733
North Beale Road and Feather River Blvd.	10.24	7.09	0.19	39.1258	-121.5769
Arboga Road and Feather River Blvd - Feather River Center	4.97	5.12	0.25	39.1226	-121.5793
Arboga Road and Jay Street	0.63	1.24	0.23	39.1208	-121.5758
Arboga Road and Grand Avenue	4.27	3.84	0.33	39.1177	-121.5710
Arboga Road	0.07	0.02	0.18	39.1160	-121.5686
Arboga Road and Pasado Road	2.17	2.55	0.28	39.1133	-121.5648
Chestnut Road and Catalpa Street	1.44	0.36	0.58	39.1086	-121.5559
Chestnut Road and 2nd Avenue	1.88	0.78	0.33	39.1044	-121.5529
Chestnut Road and Olivehurst Avenue	7.59	0.00	0.19	39.1020	-121.5513
Olivehurst Avenue and 6th Avenue - Ampla Health	2.73	3.40	0.30	39.0977	-121.5514
Olivehurst Avenue and 7th Avenue	7.33	5.99	0.15	39.0956	-121.5515
Olivehurst Avenue and 9th Avenue	3.46	2.79	0.26	39.0919	-121.5517
Olivehurst Avenue and 11th Avenue	3.76	0.00	0.24	39.0884	-121.5517
Olivehurst Avenue and Clarice Avenue	3.43	1.48	0.41	39.0824	-121.5519
Olivehurst Avenue and Bellis Court	5.60	1.80	0.23	39.0790	-121.5520
McGowan Parkway and Ardmore Avenue - Olivehurst School	4.57	4.19	0.19	39.0771	-121.5495
McGowan Parkway and George Avenue	1.40	2.62	0.27	39.0773	-121.5445
Evelyn and Johnson Park	33.74	24.50	0.40	39.0787	-121.5372

Figure 216 - Route 3 Southbound Stop Spacing

ROUTE 4A

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Peach Tree Clinic (Departing)	6.08	5.50		39.1202	-121.5668
North Beale Road and Wal-Mart - North Side	21.14	14.13	0.50	39.1254	-121.5733
North Beale Road at Rio Inn	0.78	0.34	0.51	39.1281	-121.5821
D and 2nd (Departure)	3.06	6.42	0.71	39.1370	-121.5887
F Street and Second Street (Buttes Manor)	1.49	0.52	0.15	39.1369	-121.5915
3rd Street at Rideout Hospital	0.67	0.55	0.11	39.1378	-121.5933
H Street and 7th Street	0.00	0.13	0.32	39.1422	-121.5953
Yuba Co. Government Center - I & 9th Streets	23.73	13.79	0.15	39.1438	-121.5972
H Street and 11th Street	0.12	0.36	0.21	39.1468	-121.5960
14th Street and H Street	0.86	0.39	0.21	39.1498	-121.5964
14th Street and Ellis Lake Drive	1.18	0.87	0.22	39.1503	-121.5923
B Street and 16th Street	0.67	0.65	0.32	39.1531	-121.5877
East 18th Street and B Street	4.71	3.20	0.13	39.1550	-121.5878
Ramirez Street and East 18th Street	1.53	1.53	0.23	39.1556	-121.5835
East 19th Street and Sampson Street	0.39	0.79	0.18	39.1568	-121.5805
Covillaud Street and East 19th Street	2.28	3.16	0.16	39.1574	-121.5776
Covillaud Street and East 22nd Street	0.35	0.21	0.19	39.1601	-121.5780
22nd Street and Huston Street	1.18	1.33	0.36	39.1607	-121.5713
East 22nd Street and Hansen Street	5.02	3.77	0.26	39.1599	-121.5666
East 17th Street and Huston Street	0.67	1.33	0.39	39.1554	-121.5711
East 17th Street and Del Pero Street	0.94	0.58	0.15	39.1550	-121.5739
East 17th Street and Covillaud Street	0.75	0.76	0.18	39.1549	-121.5773
Sampson Street and East 16th Street	0.67	1.21	0.17	39.1538	-121.5802
Ramirez Street and East 15th Street	1.10	0.67	0.18	39.1525	-121.5830
Ramirez Street and East 13th Street	1.14	0.81	0.16	39.1502	-121.5829
Yuba Street and 12th Street (One-Stop)	3.65	1.96	0.16	39.1480	-121.5842
Ramirez and East 11th Street	5.77	2.82	0.10	39.1479	-121.5824
B Street and 9th Street	0.90	1.26	0.32	39.1447	-121.5867
B Street and 6th Street	1.18	1.08	0.22	39.1415	-121.5863
B Street and 3rd Street	0.31	0.37	0.20	39.1386	-121.5856
D and 2nd (Departure)	6.12	0.13	0.20	39.1370	-121.5887
North Beale Road and Feather River Blvd.	0.16	0.00	1.00	39.1258	-121.5769
North Beale Road and Walmart - South Side	5.41	3.96	0.16	39.1252	-121.5740
Peach Tree Clinic (Arrival)	18.95	0.09	0.52	39.1202	-121.5668

Figure 217 - Route 4A Stop Spacing

ROUTE 4B

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Peach Tree Clinic (Departing)	0.49	5.68		39.1202	-121.5668
North Beale Road and Wal-Mart - North Side	19.32	13.24	0.50	39.1254	-121.5733
North Beale Road at Rio Inn	1.14	0.46	0.51	39.1281	-121.5821
D and 2nd (Departure)	4.60	2.63	0.71	39.1370	-121.5887
B Street and 3rd Street	0.65	0.17	0.18	39.1384	-121.5859
B Street and 6th Street	1.83	0.36	0.21	39.1415	-121.5863
B Street and 8th Street (Caltrans)	0.00	0.71	0.18	39.1440	-121.5864
Yuba Street and 12th Street (One-Stop)	1.06	0.50	0.30	39.1480	-121.5842
Ramirez and East 11th Street	2.03	1.84	0.10	39.1479	-121.5824
Ramirez Street and East 12th Street	0.90	1.56	0.10	39.1493	-121.5826
Ramirez Street and East 15th Street	1.22	0.46	0.22	39.1524	-121.5832
Sampson Street and East 16th Street	0.16	0.29	0.17	39.1536	-121.5804
East 17th Street and Covillaud Street	0.37	0.20	0.17	39.1547	-121.5775
East 17th Street and Del Pero Street	0.12	0.51	0.21	39.1552	-121.5737
East 17th Street and Huston Street	0.65	0.24	0.15	39.1553	-121.5709
Hansen and East 22nd Street	7.53	6.81	0.38	39.1595	-121.5665
22nd Street and Huston Street	2.48	2.84	0.28	39.1605	-121.5716
22nd Street and Covillard Street	0.28	0.27	0.34	39.1603	-121.5780
Covillaud Street and East 19th Street	5.25	4.90	0.21	39.1574	-121.5776
East 19th Street and Sampson Street	1.14	0.71	0.18	39.1566	-121.5809
Ramirez Street and East 18th Street	8.58	3.62	0.18	39.1552	-121.5836
Chestnut Street and East 18th Street	6.35	9.63	0.20	39.1549	-121.5873
B Street and 16th Street	2.28	1.38	0.38	39.1536	-121.5804
14th Street and Ellis Lake Drive	7.12	3.73	0.68	39.1503	-121.5923
H Street and 14th Street	1.91	0.79	0.24	39.1495	-121.5966
H Street and 11th Street	1.42	0.22	0.19	39.1468	-121.5960
Yuba Co. Government Center - I & 9th Streets	6.88	3.40	0.21	39.1438	-121.5972
H Street and 7th Street	0.98	0.09	0.15	39.1422	-121.5953
H Street and 4th Street	4.43	0.84	0.23	39.1390	-121.5950
3rd Street at Rideout Hospital	0.61	2.34	0.12	39.1378	-121.5933
North Beale Road and Feather River Blvd.	0.08	0.02	1.21	39.1258	-121.5769
North Beale Road and Walmart - South Side	7.16	3.20	0.16	39.1252	-121.5740
Peach Tree Clinic (Arrival)	23.92	0.04	0.52	39.1202	-121.5668

Figure 218 - Route 4B Stop Spacing

ROUTE 5 NORTHBOUND

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Walton Terminal at Sam's Club	41.86	11.69		39.1391	-121.6441
Bridge St. and Walton Ave.	0.05	0.18	0.47	39.1323	-121.6436
Bridge St. and JoAnn Way	0.00	0.31	0.17	39.1322	-121.6404
Bridge St. and Oji Way	3.16	3.19	0.17	39.1323	-121.6372
Onstott Frontage Road and Cinemark Movies 12	0.10	0.94	0.22	39.1296	-121.6351
Franklin Road and Winco Center	3.06	2.26	0.21	39.1272	-121.6375
Walton Ave. and Franklin Road	0.88	0.80	0.35	39.1271	-121.6440
Walton Ave. and Camino Del Flores - AK School	0.41	0.39	0.24	39.1236	-121.6437
Walton Ave. and Cherry Street	0.10	0.01	0.27	39.1197	-121.6440
Walton Ave. and McCune Avenue	0.47	0.23	0.21	39.1167	-121.6440
Lincoln Road and Crest Drive - Lincoln School	0.00	0.56	0.32	39.1126	-121.6412
Lincoln Road and Phillips Road	3.22	1.39	0.51	39.1126	-121.6318
Lincoln Road and Jones Road	2.96	2.13	0.26	39.1126	-121.6268
Lincoln Rd. and Railroad Ave.	2.49	2.06	0.19	39.1127	-121.6232
Lincoln Rd. and Garden Hwy.	2.33	0.37	0.27	39.1126	-121.6182
Garden Highway and Teesdale Road - Blackburn-Talley Park	0.78	1.14	0.37	39.1073	-121.6168
Garden Highway and River Oaks Drive	0.21	1.09	0.32	39.1028	-121.6162
Bogue Road and Garden Highway	19.30	2.33	0.13	39.1008	-121.6162

Figure 219 - Route 5 Northbound Stop Spacing

ROUTE 5 SOUTHBOUND

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Bogue Road and Garden Highway	5.43	8.97		39.1008	-121.6162
Bogue Road and South Park	0.00	1.13	0.28	39.0996	-121.6211
Bogue Road and Railroad Avenue	0.28	0.63	0.19	39.0986	-121.6245
Bogue Road and Ramona Avenue	0.09	0.64	0.48	39.0984	-121.6334
Bogue Road and Walton Avenue - Grace Christian School	0.19	0.07	0.51	39.0983	-121.6428
Bogue Road and Germaine Drive	0.00	0.11	0.26	39.0984	-121.6476
Bogue Road and Falls Drive	0.80	0.54	0.20	39.0983	-121.6512
Sanborn Road and Bogue Road	4.26	2.84	0.21	39.0984	-121.6551
Pebble Beach and Portola Valley Drive - Happy Park	0.70	3.26	0.46	39.1035	-121.6495
Pebble Beach Drive and Walton Ave	1.87	1.44	0.29	39.1036	-121.6441
Walton Ave. and Tracy Drive	0.89	1.84	0.23	39.1069	-121.6437
Walton Ave and Joseph Street - Lincoln School	0.56	0.81	0.29	39.1111	-121.6438
Walton Ave and Lincoln Road - Lincoln School	8.05	2.97	0.12	39.1128	-121.6438
Walton Ave. and McCune Avenue	1.08	1.07	0.26	39.1167	-121.6440
Walton Ave. and Cherry Street	0.28	0.15	0.21	39.1197	-121.6440
Walton Ave. and Camino Del Flores - AK School	2.15	1.43	0.27	39.1236	-121.6437
Walton Ave. and Franklin Road	0.19	2.77	0.24	39.1271	-121.6440
Franklin Road and Winco Foods	6.22	5.44	0.35	39.1274	-121.6374
Bridge St and Raleys	1.12	3.04	0.35	39.1325	-121.6375
Bridge St. and JoAnn Way	0.84	0.48	0.16	39.1322	-121.6404
Walton Ave. and Bridge St.	0.19	0.66	0.18	39.1327	-121.6437
Lassen and Walton Avenue	0.14	0.86	0.37	39.1381	-121.6443
Lassen Boulevard and Tharp Rd.	0.09	0.15	0.24	39.1381	-121.6488
Lassen and Klamath - One-Stop / Feather River Academy	1.73	0.76	0.19	39.1381	-121.6523
Harter and Spirit Way - River Valley HS	5.29	0.32	0.20	39.1398	-121.6553
Harter Road and Walmart	4.40	8.89	0.32	39.1443	-121.6554
Butte House and Harter Parkway	0.33	0.31	0.44	39.1505	-121.6530
Butte House Rd. and Tharp Rd.	0.23	0.88	0.29	39.1490	-121.6479
Stabler Ln. and Butte House Rd. - Bel Air	1.87	3.00	0.23	39.1474	-121.6441
Stabler Ln. and Starr Drive - DMV	1.50	0.28	0.29	39.1432	-121.6440
Walton Terminal at Sam's Club	30.61	3.04	0.28	39.1391	-121.6441

Figure 220 - Route 5 Southbound Stop Spacing

ROUTE 6 NORTHBOUND

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Edgewater Circle and Rupert Ave	1.00	0.86		39.1155	-121.5542
Edgewater Circle and Oakwood Drive	1.17	1.62	0.23	39.1175	-121.5507
Edgewater Circle and Riverbank Drive	4.05	6.69	0.34	39.1150	-121.5452
Erie and Ravine Ct. - Pedestrian Access	1.58	0.21	0.34	39.1135	-121.5512
Pasado Road and Arboga Road	0.35	0.50	0.78	39.1128	-121.5658
Pasado Road and Alicia Avenue	0.94	1.33	0.25	39.1127	-121.5704
Grand Avenue and Alicia Avenue	4.57	1.66	0.29	39.1152	-121.5747
Grand Avenue and Cottonwood Avenue	1.64	0.97	0.23	39.1129	-121.5780
Feather River Blvd. and Island Ave	2.64	0.68	0.23	39.1132	-121.5822
Feather River Boulevard and Riverside Drive	1.47	0.50	0.21	39.1161	-121.5834
Feather River Blvd. and Alicia Ave	2.81	0.77	0.31	39.1203	-121.5813
Feather River Blvd. and Arboga Road	0.00	0.00	0.19	39.1226	-121.5793
North Beale Road and Walmart - South Side	25.10	12.34	0.34	39.1252	-121.5740
North Beale Road and Lowe Avenue	1.35	3.97	0.67	39.1276	-121.5618
North Beale Road and Park Avenue	1.17	0.44	0.18	39.1274	-121.5584
Hammonton-Smartville Road and North Beale Road	0.35	0.27	0.20	39.1283	-121.5549
Hammonton-Smartville Rd. and Farrell Way	9.62	4.19	0.51	39.1347	-121.5503
Hammonton-Smartville Rd. and Dunning Avenue	1.70	0.40	0.33	39.1353	-121.5441
Alberta Ave. and Hammonton-Smartville Road	0.00	0.04	0.72	39.1355	-121.5306
Alberta Avenue and North Beale Road	3.40	1.86	0.44	39.1292	-121.5306
Yuba College Terminal	5.69	0.94	0.41	39.1269	-121.5377

Figure 221 – Route 6 Northbound Stop Spacing

ROUTE 6 SOUTHBOUND

Stop Name	Ridership		Distance	Latitude	Longitude
	2019	2022			
Yuba College Terminal	9.45	6.20		39.1269	-121.5377
North Beale Road and College View Drive	0.30	0.71	0.19	39.1280	-121.5344
Alberta Avenue and North Beale Road	4.52	4.01	0.22	39.1292	-121.5306
Alberta Ave. and Hammonton-Smartville Road	0.30	0.14	0.45	39.1357	-121.5309
Hammonton-Smartville Rd. and Dunning Avenue	6.15	2.76	0.71	39.1353	-121.5441
Hammonton-Smartville Road and Mapes Way	0.76	0.79	0.20	39.1353	-121.5479
Hammonton-Smartville Road and Hile Avenue	4.82	2.12	0.36	39.1319	-121.5531
North Beale Road at Alpine/ Park	1.42	0.85	0.39	39.1277	-121.5578
North Beale Road and Lowe Avenue	2.29	1.42	0.22	39.1276	-121.5618
North Beale Road and Wal-Mart - North Side	24.84	11.07	0.64	39.1254	-121.5733
Feather River Blvd. and North Beale Road	7.26	3.03	0.15	39.1254	-121.5762
Feather River Blvd. and Arboga Road	1.02	0.41	0.25	39.1226	-121.5793
Feather River Blvd. and Alicia Ave	2.44	0.73	0.19	39.1203	-121.5813
Feather River Blvd. and Riverside Drive	0.20	1.09	0.32	39.1161	-121.5836
Feather River Blvd. and Island Ave	0.71	0.15	0.21	39.1132	-121.5822
Grand Avenue and Cottonwood Avenue	0.30	0.34	0.23	39.1129	-121.5780
Grand Avenue and Alicia Avenue	1.57	0.35	0.23	39.1152	-121.5747
Alicia Ave and Pasado Road	1.12	1.36	0.27	39.1127	-121.5708
Pasado Road and Arboga Road	1.12	0.00	0.27	39.1128	-121.5658
Edgewater Circle and Rupert Ave	16.86	0.36	0.65	39.1155	-121.5542

Figure 222 - Route 6 Southbound Stop Spacing

APPENDIX III – ONLINE SURVEY DETAILED RESPONSES

METHODOLOGY

The online questionnaire served as a forum for current transit passengers to share their travel behavior, recent bus trip information, preferred mode of transportation, and additional thoughts about the current Yuba-Sutter bus system and level of service.

The survey included multiple-choice, ranking, and demographic questions. Participant responses are summarized in this document with graphs below.

1. Have you ridden the bus today?

- a. 17.62% of participants (80 people) rode the bus that day
- b. An additional 5.88% plan to ride the bus later that day.

■

2. Which route(s) or service?

- a. Route 1 – 43%
- b. Route 2 – 22%
- c. Route 3,4,5 – 18%
- d. Route 6 – 13%
- e. Dial-A-Ride 9%
- f. Sacramento – 31%
- g. Live Oak & Foothill – 3%
- h. Wheatland – 2%

3. At what approximate time did you start your trip? From your origin, bus stop, home, etc.?

- a. 50% - 6-10 am
- b. 31% - 10-3 pm
- c. 9% - 3-7 pm
- d. 5% - Before 6 am
- e. 4% - After 6 pm

4. Was the bus on time as scheduled?

- a. 88% found their bus on time that day

■

5. Where did you start and end your trip?

- a. 70 people responded to the open-ended question (see appendix)

■

6. Where are you coming from? And where are you going?

- a. 68 people responded to the open-ended question (see appendix)
- b. 71 people responded to where they are going open ended question (see appendix)

■

7. How did you get to the bus stop?

- a. 67% walk

- b. 7% biked
- c. 10% were dropped off
- d. 13% drove to the bus stop

8. Did you transfer to another route or service?

- a. 37% of riders transferred to another route that day
- b. 18 people responded clarifying how many transfers were made and to which routes

9. How often do you ride public transit?

- a. 7% - Everyday
- b. 20% - Several times per week
- c. 8% - Infrequently weekly
- d. 9% - Infrequently monthly
- e. 26% - Rarely
- f. 2% - First time
- g. 28% - Never

10. To which surrounding community or destination would you take transit if there was service?

- a. 272 participants responded to the open-ended question (see appendix)

11. How do you get information about public transit services?

- a. 67% - Yuba-Sutter Transit Website
- b. 18% - DoubleMap App
- c. 22% - Brochures on the bus
- d. 11% - Map case at the transit center
- e. 75 people responded to other (see appendix)

12. What is your preferred mode of transportation?

- a. 30% - Transit Bus
- b. 2% - Taxi or Ride Sharing Services
- c. 57% - Personal Automobile
- d. 3% - Bike/Scooter
- e. 3% - Walk
- f. 13 people responded "other" (see appendix)

13. Do you regularly have access to a car for your transportation needs?

- a. 69% answered yes

14. Do you utilize a mobility aid?

- a. 1.3% - Wheelchair
- b. 1.3% - Scooter
- c. 4% - Walker
- d. 89% - None
- e. 12 responded "other" (see appendix)

15. What stops you from riding the bus more than you currently do?

- a. 31% - Lack of available service routes
- b. 1% - Cost
- c. 24% - Convenience/time
- d. 16% - The bus doesn't go where you need it to
- e. 11% - Hours of service
- f. 50 responded "other" (see appendix)

■

16. How did you normally pay for your bus fare?

- a. 47% pay for with cash
- b. 34% - Connect Card Monthly Pass
- c. 10% - Connect Card Cash
- d. 5% - Voucher/Ticket
- e. 3% - Free

■

17. On a scale of 1-5, how convenient is paying for transportation? (5 being "very convenient")

- a. 3.6 was average ranking

■

18. On a scale of 1-5, how helpful is the current route and service information provided by Yuba-Sutter Transit? (5 being "very convenient")

- a. 3.4 was average ranking

■

19. If you have concerns about your current route and service information, what are they?

- a. 19% - Not enough information
- b. 19% - Not enough real time information
- c. 11% - Information isn't where I need it to be
- d. 15% - Information isn't easily understood
- e. 131 answered none
- f. 40 responded "other" (see appendix)

■

20. What additional service(s) may be offered to enhance your experience?

- a. 49% - Later evening fixed route service
- b. 39% - Sunday service
- c. 41% - More direct service
- d. 21% - Faster service
- e. 38% - More frequent service
- f. 57% - Increased service area
- g. 51 people responded "other" (see appendix)

■

21. Do you own a smartphone with internet access?

- a. 97% responded yes

■

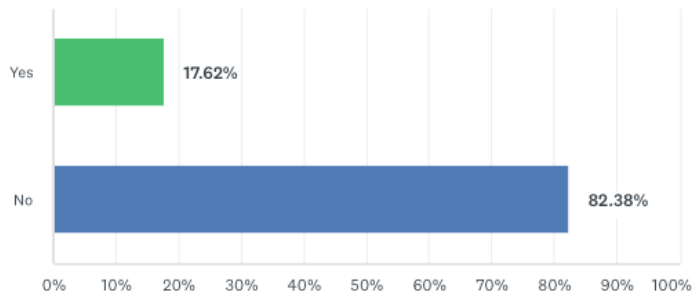
22. Are you aware that evening Dial-A-Ride (6:00 - 9:30 pm) is available to everyone?

- a. 31% answered yes

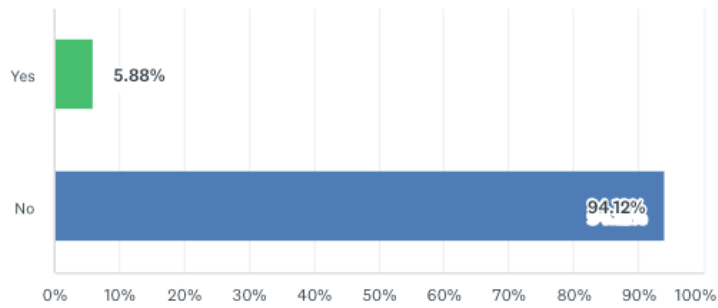
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- 23. On a scale of 1-5 how safe is taking the bus (5 being “very safe”)?
 - a. 3.5 was the average ranking
- 24. If you have concerns about transit safety, what are they?
 - a. 21% - I have witnessed unsafe acts
 - b. 20% - I have personally experienced a situation that makes me feel unsafe
 - c. 46% - Insufficient lighting at bus stops
 - d. 11% - There is not enough safety equipment on the bus
 - e. 24% - COVID: Lack of mask-wearing or not feeling safe around others
 - f. 81 people responded “other” (see appendix)
- 25. On a scale of 1-5, how clean is the bus service including buses, stops, and transit centers?
 - a. 3.8 was the average ranking
- 26. If you have concerns regarding cleanliness, what are they?
 - a. 149 participants answered the open-ended question (see appendix)
- 27. On a scale from 1-5, what do you think of the bus service overall? (5 means great)
 - a. 3.2 was the average ranking

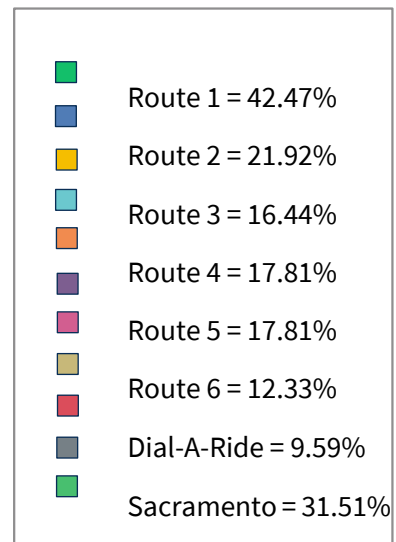
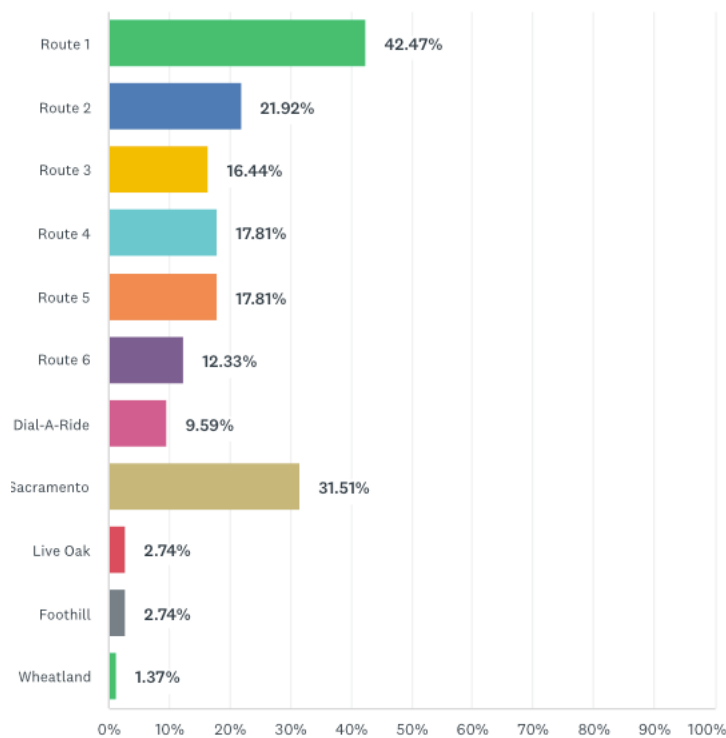
Q1: Have you ridden the bus today?



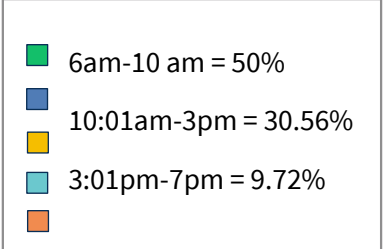
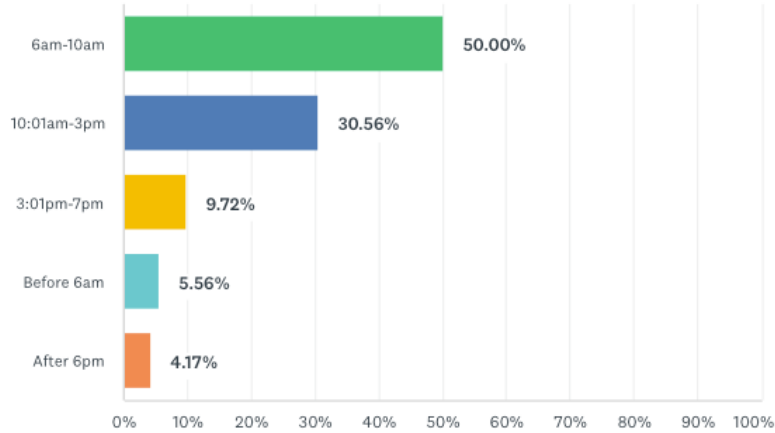
Q2: Do you plan to ride the bus today?



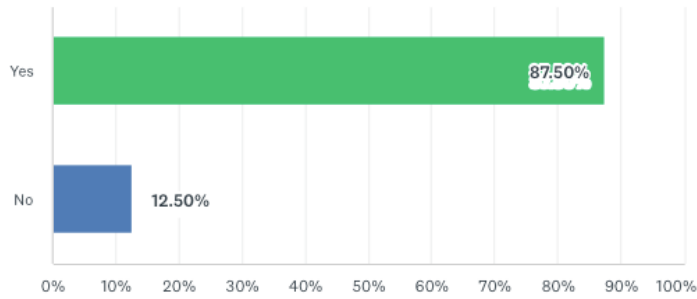
Q3: Which route(s) or service?



Q4: At what approximate time did you start your trip from your origin (bust stop, home, etc.)?



Q5: Was the bus on time as scheduled?



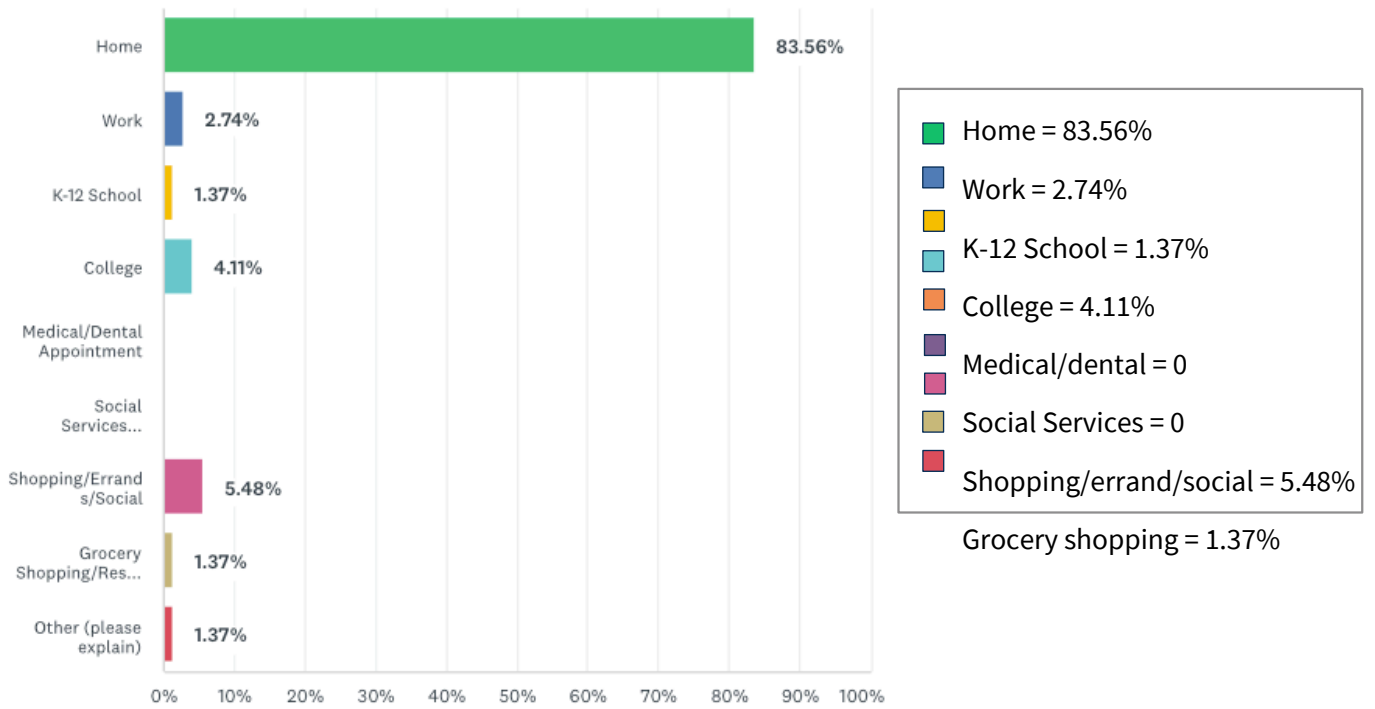
Q6: Where did you start your trip? (Cross-Street or City/Community)

Open ended question

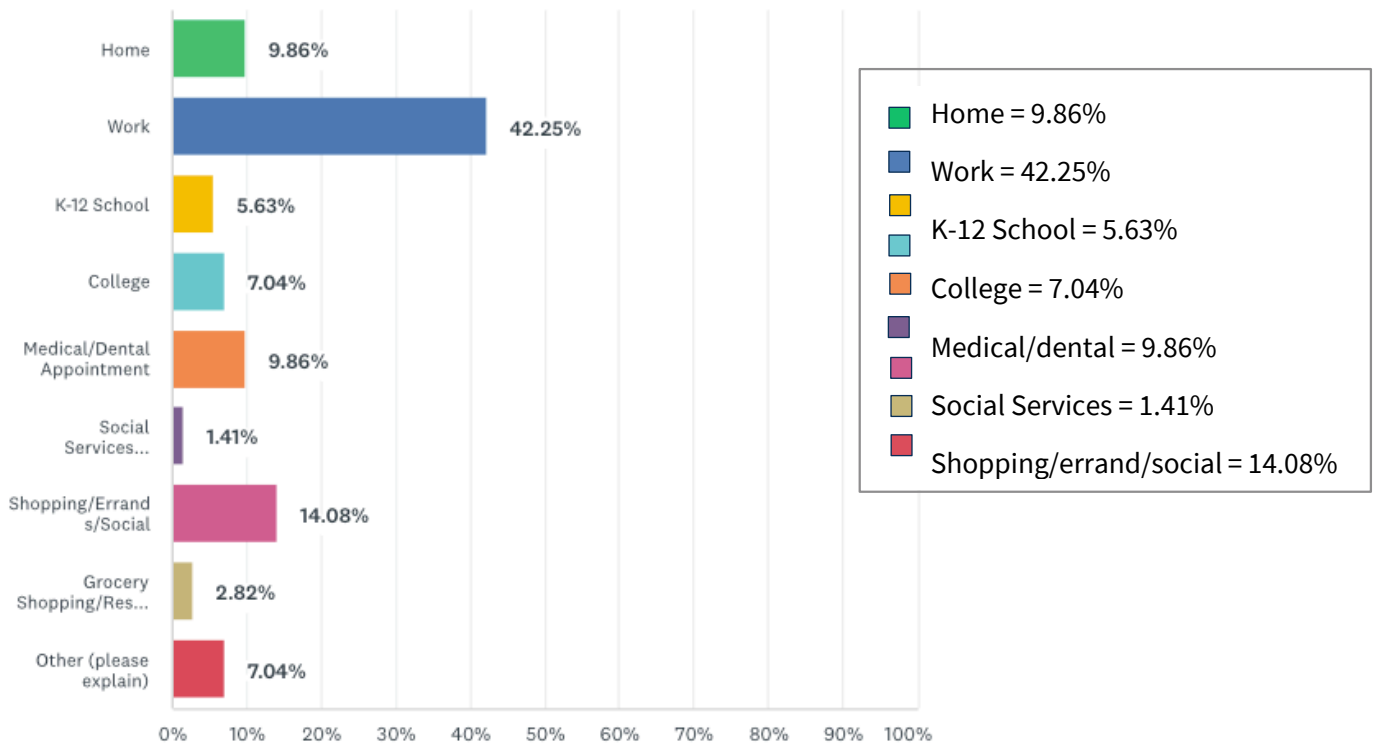
Q7: Where did you end your trip? (Cross-Street or City/Community)

Open ended question

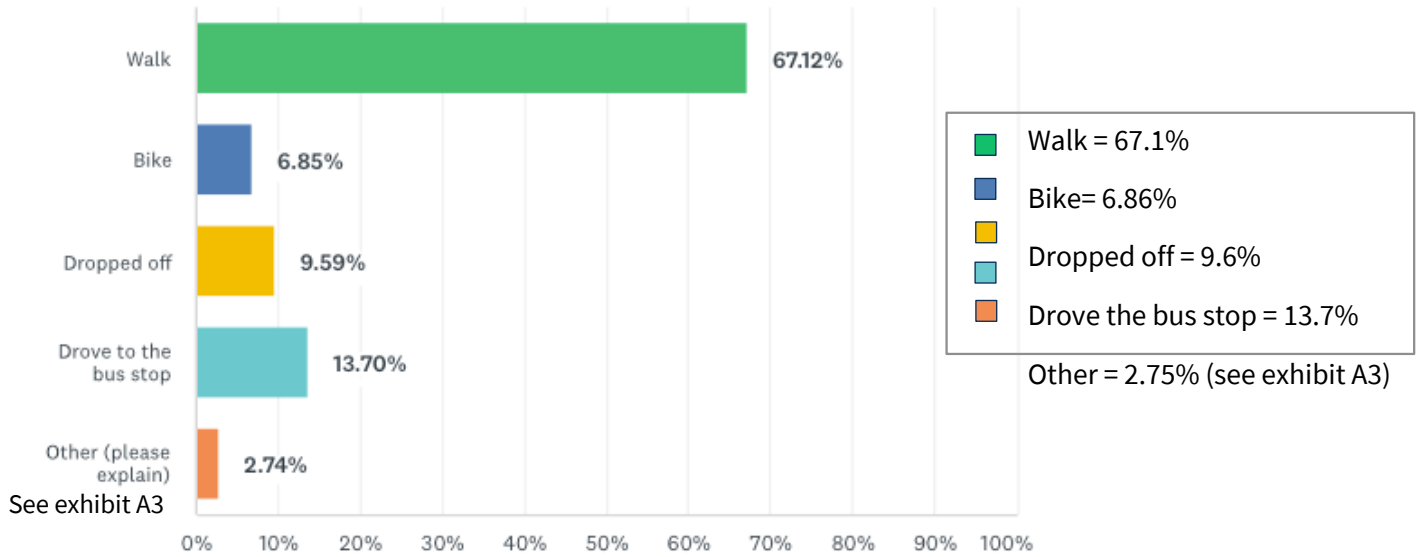
Q8: Where are you coming from?



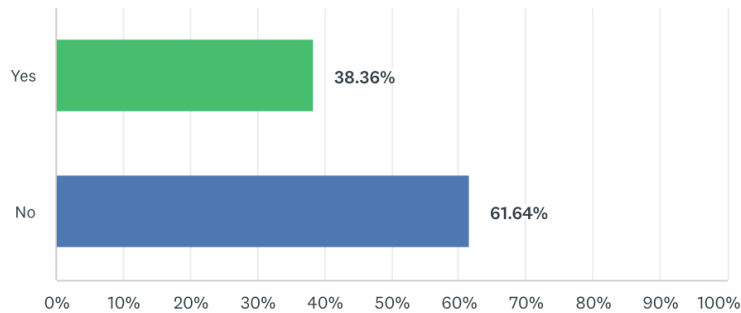
Q9: Where are you going to?



Q10: How did you get to the bus stop?



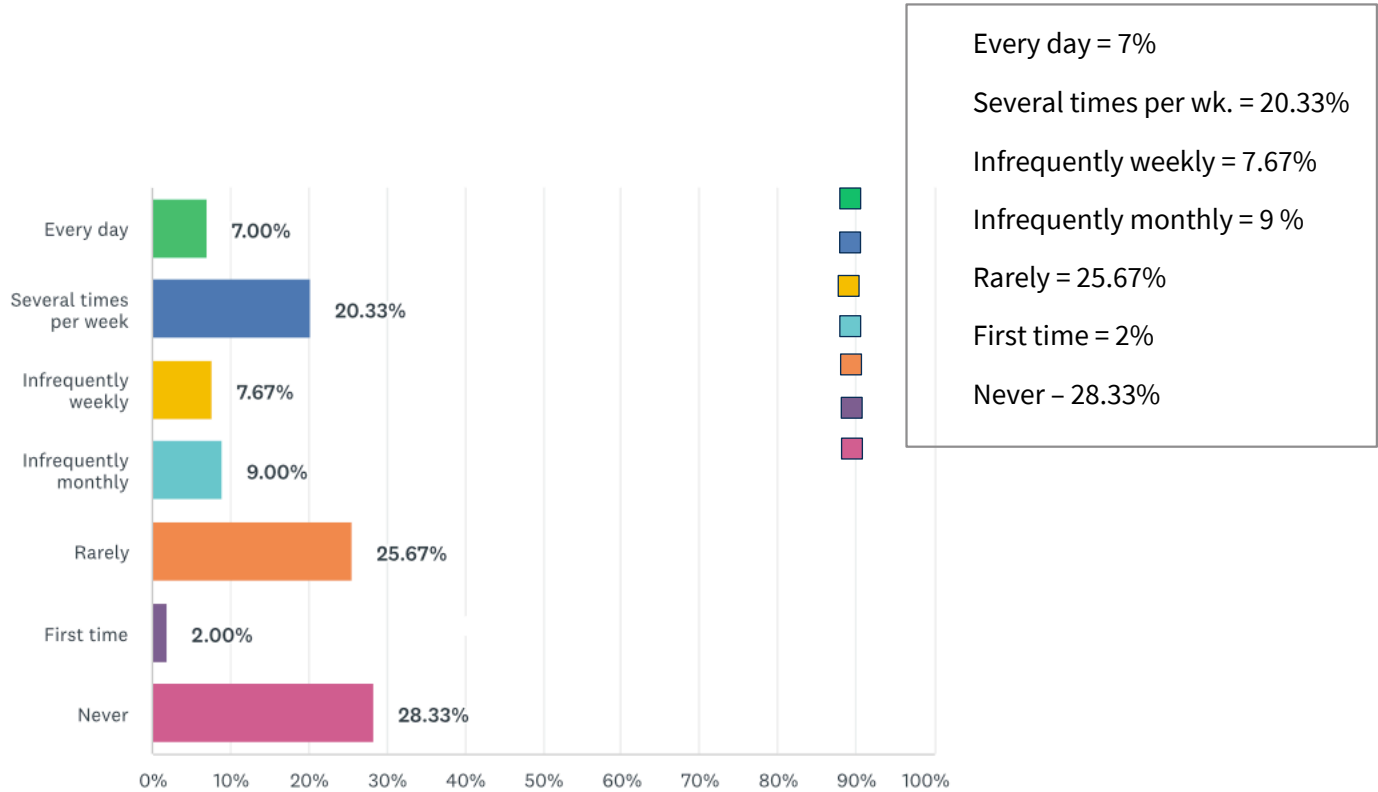
Q11: Did you transfer to another route?



Q12: If you transferred, how many transfers were made and to which routes?

Open ended question

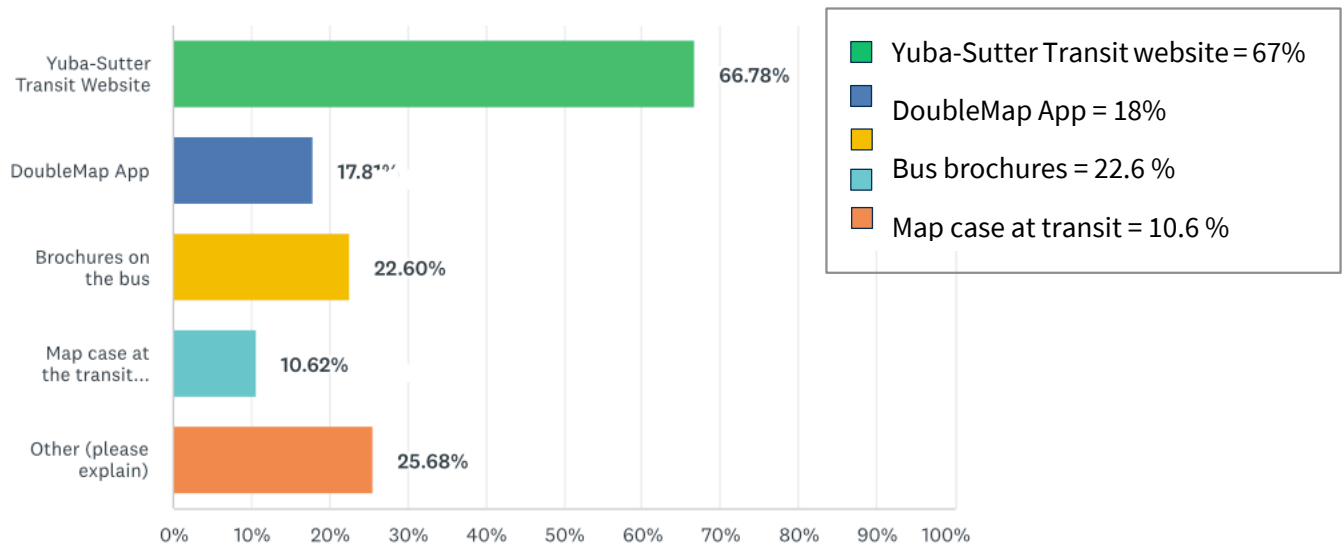
Q13: How often do you ride public transit?



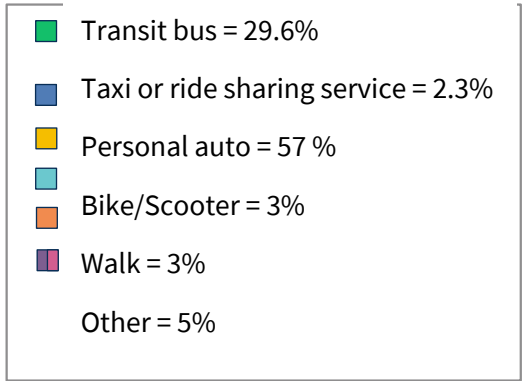
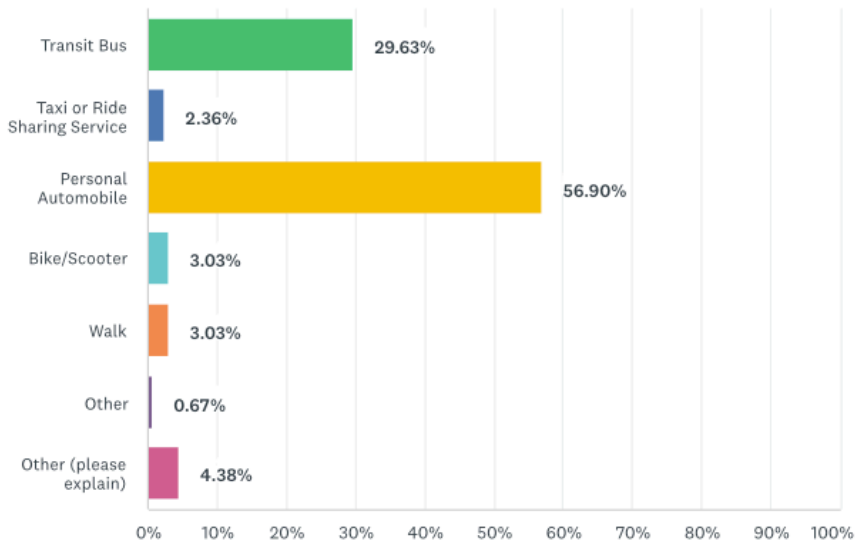
Q14: Which surrounding community or destinations would you take transit to if there was service?

Open ended question

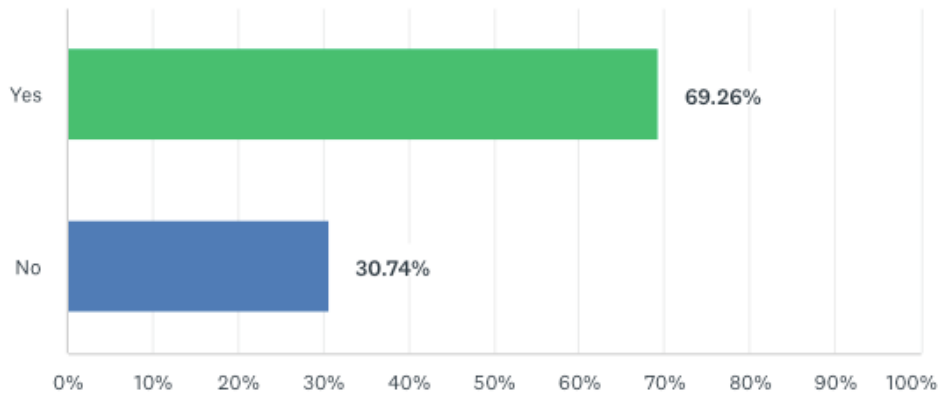
Q15: How do you get information about public transit services (you may select more than one option)



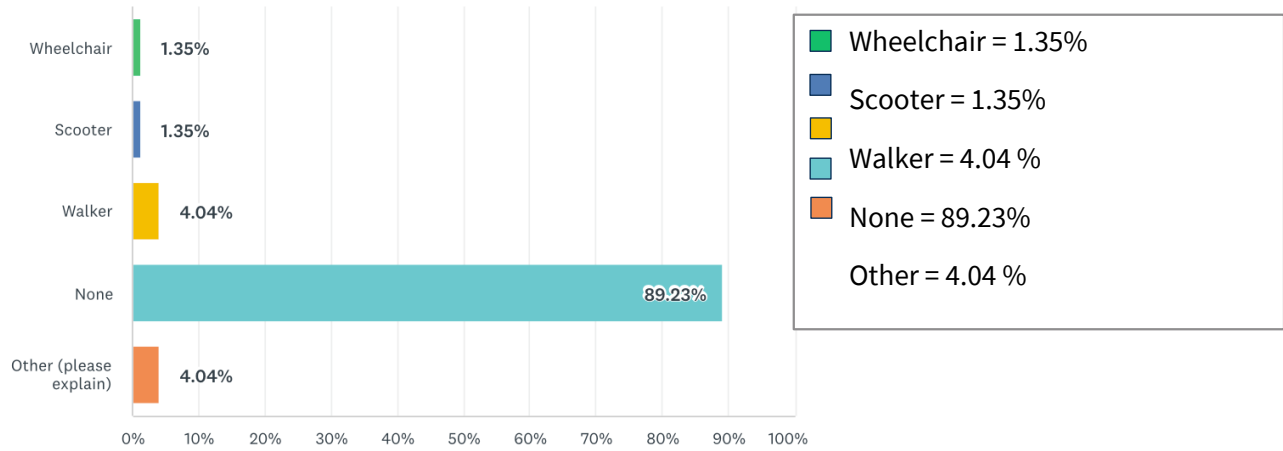
Q16: What is your preferred mode of transportation?



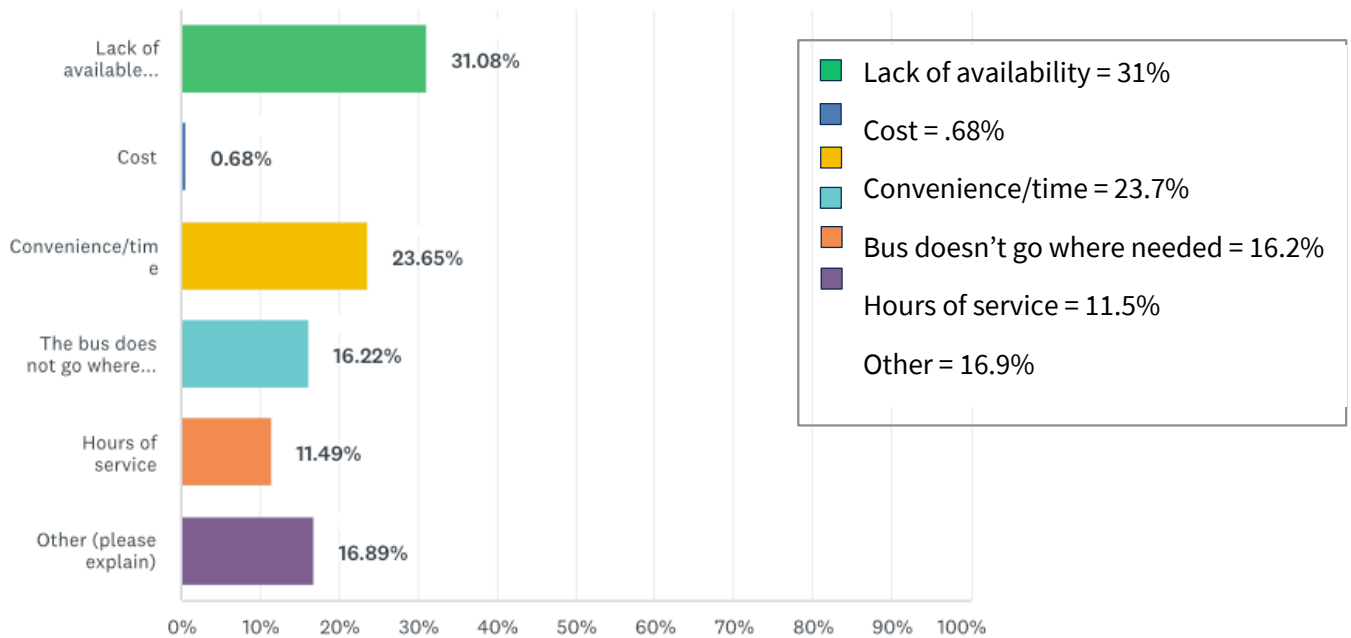
Q17: Do you regularly have access to a car for your transportation needs?



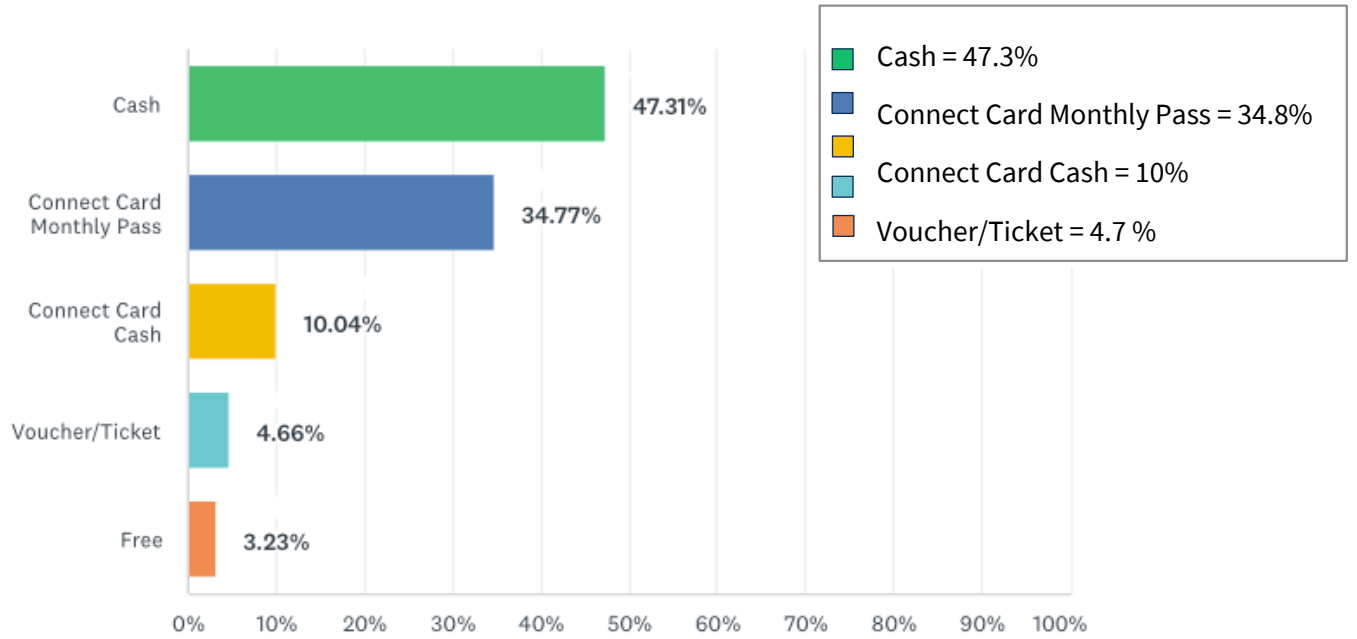
Q18: Do you utilize a mobility aid? If yes, please answer below.



Q19: What stops you from riding the bus more than you currently do?

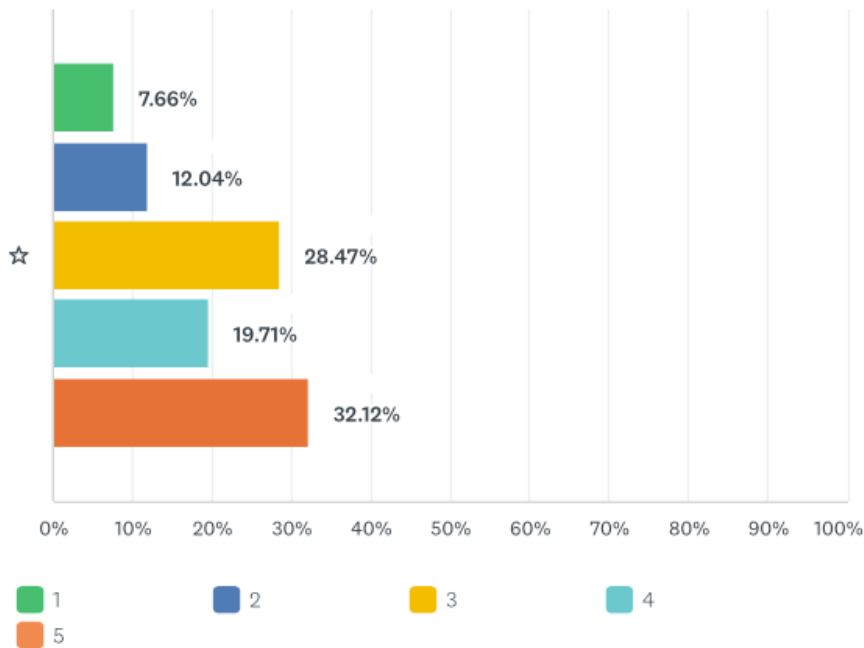


Q20 How do you generally pay for bus fare?



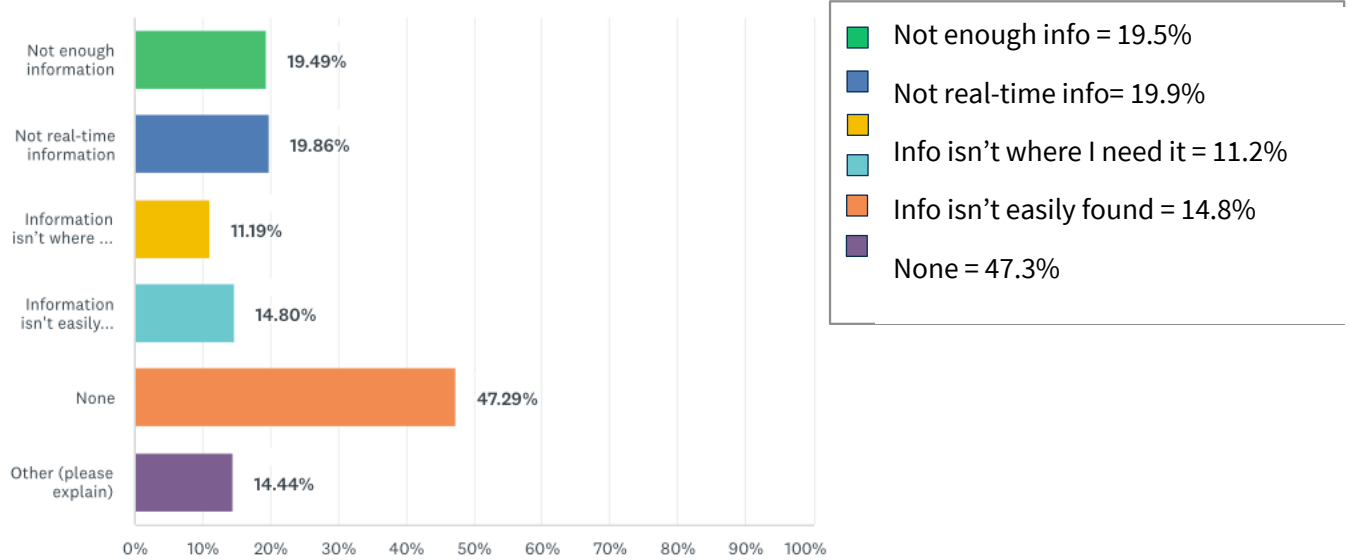
Q21: On a scale of 1-5, how convenient is paying for transportation? (5 being “very convenient”)

Average rating = 3.6

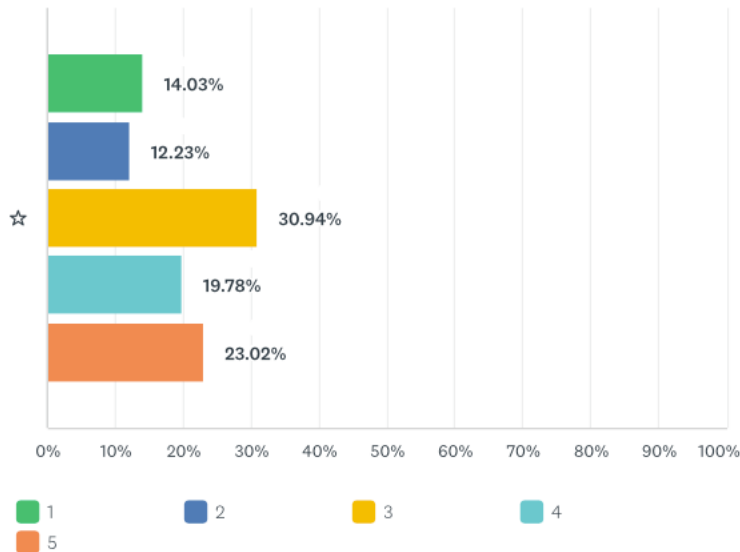


Q22: On a scale of 1-5, how helpful is the current route and service information provided by Yuba-Sutter Transit? (5 means the information is “very helpful”)

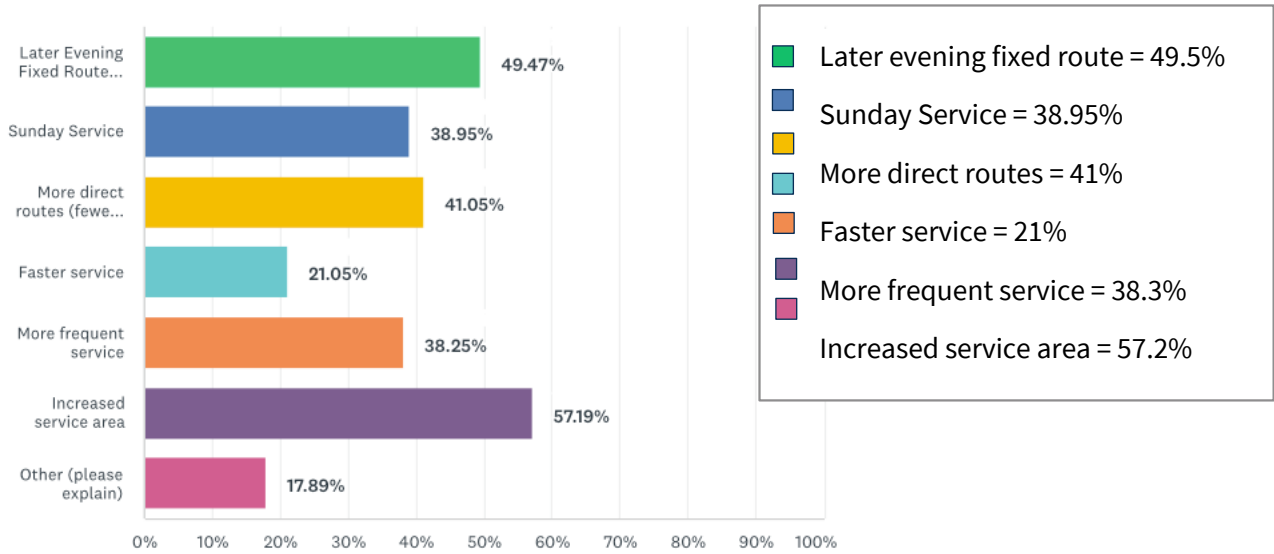
Average rating = 3.3



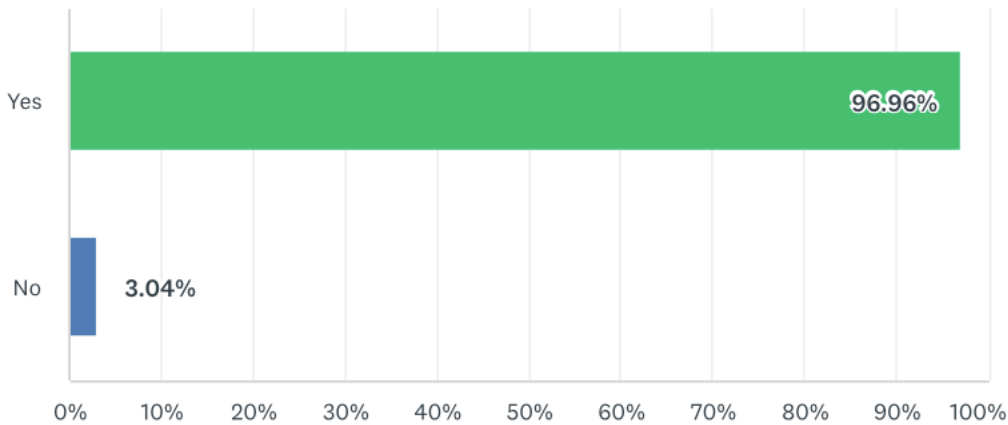
Q23: If you have concerns about your current route and service information, what are they? (You may select more than one option).



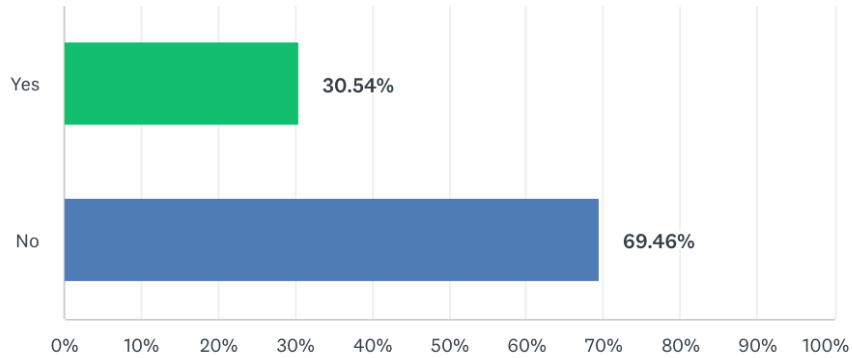
Q24: What additional service(s) may be offered to enhance your experience? (You may select more than one option)



Q25: Do you own a smartphone with internet access?

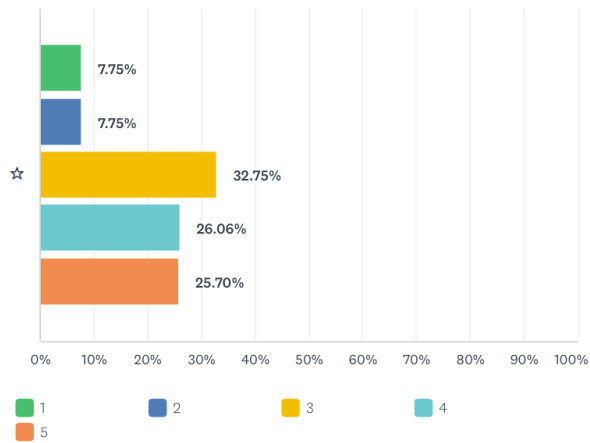


Q26: Are you aware that evening Dial-A-Ride (6-9:30 pm) is available to everyone?

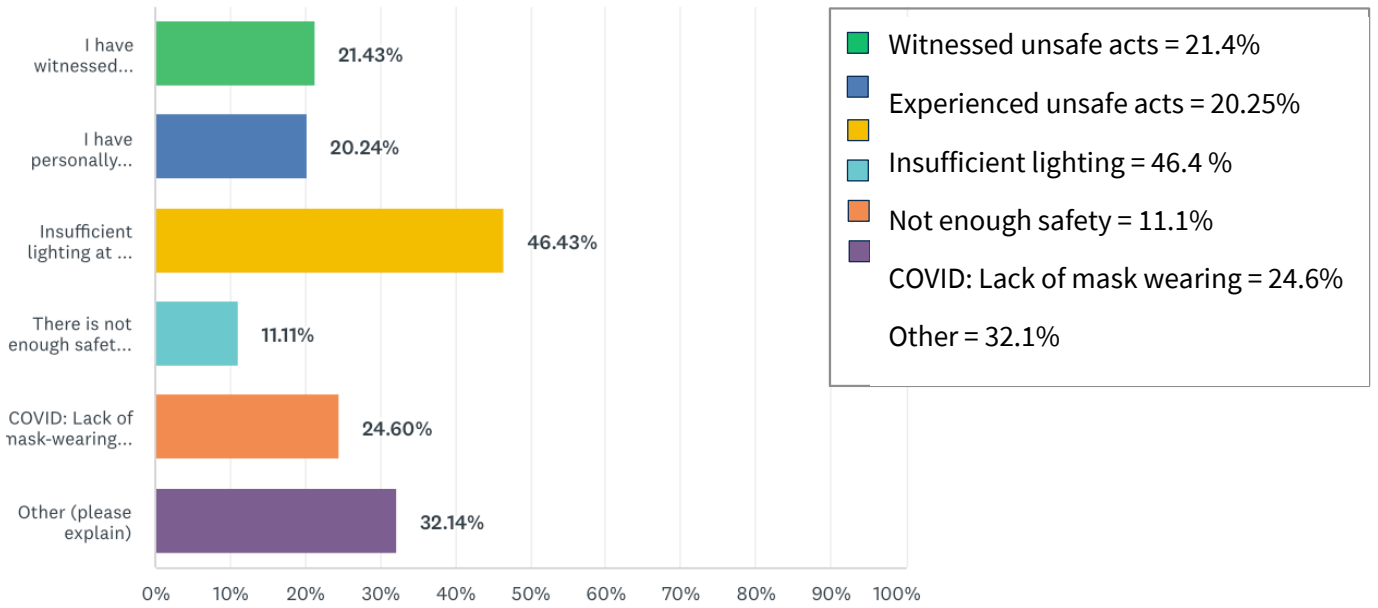


Q27: On a scale of 1-5, how safe is taking the bus? (5 being “very safe”)

Average rating: 3.5

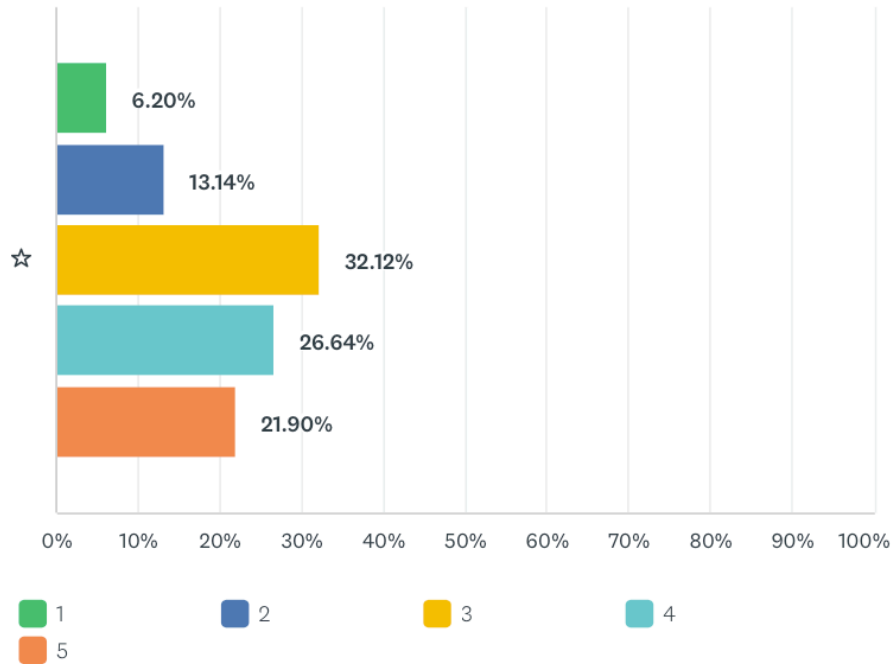


Q28: If you have concerns about transit safety, what are they?



Q29: On a scale of 1-5, how clean is the bus service including buses, stops, and the transit centers? (5 is “very clean”)

Average rating: 3.5

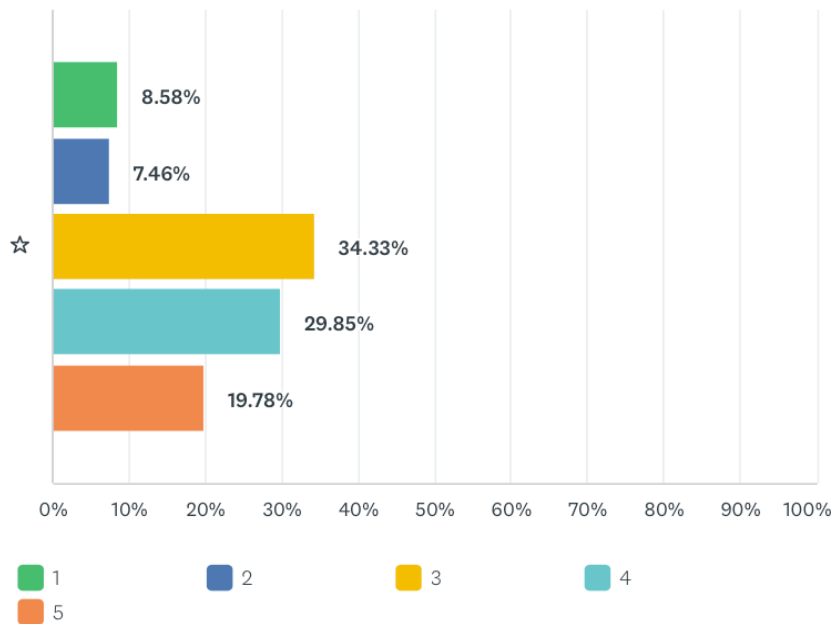


Q30: If you have concerns regarding cleanliness, what are they?

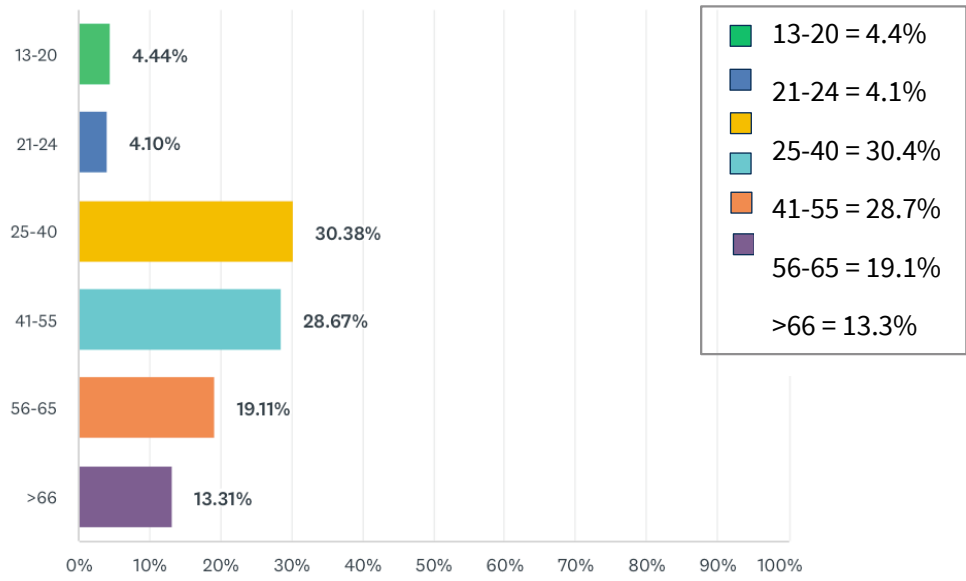
- Open ended question

Q31: On a scale of 1-5, what do you think of the bus service overall? (5 is great)

Average rating: 3.5



Q32: What is your age range?



YUBA-SUTTER TRANSIT SURVEY - OPEN-ENDED QUESTION RESPONSES

Q6: Where did you start your trip? (Cross-Street or City/Community)

Alturas and shasta	Rices Crossing Rd.
E 22 nd	In Linda right in front of subway
Wal-mart	Plumas
Sanborn Road	McGowan Parkway
5th and P Street, Downtown Sac.	Alecia Avenue going to yuba collage.
washington and gray ave, yuba city	S Walton
Sam's club 525am	YUBA COUNTY GOVERNMENT CENTER
I and 9th marysville California	Bogue Road in Yuba City
Olivehurst	PLUMAS LAKE
Sanborn and Bogue	North Beale Rd
Arboga road	Bogue Road
Lincoln & Railroad 2A	YUBA CITY TO MARYSVILLE
Olivehurst Ave and 6th Ave	Olivehurst ave and chestnut rd
D and 2nd	Bogue Road Park n ride
Portola Valley Dr. and Pebble Beach	McGowan or Edgewater
14th & h sts	Walton Terminal/Sam's Club
Yuba city	Olivehurst ave/chestnut ave in olivehurst ca
Yuba College	Yuba community college
H street Marysville, ca	19th & Sampson Streets, Marysville
Wheatland	Hammonton smartsville and dunning
Linda Marysville	6 & B
Griffith Ave	City
Mcgowan	D&2nd Street, Marysville
Franklin road	Plumas Lake
Linda	Apt complex
Shasta and Alturas	Plums Lake Park and Ride
North Beale linda	Bogue and HWY 99
Peach Tree-Packard Ave	Plumas Lake Park and Ride
Yuba county government center	Linda
Falls Drive and Bogue road	Plumas Lake stop and ride
Gray Ave and Melton	Yuba city
Clark avenue	Government Center
Plumas Lake Park & Ride	Walton and Colusa hwy
Corner of B street and Gray avenue	

Q7: Where did you end your trip? (Cross-Street or City/Community)

Yuba Government center	At marysville high school
The mall	Forbes
Sam's club	Sacramento
8th and B Street Marysville (Caltrans District office)	Yuba collage
2nd and dst.	Mall
J and 8th	DOWNTOWN SACRAMENTO P AND 5TH
5th and p Sacramento ca	SACRAMENTO
Yuba city	Marysville
North Plumas st. Or Walmart	Sacramento P and 9th street in morning and back to evening bus from Sacramento to Yuba city Bogue Road stop
Yuba college terminal	No Beale rd S across from Walmart
Butte House & Walton (Rite-aid)	9th and P Street Sacramento
Harter Pkwy Walmart	Edgewater
Yuba County welfare	K & 15th, Downtown Sacramento
To Walmart, and then Route 1 to the YC Senior Center	Olivehurst ave/9th Ave in olivehurst ca
Linda walmart	McGowan
Wilbur	19th & Sampson Streets, Marysville
I and 9th Gov. Center	Walmart
Peachtree clinic	Walmart
Wheatland	City
Stonehaven	Forbes&Clark, Yuba City
East Marysville	5th / Pst
Walmart	Walmart center for a different route
Plumas	4th and J Street, Sacramento
Oliverhurst	Sacramento 4th and J st
2100 b st	4th and J in Sacramento, CA
22nd st Marysville	Yuba City
Marysville High School	9th & P, Sacramento
Walmart yuba city	Garden hwy
McDonald on Stabler Lane	Sacramento
River valley high school	Sac downtown
Walton	test
Sacramento 8th & J Street	yuba county government center
Cake lady Yuba city	Yuba college
Downtown Sacramento	Government Center

Q9: Where are you going to?

Library	Family
NA	Meeting
Car shop	

Q10: How did you get to the bus stop?

Pushing a wheel car	By car
---------------------	--------

Q12: If you transferred, how many transfers were made and to which routes?

From route 2a to route 1 eastbound	2
I take 5 to 2a or 2b depending on where I'm going	Just one
1, 1	2 to 5 and 1
2 transfer, from Pebble Beach Dr. to Walmart to Senior Center	1 transfer, Route 3 to Route 4.
3 Transfers Routes: 1,2 and Wheatland	1-2. McGowan 70 to yuba college 1 to Edgewater 6 or vice versa
1	3
One transfer	4
2	1 transfer to SacRT
NA	1 to 3md

Q14: Which surrounding community or destinations would you take transit to if there was service?

Tierra Buena	live oak to gridley, transfer to oroville @ Gridley Safeway, on 99, or transfer to chico @ Gridley Safeway, on 99, to go to CSU chico or Butte College, oroville.
Gridley	Olivehurst, Marysville and Yuba City
lincoln roseville marysville	Sacramento state university
n/a	San Jose
Sacramento, Bay Area, Roseville	Although I do not take transit, I believe that we should connect each of the major communities - Marysville, Yuba City, Wheatland, Linda, Olivehurst, Plumas Lake, etc.
River Valley High School in Yuba City, Shanghai Bend Park in Yuba City and Ampla Health in Yuba City.	Cannot think of any at this time. However, others including a young adult child is interested in utilizing a transportation system that services the Olivehurst/Plumas Lake area with transportation to the Yuba City, Lincoln, and Roseville areas.
They're all covered	Shuttle to the amphitheater, maybe take my bike to American River or other bike trails, use as a designated driver if the walk isn't too far and it's kept clean and safe

There should be a good commuter service for Rocklin & Roseville cities to Marysville & Yuba cities. Unfortunately, there is no such service available at this time and this is the reason why I live in Downtown Sac.	Locally, Marysville, Yuba City, Lincoln, Rocklin, Roseville, Old Sacramento
colusa and on to woodland/sacramento	Plumas Lake area (Wheeler Ranch community) to Walmart/future Costco area and to Yuba City and Marysville downtown areas.
Casino	Shopping
The town of Sutter, CA	Yuba city, Sacramento
Natomas	Well there several places like Oroville California, Sutter county and so on
Ridley, Oroville	Yuba city
Roseville, Lincoln, Marysville, and Yuba City	Sacramento-Yuba City
Wheatland, Casino areas	In 2024 the agency I work for will be relocating to 7th and Richard's Blvd in Sacramento. It would be wonderful if Yuba Sutter Transit expanded service to that area of Sacramento
Plumas Lake in Wheeler Ranch	Plumas Lake
I have taken the bus a lot in the past and my older kids take the bus on occasion, but since bus trips are so long and the east time between busses can be up to an hour. I end up having to drive them so it doesn't take them 3 hours to get somewhere that would take 15 minutes in a car. We need more routes in marysville	Plumas Lake to Marysville
Plumas lake to marysville yuba city	Yuba City
Wheatland, Marysville, Yuba city	Natomas, Marysville, yuba city
Library, downtown	Yuba and Marysville
Wheeler Ranch, Plumas Lake	From Plumas Lake to town
Marysville Flea Market.	Yuba City, Sacramento, Amtrak, Airport
My response is for my teenage son who rides regularly. Id like to see more weekend routes and run a little later so when he works a swing shift he can get home easier	No where
Del Wayne estates, 3120 live oak blvd , would be helpful for so many	Plumas lake
It would be nice if the bus went north up Stabler Lane - at least to Jamie if not to the park between Jamie and Pease.	Any
Just to work and back	Plumas lake to Yuba or Wheatland
Live Oak	Beale AFB and Sacramento
Oroville Sacramento ON THE WEEKEND (dial a ride bus?)	District 10
n/a	Liveoak
Gridley, Live Oak, Chico	Sacramento
yuba	The hard rock casino, airport and woodland
Yuba City and Marysville California	Sacramento
Roseville	Yuba city and Sacramento

None	Wheatland
No	Live oak
DOBBINS to Yuba City	Yuba college, mall, peach tree, Food max
Oregon House and Camptonville	Sacramento
Colusa and lincoln	Sacramento you
Sacramento	Marysville
You need to put a stop on Griffith Ave like about half way down the road and one at the south end of Griffith	Walgreens in Plumas Lake
Hardrock Casino, would love to connect to Roseville	None
Sacramento	Roseville, Chico, Oroville, San Francisco, Vacaville
Live Oak, Marysville, Yuba City	None
Hard Rock Casino -	Natomas, Sacramento, Roseville
Olivehurst	Yuba, lincoln
sacramento	Lincoln, or maybe costco in Marysville when it is in. We'll see.
Wheatland Ranch to casino, amphitheater, and Walmart.	Yuba city, Sacramento, natomas, marysville
Civic center to Plumas	Plumas lake
Daily Wheatland route	Marysville, live oak, Wheatland, Lincoln
Hard Rock Casino, Placer County (Lincoln, Roseville)	American river college, Sacramento
Camptonville	Sacramento airport
Olivehurst, to Marysville to Yuba City, to Sacramento	Woodland sutter plumas lake
Walmart or Library	No where, as I am not in need of public transport
Plumas Lake	Davis
Plumas Lake, Olivehurst, Brownsville, Wheatland	Plumas Lake to anywhere
Wheatland	Concerts or events
Marysville Joint Unified School District Office and Bel Air on Stabler in Yuba City	Olivehurst
Marysville, Yuba City, Sacramento, Roseville, Rocklin	Plumas lake
Chico	Arboga, Plumas Lake, Wheatland
Chico	Plumas Lake to Marysville, Yuba college, Marysville High.
my family uses the bus and have taken it locally in Olivehurst and as far as Yuba City Also, my clients use the bus and sometimes take the Sacramento route	Sacramento
Not sure	Bouge and Garden Highway. Sutter Mall area. Sams and Home Depot area. Downtown Marsville, Beale AFB
All	Work in Sacramento downtown. The times don't go late enough. Grocery shopping in Yuba City or Natomas

Live Oak Gridley Chico Colusa Nevada City Woodland Roseville	Beale AFB, Downtown Sac, Lincoln
marysville	Roseville, Lincoln, Sacramento... all of them, really
outlying areas outside of Yuba County	Plumas Lake, North And South.
More of Olivehurst and Plumas Lake area. Provide routes in the foothills more often, as well.	Yuba city live oak Gridley olivehurst and linda
Wheatland	South Yuba County
DMV	Sacramento
Plumas Lake	Roseville, Lincoln
Yuba and Sutter counties	Wheatland to downtown Sacramento for work, M-F.
Sutter	I'm in Plumas Lake and have a 19 year old son. Would love it if there was transportation to Linda, Marysville, Yuba City and even Sacramento
Marysville, Yuba City, Olivehurst, the Foothills	Marysville and Yuba City
Grocery Stores - Walmart's Linda/YC	Casino
Chico	Down town Sacramento
Live Oak, Chico.	Sacramento
Improvements on the existing routes would be best, most of the bus stops are too far apart making any trip take an hour just or more to go a few miles	Roseville
Oroville, Nevada city, Grass Valley,	I dont know yet. I'm new at riding the bus.
Yuba City / Marysville from Camptonville Nevada City/ Grass Valley from Camptonville	More frequent buses so it doesn't take all day to go to the mall or grocery shopping
Tierra buens	Plumas Lake
Wheatland, Woodland	I'd love at minimum a consistent bus route to the airport. Uber/Lyft can be difficult and although the median income is high in Plumas Lake, not everyone may be able to afford two weeks + in the long term parking lot
Yuba City (Downtown or SH99 area)	Target to river valley high school and back
South Yuba City - Harmony Village area	Bay Area
I would like to be able to go from Camptonville to Marysville	None!
Camptonville	The Hardrock for leisure and Oroville for health appointments.
Sutter, Brownsville, Dobbins, Camptonville, Sycamore Ranch Park, Wheatland, Plumas Lake, Meridian	Oroville
Sac Airport- people would love this route	Plumas lake, plumas arboga, The hard rock casino and amphitheater, Yuba college Sutter campus.
From olivehurst to yuba city	Roseville and Lincoln
Marysville	Sac
Liveoak	New York

South Yuba City	in the past rode routes daily. After strokes boss watches over me like a hawk so do not ride often. But I fear I will be alone in the near future and will need the buss again
Oregon House	Yuba College
down hwy 99 to harmoney Village	Sacramento- more times. Wheatland.
Deer in south Yuba City	Sacramento
Wheatland as far as forty mile. Rd For job opportunities	None
more night time service - especially for events in yuba city and Marysville movies and theaters	Plumas Lake
from the River valley and yuba city high schools to the sutter center for after school college courses	To Brownsville, Grass Valley and Loma Rica
Roseville, Rocklin, Lincoln	Wheatland, Yuba City
Connect Yuba city route to winco	Sacramento, Chico
Chico, CA	Yuba Sutter
Sutter	Recreation areas in the foothills maybe.
Hard rock casino north yuba city	Sutter
i live in the Yuba Foothills. Extremely limited opportunities to utilize Y/S transit. It would be fantastic if Y/S Transit could invest in a "foothill route" that would take folks who live in the foothill around the communities and also connect to the larger transit service daily (or more)	San Francisco, CA Oroville ca
Airport, Chico, Sacramento, placer County	Parks, outlet stores, Hard Rock Casion
Live oak Sutter	If there was service for east side Plumas lake from the Plumas lake park and ride it would be a lot easier to get to Yuba. I do not drive!
Bay Area	I would like the bus to come to East side Plumas lake and go to Marysville and Yuba especially Yuba college, my kids and myself have no access to the city because of lack of transportation!
None	Church
casino ,	Williams, CA Gridley, CA Oroville, CA
Yuba College Sutter Center and the city of Woodland or the Yuba College Woodland Center	Olivehurst, Linda, Marysville and Yuba City
.	Natomas, West Sacramento and downtown Sacramento Also Rocklin Roseville area
Yuba Foothills, Loma Rica, browns valley	None
Wheatland, Live Oak,	Grass valley
South Sutter Co	State agencies off highway 50 Franchise Tax Board
Chico and grass valley.	Plumas Lake
Placer County - Lincoln, Rocklin, Roseville - Hwy 65 Corridor	Sacramento to Wheatland and Sacramento to the airport
foothills	Sutter

N/A	None
Chico, Sacramento	Plumas Lake to Marysville, and Yuba City.
Yuba College Marysville Campus	Marysville
Sacramento	None
Auburn, Roseville, Gridley	My house. The nearest is over half a mile away. Seriously, I travel to Sac for work.
Chico, Rosville	Gridley then ho to Chico
My primary route is Olivehurst to Sacramento. I live in Wheatland, where the limited bus service does not work with my schedule.	Plumas Lake to Marysville
Sacramento, Yuba City	Not much need for different area but would like a stop at Walgreens plumas lake area and availability on sundays
YUBA SUTTER TRANSIT	none
to Griffth ave in Linda by Hammonton\Smartsville rd. Also would go to Jamie Dr by stabler lane. it would be nice if there was service to woodland too	Roseville
CSU, Chico	Sacramento International Airport, Hard Rock casino, Roseville Galleria, Sutter Roseville hospital, Kaiser Roseville hospital
Sacramento,yuba city, Marysville, airport	From Walton Ave to E Onstott Rd /. Need bus going to Yuba College on Highway 99 in Yuba City
Yuba city to Live oak and to Chico	I'm ok with current area but Grass Valley would be super!
Roseville	North yuba county to Marysville/Yuba City
Arena/Truxel/Natomas area. Woodland, CA. Roseville, CA. Citrus Heights, CA.	Lincoln and Roseville
Live Oak to Sacramento/San Fransisco	Oroville
Live Oak to Chico Live Oak to Sacramento Live Oak to Marysville Live Oak to Sutter Ponite	Sacramento
Downtown Marysville	Sutter (town)
Roseville Galleria Mall; Oroville; Chico	Only Sacramento Commuter, but ever since Covid crap, I have teleworked at home for 2 plus years now and currently teleworking.
Downtown Sacramento weekends; Roseville	Live Oak

Q15: How do you get information about public transit services (you may select more than one option)

Mailing newsletter	the radio broadcast
online	Google
There is no transit so what good does info do me?	None
Social media	emails
Facebook	Call the transit office dispatch numbe
email	emails
my brother in law works there	e-mail for when money is put into my account and newsletter
I cannot figure it count actually.	emeils
by phone call	Yuba Sutter Transit emails me the information
Maps has the bus schedule	Email
Google maps	FREED
Appeal democrat	Don't
Google/Apple Maps	Personal Phone
From drivers or office services	Newsletter and newspaper
just when someone circulates info via email or Facebook	social media
There's not any info for upper N.E. Yuba County	Call to get information
I don't get information because Yuba County has never provided bus service to our community. When Nevada County provided it, many community members used it.	Internet
Google Maps	I don't
Emails	Telephone questions about service
no idea	Dial a Ride phone number (landline) bcuz your website hasnt ever functioned in the past for me, (tho' its been several years since ive tried, and it may- by now- work.)
Buss stop code	I've never seen any information, but would check it out if I knew where to look
community resource centers	Facebook
Sutter county one stop	I don't
None	I would search online
i have some friends work there	Google
I have never checked	Google search

Facebook	I
Google	Internet
Facebook posts from Gary Bradford	internet
Facebook	I don't
N/A	Nextdoor App
I got a brochure and the Yuba County One Stop	Currently none of above as I am unaware of public transportation available in Plumas Lake.
Facebook	Website
Google	Google
I don't use public transportation	Yuba Sutter News fb page
Never use it, don't need to search it	n/a
Surgery poll for plumas lake	Twitter
Facebook	

Q16: What is your preferred mode of transportation

I don't care, as a disabled person I just want to be able to go somewhere from Plumas Lake	A car if I had one but I usually take bus 3 and only use dial a ride if I have to carry stuff or need service after 6 pm
I'd prefer bus but not accessible to 3120 live oak blvd	1) bum a car ride: live oak to gridley, 2)walk, if no friends going there when im asking to go.
just lost car -- need to explore public transit and other options	Car because of the isolated environment of PL. I would rather walk, bike, and or take the bus if the places I needed to go to were walkable/ bikeable
I use a car, not from preference, but from lack of transit	Train (but buses are fine, i guess)
Transport	My husband used to frequent dial a ride, but it got complicated
i can drive but sometime i like to go in the bus just to check how service works	car, bike, bus, walk, depends on the destination
	The bus only runs certain days where i live so it prevents me from riding daily

Q18. Do you utilize a mobility aid? If yes, please answer below.

There are times I need additional assistance from a person to ambulate. I might need a couple extra minutes to get on/off the bus.	Cane now and again after strokes
Cane	sometimes, not often. a bike.
Epilepsy/ can't legally drive	Cane and sometimes walker
cane	Baby stroller for children
Bicicleta	None
Walking cane	Cane

Q19: What stops you from riding the bus more than you currently do?

riders who won't wear masks
lack of routes, means bus doesn't go where I need it to, and the hours of service could be extended
Only as needed
Dirty, unsafe, unreliable
I commute to Chico for work and there is no transpiration there and back during my work times
It is not safe, homeless issues
Having a vehicle and the time it would take to get me to my workplace on the route
Not enough coverage at bus stops in bad weather and the bus does not go the times needed. People with disabilities who work at night or go to college or Foster Care Classes at night
I have a car
I used to ride the bus to Sacramento everyday, since the COVID take over I have been working from home. Now I go down 1 day a week so I just drive since this is easiest. I am also retiring in just a couple years so I can do this for a season, thanks.
Can't bring my groceries
The bus needs to be more frequent than every hour
All of the above
I like the hours the bus runs. It's perfect for me
need late route like 7:40 at Bouge road stop. many people start work at 8:30 AM downtown SAC.
all the above

The bus does not make frequent enough or direct enough trips to the places I need to go. I would like to ride the bus from South Yuba City to Yuba College in Marysville, but I could not get to campus as early as I need or leave as late as I would need. Between the transfer and many stops in between, traveling this way would take too much time.
Security
Currently no traveling due to health issues.
it would be nice if the bus ran longer like to 9 p.m.
Too many people, too much waiting, I love my freedom
Working remotely, but will start to remote-centered soon
before covid, I rode the shuttle to Sacramento and back. However, the homeless problem in Sacramento can make it very unsafe at times to be dropped off at J St and 8th and walk to work. I have dealt with several confrontations and had to maneuver away from a man who was trying to block my access to my job
trips are tiring due to schedule/appointment variability
Fulltime teleworking from my state job
Inability to sit on the bus for long periods of time.
I am teleworking
right now routes are good
Bus doesn't offer rides on Sunday
No picks in my area
Dont need to
Convenience and safety of personal car
all of above. ALSO, published routes, locations of busstops, times of travel and rates are NOT information readilyavailable.
I have a car
It's not convenient, adding time to already long drives. I don't feel it is clean and safe, can't take my dog
No bus service in Plumas Lake neighborhoods
Scary people at bus stops
Work from home
Don't ride the transit at all
No service in Plumas Lake
Dirtbags
Have my own car
Not interested- have my own car
Do not, since I have my personal vehicle
I have a car
Use my own vehicle

I work at home and have my own car so don't need public transit at this time
Difficulty getting from bus stop & business I want to go to.
I like to drive my personal car instead
The people riding the bus in this area.

Q28: If you have concerns about transit safety, what are they? (You may select more than one answer)

I once saw someone messing around with what looked like a military combat knife.
None
None, I have always felt safe on the bus
None
Female...makes me extra wary
None
N/A
Drug use of passengers
none
The routes need to be moved away from home streets and back to main roads so they don't deteriorate the streets.
Safer Bus Stop area in Linda
bus fair must be exact change
Behavior of other passengers
People defacing or destroying the bus benches at the bus stops
Fear of potentially unsafe passengers
sketchy people ride the bus and I travel as a lone female.
none
the lack of covered bus stops (Like on N. Beale Road) and the lack of seating for those that are unable to stand for long periods of time
When there are teens/children alone, the driver should be aware if they feel unsafe. Just because they could be in a unsafe situation
There should be more benches and bus encloses to safely sit and wait
No shade at bus stops on hot days.
there was one very aggressive passenger little weird used to be on thr bus he always ready to fight. luckily i dont see him after covid. lol
n/a
None
Bus driver do not stop at curb which could ml stepping up on bus Safely 79 yr old and may fall stepping even when lift is lowered. Also cars parked I bus stops

safety protocols and promotions to encourage parents to allow teens and young adults bus
many people seems to be actively having psychosis
None
Need a security guard on each bus.
please provide more info
some areas are not safe environments/many homeless or people under the influence or acting strange
No Concerns
LIGHTS AND TRASH AT THE PLUMAS LAKE PARK N RIDE
People hanging around bus stops
None
There was a medical emergency and the driver was unsure what to do
Ninguna
People who do not want to abide by the rules on the bus.
sometimes there is not enough seating and i had to stand on the bus number 1 or 2 on 9/8/22
No concerns
No concerns
No safety issues
none that I've seen
I wouldn't take a fixed route bus in off hours because the world is just not quite safe enough to due so
None
Transients sleeping or damaging property at bus stops
none
None, seems fine to me
Homeless types hanging around the bus stops
don't care
Cleanliness of buses
No concerns
NA
Security at locations I have seen
Bus stops have scary people hanging around. They take up the seats
Homeless people
Homeless

sometimes needles are left on the floor- people step on these. i fear diseases from used hypos. these addicts dont givaratsass about their own health nor about the toddlers riding bus after them. sweep the buses, please.
Bias from other communities in years past.
I'm uncomfortable with the panhandlers and loiterers at the stops and on transit
Video cameras on buses and security service at dangerous stops
Passengers yelling at the driver and other passengers
I feel safe
Don't ride the bus at all
Crazy people
Have you seen the current bus clientele???
Homeless at bus stops
None
Drivers not stopping at stops when people are right there.
Not sure if it's safe to take children (car seats)
N/A
None
Reputation, and fear
People sleeping at the bus stop
Provides transportation to possible transients from Marysville and surrounding areas
Transients riding the bus and at bus stops
Cannot say for Yuba Sutter as I've never taken their transit. Only SF Muni/Bart and Sacramento Sac RT
Lots Of Sketchy People On The Bus.
As long as safety is maintained at a high standard - riding the bus should be a safe experience for both riders and operators
None
None

Q30: If you have concerns regarding cleanliness, what are they?

Bus stops are dirty.	surfaces don't seem wiped down.
sometimes people on the bus smell	transients leaving belongings in stops, litter surrounding stops
n/a	Trash everywhere
Sanitation.	Not usually to dirty or messy, but occasionally because of previous passengers
None	The busses are pretty clean

Hard to say, it's one of the cleanliest commuter bus service, way better than SacRT and Metro (LA) transit service.	The busses windows could be cleaner and stronger internet.
buses are kept pretty clean, but the bus stops are frequently a mess and the concrete needs to be pressure washed. Also the bench and shelter itself could really stand to be hosed down. I would be the most excellent candidate for that job.	I have noticed that people can very dirty on the bus either spitting or sneezing everywhere and nothing is cleaned
None	None
None	There should be trash cans at all bus stops.
Lots of homeless at bus stops	None
None	Not applicable as I have not ridden on a Yuba bus.
Just other people.leaving trash outside the bus stops	The drivers do what they can. It's the passengers that don't clean up after themselves.
None	I do not have any concerns regarding cleaning has they do cleaning every day
Trash and homeless people	N/A
trash, dirty benches	Some stops are very dirty,bigger trash receptacles. And on bus riders place feet in seats and drivers never say or command them to place feet on floor
None	need more shade, seating, and trashg cans
None	Sanitizing the seats would be nice
Drug use at bus stops	None
n/a	Not all stops are maintained
NA	Fear of covid
-	people living at bus stops
Dirty seats that are usually stained or moist, also bad smell throughout the bus	keep the bus stop shelter clean more benches
None	DIRTY FLOORS
Stops- trash, smoking butts, and other parafanilla	Homeless using bus stops to hang out and sleep and leaving garbage
Ok	buses should be cleaned more often my bus was stinky
Ninguna	N/A
none	Are has cigarette butts and garbage on seats and around the area.
Always homeless and trash around every stop	homeless people
I like it clean.	The busses are usually fine, but some of the benches at the stops are not clean at all.
Bus stops are somewhat unkept. Graffiti and litter are the main issues.	A veces no tienen encendido el GPS
The busses are clean but the bust stops sometimes arent	Passengers who make a mess on the Buses.
Bus stops are dingy and poorly lit with lots of homeless campers in them	People leaving their trash on the bus.

No I don't	some of the bus stops have trash at them, you used to have hired people to clean up the bus stops but i guess they are not doing it anymore. need more garbage cans at bus stops and hire more people to clean the bus stops
Only that the windows should be allowed to open for actual fresh air	Trash near bus stops. Sanitation on bus
garbage left by other patrons	Shit on the floor
None	N/A
None	None
Not sure haven't ridden a bus for awhile	sometimes bad when it rains
Covid concerns make me wonder how often, if ever, the buses are cleaned and sanitized.	None
None	N/a
Dirty seats	none
Disinfecting and smell	None
Unsure as I have not used public transport	Trash at bus stops
Transients in the stops	Transients sleeping at and trashing bus stops
None	A handful of times I've seen trash on the floor of the bus. That rarely happens though.
Homeless sleeping on or around bus stops	None
Wiped down regularly	Seats are filled with lent and hair.
N/A	Trash at the Sam's Club stops
N/A	Surfaces are not properly sanitized
Alot Of Homeless And Trash At The Covered Spots. Especially In Marysville. Would Not Feel Safe Boarding/Getting Off There.	don't care
None	Sanitize
I do not have concerns over cleanliness, because you can only do so much. Some people throw their trash everywhere because they don't know any better.	excessive trash, riders who use bus that are unclean & leave trash, cigarette butts
Homeless people leave things there	I see a lot of bus stops that have trash, transient belongings, and even piles of clothes sometimes left there.
No	NA
N/a	N/A
Needs sanitized	unclothed animals siting directly on a bus seat
No	Bus stops need cleaning often
None	NA
Stops	Homeless sleeping on benches
Benches and awnings could be better	I don't like graffiti.
There are people sleeping at the bus stops, actively using drugs. I'd never want to get on the bus from what I see at the stops	None

Seats are dirty, busses smell bad, bus stops sometimes full of homeless people who leave trash and human waste sometimes. Ride out hospital stop always dirty.	Sanitize
bus stops are sometimes messy	Homeless sleeping at bus stops
Bus stops not very hygiene oriented	aboard the bus, some drivers dont sweep the needles up after each trip.
More garbage cans, less homeless living in them.	I don't have any
I don't ride the bus at all	Dirty
x	People leaving carts and garbage at bus stops
Trash	I have not ridden any of the buses yet. I am new to the area and have no idea of any bus schedule to my area.
None	Mainly homeless people at the bus stop and park and ride location.
No	Some of the stops I have noticed trash at and no trash can. The Alturus and Shasta stop has homeless staying at it.
Homeless using the bus stop as a restroom	I'm almost always seeing trash by bus stops
The parking lot area is a little unkept and need a security guard to be a deterant	Seating is unclean
No	Antiseptic spraying of buses would be helpful
Need sanitizer wipes on buses	It is always dirty, sticky because people spill their drinks and homeless taking up the place to camp out
	Disinfecting

Q34: What is your ethnicity?

I once saw someone messing around with what looked like a military combat knife.
None
None, I have always felt safe on the bus
None
Female...makes me extra wary
None
N/A
Drug use of passengers
none
The routes need to be moved away from home streets and back to main roads so they don't deteriorate the streets.
Safer Bus Stop area in Linda
bus fair must be exact change
Behavior of other passengers
People defacing or destroying the bus benches at the bus stops

Fear of potentially unsafe passengers
sketchy people ride the bus and I travel as a lone female.
none
the lack of covered bus stops (Like on N. Beale Road) and the lack of seating for those that are unable to stand for long periods of time
When there are teens/children alone, the driver should be aware if they feel unsafe. Just because they could be in a unsafe situation
There should be more benches and bus encloses to safely sit and wait
No shade at bus stops on hot days.
there was one very aggressive passenger little weird used to be on thr bus he always ready to fight. luckily i dont see him after covid. lol
n/a
None
Bus driver do not stop at curb which could ml stepping up on bus Safely 79 yr old and may fall stepping even when lift is lowered. Also cars parked I bus stops
safety protocols and promotions to encourage parents to allow teens and young adults bus
many people seems to be actively having psychosis
None
Need a security guard on each bus.
please provide more info
some areas are not safe environments/many homeless or people under the influence or acting strange
No Concerns
LIGHTS AND TRASH AT THE PLUMAS LAKE PARK N RIDE
People hanging around bus stops
None
There was a medical emergency and the driver was unsure what to do
Ninguna
People who do not want to abide by the rules on the bus.
sometimes there is not enough seating and i had to stand on the bus number 1 or 2 on 9/8/22
No concerns
No concerns
No safety issues
none that I've seen
I wouldn't take a fixed route bus in off hours because the world is just not quite safe enough to due so
None

Transients sleeping or damaging property at bus stops
none
None, seems fine to me
Homeless types hanging around the bus stops
don't care
Cleanliness of buses
No concerns
NA
Security at locations I have seen
Bus stops have scary people hanging around. They take up the seats
Homeless people
Homeless
sometimes needles are left on the floor- people step on these. i fear diseases from used hypos. these addicts dont givaratsass about their own health nor about the toddlers riding bus after them. sweep the buses, please.
Bias from other communities in years past.
I'm uncomfortable with the panhandlers and loiterers at the stops and on transit
Video cameras on buses and security service at dangerous stops
Passengers yelling at the driver and other passengers
I feel safe
Don't ride the bus at all
Crazy people
Have you seen the current bus clientele???
Homeless at bus stops
None
Drivers not stopping at stops when people are right there.
Not sure if it's safe to take children (car seats)
N/A
None
Reputation, and fear
People sleeping at the bus stop
Provides transportation to possible transients from Marysville and surrounding areas
Transients riding the bus and at bus stops

Cannot say for Yuba Sutter as I've never taken their transit. Only SF Muni/Bart and Sacramento Sac RT
Lots Of Sketchy People On The Bus.
As long as safety is maintained at a high standard - riding the bus should be a safe experience for both riders and operators
None
None

Q35: What community do you live in? Please provide the city/community and zip code.

Tierra Buena, 95993	95961
Marysville ca 95901	95901
95961	Yuba City
yuba city	Yuba City - 95991
Plumas Lake 95961	Brownsville
Yuba City/Yuba-Sutter/95991	Linda, 95901
95961	Yuba City 95991
Downtown Sacramento	Marysville 95901
yuba city	95991
95991	Yuba City, 95991
95901	95901
95993	Wheatland, 95692
95901 Linda	Plumas Lake 95961
95961	Yuba Cit Ca 95993
Marysville, 95901	yuba city, live oak blvd, 95991
Live Oak	95991
Yuba City 95993	Yuba city
Yuba City 95993	95993
95961	Yuba City, 95991
95961	95953
95901	Live Oak, 95953
Plumas lake 95961	Marysville 95901
Plumas lake 95961	south Yuba City
Marysville 95901	Yuba City 95991
Arboga, 95961	Plumas Lake 96961
Marysville, 95901	95961
95901	Yuba City 95993
3129 live oak blvd 95991	95993
95993	Yuba City, 95991

Marysville	95993
95953	Yuba City, 95991
Yuba City 95991	95962
95991	Edgewater
95991	Yuba City
Yuba City	Yuba City 95993
Olivehurst 95961	Sutter, 95982
Marysville 95901	So. Yuba City, 95991
Yuba City 95993	Yuba City 95993
DOBBINS 95935	95901
Oregon House 95962	Yuba City
Msvl	Yuba City 95993
Marysville. Yuba College 95901	Yuba City 95991
Marysville 95901	Yuba City
Yuba City, 95991	Yuba City
Marysville, CA 95901	Yuba city 95993
95825	95901 Edgewater
Olivehurst 95961	Yuba City
95901	Oregon House
95993	Plumas Lake
95692	Marysville yuba college 95901
95993	95692
Yuba City 95993	95993
Marysville, CA. 95901	Yuba City
Wheatland/95692	95993
Yuba City 95993	Sutter 95982
Sutter	Yuba City
95901	95961
Marysville, 95901	North Sutter County
Plumas Lake 95961	95961
East Linda	Plumas lake
Yuba City, 95991	Plumas lake 95961
Olivehurst 95961	95991
Yuba City, 95991	95901
Yuba City, 95993	Plumas Lake 95961
95991	Plumas lake ca
95991	Linda 95901

95961	Marysville 95901
95901	Plumas Lake 95961
Yuba City 95993	Plumas Lake, CA 95961
camptonville	Butte Vista 95993
Marysville, CA 95901	95823 south Sacramento
Plumas Lake 95961	95961
Wheatland	Plumas Lake
Yuba City	Marysville
Plumas Lake 95961	95961
Yuba City 95993	Plumas Lake
Yuba County	95953
95993	Wheatland 95692
95991	95961
Marysville 95901	Plumas lake 95961
95993	Plumas Lake 95961
Yuba City 95991	Plumas Lake, 95961
95901	Wheeler Ranch, 95961
Camptonville 95922	95961
Yuba city 95991	Plumas Lake, Wheeler Ranch, 95961
Yuba city 95993	Plumas Lake/Wheeler Ranch 95961
95991	95961
Plumas Lake 95961	Yuba City 95991
95991	95991
Camptonville, 95922	Yuba city 95991
Camptonville 95922	Plumas Lake 95961
South Yuba City 95993	Marysville 95901
95993	95961
Olivehurst 95961	96991
Marysville 95901	Plumas Lake, Sonoma Ranch, 95961
Liveoak 95993	Yuba City 95993
South Yuba City 95991	Plumas Lake 95961
Oregon House, Ca 95962	Eastside Plumas Lake 95961
marysville 95901	Plumas Lake - 95961
Yuba sutter	Plumas Lake 95961
Yuba city95991	Plumas Lake 95961
95918	Plumas Lake
95993	Plumas Lake, 95961

Olivehurst 95961	Plumas Lake
95926	95961
95961	Yuba City 95991
95993	95901
camptonville 95922	95961
East Marysville 95901	Olivehurst/Plumas Lake
95901	District 10/95901
South Yuba City, 95991	95993
95901	Plumas lake 95961
Marysville 95901	Plumas Lake
yuba city	Marysville 95901
Yuba city	Plumas Lake, Ca 95961
Linda/Marysville 95901	Yuba city 95991
95918	Live oak
Wheatland	95901
Live oak 95953	95993
95692, Wheatland	Wheatland 95692
CFW, 95692	95961
Plumas Lake, 95961	Plumas Lake 95961
Plumas Lake, 95961	Plumas Lake 95961
95961	95993
95961	95961
95961	Plumas Lake
Plumas Lake	Plumas lake 95961
So yuba city 95991	Wheatland, settlers village, 95692
95991	95961
Plumas lake	Plumas Lake
Plumas Lake, 95961	Yuba City 95993
95991	Linda CA 95901
95961	South Yuba city, 95991
Plumas Lake 95961	95961
Plumas Lake 95961	95961
95901	Plumas Lake
95991	Yuba city/95991
Olivehurst 95961	95991
Edgewater Community 95901	95961
Sacramento	Edgewater 95901

95901	Plumas lake 95961
Plumas Lane, 95961	Olivehurst 95961
Plumas Lake. 95961	Plumas Lake 95961
Marysville 95901	95991
Arboga	95961
Plumas Lake 95961	95961