RESULTS OF

SOLANO TRANSPORTATION AUTHORITY

2022 ON-BOARD TRANSIT SURVEY

Submitted to

Solano Transportation Authority
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Submitted by

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EXECUTIVE SUMMARY

This report presents the results of an on-board survey of 1,181 riders on the 4 consolidated routes in the Solano Transportation Authority system. Results were weighted according to the weekly ridership of each route as estimated from on-off counts summarized below.

Figure ES-1. Ridership by Route and Survey Weights

Route	A Weekday Count	B Saturday Count	C Sunday Count	5A+B+C= Weekly Riders	Number of Surveys Completed	Survey Weights
Blue Line B	301	71		1,576	211	0.176
Green Express	256			1,280	112	0.143
Yellow Line Y	162	99	55	964	173	0.108
Red Line/Route 82	912	355	198	5,113	685	0.572
TOTALS	1,631	525	253	8,933	1,181	1.000

The survey results, as well as additional comments provided by riders, indicate that the four consolidated routes in the Solano Transportation Authority system are an essential resource for Solano County residents and others with limited transportation options for access to jobs, education and other social activities. While riders are moderately satisfied with these bus lines overall, they are less satisfied with the frequency of service, suggesting that more frequent buses would significantly improve the value of the STA system to this transit-dependent population. Specific findings include:

- Surveyed riders rely on the bus for transportation. More than one-fourth (28%) of respondents said they would not have made the trip if their bus had not been available – indicating that while most riders have alternative ways of making this trip and that the trip must be made (e.g., for getting to work), a sizeable minority are completely dependent on access to their bus.
    - More than 28% of riders on surveyed buses have no cars in their household, and 31.7% have just a single vehicle, meaning that almost 60% of riders have limited access to an automobile as an alternative to their bus service.
    - In addition, 36% of respondents do not have a driver's license.
    - (It is important to note that all of these indicators of rider dependence on the bus increased since this survey was last fielded in October and November of 2018, when 23% said they would not have made the trip, 52% had limited access to a car and 28% did not have a driver's license.)

- Most riders use their bus frequently, with almost 50% reporting that they ride at least 5 days a week and more than 80% riding at least weekly. Most riders are also long-term users: more than 62% of riders have been using their current route for at least a year, with 22.3% having been riders for 6 years or more. These lines also continue to attract new riders: 25% of respondents said they had been riding for less than 6 months, including 5% who were riding for the first time.

- Riders travel primarily between home and work, but also to and from a variety of other destinations. More than 90% of respondents either began or planned to end their current trip at home, while almost 70% were coming from or going to work, about 13% to or from sports/social/recreational activities and 7% to or from school or college.

- Riders use the buses as one of several links in their commute or other travel, with roughly half using other public transportation methods (BART, other buses) both to get to their bus stop and to get to their final destination.

- Demographically, these routes serve a diverse ridership, with almost 40% of riders African American, 21.8% white/Caucasian and 18.5% Asian. About 25% of riders described themselves as Hispanic or Latino. In addition, 34% of respondents said they speak a language other than English at home – primarily Spanish (51%) and Filipino/Tagalog (25%), but also more than a dozen other languages.

- More than 84% of surveyed riders are within the traditional age range of working adults (18 to 64), with only 3.9% under 18 and 12% age 65 and older. Similarly, more than 80% of riders are employed full time (67%) or part time (13.5%).

- Surveyed riders gave good ratings to most service elements, with an overall service rating of 2.99, where 3.0 represents a "good" rating (4 is excellent; 2 is fair and 1 is poor).
  - Five service elements received ratings of 3.0 or higher, with driver courtesy receiving the highest rating of 3.34.
  - Availability of intercity connections, on-time performance, rider information and fares all received ratings slightly below 3.0, but the average rating for frequency of service was significantly lower at 2.72, highlighting one area where the system is falling short in meeting the needs of transit-dependent passengers.
  - Both transit facilities and bus shelters received mean ratings slightly higher than "fair", while real-time apps myStop and NextBus were rated less than "fair" with averages of about 1.8.
  - It should be noted that the printed survey instrument had been developed for use before the survey was delayed by Covid and therefore asked about the transit apps most widely used and supported at that time: NextBus and myStop. These apps were no longer supported with real-time data when the survey was fielded, which would explain the low ratings.

- When asked which individual aspect of service was MOST responsible for their overall service rating, almost one-third of riders said on-time performance was the most important factor, followed by 14.1% who identified frequency of service and 8.8% who mentioned driver courtesy. No other element of service was cited by as many as 5% of respondents.

- Riders were also asked to identify how they currently receive transit information from a list of 11 sources (with more than one response possible.) The Transit website and Transit Center together were mentioned by more than 60% of riders, while phone apps NextBus, Google Maps and myStop together were cited by about 20%. About 25% of respondents cited more traditional non-digital information sources: information at stops (9%), printed schedules (6.2%) and asking a friend or bus driver (9.3%).

- The interest in online information is confirmed by the high percentage of riders who own smart phones (more than 90%) and the significant share of phone owners who use apps to track buses (44.4%). Those who use real-time apps primarily said they use NextBus (40.8%), myStop (15.8%) and Google Maps (15.2%). It is important to note that more than half of respondents said they use apps (NextBus and myStop) that are no longer supported with real-time data, despite extensive efforts to make riders aware of the Transit app. This indicates that more marketing and education are needed to inform riders that a) the Transit app is the preferred source of information and b) NextBus and myStop are no longer supported and should not be relied upon.

- While these results consistently show a ridership that relies on buses to commute between home and work as well as reach other destinations, there are differences among individual routes in terms of the age, employment status, income, ethnic background and access to alternative methods of transportation of their riders.

RECOMMENDATIONS

Based upon the above findings and to pursue the goal of better meeting the needs of riders and improving their satisfaction with STA service, we offer the following recommendations.

- When possible, increase the frequency of service on selected routes, particularly during the morning and afternoon rush.

- Try to improve synchronization between the STA schedule and those of other transport systems, particularly BART.

- More marketing and education are needed to inform riders that a) the Transit app is the preferred source of real-time information on SolTrans buses and b) NextBus and myStop are no longer supported and should not be relied upon.

- Because not all riders have access to or are comfortable with online data, it is important that schedules are provided at each bus stop and kept up to date.

- Finally, a comparison of current to past indicators of transit dependence (e.g., lack of access to a car; no driver's license) shows that a higher proportion of riders today have no alternative to using the bus, suggesting that some riders surveyed in

2018 who did have alternatives have since abandoned their use of these bus lines. To better understand the factors that have driven riders away from the bus and are causing dissatisfaction among current riders, we recommend that STA consider conducting qualitative research with both groups to probe the reasons for no longer using the bus or sources of dissatisfaction. While fielding the survey, many riders verbally expressed frustration with everything from Clipper Cards to the lack of information at bus stops, yet the level of frustration in these comments was not always reflected in the written feedback on the survey form. We believe that speaking with former riders could help STA gain greater insight into the needs of post-pandemic system users.

INTRODUCTION

This report presents the results of an on-board survey of riders on the four consolidated routes in the Solano Transportation Authority system. All riders on every bus were asked to complete the survey, and approximately 60% of riders complied, providing a high degree of statistical reliability. A total of 1,181 passengers on the following routes were surveyed:

- Fairfield Suisun Transit (FAST), surveyed between May 9 and 31, 2022.
    - Blue Line B – 211 riders surveyed

- Solano County Transit (SolTrans), surveyed between April 11 and May 31, 2022.
    - Yellow Line Y – 173 riders surveyed
    - Green Express – 112 riders surveyed
    - Red Line/Route 82 – 685 riders surveyed

Results presented in this report are weighted to accurately represent the overall rider population; that is, results from each route are weighted according to the estimated number of riders per week, based on the weekday and weekend on-off counts conducted as part of this study. The results of these counts and the resulting estimates of weekly ridership that were used to develop weights are presented below.

Figure 1. Ridership by Route and Survey Weights

Route	A Weekday Count	B Saturday Count	C Sunday Count	5A+B+C= Weekly Riders	Number of Surveys Completed	Survey Weights
Blue Line B	301	71		1,576	211	0.176
Green Express	256			1,280	112	0.143
Yellow Line Y	162	99	55	964	173	0.108
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TOTALS	1,631	525	253	8,933	1,181	1.000

The remainder of this report presents results for all riders. For each set of findings, results are presented in graphic form for the overall population of riders. For most questions, results are also presented for individual routes. First, characteristics of trips being taken by surveyed riders are assessed, followed by an analysis of rider demographics. Rider perception of the quality of service and use of transit information sources are then discussed. Finally, brief conclusions are drawn regarding the characteristics of riders and their use of the Solano Transportation Authority routes.

TRIP CHARACTERISTICS

The following section is about how riders were using the bus at the time they were surveyed. Riders were asked to describe how often they rode and for what purpose, where

they were traveling to and from, how they got to and from stops, how they paid their fare and how they would have made this trip if the bus had not been available.

Frequency of Ridership

Most riders use their bus frequently, with almost 50% reporting that they ride at least 5 days a week and more than 80% riding at least weekly. As shown by the individual route results, the Green Express has the highest share of riders using the bus 5-7 times a week, while the Yellow Line has the lowest share. These results indicate that riders make these bus routes an integral part of their transportation strategy.

Figure 2. Ridership Frequency – All Routes
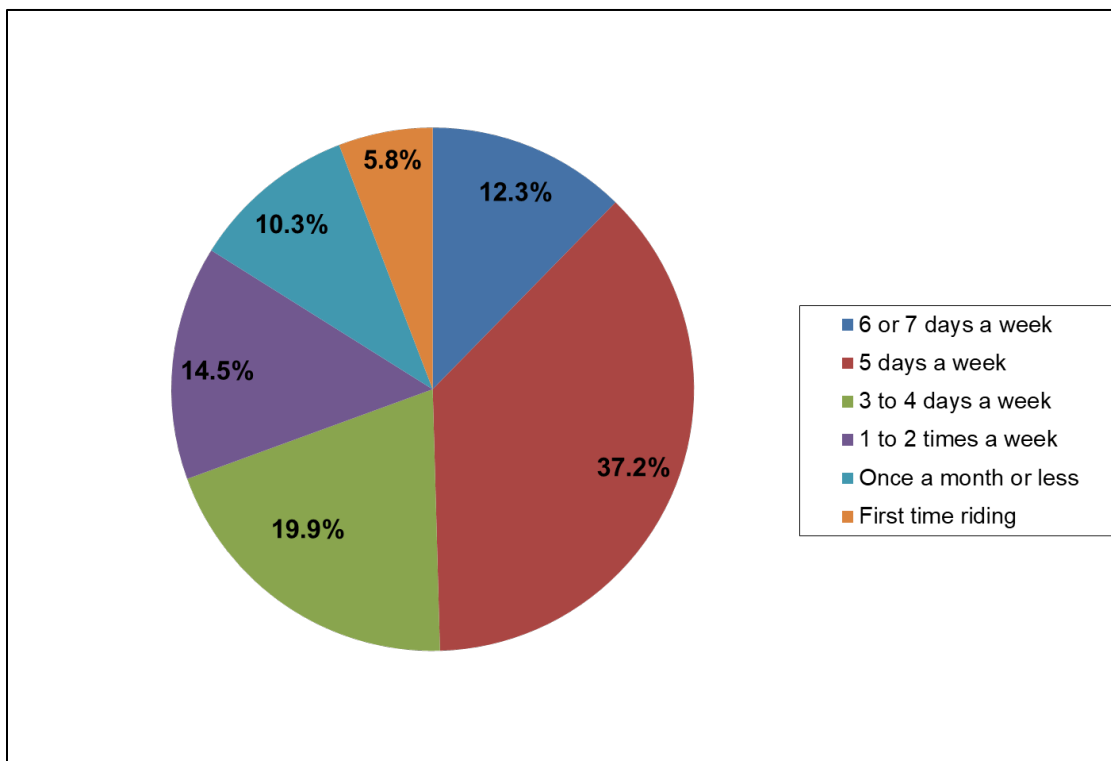
Figure 3. Ridership Frequency – Individual Routes

Route Frequency	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
6 or 7 days a week	12.3%	13.2%		14.9%	14.7%
5 days a week	37.2%	39.1%	60.4%	31.1%	32.0%
3 to 4 days a week	19.9%	18.3%	25.5%	19.3%	19.1%
1 to 2 times a week	14.5%	13.7%	9.4%	13.0%	16.2%
Once a month or less	10.3%	9.6%	3.8%	12.4%	11.7%
First time riding	5.8%	6.1%	0.9%	9.3%	6.3%

Length of Ridership

Survey results indicate that more than 62% of riders have been using their current route for at least a year, with 22.3% having been riders for 6 years or more. At the other extreme, 25% of respondents said they had been riding for less than 6 months, including 5% who were riding for the first time. The Green Express had the highest percentage of respondents who had been riding for at least 6 years, including 22.6% who had been riding for 10 years or more, while Yellow had almost 50% riding less than one year.

Figure 4. How Long Riding – All Routes
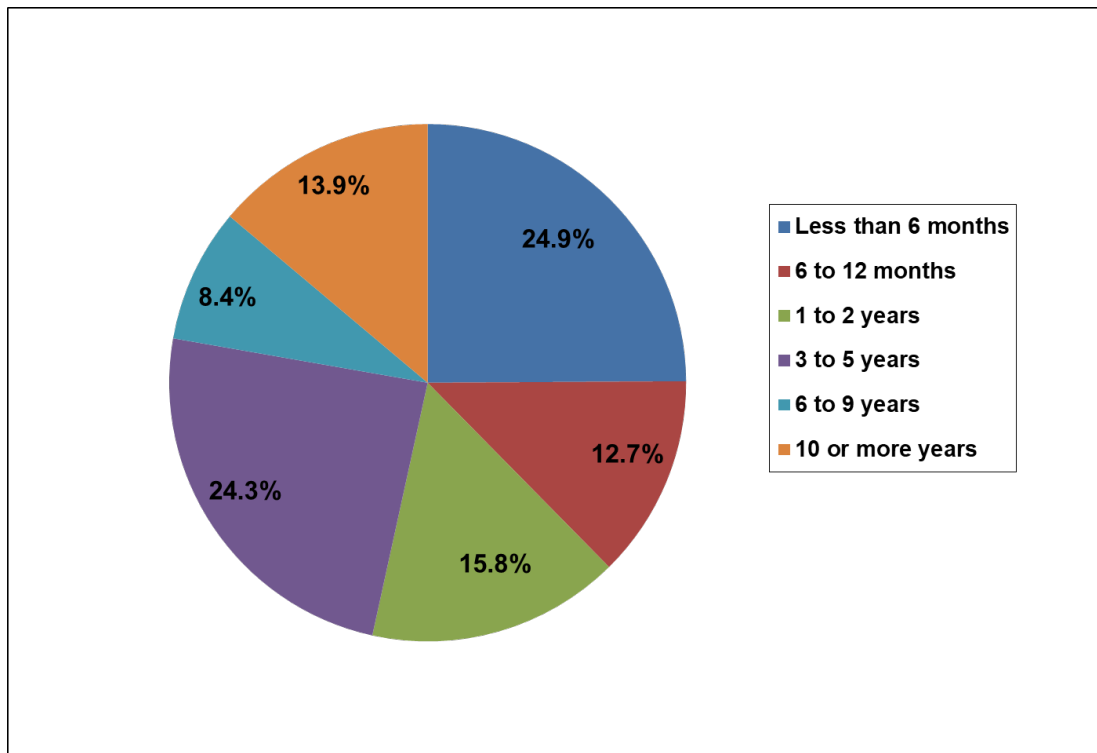
Figure 5. How Long Riding – Individual Routes

Route How long riding	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Less than 6 months	24.9%	27.6%	13.2%	31.3%	25.8%
6 to 12 months	12.7%	16.6%	5.7%	18.1%	12.3%
1 to 2 years	15.8%	15.6%	17.9%	16.3%	15.3%
3 to 5 years	24.3%	23.6%	25.5%	16.9%	25.6%
6 to 9 years	8.4%	5.5%	15.1%	3.8%	8.4%
10 or more years	13.9%	11.1%	22.6%	13.8%	12.6%

Round/One Way Trip

Approximately 70% of respondents said their ride on the bus was part of a round-trip, while 24% said they did not intend to make a round trip on the bus and 5.4% did not yet

know whether they would be making a return trip on the same route. More than 80% of Green Line riders expected to make round trips, but only 66% of Yellow Line riders expected to do so, with 7.1% of the latter uncertain whether they would return on the same bus. The high percentage of riders on round trips supports the hypothesis that many riders on these buses are on a regular commute.

Figure 6. This Trip is Part of a Round Trip on the Bus – All
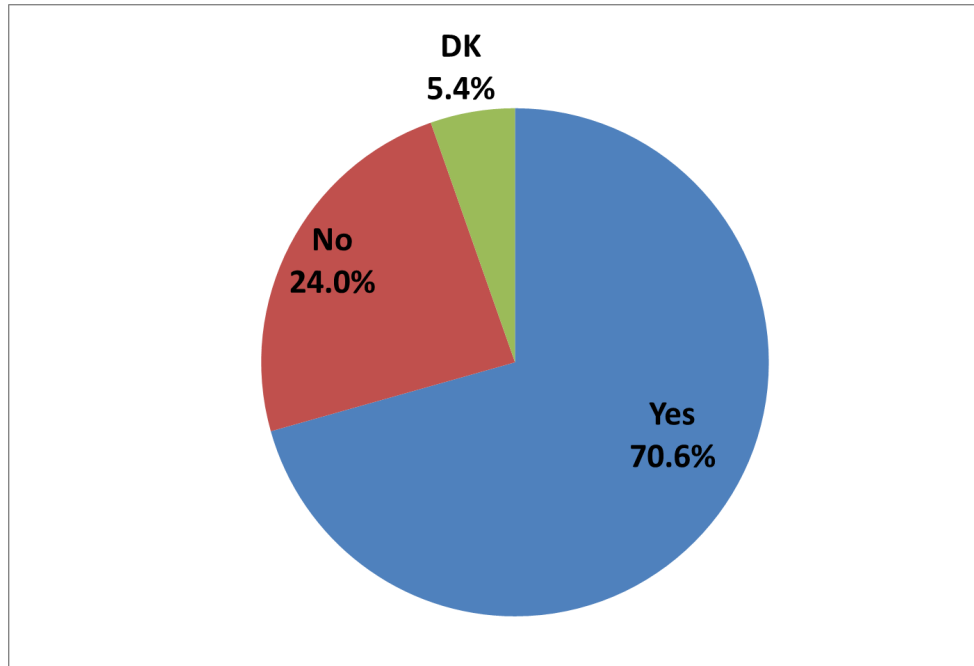
Figure 7. This Trip is Part of a Round Trip on the Bus – Individual Routes

Route	All	Blue B	Green GX	Yellow Y	Red/Rt 82
Round trip?	n=1181	n=211	n=112	n=173	n=685
Yes	70.6%	72.4%	83.8%	65.7%	67.7%
No	24.0%	22.9%	14.4%	27.2%	26.1%
Don't know	5.4%	4.8%	1.8%	7.1%	6.2%

Trip Purpose—Where Are You Coming from and Where Are You Going?

Passengers were asked where they were coming from and where they were going on this trip. The results show that riders are traveling primarily between home and work, with far fewer going to and from a variety of other destinations. Almost 90% of respondents either began or planned to end their current trip at home, while 73% were coming from or going to work, about 11% to or from sports/social/recreational activities, 7% to or from school or college and 6% to or from shopping or errands. No other origin or destination accounted for as much as 5%.

More than 84% of riders said they were coming from either home 56%) or work (28.2%) on their current trip, while 5.1% said they were returning from sports, social or recreational activities and 3.4% were returning from school or college. All but 5.4% of Green Express riders were coming from home or work, compared to 76.5% of those on Yellow Line buses.

Figure 8. Trip Origins – All
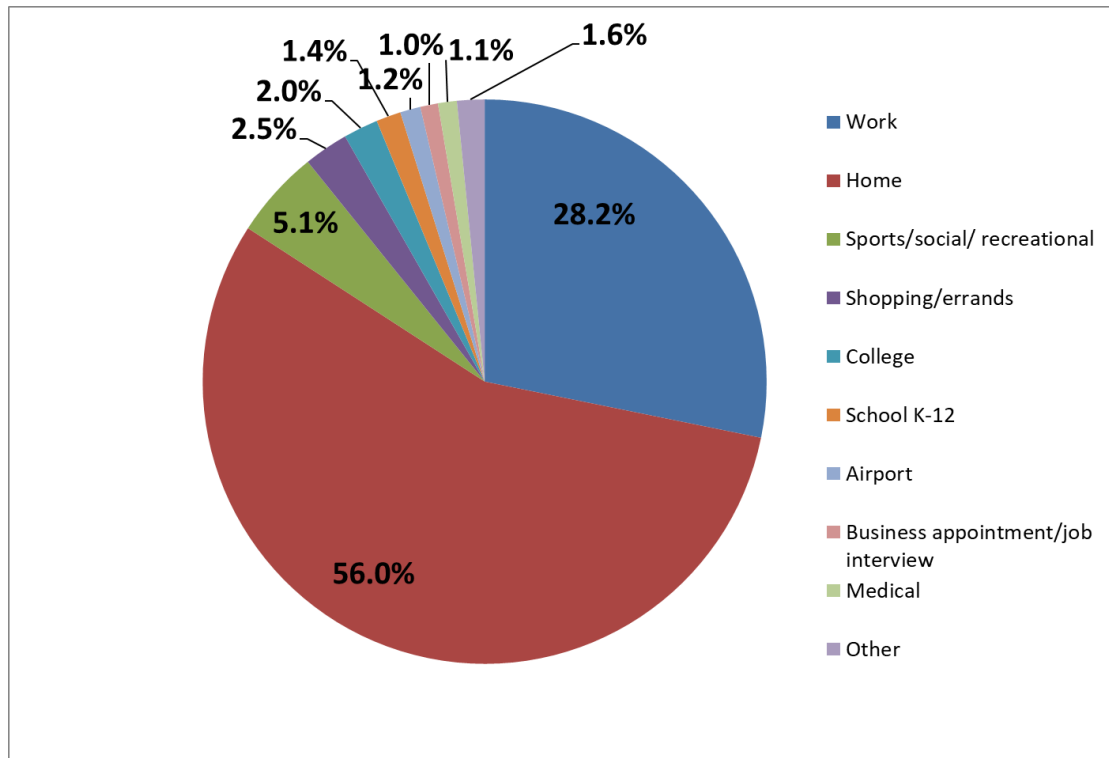
Figure 9. Trip Origins – Individual Routes

Route Number Coming from	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Work	28.2%	33.5%	15.5%	21.8%	31.0%
Home	56.0%	54.5%	79.1%	54.7%	50.8%
Sports/social/ recreational	5.1%	2.9%	1.8%	10.0%	5.6%
Shopping/errands	2.5%	1.0%	1.8%	3.5%	3.0%
College	2.0%	3.8%	0.9%	2.9%	1.5%
School K-12	1.4%	1.0%		3.5%	1.5%
Airport	1.2%	0.5%		1.2%	1.7%
Business appointment/job intervie	1.0%	0.5%		0.6%	1.5%
Medical	1.1%	1.0%		1.2%	1.4%
Other	1.6%	1.4%	0.9%	0.6%	2.0%

Among trip destinations, work was the most often mentioned (41.1%), followed by home (35.7%); sports, social or recreational (8.3%); shopping/errands (4.2%) and school (3.8% for K-12 and college combined). Various other destinations each accounted for less than 3% of responses.

The Green Express had 95% of riders heading for work or home, compared to only 61.6% for the Yellow Line, which had 13.2% going shopping or running errands. All other destinations accounted for less than 10% each. The origins and destinations emphasize the primary role of the system in serving commuters and, to a lesser extent, providing access to other activities.

Figure 10. Trip Destinations – All
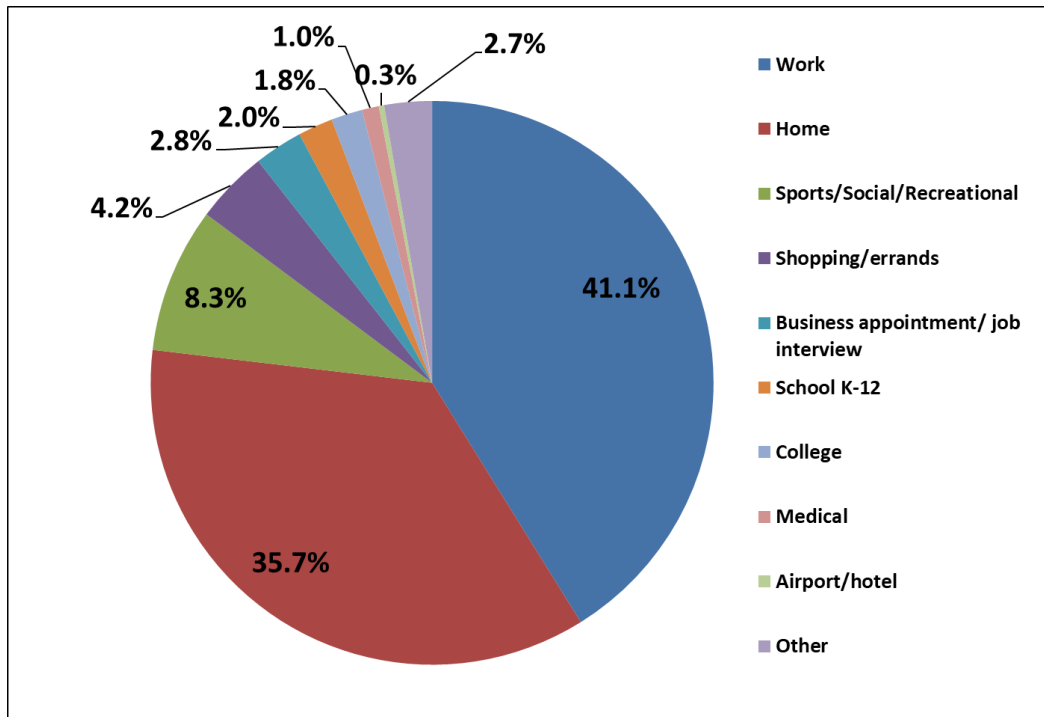
Figure 11. Trip Destinations – Individual Routes

Route Number	All	Blue B	Green GX	Yellow Y	Red/Rt 82
Going to	n=1181	n=211	n=112	n=173	n=685
Work	41.1%	38.5%	77.1%	30.5%	34.9%
Home	35.7%	40.0%	18.3%	31.1%	39.6%
Sports/Social/Recreational	8.3%	6.8%	1.8%	9.0%	10.3%
Shopping/errands	4.2%	3.9%		14.4%	3.4%
Business appointment/ job interview	2.8%	2.0%	0.9%	2.4%	3.6%
School K-12	2.0%	0.5%		5.4%	2.3%
College	1.8%	3.9%	0.9%	2.4%	1.2%
Medical	1.0%	1.5%			1.2%
Airport/hotel	0.3%			1.2%	0.3%
Other	2.7%	2.9%	0.9%	3.6%	3.0%

Places of Origin and Destination

Respondents were also asked in which city they had started their current trip and where they planned to end it. Overall, 65% of riders started their trip in Vallejo, San Francisco, Fairfield or Oakland and 63% planned to end their trip at one of those four destinations. Vacaville accounted for 6.4% of origins and 5% of destinations, and no other cities accounted for as much as 6% of either origins or destinations.

Figure 12. City of Origin and Destination – All
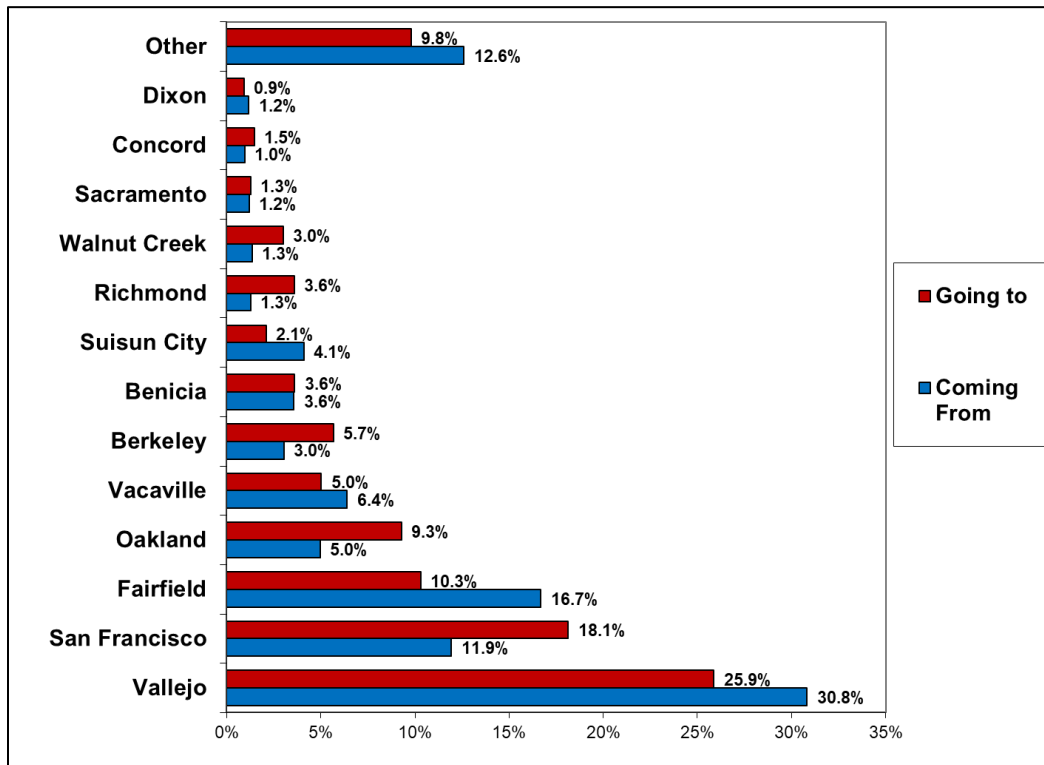
Among individual routes, both the Yellow and Red Lines had about 45% of riders coming from Vallejo, but the Yellow Line had only 23% going there, compared to 40% for the Red Line. The Green Line had more than half coming from but only 15% going to Fairfield, which also accounted for about one-fourth of origins or destinations for riders on the Blue Line. The Blue Line also had a significant percentage of riders from and to Vacaville (26% coming from, 20% going to) and Sacramento (4.1% coming from, 7.3% going to).

Figure 13. City of Origin – Individual Routes

Route Number What city are you coming from?	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Vallejo	30.8%	0.5%		44.4%	45.3%
Fairfield	16.7%	23.5%	52.8%	2.0%	8.3%
San Francisco	11.9%	12.8%	9.4%	4.6%	13.7%
Vacaville	6.4%	26.0%	8.5%		1.0%
Oakland	5.0%	3.1%	1.9%	2.6%	6.7%
Benicia	3.6%	2.0%		20.5%	1.7%
Suisun City	4.1%	5.1%	16.0%		1.6%
Berkeley	3.0%	0.5%	4.7%		4.0%
Walnut Creek	1.3%	3.6%		6.6%	
American Canyon	1.1%			3.3%	1.4%
Dixon	1.2%	6.6%			
Richmond	1.3%	0.5%			2.1%
Concord	1.0%	2.6%		4.6%	
Sacramento	1.2%	4.1%	1.9%		0.3%
Davis	0.7%	3.1%			0.3%
South SF	0.8%	1.0%	0.9%	1.3%	0.5%
El Cerrito	0.6%				1.0%
San Pablo	0.6%			0.7%	0.9%
Other	8.8%	5.1%	3.8%	9.3%	11.1%

Figure 14. City of Destination – Individual Routes

Route Number What city are you coming from?	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Vallejo	25.9%	1.0%	1.1%	23.0%	40.3%
San Francisco	18.1%	13.0%	40.9%	3.1%	16.9%
Fairfield	10.3%	26.9%	15.1%	0.6%	5.8%
Oakland	9.3%	2.6%	23.7%	5.6%	8.4%
Berkeley	5.7%	2.6%	7.5%	2.5%	6.7%
Vacaville	5.0%	19.7%	1.1%		2.4%
Benicia	3.6%	1.6%		23.0%	1.5%
Richmond	3.6%	1.0%	4.3%		4.9%
Walnut Creek	3.0%	5.2%		19.3%	
Suisun City	2.1%	2.6%	5.4%		1.5%
Concord	1.5%	4.1%		6.8%	
Sacramento	1.3%	7.3%			
El Cerrito	1.1%				1.9%
Dixon	0.9%	4.7%			0.2%
Pleasant Hill	0.5%	1.6%		2.5%	
Davis	0.5%	2.1%	1.1%		
American Canyon	0.5%			0.6%	0.7%
Napa	0.4%	1.0%			0.4%
Other	6.8%	3.1%		13.0%	8.4%

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Where Did You Board and Where Will You Leave the Bus?

When asked where they had boarded the bus, 58.4% of riders said they had boarded either in Vallejo or El Cerrito and nearly 66% planned to leave in these cities, in part reflecting the high volume of passengers connecting to BART. While 22% of passengers boarded their bus in Fairfield, only 12% planned to get off there. Conversely, Walnut Creek accounted for 8.2% of boardings, but 10.2% of planned de-boardings. No other city accounted for as much as 4% of either boarding or departing riders.

Figure 15. Where Did You Board/Will You Leave? – All

City	Where Did You Board	Where Will You Leave
Vallejo	33.6%	28.8%
El Cerrito	24.8%	37.1%
Fairfield	22.0%	12.0%
Walnut Creek	8.2%	10.2%
Vacaville	3.7%	3.8%
Benicia	2.8%	2.8%
Suisun City	1.7%	1.0%
Sacramento	1.3%	1.3%
San Francisco	0.2%	1.1%
Dixon	0.6%	0.6%
Concord	0.3%	0.6%
Davis	0.5%	0.5%
Pleasant Hill	0.3%	0.1%

Among individual routes, The Red Line had almost 90% of riders boarding in Vallejo or El Cerrito, while Green Express had 93.8% boarding in El Cerrito or Fairfield and the Yellow Line had all but 5.4% getting on in Vallejo, Walnut Creek or Benicia.

Figure 16. Where Did You Board? – Individual Routes

Route Number Where did you board?	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Vallejo	33.6%	0.5%		47.3%	49.7%
El Cerrito	24.8%		18.8%		38.6%
Fairfield	22.0%	31.9%	75.0%		9.9%
Walnut Creek	8.2%	31.9%		23.7%	
Vacaville	3.7%	21.0%			
Benicia	2.8%	1.4%		23.7%	
Suisun City	1.7%		6.3%		1.4%
Sacramento	1.3%	7.6%			
Dixon	0.6%	2.9%			0.2%
Davis	0.5%	2.9%			
Concord	0.3%			3.0%	
Pleasant Hill	0.3%			2.4%	
San Francisco	0.2%				0.3%

All of the Green Line riders said they planned to leave the bus in El Cerrito or Fairfield, while almost 90% of Red Line riders planned to leave in El Cerrito or Vallejo. The Blue and Yellow Lines did not have more than 42% of riders getting off in any single city,

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Figure 17. Where Will You Leave the Bus? – Individual Routes

Route Number / Where will you leave?	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
El Cerrito	37.1%		81.3%		44.6%
Vallejo	28.8%			27.2%	45.2%
Fairfield	12.0%	31.9%	18.8%		6.4%
Walnut Creek	10.2%	31.9%		42.0%	
Vacaville	3.8%	21.0%			0.2%
Benicia	2.8%	1.4%		23.7%	
Sacramento	1.3%	7.6%			
San Francisco	1.1%				2.0%
Suisun City	1.0%				1.7%
Concord	0.6%			5.9%	
Dixon	0.6%	3.3%			
Davis	0.5%	2.9%			
Pleasant Hill	0.1%			1.2%	

Access to Bus Stop

More than half of riders reached the bus stop using BART, another bus or train, or the ferry, with 50.6% responding that they used one of these forms of public transportation to get to their stop. Another 27.1% reached their stop by car, either as driver (18.2%) or as passenger/unspecified (8.9%), while 20.5% said they walked at least part of the way to their stop (note that some riders provided more than one response).

Figure 18. How Did You Get to the Bus? – All

* Totals exceed 100% because more than one response was accepted.

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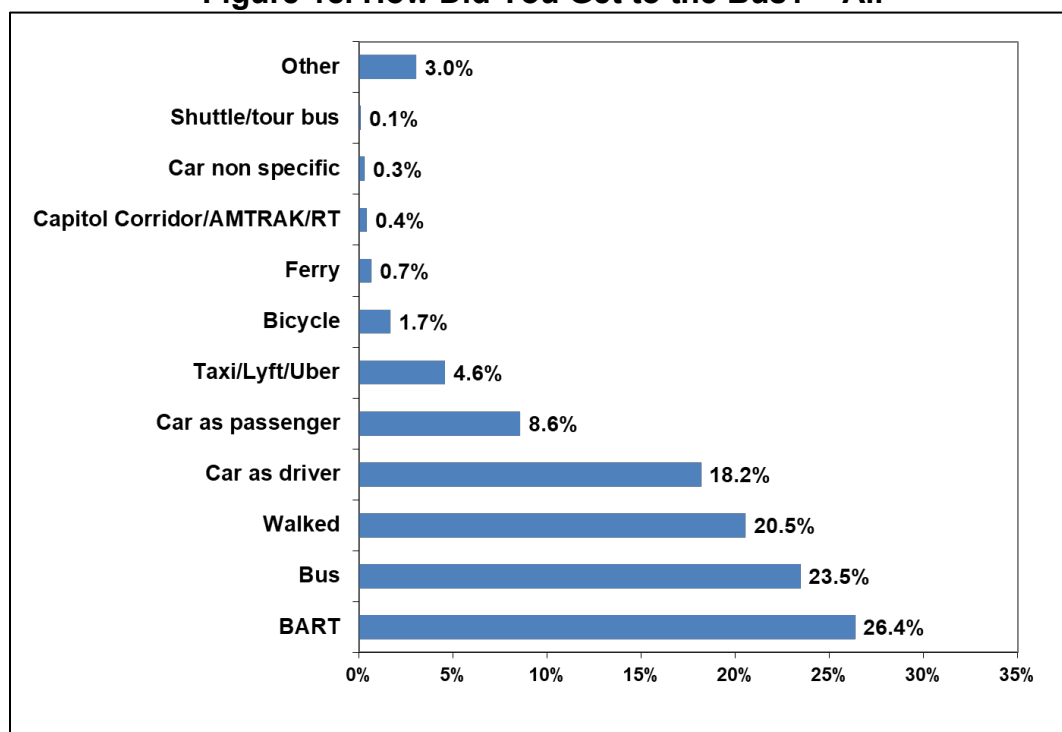
Figure 19. How Did You Get to the Bus? – Individual Routes

| Route Number / Mode to bus stop	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
BART	26.4%	21.7%	21.3%	16.2%	31.0%
Bus	23.5%	22.2%	10.2%	26.9%	26.5%
Walked	20.5%	24.6%	1.9%	36.5%	20.9%
Car as driver	18.2%	17.9%	60.2%	6.0%	10.1%
Car as passenger	8.6%	7.7%	8.3%	9.6%	8.7%
Taxi/Lyft/Uber	4.6%	4.8%	2.8%	3.6%	5.1%
Bicycle	1.7%	3.4%		2.4%	1.4%
Ferry	0.7%			1.2%	0.9%
Capitol Corridor/AMTRAK/RT	0.4%			0.6%	0.6%
Car non specific	0.3%		0.9%	0.6%	0.2%
Shuttle/tour bus	0.1%				0.2%
Other	3.0%	2.9%	1.9%	3.6%	3.3%

* More than one mode may have been used

Riders who walked to reach their bus stop were asked approximately how long the walk took. Mid-points of ranges (e.g., 8 minutes for 6-10 minutes) were used to calculate an average time of about 13.6 minutes for the 202 riders who walked to their bus stop and reported the length of their walk.

Using the same approach, the average distance driven by the 130 respondents who drove themselves to the bus stop was calculated as about 5.9 miles, while the 77 who got a ride or used a rideshare service reported an average distance of 4.9 miles. The 14 riders who used bicycles to reach the station averaged about 3.3 miles.

Most riders who reached their stop by bus used other STA operators, with SolTrans and FAST accounting for over 80% of the total. In addition to Vacaville City Coach (8.1%), buses from several other transit systems were used to reach bus stops, including Napa Vine (3.0%), AC Transit (2.6%), Dixon Readi-Ride (2.1%) and County Connection (1.3%).

Figure 20. If Bus to Stop, What Transit Operator? – All
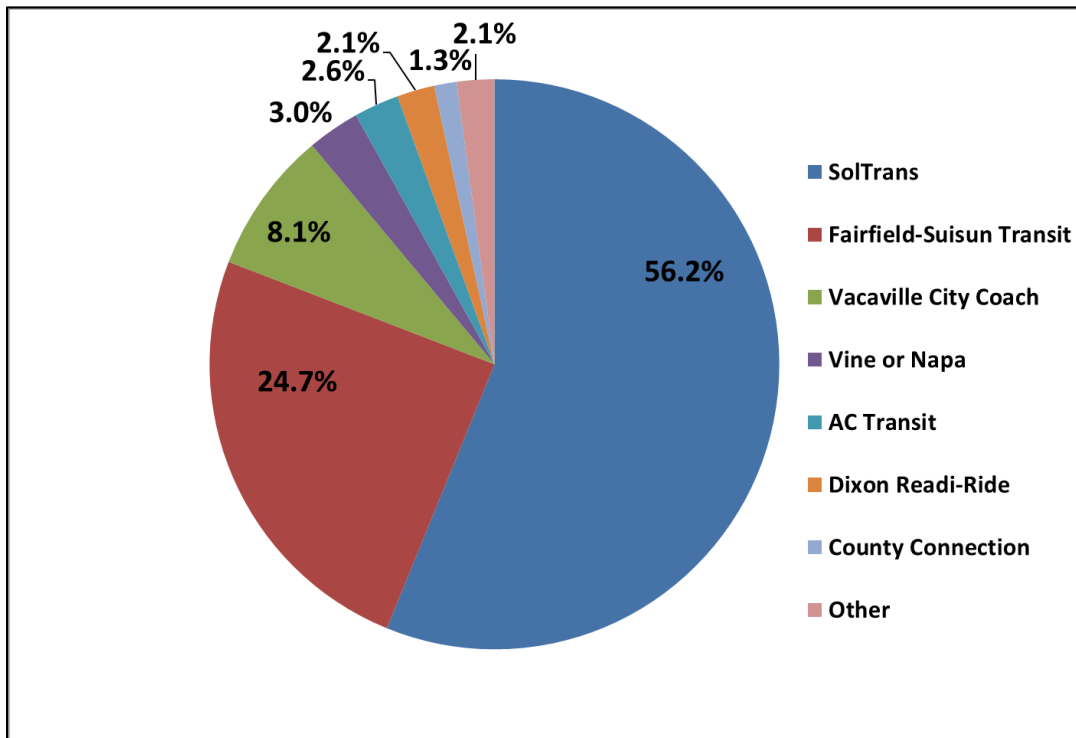
Access to Final Destination

Riders were also asked how they planned to reach their final destination. More than half planned to rely on public transportation, primarily BART (35.3%) and other buses (21.8%). About 22% included walking in their plans and about 19% would use cars (7.6% as driver; 11.5% as passenger or using a rideshare service). Green Express riders were most likely to rely on BART (62%) and Blue Line respondents had the highest percentage indicating they would use another bus (28.1%) or drive themselves (10.8%).

Figure 21. How Will You Get to Your Final Destination? – All

Mode	Percentage
Other	8.8%
Car non-specific	0.1%
Ferry	0.2%
Capitol Corridor/AMTRAK/RT	0.8%
Shuttle/Tour bus	1.6%
Bicycle	2.2%
Taxi/LYFT/Uber	3.7%
Car as driver	7.6%
Car as passenger	7.8%
Bus	21.8%
Walk	22.3%
BART	35.3%
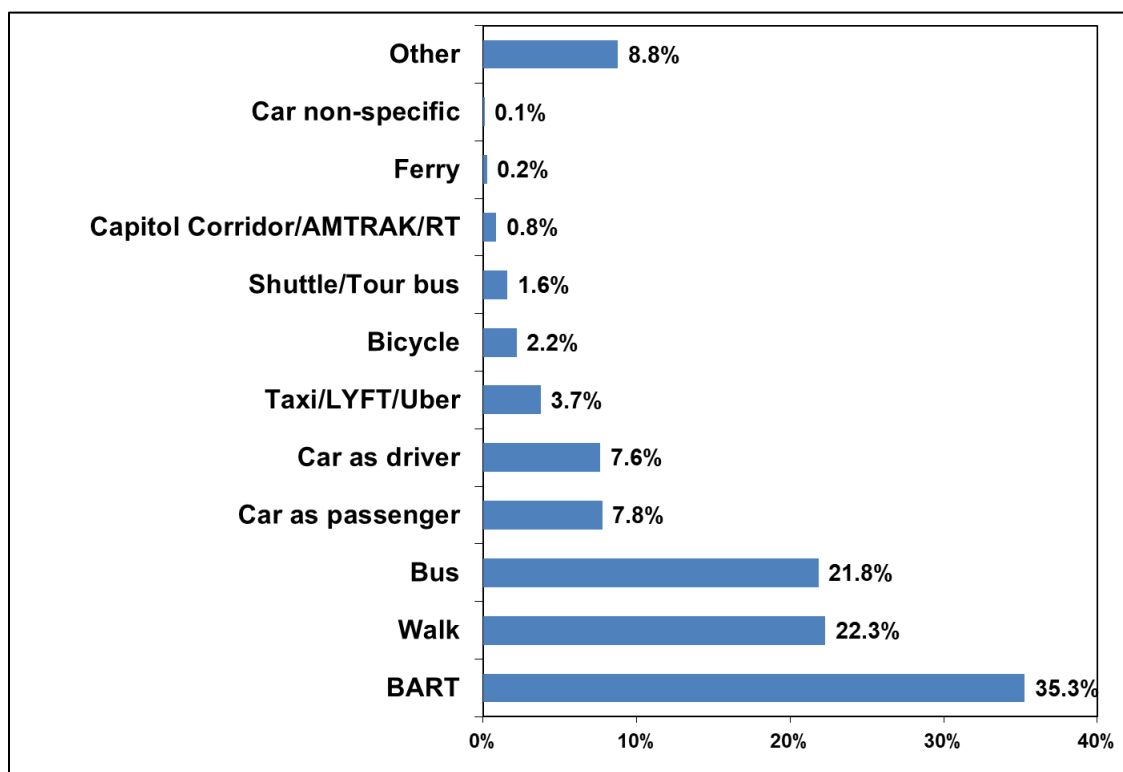
* Totals exceed 100% because more than one response was accepted.

**Figure 22. How Will You Get to Your Final Destination? – Individual Routes**

Route Number Mode to destination*	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
BART	35.3%	18.7%	62.0%	22.9%	36.0%
Walk	22.3%	24.6%	8.3%	40.1%	21.7%
Bus	21.8%	28.1%	9.3%	24.2%	22.6%
Car as passenger	7.8%	8.4%	6.5%	3.2%	8.8%
Car as driver	7.6%	10.8%	3.7%	3.2%	8.4%
Taxi/LYFT/Uber	3.7%	3.9%	3.7%	3.8%	3.7%
Bicycle	2.2%	4.4%	0.9%	3.2%	1.6%
Shuttle/Tour bus	1.6%		9.3%	0.6%	0.3%
Capitol Corridor/AMTRAK/RT	0.8%	2.0%	0.9%		0.6%
Ferry	0.2%	0.5%		0.6%	0.2%
Car non-specific	0.1%				0.2%
Other	8.8%	2.5%	0.9%	1.9%	14.0%

* More than one mode may have been mentioned

The 205 riders who provided an estimate of how long they would take to walk to their destination reported that they would take an average of 12.7 minutes, while the 65 who planned to drive themselves estimated an average distance of 6.4 miles and the 63 getting a ride expected to average 7.4 miles. The 21 respondents riding a bicycle to their destination expected to cover an average of 3.6 miles.

Among riders who planned to reach their final destination by bus, more than half said they would travel on SolTrans or FAST, while 12% planned to use AC Transit and 4.1% Vacaville City Coach. No other operator was mentioned by more than 2.3% of respondents.

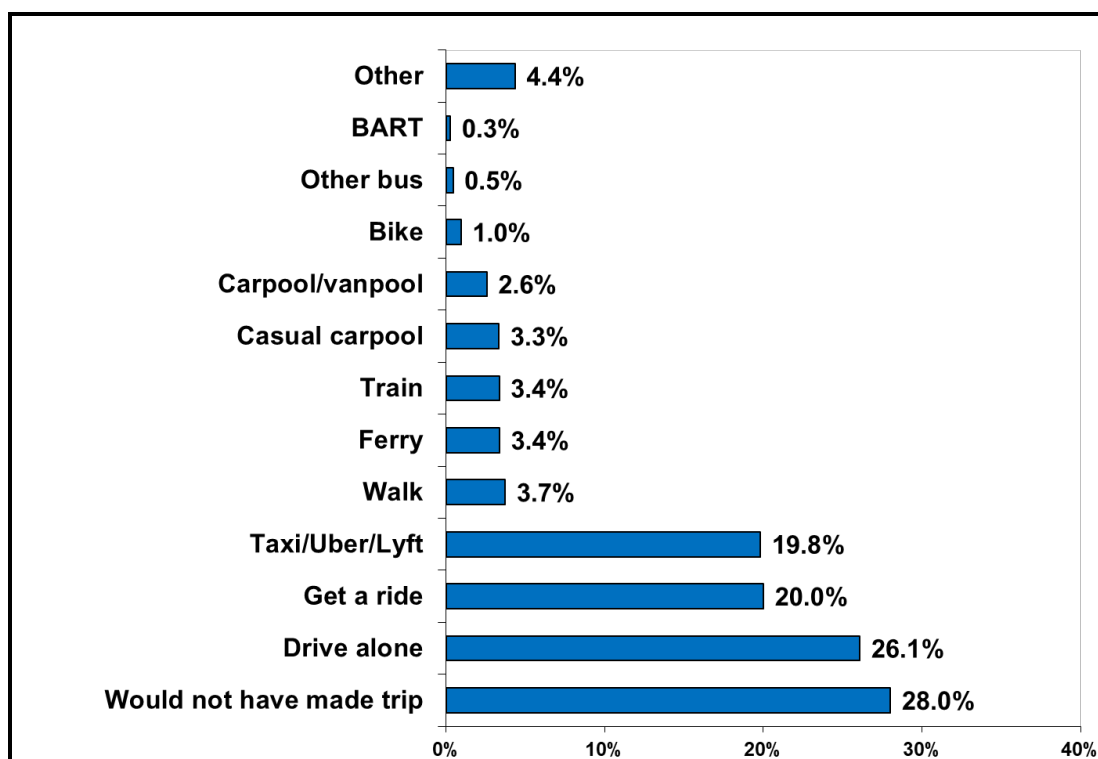**Figure 23. If Bus to Destination, What Transit Operator? – All**
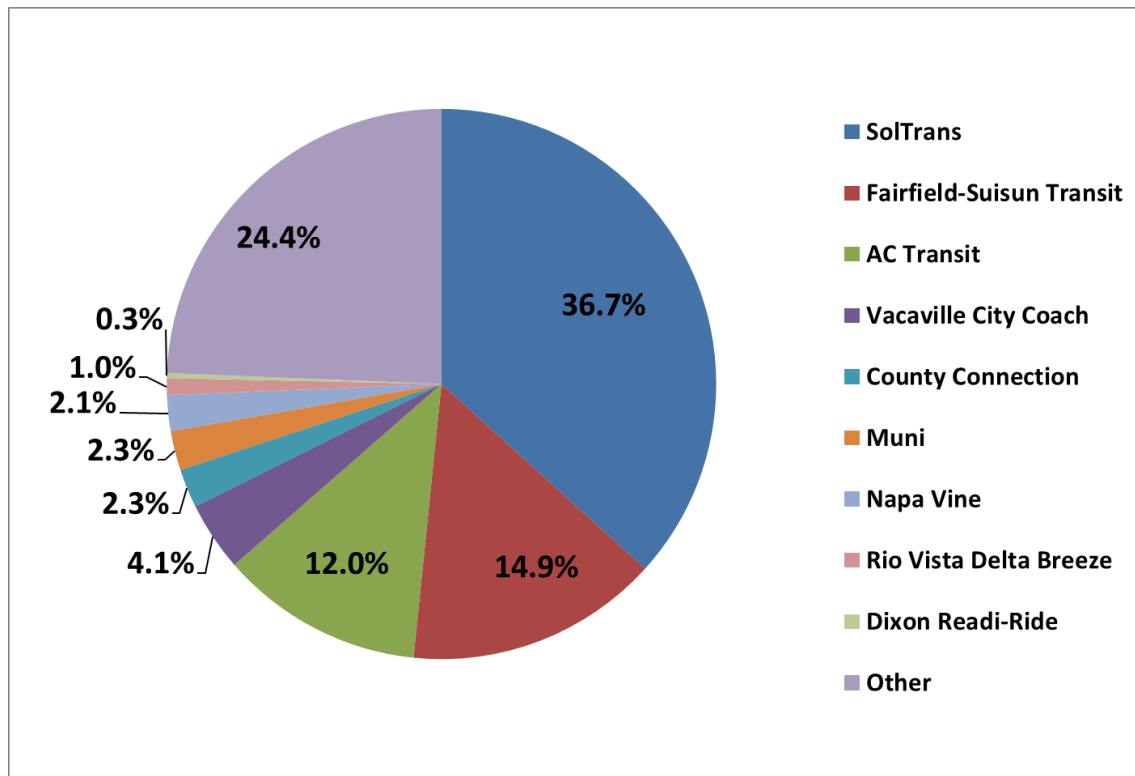
How Trip Would Have Been Made Without the Bus

More than one-fourth (28%) of respondents said they would not have made the trip if their bus had not been available – indicating that while most riders have alternative ways of making this trip and that the trip must be made (e.g., for getting to work), a sizeable minority are dependent on access to their bus. Automobiles were by far the most often mentioned alternative, either by driving alone (26.1%), getting a ride (20%) or by using a taxi or ride sharing service (19.8%). These results indicate both the importance of bus access to riders and its effectiveness in reducing automobile usage and the associated emissions. No individual non-automotive source of transportation accounted for as much as 4% of responses.

More than one-third of Yellow Line riders reporting that they would not have made the trip without this bus available, while the Green Express had fewer than 20% who would not have made the trip, with 55.8% of these riders saying they would have driven alone. In contrast, only 15.4% of Yellow Line respondents would have driven alone.

Figure 24. How Trip Made if Bus Not Available? – All

Category	Percentage
Other	4.4%
BART	0.3%
Other bus	0.5%
Bike	1.0%
Carpool/vanpool	2.6%
Casual carpool	3.3%
Train	3.4%
Ferry	3.4%
Walk	3.7%
Taxi/Uber/Lyft	19.8%
Get a ride	20.0%
Drive alone	26.1%
Would not have made trip	28.0%

* Totals exceed 100% because more than one response was accepted.

Figure 25. How Trip Made if Bus Not Available? – Individual Routes

Route Number / If no bus available	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Would not have made trip	28.0%	24.0%	19.2%	35.2%	30.1%
Drive alone	26.1%	33.8%	55.8%	15.4%	18.3%
Get a ride	20.0%	20.6%	7.7%	20.4%	22.8%
Taxi/Uber/Lyft	19.8%	19.6%	4.8%	24.1%	22.8%
Walk	3.7%	2.5%	1.0%	4.3%	4.7%
Ferry	3.4%	0.5%	1.9%	1.2%	5.0%
Train	3.4%	7.8%	5.8%	0.6%	1.9%
Casual carpool	3.3%	2.5%	3.8%	1.9%	3.8%
Carpool/vanpool	2.6%	1.5%	2.9%	1.9%	3.0%
Bike	1.0%	1.0%		3.1%	0.8%
Other bus	0.5%				0.8%
BART	0.3%			1.9%	0.2%
Other	4.4%	2.9%	8.7%	4.9%	3.6%

Smart Phone Ownership

Riders were also asked whether they own a smart phone, and if so, whether it was an iPhone or Android model. More than 90% of riders said they did, with 59.3% owning iPhones and 34.4% owning Android phones. Fewer than 2% of Green Line riders did not have a smart phone, compared to 7.5% of Red Line riders.

Figure 26. Do You Own a Smart Phone? – All
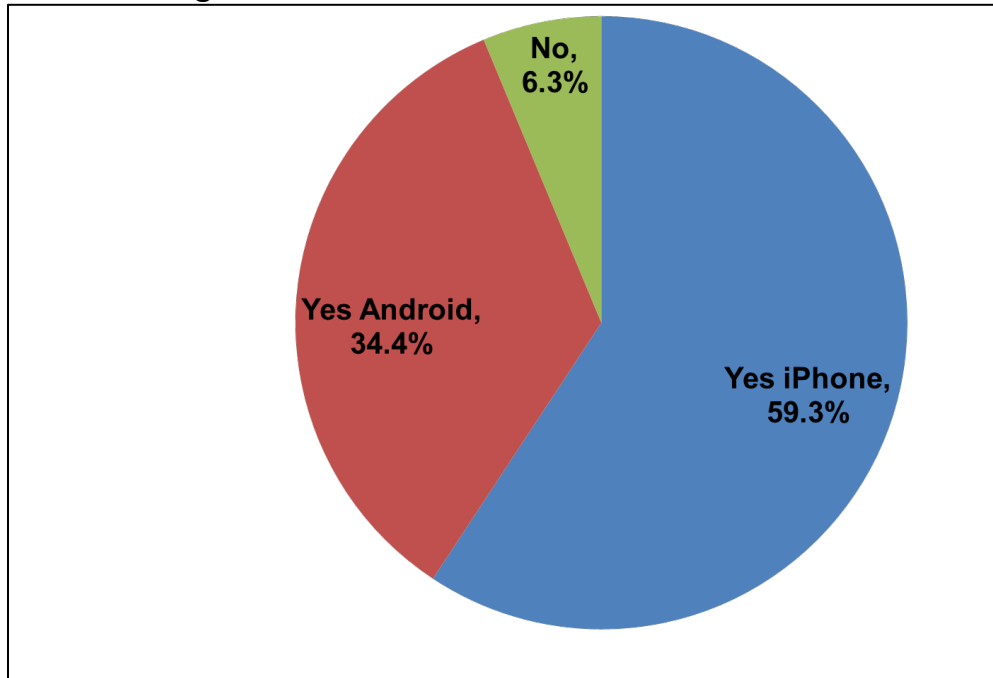
Figure 27. Do You Own a Smart Phone? – Individual Routes

Route Own a Smart Phone?	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Yes iPhone	59.3%	62.8%	67.6%	60.1%	56.0%
Yes Android	34.4%	30.6%	30.5%	34.6%	36.6%
No	6.3%	6.6%	1.9%	5.2%	7.5%

Use of Real-time Apps

Of those respondents with smart phones, fewer than half (44.4%) say they use real time bus apps. Among individual lines, the percentage using apps ranged from a low of 33.7% for the Green Line to a high of 51.6% for the Yellow Line. Reasons offered for not using bus apps included: did not know about it (53 respondents), app is wrong/doesn't work (51), don't need it (24) and confusing/hard to use (22).

Figure 28. Use Real-time Bus Apps? – All

Route Use Bus Info App?	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Yes	44.4%	43.2%	33.7%	51.6%	46.2%
No	55.6%	56.8%	66.3%	48.4%	53.8%

Mobile Apps Used

Those who use real-time apps were asked which specific apps they use, and among the 442 who responded, 40.8% indicated that they use NextBus, well ahead of the 15.8% who use myStop and the 15.2% who use Google Maps. Two-thirds of Green Express

riders said they use NextBus, compared to fewer than one-fourth of Yellow Line riders (who did not have access to NextBus support on this Solano Transit operated line). The recently launched Transit app was used by 10.8% of respondents, with usage ranging from a high of 13.7% on the Yellow Line to a low of 5.1% on the Blue Line. Note that more than half of riders said they used NextBus and myStop, even though neither app was supported with real time data at the time of the survey.

Figure 29. Which Apps Do You Use? – All

| Route Which App?	All n=442	Blue B n=78	Green GX n=34	Yellow Y n=73	Red/Rt 82 n=257
NextBus	40.8%	59.0%	67.6%	24.7%	31.5%
myStop	15.8%	3.8%	5.9%	20.5%	21.0%
Google Maps	15.2%	15.4%	5.9%	15.1%	17.5%
Transit App	10.8%	5.1%	11.8%	13.7%	11.7%
Moovit	3.8%	1.3%		8.2%	4.7%
Other specified	5.7%	6.4%		9.6%	6.2%
Other not specified	8.0%	9.0%	8.8%	8.2%	7.4%

RIDER DEMOGRAPHICS

The following section examines the demographics, or basic characteristics, of surveyed riders. These include gender, ethnicity, age, employment status, and household income, and help to determine the characteristics of riders on these routes.

Gender

Slightly more riders of these lines are male than female, with males accounting for 50.5% of ridership, women for 47.9% and nonbinary individuals for 1.6%. The Blue and Yellow lines had more men than women, while women accounted for 52.8% of Green Line and 49.7% of Red Line riders. Among Yellow Line riders, 3.2% reported their gender as nonbinary/other.

Figure 30. Gender – All

	Nonbinary/other	1.6%
Female	47.9%
Male	50.5%
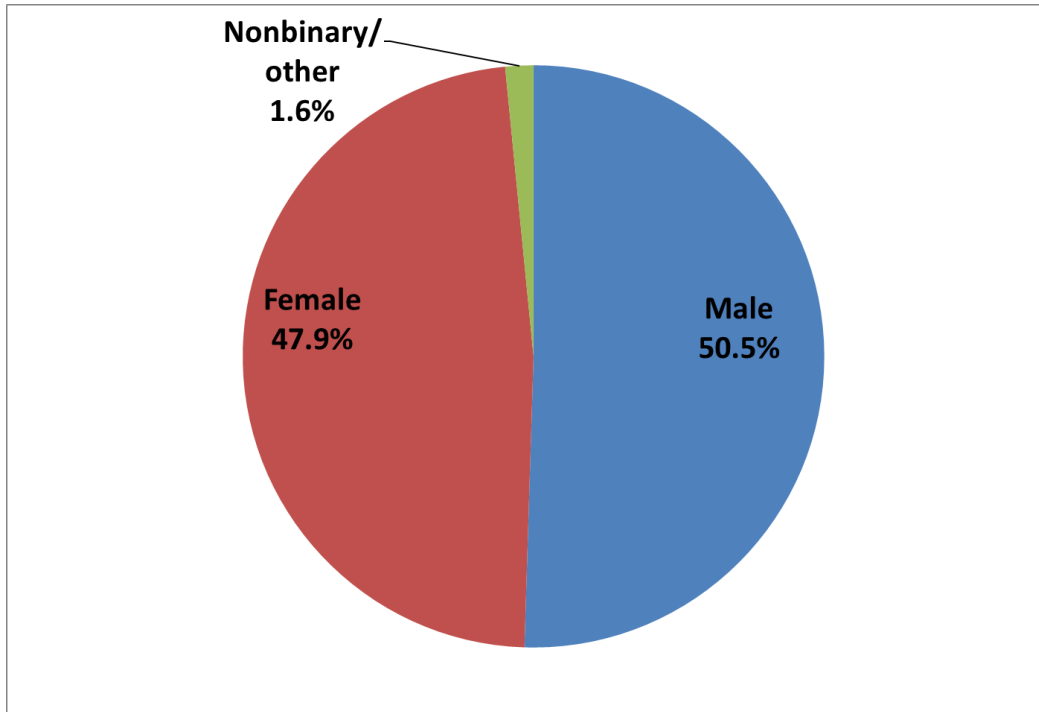
Figure 31. Gender – Individual Routes

Route Number	All	Blue B	Green GX	Yellow Y	Red/Rt 82
Gender	n=1181	n=211	n=112	n=173	n=685
Male	50.5%	55.0%	47.2%	58.0%	48.5%
Female	47.9%	43.9%	52.8%	38.9%	49.7%
Nonbinary/other	1.6%	1.1%		3.2%	1.8%

Age

More than 84% of surveyed riders are within the traditional age range of working adults (18 to 64), with only 3.9% under 18 and 12% age 65 and older. The highest percentage of working age adults was found on the Blue Line (86.1%), while Green Express had the lowest percentage under 18 (1.9%) and the highest percentage 65 and older (16.2%). It should be noted that minors appearing to be under the age of 13 were not asked to complete a questionnaire.

Figure 32. Age – All

Age	Percentage
65 and older	12.0%
50 - 64	28.3%
35 - 49	25.0%
25 - 34	19.6%
18 - 24	11.3%
17 and younger	3.9%
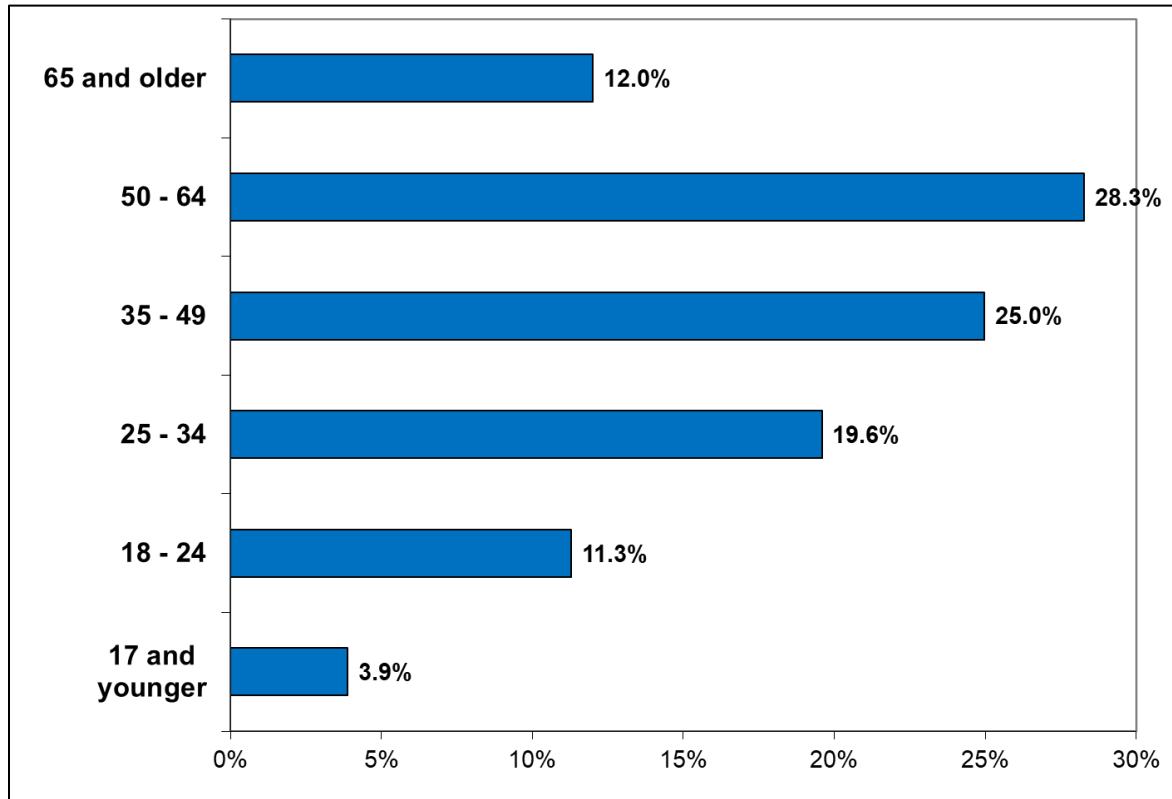
Figure 33. Age – Individual Routes

Route Number Age	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
17 and younger	3.9%	2.6%	1.9%	7.1%	4.2%
18 - 24	11.3%	14.4%	3.8%	13.0%	11.9%
25 - 34	19.6%	17.4%	8.6%	20.8%	22.8%
35 - 49	25.0%	27.7%	27.6%	23.4%	23.8%
50 - 64	28.3%	26.7%	41.9%	21.4%	26.6%
65 and older	12.0%	11.3%	16.2%	14.3%	10.8%

Employment Status

More than 80% of riders are employed full time (67%) or part time (13.5%), while 7.5% are students and 5.8% are unemployed. The remaining 6.2% of riders comprised retirees and homemakers. The Green Express route had almost 90% of riders who were employed fulltime (87.5%); the Yellow Line had the lowest share, at 56.2%.
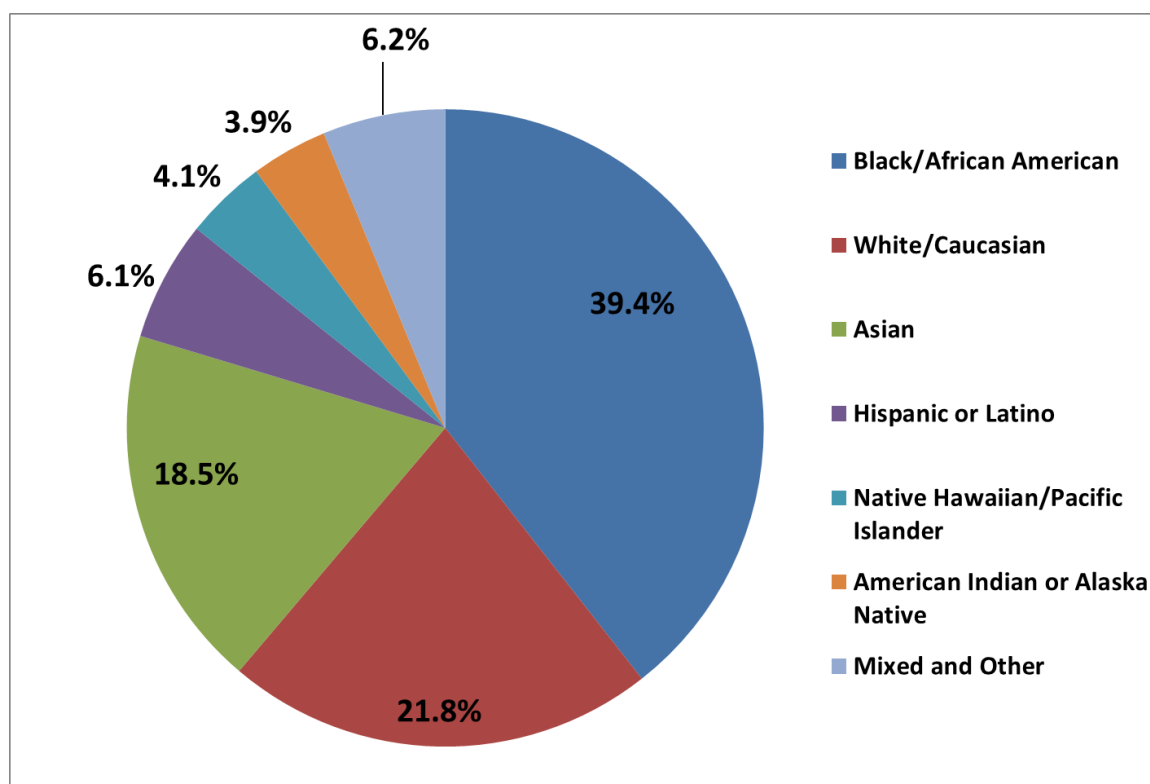
24

Figure 34. Employment Status – All

Homemaker	0.9%
Unemployed	5.8%
Retired	5.3%
Student	7.5%
Part time	13.5%
Fulltime	67.0%
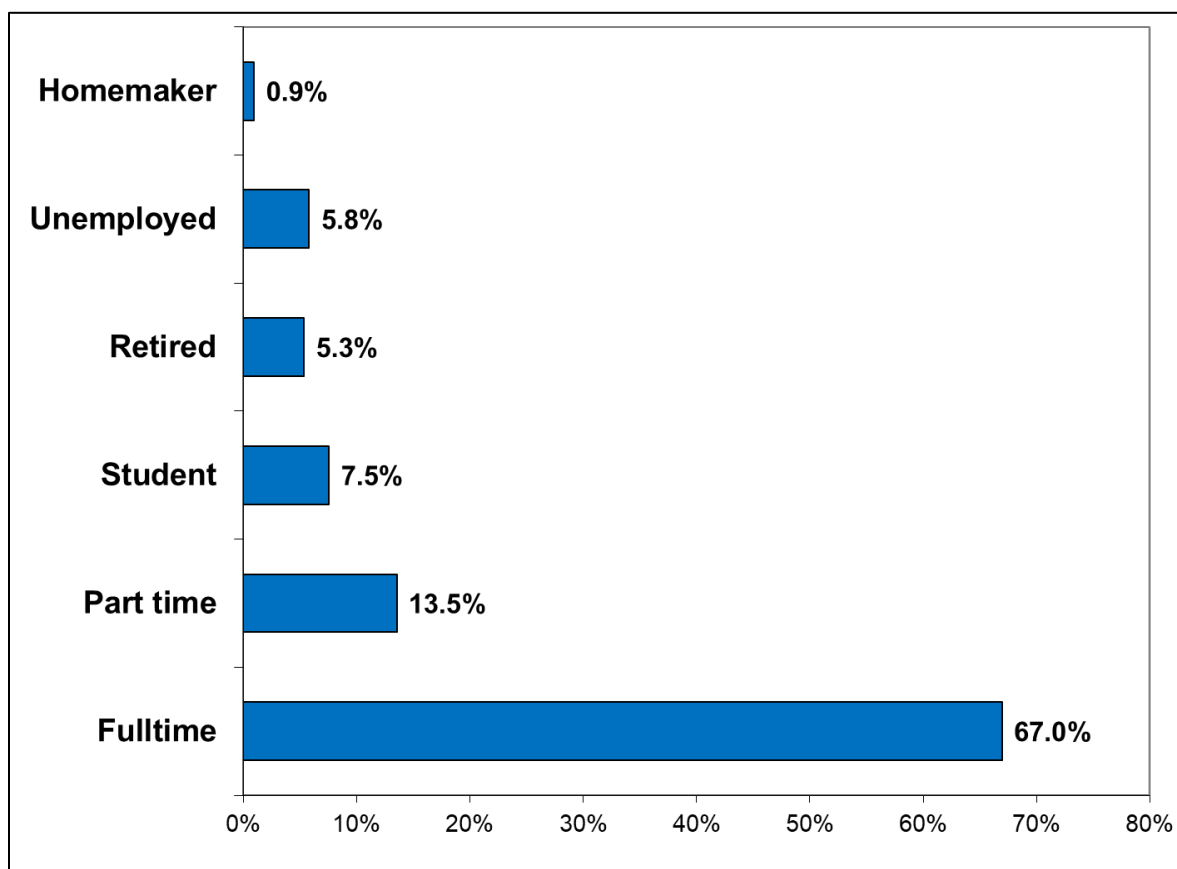
Figure 35. Employment Status – Individual Routes

Route Number Employment Status	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Fulltime	67.0%	65.5%	89.6%	56.2%	63.8%
Part time	13.5%	13.7%	6.6%	13.7%	15.2%
Student	7.5%	9.1%	0.9%	11.1%	8.0%
Retired	5.3%	5.6%	0.9%	8.5%	5.7%
Unemployed	5.8%	4.6%	1.9%	9.8%	6.4%
Homemaker	0.9%	1.5%	0.9%	0.7%	1.0%

Race and Ethnicity

The surveyed routes have a diverse ridership, with almost 40% of riders African American, 21.8% white/Caucasian and 18.5% Asian. The Red Line had the highest percentage of African American respondents (45.6%), while the Yellow Line had the highest percentage white/Caucasian (35.7%). The Green Express had the highest percentage of Asian respondents (24.2%), but all other lines had between 16% and 20% Asian riders. Note that some respondents provided more than one answer; the percentages shown represent the percentage of total responses.

Figure 36. Race and Ethnicity – All

Legend:
- Black/African American
- White/Caucasian
- Asian
- Hispanic or Latino
- Native Hawaiian/Pacific Islander
- American Indian or Alaska Native
- Mixed and Other

Pie chart values: 39.4%, 21.8%, 18.5%, 6.1%, 4.1%, 3.9%, 6.2%

Figure 29. Race and Ethnicity – Individual Routes

Route Number Race/ethnicity*	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
Black/African American	39.4%	27.5%	41.4%	23.6%	45.6%
White/Caucasian	21.8%	31.2%	21.2%	35.7%	16.4%
Asian	18.5%	18.5%	24.2%	19.7%	16.8%
Hispanic or Latino	6.1%	6.3%	1.0%	8.3%	6.9%
Native Hawaiian/Pacific Islander	4.1%	6.9%	6.1%	1.3%	3.4%
American Indian or Alaska Native	3.9%	4.2%	2.0%	5.1%	4.0%
Mixed and Other	6.2%	5.3%	4.0%	6.4%	7.0%

* More than one response accepted

Respondents were asked several other questions about their cultural background. When asked if they considered themselves Spanish, Hispanic or Latino, 24.5% of riders surveyed responded in the affirmative. The survey also asked if the respondent spoke a language other than English at home: 34.3% of riders said they did so, with the percentage relatively consistent across lines, ranging from 27.4% for Green Express to 36.4% for the Yellow Line.

Among those who specified what language they spoke at home, just over half mentioned Spanish and almost 25% said Filipino/Tagalog, while 4% mentioned Chinese (both Mandarin and Cantonese), with the remainder comprising a variety of other languages,

including American Sign Language (3%), French (2%), Arabic, and multiple other languages. (Surveys were available in 5 different languages: English, Spanish, Vietnamese, Chinese, Tagalog).

Household Size

More than 43% of survey respondents live in one- or two-person households, and 80.8% live in households with 4 people or fewer. The percentage of riders in 5-person households (10.4%) is more than the combined total of the percentage of households with 6, 7 and 8 or more (8.8%).

The Yellow Line had the highest percentage of one-person households (22.2%), as well as the highest percentage of households with 5 or more (25%.). The Red and Green Express Lines both had 8% or fewer of riders in households with 6 or more people.

Figure 38. Household Size – All
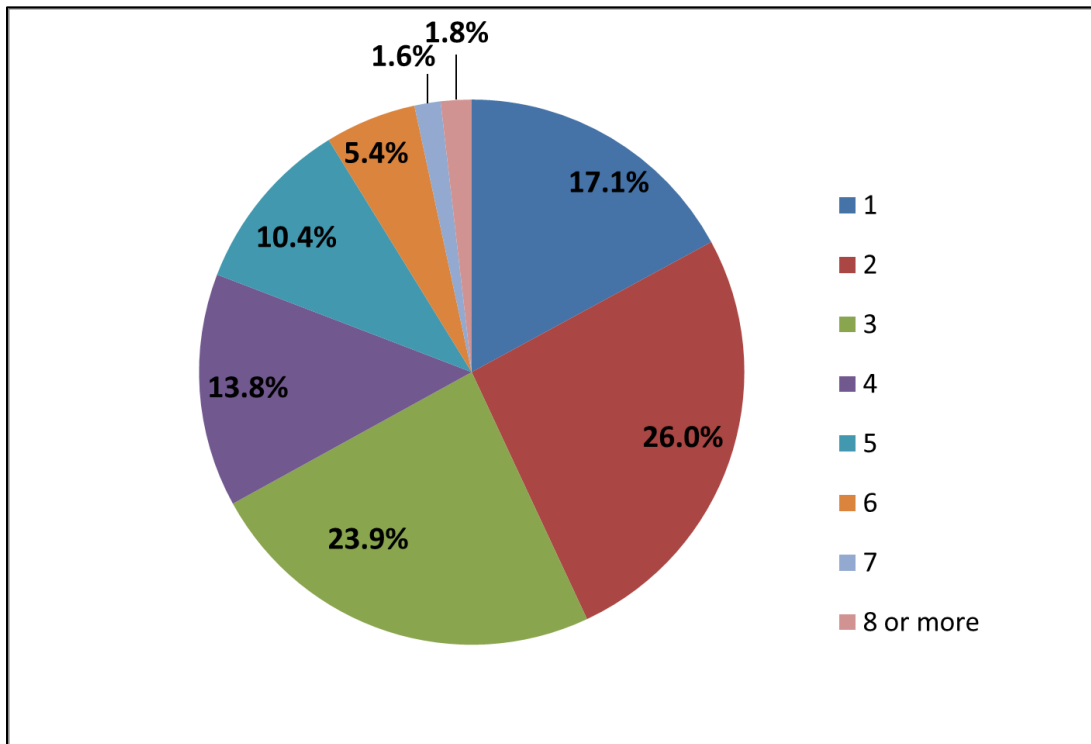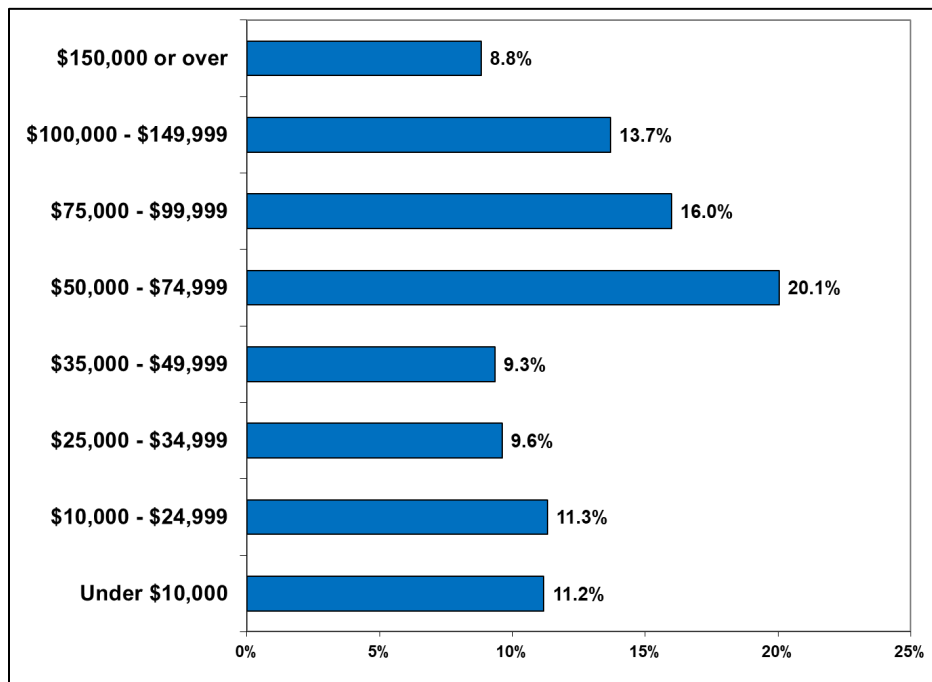
Figure 39. Household Size – Individual Routes

Route Number / Household size	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
1	17.1%	7.7%	16.0%	22.2%	19.3%
2	26.0%	32.8%	26.0%	20.8%	24.8%
3	23.9%	25.1%	25.0%	18.8%	24.3%
4	13.8%	13.1%	12.0%	13.2%	14.6%
5	10.4%	9.3%	13.0%	14.6%	9.3%
6	5.4%	8.7%	5.0%	5.6%	4.5%
7	1.6%	2.2%	3.0%	2.1%	0.9%
8 or more	1.8%	1.1%		2.8%	2.3%

Household Income

Among those respondents reporting their income (about 65% of the total), 58.6% had household incomes greater than $50,000, while 22.5% had incomes less than $25,000.

Green Express had the highest income riders, with 41.6% of those respondents reporting incomes over $100,000 and only 6.5% reporting incomes below $25,000. The Blue Line had a much smaller share of middle-income riders than other lines, with just 17.1% reporting incomes from $35-75,000, compared to about 30% for the other lines.

Figure 40. Household Income – All

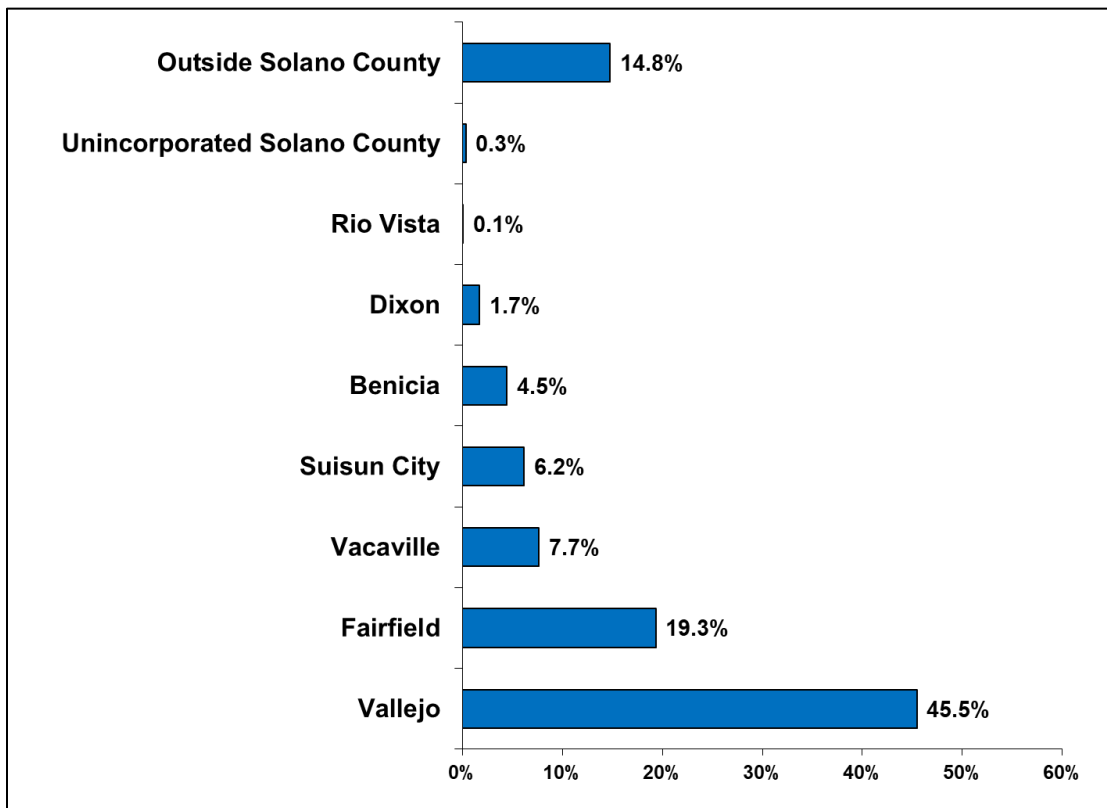| Income	Percent
$150,000 or over	8.8%
$100,000 - $149,999	13.7%
$75,000 - $99,999	16.0%
$50,000 - $74,999	20.1%
$35,000 - $49,999	9.3%
$25,000 - $34,999	9.6%
$10,000 - $24,999	11.3%
Under $10,000	11.2%

Figure 41. Household Income – Individual Routes

Route Number	All	Blue B	Green GX	Yellow Y	Red/Rt 82
Income	n=1181	n=211	n=112	n=173	n=685
Under $10,000	11.2%	11.0%	2.6%	14.0%	12.9%
$10,000 - $24,999	11.3%	10.3%	3.9%	12.1%	13.3%
$25,000 - $34,999	9.6%	7.5%	1.3%	14.0%	11.5%
$35,000 - $49,999	9.3%	6.8%	7.8%	6.5%	11.0%
$50,000 - $74,999	20.1%	10.3%	20.8%	28.0%	21.4%
$75,000 - $99,999	16.0%	21.2%	22.1%	12.1%	13.6%
$100,000 - $149,999	13.7%	19.9%	22.1%	6.5%	11.0%
$150,000 or over	8.8%	13.0%	19.5%	6.5%	5.3%

City of Residence

Almost half of riders surveyed live in Vallejo (45.5%) – more than all other locations inside Solano and Napa Counties combined. The Blue and Green Express lines had very few Vallejo residents among survey respondents; both had Fairfield and Vacaville residents account for about two-thirds of their riders. The Green Express had the highest percentage of riders living in Suisun City (23.4%), while the Yellow Line had the highest percentage of Benicia residents (27.9%).

Figure 42. City of Residence – All


Outside Solano County	14.8%
Unincorporated Solano County	0.3%
Rio Vista	0.1%
Dixon	1.7%
Benicia	4.5%
Suisun City	6.2%
Vacaville	7.7%
Fairfield	19.3%
Vallejo	45.5%

Figure 43. City of Residence – Individual Routes

Route Number	All	Blue B	Green GX	Yellow Y	Red/Rt 82
City of Residence	n=1181	n=211	n=112	n=173	n=685
Vallejo	45.5%	1.9%	0.9%	49.4%	69.3%
Fairfield	19.3%	34.6%	58.6%	1.2%	8.2%
Vacaville	7.7%	31.3%	9.9%	1.2%	1.0%
Suisun City	6.2%	6.6%	23.4%		2.8%
Benicia	4.5%	1.4%		27.9%	2.1%
Dixon	1.7%	9.0%	0.9%		
Rio Vista	0.1%	0.5%			
Unincorporated Solano County	0.3%	0.5%			0.4%
Outside Solano County	14.8%	14.2%	6.3%	20.3%	16.0%

Cars in Household

More than 28% of riders on surveyed buses have no cars in their household, and 31.7% have just a single vehicle, indicating that almost 60% of riders have limited access to an automobile as an alternative to their bus service. Over 35% of Yellow Line riders have no cars in their household, compared to only 16.2% of Green Express respondents, over 58% of whom report owning 2 or more cars.

Figure 44. Car Ownership – All
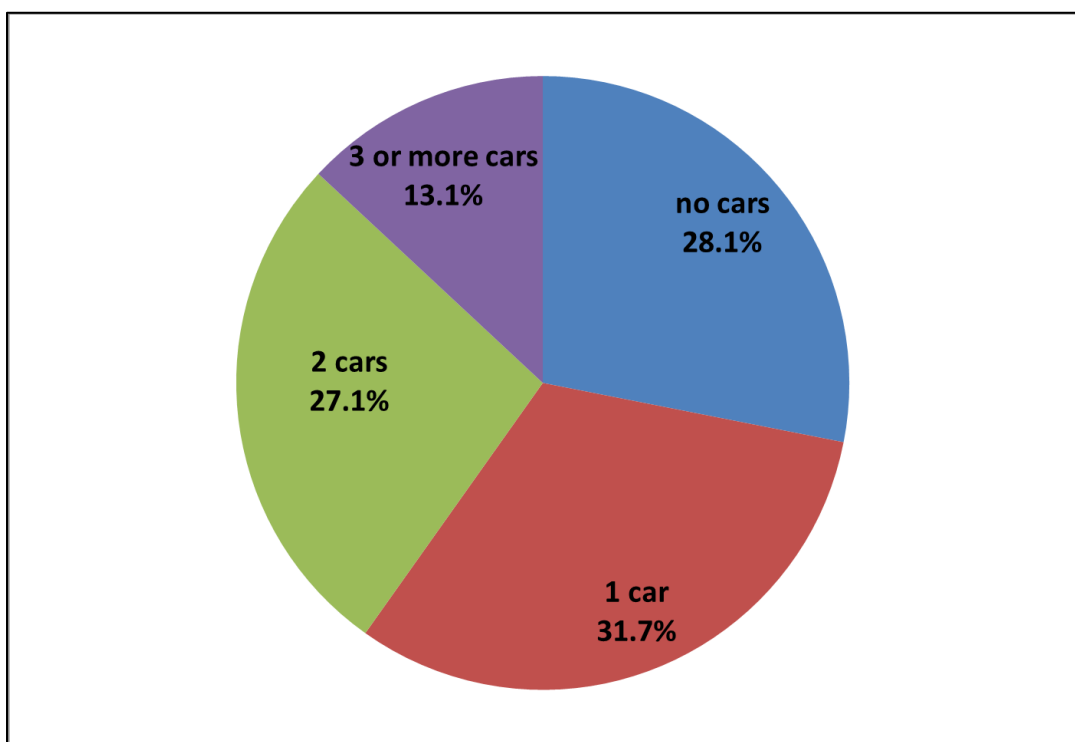
Figure 45. Car Ownership – Individual Routes

Route Number	All	Blue B	Green GX	Yellow Y	Red/Rt 82
No. of cars	n=1181	n=211	n=112	n=173	n=685
no cars	28.1%	22.6%	16.2%	35.4%	31.4%
1 car	31.7%	34.4%	25.7%	30.4%	32.7%
2 cars	27.1%	29.2%	41.0%	20.3%	24.3%
3 or more cars	13.1%	13.8%	17.1%	13.9%	11.7%

Could Car Have Been Used for this Trip?

In addition to the previous question regarding automobile ownership, the extent to which riders have access to vehicles is reflected in the responses to a question regarding whether a car could have been used for this trip. About 34% of riders said yes, while 12.3% said that a car would have been available, but it would have inconvenienced others. The fact that two-thirds of respondents said no car was *readily* available indicates that most of the surveyed riders have limited alternatives to the bus to make their trip. However, the percentage with access to a car varies widely by route, with 62% of Green Express and fewer than 22% of Yellow Line riders saying they had access to a car without inconveniencing others. This is consistent with the results presented earlier (Figure 25) showing that more than 35% of Yellow Line respondents would not have made their trip if the bus had not been available, compared to fewer than 20% of Green Express riders.

Figure 30. Did You Have a Car You Could Have Used? – All
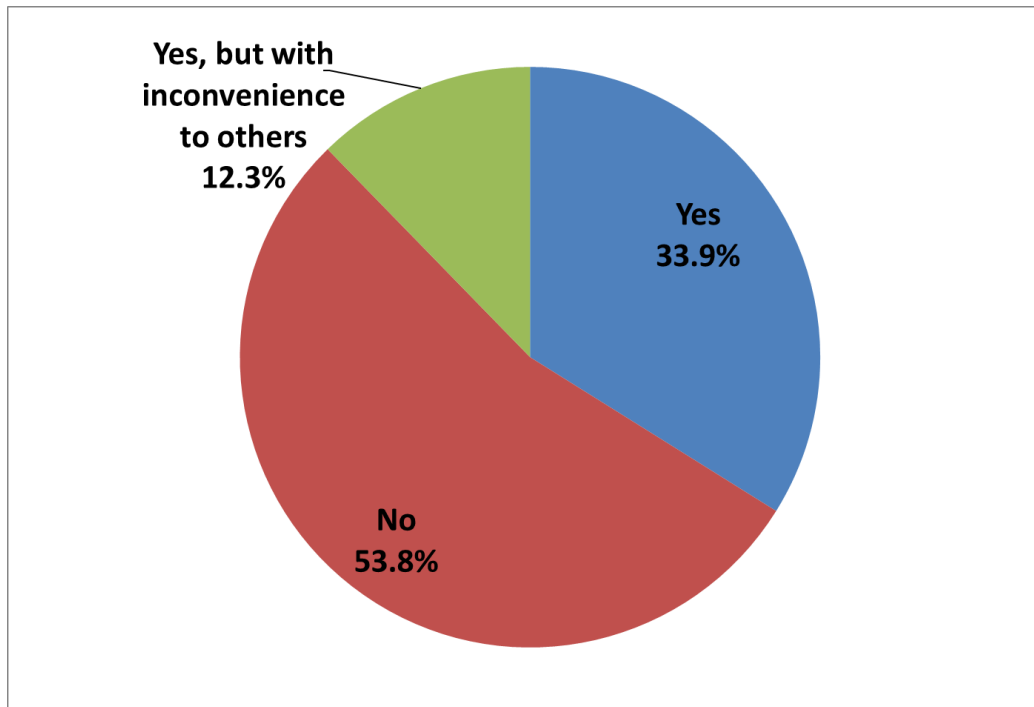
Figure 47. Did You Have a Car You Could Have Used? – Individual Routes

Route Number	All	Blue B	Green GX	Yellow Y	Red/Rt 82
Car available?	n=1181	n=211	n=112	n=173	n=685
Yes	34.0%	37.2%	62.0%	21.8%	28.2%
No	54.0%	50.5%	27.2%	65.4%	59.6%
Yes, with inconvenience to others	12.3%	12.2%	12.6%	12.8%	12.2%

Another factor influencing the extent to which riders are dependent on bus availability is whether they have a driver's license. When asked whether they have a driver's license, 63.4% of riders said yes, indicating that more than one-third of respondents cannot drive themselves as an alternative to using the bus. The percentage of respondents with a license ranged from almost 85% for Green Express to less than 50% for the Yellow Line.

Figure 48. Do You Have a Driver's License?

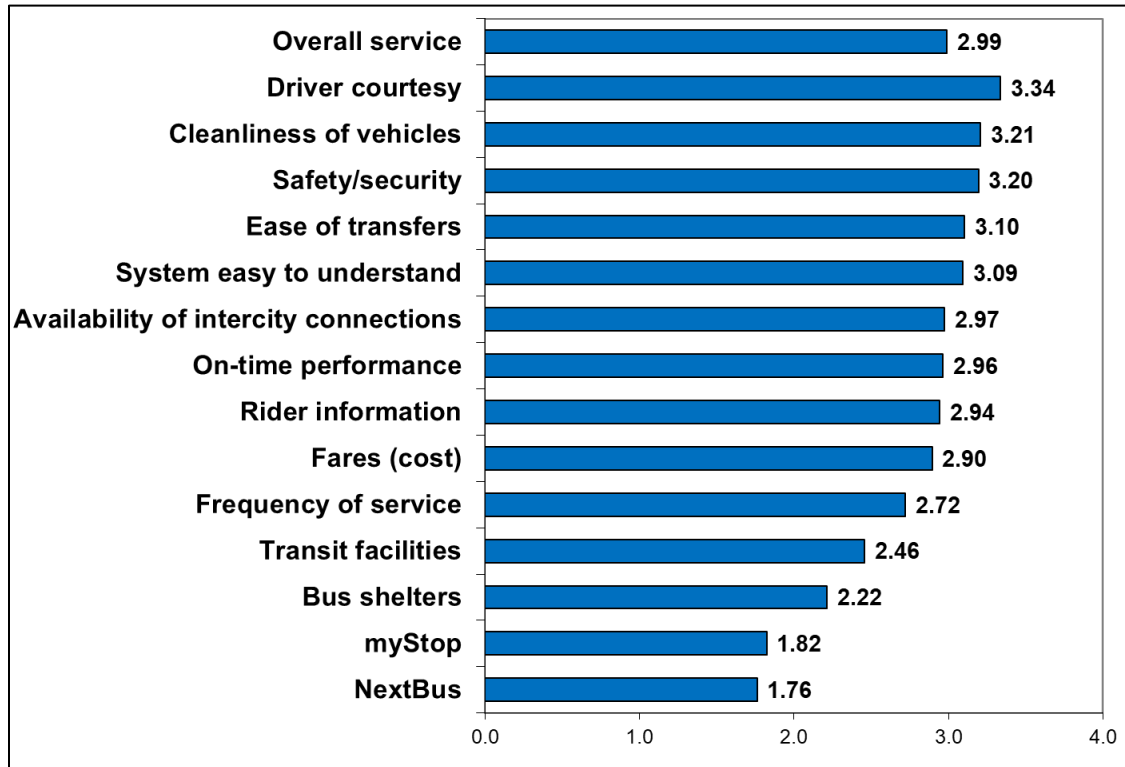| Route Number	All	Blue B	Green GX	Yellow Y	Red/Rt 82
Do you have a drivers license?	n=1181	n=211	n=112	n=173	n=685
Yes	63.4%	60.6%	84.8%	48.7%	61.7%
No	36.6%	39.4%	15.2%	51.3%	38.3%

QUALITY OF SERVICE

Survey respondents were asked to rate a variety of service elements on their bus route as excellent, good, fair, or poor. Mean ratings for each question were calculated by assigning a value of 4 to excellent, 3 to good, 2 to fair, and 1 to poor and then averaging the results. As with other responses, results were weighted by the percentage of ridership accounted for by each bus line.

Overall, surveyed riders gave good ratings to most service elements, with an overall service rating of 2.99, where 3.0 represents a "good" rating. Five service elements received ratings of 3.0 or higher, with driver courtesy receiving the highest rating of 3.34. Availability of intercity connections, on-time performance, rider information and fares all received ratings slightly below 3.0; the average rating for frequency of services was significantly lower at 2.72. Both transit facilities and bus shelters received average ratings slightly higher than "fair", while myStop and NextBus were rated less than "fair" with averages of about 1.8, indicating low satisfaction with these apps, presumably because they were not supported with real time data when the survey was fielded.

Yellow Line riders generally had higher ratings for all elements than their counterparts on other lines, with average ratings of about 3.3 for both overall service and on-time performance. Green Express respondents had the lowest satisfaction with overall service at 2.79 and also provided the lowest average rating for frequency of service (2.34).

Figure 49. Ratings of Service – Overall

Category	Rating
Overall service	2.99
Driver courtesy	3.34
Cleanliness of vehicles	3.21
Safety/security	3.20
Ease of transfers	3.10
System easy to understand	3.09
Availability of intercity connections	2.97
On-time performance	2.96
Rider information	2.94
Fares (cost)	2.90
Frequency of service	2.72
Transit facilities	2.46
Bus shelters	2.22
myStop	1.82
NextBus	1.76

Figure 31. Ratings of Service – Individual Routes

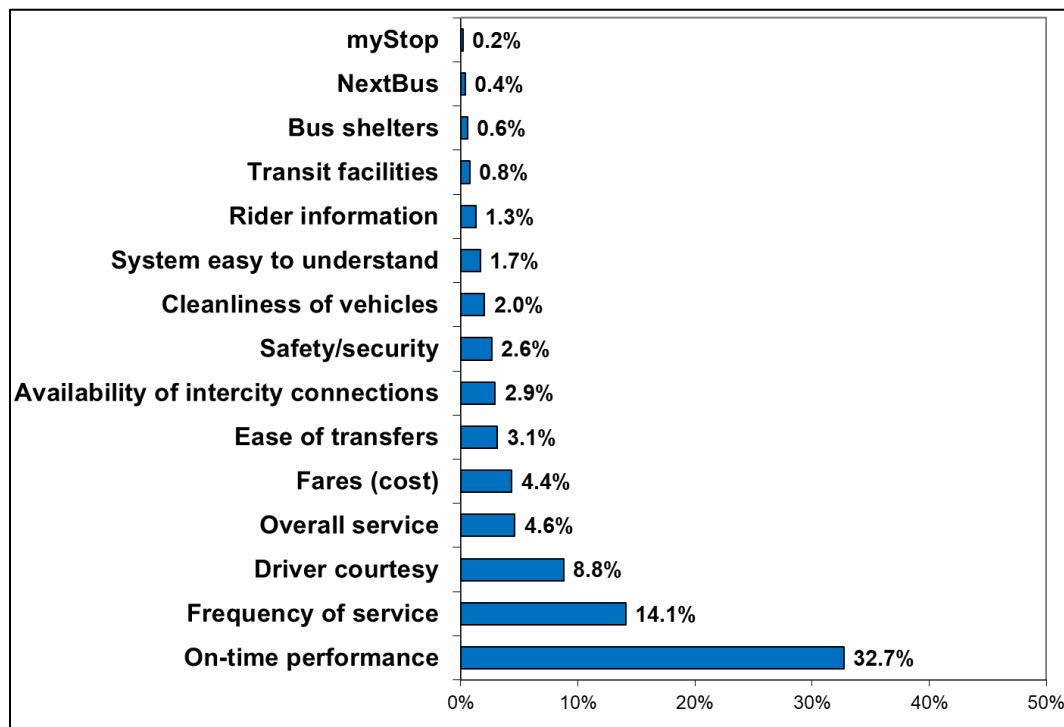| Service ratings	n=1181	n=211	n=112	n=173	n=685
On-time performance					
Excellent = 4	36%	31%	32%	54%	35%
Good = 3	35%	42%	38%	27%	34%
Fair = 2	18%	17%	22%	16%	18%
Poor = 1	11%	10%	8%	3%	13%
AVERAGE	2.96	2.94	2.94	3.33	2.91
Frequency of service					
Excellent = 4	28%	21%	21%	42%	29%
Good = 3	32%	40%	25%	27%	32%
Fair = 2	25%	27%	21%	21%	26%
Poor = 1	15%	12%	33%	10%	13%
AVERAGE	2.72	2.71	2.34	3.01	2.77
Driver courtesy					
Excellent = 4	50%	44%	52%	63%	50%
Good = 3	35%	37%	34%	27%	36%
Fair = 2	12%	13%	14%	8%	12%
Poor = 1	2%	5%		2%	2%
AVERAGE	3.34	3.21	3.38	3.50	3.33
Rider information					
Excellent = 4	34%	30%	26%	49%	35%
Good = 3	35%	37%	27%	29%	37%
Fair = 2	23%	22%	32%	18%	21%
Poor = 1	9%	11%	15%	4%	7%
AVERAGE	2.94	2.86	2.65	3.24	2.99
Cleanliness of vehicles					
Excellent = 4	42%	34%	35%	55%	44%
Good = 3	38%	38%	45%	33%	38%
Fair = 2	17%	23%	20%	11%	16%
Poor = 1	2%	5%		1%	2%
AVERAGE	3.21	3.01	3.15	3.41	3.24
Safety/security					
Excellent = 4	42%	40%	38%	54%	42%
Good = 3	38%	36%	39%	32%	40%
Fair = 2	17%	18%	21%	14%	16%
Poor = 1	3%	6%	2%	1%	2%
AVERAGE	3.20	3.11	3.13	3.39	3.20
Ease of transfers					
Excellent = 4	39%	37%	40%	45%	38%
Good = 3	38%	37%	33%	36%	40%
Fair = 2	18%	20%	22%	16%	17%
Poor = 1	5%	6%	5%	3%	5%
AVERAGE	3.10	3.05	3.08	3.23	3.10
Availability of connections					
Excellent = 4	34%	35%	34%	44%	32%
Good = 3	36%	38%	22%	33%	40%
Fair = 2	22%	19%	34%	21%	21%
Poor = 1	7%	8%	10%	3%	7%
AVERAGE	2.97	3.01	2.79	3.18	2.97
System easy to understand					
Excellent = 4	38%	36%	28%	49%	38%
Good = 3	38%	37%	30%	32%	42%
Fair = 2	21%	22%	35%	17%	17%
Poor = 1	4%	6%	6%	2%	3%
AVERAGE	3.09	3.02	2.80	3.28	3.15
Fares (cost)					
Excellent = 4	31%	35%	25%	33%	31%
Good = 3	35%	34%	34%	36%	35%
Fair = 2	26%	24%	29%	25%	26%
Poor = 1	8%	7%	12%	6%	7%
AVERAGE	2.90	2.98	2.71	2.96	2.90
NextBus					
Excellent = 4	34%	35%	34%	44%	32%
Good = 3	36%	38%	22%	33%	40%
Fair = 2	22%	19%	34%	21%	21%
Poor = 1	7%	8%	10%	3%	7%
AVERAGE	2.97	3.01	2.79	3.18	2.97
myStop					
Excellent = 4	22%	21%	18%	27%	23%
Good = 3	22%	21%	16%	23%	23%
Fair = 2	12%	12%	16%	8%	12%
Poor = 1	5%	4%	4%	3%	6%
AVERAGE	1.82	1.73	1.56	1.96	1.89
Bus shelters					
Excellent = 4	22%	21%	16%	28%	22%
Good = 3	30%	32%	26%	31%	30%
Fair = 2	19%	17%	24%	14%	20%
Poor = 1	8%	6%	18%	4%	7%
AVERAGE	2.22	2.20	2.08	2.38	2.23
Transit Facilities					
Excellent = 4	26%	23%	18%	31%	27%
Good = 3	32%	26%	27%	27%	36%
Fair = 2	21%	21%	28%	19%	19%
Poor = 1	6%	8%	8%	2%	5%
AVERAGE	2.46	2.21	2.14	2.48	2.61
Overall service					
Excellent = 4	30%	30%	23%	45%	29%
Good = 3	44%	41%	42%	40%	46%
Fair = 2	21%	23%	26%	14%	21%
Poor = 1	5%	6%	9%	1%	4%
AVERAGE	2.99	2.95	2.79	3.28	2.99

Service Aspects Influencing Satisfaction

After rating their satisfaction with various aspects of service, respondents were asked which individual aspect of service was MOST responsible for their overall service rating. As shown below, almost one-third of riders said on-time performance was the most important factor, followed by 14.1% who identified frequency of service and 8.8% who mentioned driver courtesy. No other element of service was cited by as many as 5% of respondents.

Results for individual lines generally matched those for all respondents, with all lines placing on-time performance first and the frequency of service ratings second, with the exception of the Yellow Line, 12.7% of whose riders rated driver courtesy most important.

The Green Line had the highest percentage of riders considering frequency of service most important. (As noted previously, Green Line riders were also the least satisfied with this element of service -- 2.34 – and with service overall – 2.79.) Fares were more likely to be rated most important by Blue Line (6.3%) and Green Line (6.9%) riders than by those on the Yellow (4.0%) and Red Lines (3.2%).

Figure 32. Aspect of Service MOST Responsible for Rating - All

myStop 0.2%
NextBus 0.4%
Bus shelters 0.6%
Transit facilities 0.8%
Rider information 1.3%
System easy to understand 1.7%
Cleanliness of vehicles 2.0%
Safety/security 2.6%
Availability of intercity connections 2.9%
Ease of transfers 3.1%
Fares (cost) 4.4%
Overall service 4.6%
Driver courtesy 8.8%
Frequency of service 14.1%
On-time performance 32.7%

Figure 33. Aspect of Service MOST Responsible for Rating – by Line

Route Aspect of Service MOST Responsible for Rating	All n=1181	Blue B n=211	Green GX n=112	Yellow Y n=173	Red/Rt 82 n=685
On-time performance	32.7%	38.2%	35.3%	31.3%	30.6%
Frequency of service	14.1%	12.0%	21.6%	11.3%	13.4%
Driver courtesy	8.8%	6.8%	4.9%	12.7%	9.6%
Overall service	4.6%	3.7%	4.9%	6.0%	4.6%
Fares (cost)	4.4%	6.3%	6.9%	4.0%	3.2%
Ease of transfers	3.1%	4.2%	3.9%	2.7%	2.7%
Availability of intercity connections	2.9%	2.1%	2.0%	6.7%	2.7%
Safety/security	2.6%	2.1%	2.9%	2.7%	2.7%
Cleanliness of vehicles	2.0%	2.6%	2.0%	2.0%	1.9%
System easy to understand	1.7%	1.6%		2.0%	2.0%
Rider information	1.3%	1.0%	2.0%	1.3%	1.2%
Transit facilities	0.8%	0.5%			1.2%
Bus shelters	0.6%	1.0%			0.7%
NextBus	0.4%				0.7%
myStop	0.2%			0.7%	0.2%

Sources of Transit Information

Riders were also asked to identify how they currently receive transit information from a list of 11 sources (with more than one response possible.) Respondents also had the opportunity to check "other" and identify their information source or sources. The 1,034 riders who answered this question offered a total of more than 1,340 responses, summarized below.

The Transit website and Transit Center together were mentioned by more than 60% of riders, but no other information source accounted for as much as 10%. Phone apps NextBus, Google Maps and myStop together were cited by about 20% of respondents. About 25% cited more traditional non-digital information sources: information at stops (9%), printed schedules (6.2%) and asking a friend or bus driver (9.3%). Other online tools, including 511.org, other smartphone apps and unspecified online sources together were mentioned by 7.6% of responses.
.

Figure 34. Where You Currently Get Transit Information – Overall
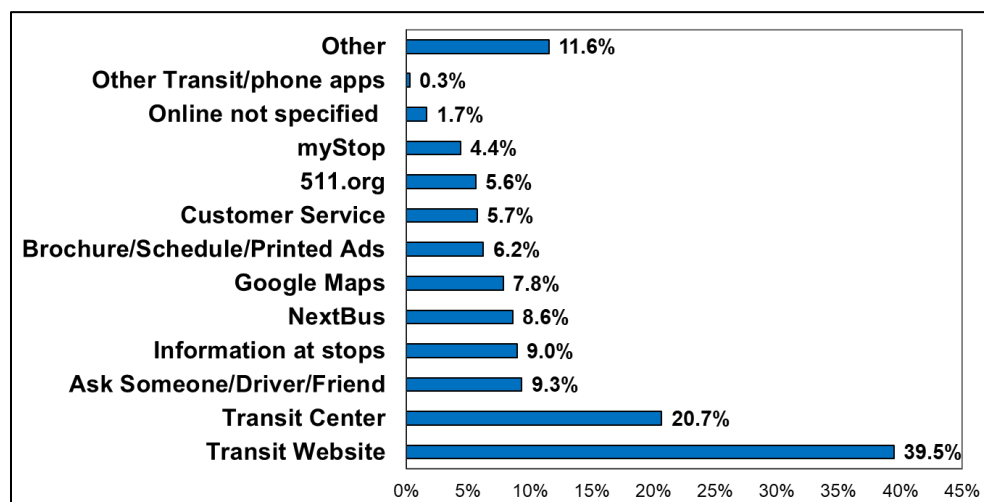
The percentage of respondents mentioning smart phone apps ranged from a high of about 25% for the Red Line to a low of 11% for the Green Express. Conversely, Green Line riders were more likely than other respondents to cite the Transit Website (51% compared to 39.5% overall) and printed schedules/brochures (10.8% versus 6.2% overall).

Figure 35. Where You Get Transit Information – Individual Routes

Route Number	All	Blue B	Green GX	Yellow Y	Red/Rt 82
Current information sources	n=1181	n=211	n=112	n=173	n=685
Transit Website	39.5%	37.7%	51.0%	40.0%	37.1%
Transit Center	20.7%	20.9%	14.7%	19.3%	22.3%
Ask Someone/Driver/Friend	9.3%	9.4%	16.7%	6.0%	8.1%
Information at stops	9.0%	10.5%	7.8%	10.7%	8.5%
NextBus	8.6%	8.9%	6.9%	4.0%	9.8%
Google Maps	7.8%	8.4%	3.9%	8.0%	8.6%
Brochure/Schedule/Printed Ad	6.2%	8.9%	10.8%	4.7%	4.6%
Customer Service	5.7%	6.8%	3.9%	5.3%	5.9%
511.org	5.6%	2.1%	1.0%	8.0%	7.4%
myStop	4.4%	2.1%		6.7%	5.8%
Online not specified	1.7%	3.1%	2.9%		1.2%
Other Transit/phone apps	0.3%			0.7%	0.3%
Other	11.6%	10.5%	7.8%	14.0%	12.4%

* Multiple sources accepted

Final Comments

At the end of the survey form, riders were asked if there were any other comments they would like to add about the service on this bus route. While more than 750 respondents either did not provide a response (573) or explicitly said they had no comments (179), 429 riders offered a total of 734 comments, including 109 positive comments. Comments were combined into broad categories as summarized below, where representative quotes are presented for several of the most mentioned categories of responses to give the reader a sense of the kinds of comments offered, together with the number of comments in that category, with the route shown in parentheses after the comment.

Buses should arrive at the right time (78)
- Please try to ensure Blue Line 6pm arrival at Walnut Creek; riders have experienced the bus to not show up at all, causing them to wait 2.5 hours at the stop. (Blue)
- The bus time said 6:10. The bus got there at 6:54. Now I'm late to the BART and late to work thanks a lot; not riding the bus again. (Red)
- Not even 30 days into this new ownership/carrier and you have failed us on at least 2 separate occasions/days. (Green)
- Please make sure drivers do not depart early--missing a bus that leaves early results in very costly taxi $$. I'm waiting for a reply for my 4/13 message sent to customer service via website on this topic. Thx! (Yellow)

More buses/more frequent service needed (78)
- If it came more, I would use it more. (Blue)
- Evening bus from Del Norte BART wait time between 5:31 and 6:14 pm bus is over 45 minutes -- too long to have to wait. (Green)
- I hope that as time passes, Sol Trans will increase the frequency of when buses run. It can sometimes be hard waiting an hour for a bus, especially in peak hours. (Red)
- In AM or during commute times, every half hour would be better. I miss having that option. (Yellow)

Good/reliable service (72)
- I enjoy the bus ride! Clean and safe! (Blue)
- This is a great convenience for me. It saves me time, unpleasant commute driving. Keep up the great work! (Green)
- Thank you! I love Sol Trans service and recommend to friends. (Red)
- Please keep this line/service; without it I wouldn't be able to get to work. (Yellow)

Add bus/stop/city/line (38)
- I would love if this bus took me all the way back to Dixon instead of terminating in Vacaville. (Blue)
- A bus service from Fairfield to San Francisco would be great, like the one Vallejo has. (Green)
- I wish this line still went to Hilltop Mall. It took me an hour to get to the BART station then had to wait 30 minutes for bus. (Red)
- Please, I would love it if the bus to Walnut Creek could stop at Hastings Dr. at/after 9am-9:30am (or 9:30-10:00) and stop on way to Vallejo between 6pm-8:30pm! (Yellow)

Weekend service needed/weekend schedule issues (38, including 25 on the Red Line and none on Green Line)
- I wish they ran on Sunday so that I could go to church. (Blue)
- Please add earlier service on weekends. Please add later service on weekends. (Red)
- Saturday route please. It'd cut down on drunk driving. (Red)
- Please add more late service in the weekend Saturday and Sunday. (Red)
- Run more buses on the weekend of the Vallejo Yacht Club Race after the race on Saturday and morning of Sunday early! (Yellow)

Later schedules needed/evening issues (37)
- Could you leave the service until 8pm because sometimes I get out late and I don't make it to Walnut Creek. Thank You! (Blue)
- Need more evening Green line buses from Del Norte! Need more Fairfield to Vacaville evening Buses! (Green)
- Later service is needed. 9pm service to Vallejo is too early on weekends; midnight run needed. (Red)

- It would be helpful if more local buses ran later. (Yellow)

Synced times needed to transfer to different bus/BART (37)
- Connecting to WC BART can be better. 7:20am arrives just as BART leaves and I have to wait another 10 minutes. Also evening 7:10 from WC could leave a few minutes later. (Blue)
- Could you let the drivers leaving El Cerrito Del Norte wait 3 extra minutes for the 3:31pm Richmond BART passengers -- we got there about 1 min late. (Green)
- Please consider aligning BART schedule with Red route. (Red)
- Change Yellow line buses' times. Advance 5 mins departure from VTC, 6AM is OK, but 7AM & 8AM should depart 5 mins before from VTC. AM should be 6:55 & 7:55AM. Due to traffic congestion at Monument I can miss my connecting bus. Instead of 1 hour make it 55 mins departures between Vallejo & WC.). (Yellow)

Arrival or schedule times wrong/no schedule or sign posted/signs or app unclear/wrong (27)
- Would like more time options/more communication when buses aren't coming. (Blue)
- The NextBus app hasn't worked for months. Buses I take have been canceled without notice. (Green)
- Bus signs/notices are confusing, not clear. (Red)
- I really need the bus GPS working; it's how I track when to leave. (Yellow)

Bus never shows (26)
- Quite often buses don't show up. (Blue)
- Buses are late or don't show up. (Green)
- Yesterday (5/11) the Red bus from Del Norte was so late and there were so many people we didn't all fit on the bus. The line was longer than the BART station at 5:54, the 5:53 never came. We need more buses. More often. YOU need to recognize that bad traffic happens and plan for it. Also, today, 5/12, the 5:54 bus either didn't come, or left early. (Red)
- Sol Trans has proven on more than one occasion to be very unreliable. I've wasted hundreds of dollars in ride shares due to being stranded or buses being too early. (Yellow)

Driver comments - positive (25)
- Good drivers. They should get a raise. (Blue)
- Bus driver and staff are very nice and extremely helpful. (Red)
- All drivers are nice & respectful. (Yellow)

Driver comments - negative (20)
- We had a bad experience with our bus driver at FTC. He asked us where we were going and we told him "Walnut Creek BART Station" he closed the door and left us standing there. This was the 3:45 bus and said Solano Express B Walnut Creek BART. My wife and I could not believe it!! (Blue)
- Drivers move slow during driver exchange. (Green)

- Some bus drivers are very rude and don't want to help the passengers. (Red)
- 1) Enhance training for drivers. 2) Inform drivers of good and bad comments. (Yellow)

Payment issues (25)
- Bus pass and Clipper issues for disabled need to be resolved ASAP. (Green)
- You need to do something about new Clipper machine. I put Clipper first time turn (off). Second time it took all the money it had on. Bus driver called you, she said 12 customers have had the same problem. Clipper card had nothing wrong, I had it checked out. That's $15 you owe me. (Red)
- Please place a machine to recharge cards in the terminal or allow payment by credit card. (Red)

Schedule issues
- Need more express commuter buses in the AM and PM. (Blue)
- It's hard to connect anywhere when the earliest I can get to Fairfield is 10am, without the whole day being shot by the time I arrive. (Blue)

Customer service issues
- No back up drivers--management does not care about customers; no response to email or message left. (Blue)
- (1) I think it's unprofessional to say someone will contact you--and they don't. 2) They are not taking customers' concerns seriously. (Blue)
- Need a phone number that we can call to ask questions after hours. (Green)
- ALL of Sol Trans employees can greatly benefit from some extra training in customer service what the job description entails, time management and professionalism. (Yellow)

Fare-related issues
- Bus should come more often and should be cheaper for round trip rides! Roundtrip and one ways shouldn't be same price. (Green)
- Less fare would bring great gratitude to the bus line. (Yellow)
- I've been taking this line for years. It's OK but it feels costly after a while, especially if you're low income. (Green)
- Make available a discount if using the clipper card transferring from Bart/bus to Red Line. (Red)

Please keep service
- Please keep this line available. I am a senior and appreciate my independence and convenience. (Red)
- Please don't stop this line; it can help a lot of commuters at my job. (Red)
- Please don't tell me I filled this out for bad reasons. (Yellow)

CONCLUSIONS

The survey results, as well as additional comments provided by riders, indicate that the four consolidated routes in the Solano Transportation Authority system are an essential resource for Solano County residents and others with limited transportation options for access to jobs, education and other social activities. While riders are moderately satisfied with these bus lines overall, they are less satisfied with the frequency of service, suggesting that more frequent buses would significantly improve the value of the STA system to this transit-dependent population. Specific findings include:

- Surveyed riders rely on the bus for transportation. More than one-fourth (28%) of respondents said they would not have made the trip if their bus had not been available – indicating that while most riders have alternative ways of making this trip and that the trip must be made (e.g., for getting to work), a sizeable minority are completely dependent on access to their bus.
    - More than 28% of riders on surveyed buses have no cars in their household, and 31.7% have just a single vehicle, meaning that almost 60% of riders have limited access to an automobile as an alternative to their bus service.
    - In addition, 36% of respondents do not have a driver's license.
    - (It is important to note that all of these indicators of rider dependence on the bus increased since this survey was last fielded in October and November of 2018, when 23% said they would not have made the trip, 52% had limited access to a car and 28% did not have a driver's license.)

- Most riders use their bus frequently, with almost 50% reporting that they ride at least 5 days a week and more than 80% riding at least weekly. Most riders are also long-term users: more than 62% of riders have been using their current route for at least a year, with 22.3% having been riders for 6 years or more. These lines also continue to attract new riders: 25% of respondents said they had been riding for less than 6 months, including 5% who were riding for the first time.

- Riders travel primarily between home and work, but also to and from a variety of other destinations. More than 90% of respondents either began or planned to end their current trip at home, while almost 70% were coming from or going to work, about 13% to or from sports/social/recreational activities and 7% to or from school or college.

- Riders use the buses as one of several links in their commute or other travel, with roughly half using other public transportation methods (BART, other buses) both to get to their bus stop and to get to their final destination.

- Demographically, these routes serve a diverse ridership, with almost 40% of riders African American, 21.8% white/Caucasian and 18.5% Asian. About 25% of riders described themselves as Hispanic or Latino. In addition, 34% of respondents said they speak a language other than English at home – primarily

Spanish (51%) and Filipino/Tagalog (25%), but also more than a dozen other languages.

- More than 84% of surveyed riders are within the traditional age range of working adults (18 to 64), with only 3.9% under 18 and 12% age 65 and older. Similarly, more than 80% of riders are employed full time (67%) or part time (13.5%).

- Surveyed riders gave good ratings to most service elements, with an overall service rating of 2.99, where 3.0 represents a "good" rating (4 is excellent; 2 is fair and 1 is poor).
    - Five service elements received ratings of 3.0 or higher, with driver courtesy receiving the highest rating of 3.34.
    - Availability of intercity connections, on-time performance, rider information and fares all received ratings slightly below 3.0, but the average rating for frequency of service was significantly lower at 2.72, highlighting one area where the system is falling short in meeting the needs of transit-dependent passengers.
    - Both transit facilities and bus shelters received mean ratings slightly higher than "fair", while real-time apps myStop and NextBus were rated less than "fair" with averages of about 1.8.
    - It should be noted that the printed survey instrument had been developed for use before the survey was delayed by Covid and therefore asked about the transit apps most widely used and supported at that time: NextBus and myStop. These apps were no longer supported with real-time data when the survey was fielded, which would explain the low rating.

- When asked which individual aspect of service was MOST responsible for their overall service rating, almost one-third of riders said on-time performance was the most important factor, followed by 14.1% who identified frequency of service and 8.8% who mentioned driver courtesy. No other element of service was cited by as many as 5% of respondents.

- Riders were also asked to identify how they currently receive transit information from a list of 11 sources (with more than one response possible.) The Transit website and Transit Center together were mentioned by more than 60% of riders, while phone apps NextBus, Google Maps and myStop together were cited by about 20%. About 25% of respondents cited more traditional non-digital information sources: information at stops (9%), printed schedules (6.2%) and asking a friend or bus driver (9.3%).

- The interest in online information is confirmed by the high percentage of riders who own smart phones (more than 90%) and the significant share of phone owners who use apps to track buses (44.4%). Those who use real-time apps primarily said they use NextBus (40.8%), myStop (15.8%) and Google Maps (15.2%). It is important to note that more than half of respondents said they use apps (NextBus and myStop) that are no longer supported with real-time data, despite extensive efforts to make riders aware of the Transit app. This indicates

that more marketing and education are needed to inform riders that a) the Transit app is the preferred source of information and b) NextBus and myStop are no longer supported and should not be relied upon.

- While these results consistently show a ridership that relies on buses to commute between home and work as well as reach other destinations, there are differences among individual routes in terms of the age, employment status, income, ethnic background and access to alternative methods of transportation of their riders.

RECOMMENDATIONS

Based upon the above findings and to pursue the goal of better meeting the needs of riders and improving their satisfaction with STA service, we offer the following recommendations.

- When possible, increase the frequency of service on selected routes, particularly during the morning and afternoon rush.

- Try to improve synchronization between the STA schedule and those of other transport systems, particularly BART.

- More marketing and education are needed to inform riders that a) the Transit app is the preferred source of real-time information on SolTrans buses and b) NextBus and myStop are no longer supported and should not be relied upon.

- Because not all riders have access to or are comfortable with online data, it is important that schedules are provided at each bus stop and kept up to date.

- Finally, a comparison of current to past indicators of transit dependence (e.g., lack of access to a car; no driver's license) shows that a higher proportion of riders today have no alternative to using the bus, suggesting that some riders surveyed in 2018 who did have alternatives have since abandoned their use of these bus lines. To better understand the factors that have driven riders away from the bus and are causing dissatisfaction among current riders, we recommend that STA consider conducting qualitative research with both groups to probe the reasons for no longer using the bus or sources of dissatisfaction. While fielding the survey many riders verbally expressed frustration with everything from Clipper Cards to the lack of information at bus stops, yet the level of frustration in these comments was not always reflected in the written feedback on the survey form. We believe that speaking with former riders could help STA gain greater insight into the needs of post-pandemic system users.