

To: Advisory Committee

Date: September 6, 2012

From: Laramie Bowron, Manager of Planning

Reviewed by:

SUBJECT: Draft On-Board Survey

Summary of Issues:

Attached is the draft 2012 On-Board survey report completed by RedHill Group. This survey was administered in April 2012 by an MTC-hired consultant. RedHill Group is also in the process of administering onboard surveys for all Bay Area operators that receive TDA funding. Though staff has gone through the document and noted possible errors that will be addressed at a follow-up meeting scheduled in September, the data presented in the report is comprehensive and demonstrates the first on-board survey since 2007. This report will be included in the final Short Range Transit Plan as an appendix. The survey focused on the following categories: trip pattern and purpose, payment method, and demographic information, giving CCCTA an updated rider profile and data relevant to service planning and Title VI Reporting.

Notable information includes:

- 53% of respondents do not have a driver license,
- 60% of respondents ride at least 5 days/week,
- 52% of respondents use the bus to get to work, and
- 17% of non-English-speaking households speak Tagalog.

Financial Implications:

None

Recommendation:

This is presented for review prior to inclusion in the final SRTP.

2012

County Connection

2012 Passenger Study

Draft

Survey Findings

Conducted by:

Redhill Group, Inc.

August 22, 2012

*The County
Connection*



redhillgroup
THE POWER OF INSIGHT

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Executive Summary

Methodology

Under contract to the MTC, Redhill Group conducted a survey of County Connection Transit riders to provide highly accurate trip information. The survey also included traditional demographics, languages spoken, fare media and selected attitudinal questions. The survey employed a new methodology that includes a brief, two-minute onboard survey that is limited to origin and destination-types and rider contact information. This much shorter initial survey format leads to significantly higher rider participation compared to traditional onboard surveys and minimizes non-response bias for short trips.

The short onboard survey is followed up by a telephone survey that incorporates real-time trip mapping. Replacing a detailed self-administered paper and pencil survey with a telephone survey minimizes literacy issues that often result in non-response bias. The real-time trip mapping component ensures that each component of a rider's complete trip is accurately captured including all trip segments, transfers, and logical access and egress information. Together, these enhancements in survey methodology produce a more accurate picture of true travel patterns, enabling more effective route and schedule planning.

The goal of the survey was to collect a representative sample of five percent of all boardings for riders 16 or older. Because the average number of boardings per one-way trip for County Connection is 1.8 and most riders do round-trips, the average number of boardings per unique rider is approximately three per day, and accordingly the five percent boarding figure equates to 15 percent of all riders.

The five percent goal of average daily weekday boardings (12,500) translates into 625 completed surveys and average weekend ridership of 2,700 produces 135 surveys. This was then divided into targets in proportion to boardings for each route. The weekday surveys were further divided into targets for each daypart (AM Peak, Midday, Early PM, PM Peak, and Night) to ensure a representative sample. To ensure adequate telephone surveys were completed, an average of 2.5 field surveys were collected for each anticipated phone survey. This produced a field survey target of 2,845 surveys.

Field surveying was conducted May 12th - 19th, beginning and ending on a Saturday. Follow-up telephone surveying was between May 18th and June 31st. The final results for the surveying process included a total of 838 completed phone surveys and 2,228 field surveys.

An additional methodology change to provide more actionable reporting was to combine all home based trips, creating a new home-based trip purpose by reversing trips that were home-bound. This provides a clearer picture of outbound trips

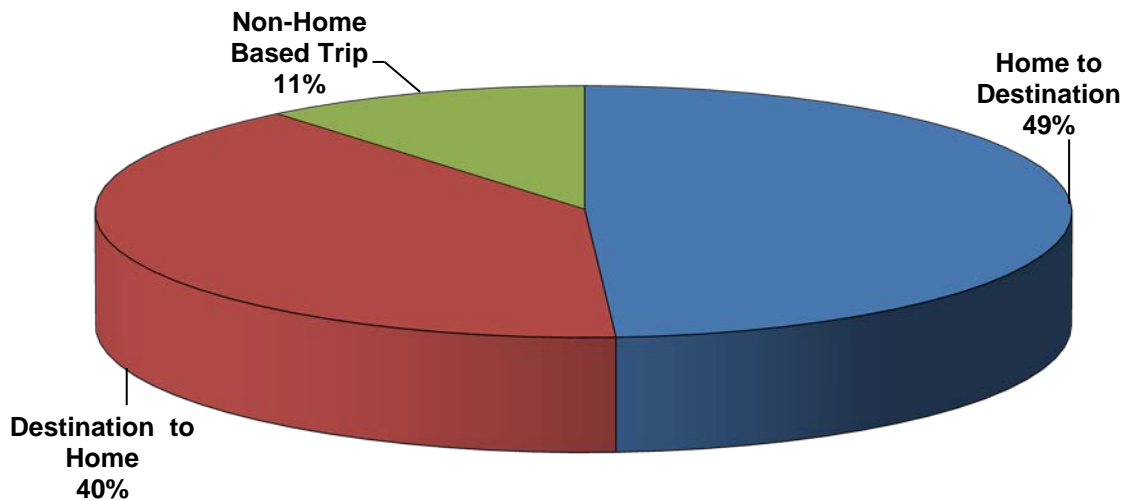
Key Findings

- The distribution of home-based trip purposes is diverse with work and business appointments accounting for 56 percent, and K-12 and college accounting for 17 percent. This is rounded out by 11 percent social/recreational, 10 percent shopping, and five percent medical/dental.
- The trip purpose distribution is in line with employment and school demographics with over a half (53%) of riders indicating that they work only, 16 percent indicating that they are students only, and 14 percent saying that they are both students and workers. Seventeen percent of riders are neither employed nor students.
- The vast majority of riders' (87%) access transit from home by walking while the remaining 13 percent either drive alone (5%), are dropped off (4%), carpool (2%), or bicycle (2%). The average access walk time is 9.1 minutes. Riders' egress mode is more likely to be walking at 95 percent. Being picked up (4%) and bicycling (1%) account for the remainder. The average walk time to the destination is 5.6 minutes, likely reflecting higher density at typical non-home trip destinations than in residential areas.
- Thirty-eight percent of County Connection riders complete their one-way trip riding one bus while 45 percent require one transfer, and 17 percent require two or more transfers.
- Cash, at 42 percent, is the most common form of fare payment, while passes are the primary non-cash fare media at 24 percent (12-Ride Pass 13%, Monthly Pass 10%, Monthly Express Pass 1%). Transfers account for nine percent (Bart transfer 8%, County Connection transfer 1%) and cards account for seven percent (Commuter Card 4%, RTC Card 3%).
- A majority of riders (72%) pay full adult fares with the largest discount groups being seniors (7%), disabled riders (7%), and students (3%).
- When asked how they would most like to see County Connection service improved, the most popular improvement is more frequent service, cited by 41 percent. The next two requested improvements are later evening service (25%) and being more consistently on time (13%). At a much lower level, earlier morning service and requiring fewer transfers were mentioned by seven and three percent respectively. More weekend service was suggested by three percent of riders.
- If County Connection was not available, 17 percent said they would not make the trip. Twenty-seven percent said they would have someone drive them, and a quarter said they would walk. Other options included taxi (10%), driving alone (9%), carpooling (6%), and bicycling (4%).
- The vast majority of trips are made by frequent riders with 93 percent of trips made by riders that ride at least once a week
- Approximately half of County Connection trips are made by riders that are transit dependent as indicated by 53 percent saying they do not have a driver's license.
- Eighty percent of riders have at least one way of accessing the Internet through a smart phone (43%), tablet (13%), and/or traditional computer (69%).

Trip Characteristics

Riders were surveyed during all parts of the day and in both directions on all routes. This produces a relatively balanced sample of “inbound” and “return” trips. The vast majority of these trips (89%) include home as either the trip origin or destination.

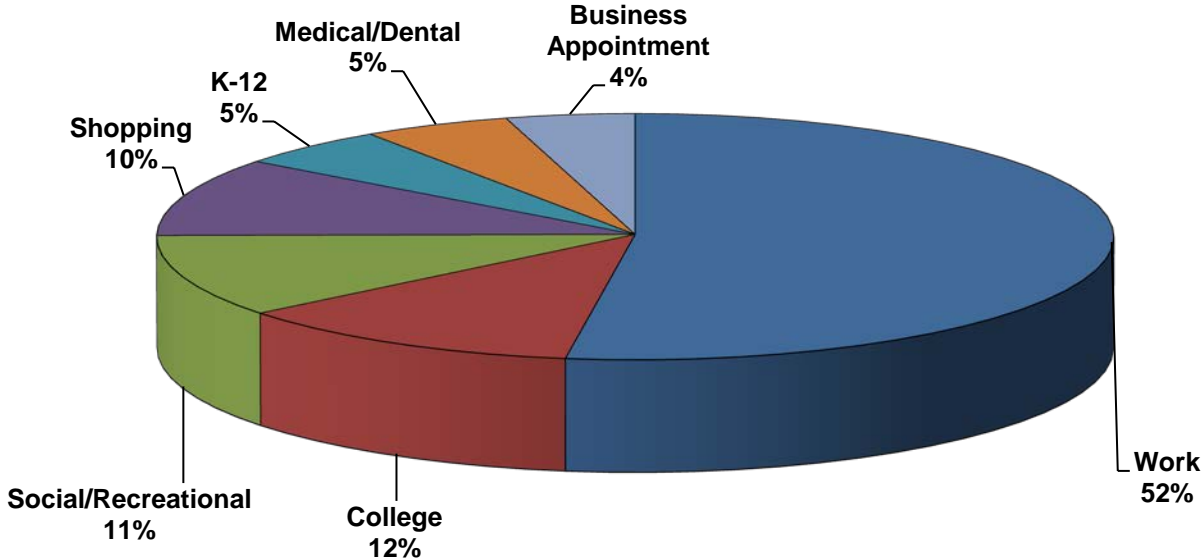
Figure 1: Is Home Your Origin or Destination?
n=838



In traditional onboard survey reporting, all origins are reported in aggregate regardless of trip direction. This results in the information about trip origins and access being a combination of home, work and other ultimate origin-types. As such it does not produce a clear and meaningful picture of the trip from home to the first transit boarding point, or of the final leg of the trip from the last alighting point to the ultimate destination.

To overcome this, a modified database has been created from the original that reverses all trips that are home-bound, converting the destination from home to the original non-home origin, and making home the new origin. This modified database provides a consistent picture of all outbound trips from home to the ultimate trip destination-type. The first section of the report provides reporting on this modified database to show a more meaningful and actionable picture of rider behavior

Figure 2: What Was Your Trip Purpose?
n=768

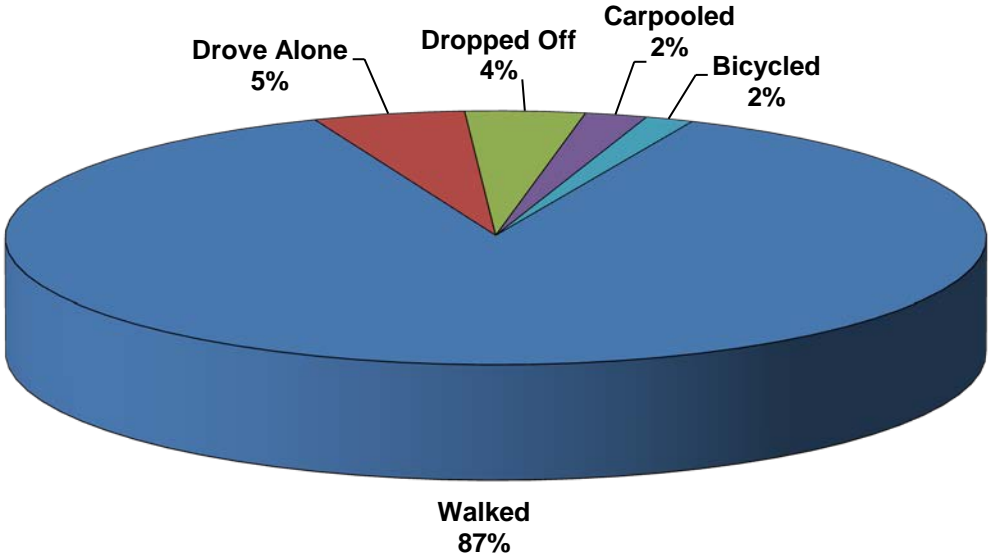


Work represents the largest proportion of trip-purpose destinations from home-based trips, accounting for 52 percent of all trips. Business appointments account for an additional four percent. This is in line with riders' reporting of work status with 67 percent indicating that they are currently employed.

Not surprisingly, school is the second largest trip destination with 12 percent of riders going to colleges or universities, and an additional five percent going to K-12 schools for a total of 17 percent. This is in line with 30 percent of riders reporting that they are students.

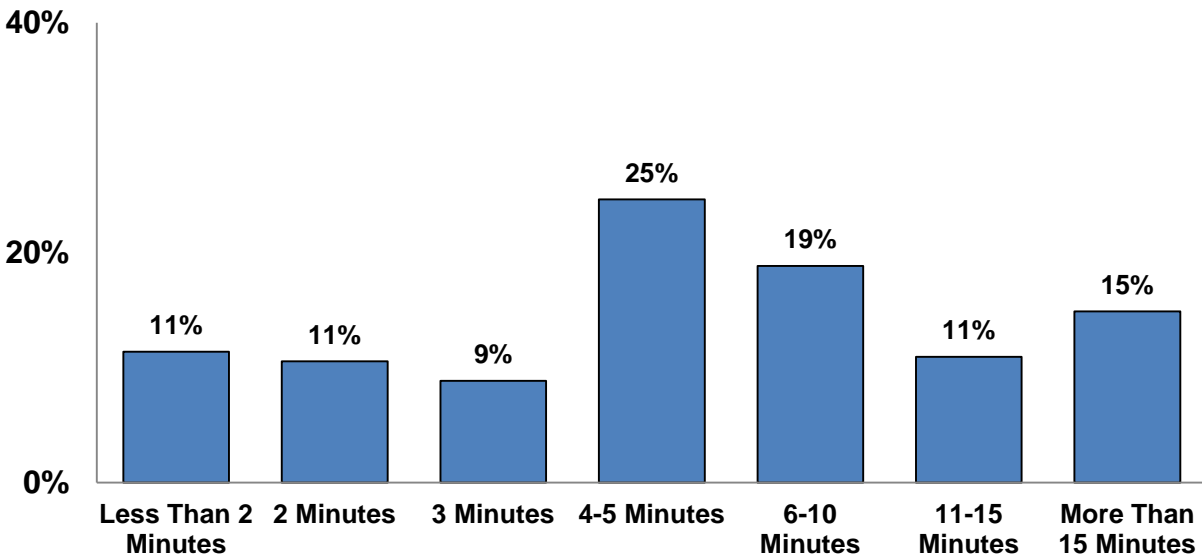
Social and recreational trips account for 11 percent, and shopping accounts for ten percent. Medical/dental trips are also a common destination at five percent.

Figure 3: How Did You Get From Your Home to Your First Boarding Point?
n=768



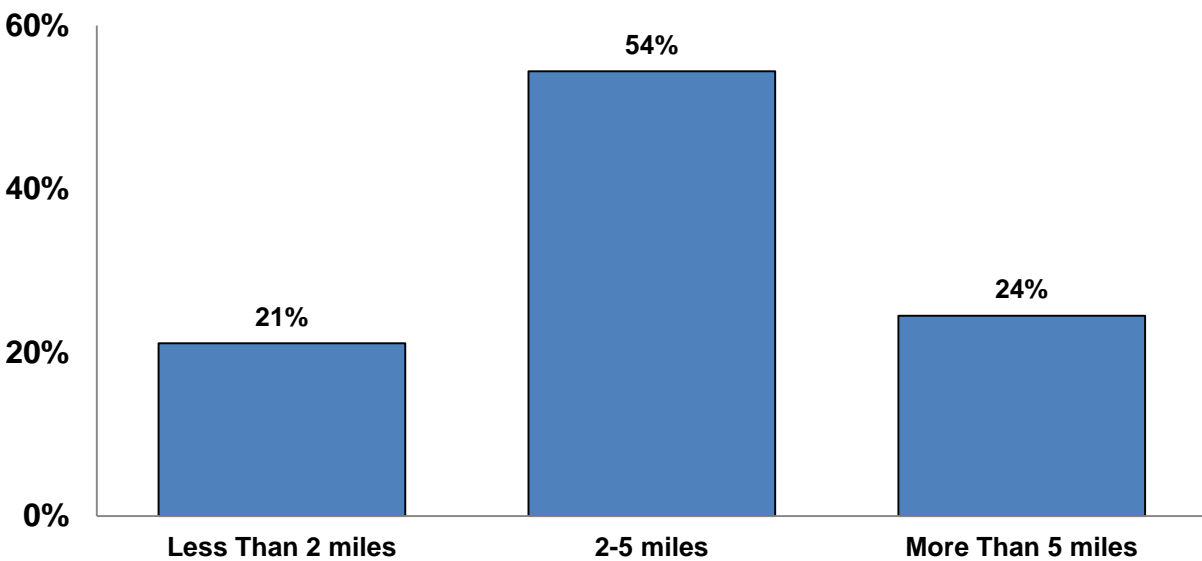
The vast majority of riders (87%) walk to their first transit boarding point. Car-based modes are the next most common transit access mode, with five percent of riders driving to their boarding point alone, four percent being dropped off by someone, and two percent carpooling. The final two percent of riders bicycle to the bus stop.

Figure 4: How Many Minutes Did It Take You to Walk From Your Home to Your First Boarding Point?
n=655



Among the riders who walk from home to their first boarding point, the most common time is four to five minutes at 25 percent. This is followed by 19 percent that have a walk time of six to ten minutes. There are 26 percent that have walk times in excess of 10 minutes, and a slightly larger proportion of riders walk three or fewer minutes at 31 percent. The overall average walk time from home to the first boarding point is 9.1 minutes.

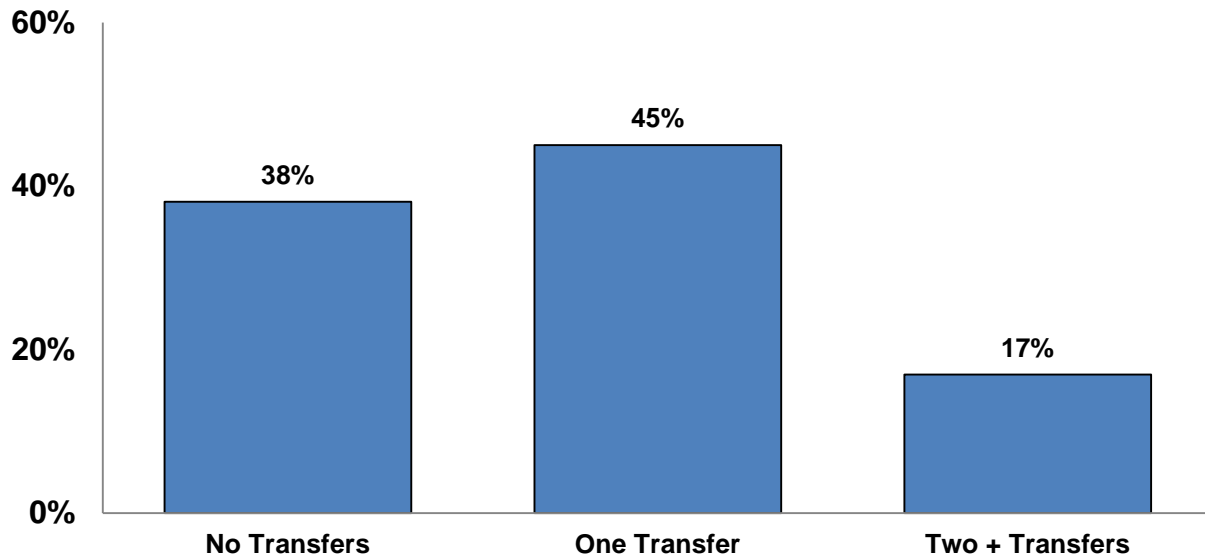
Figure 5: How Many Miles Is It From Your Home to First Boarding Point? (Non-Walkers)
n=113



For riders that do not walk from home to the bus, the majority (54%) travel two to five miles. The remainder is balanced relatively evenly between those traveling more than five miles (24%) and those traveling less than two miles at 21 percent. The average distance traveled to the first boarding point for non-walkers is 4.8 miles.

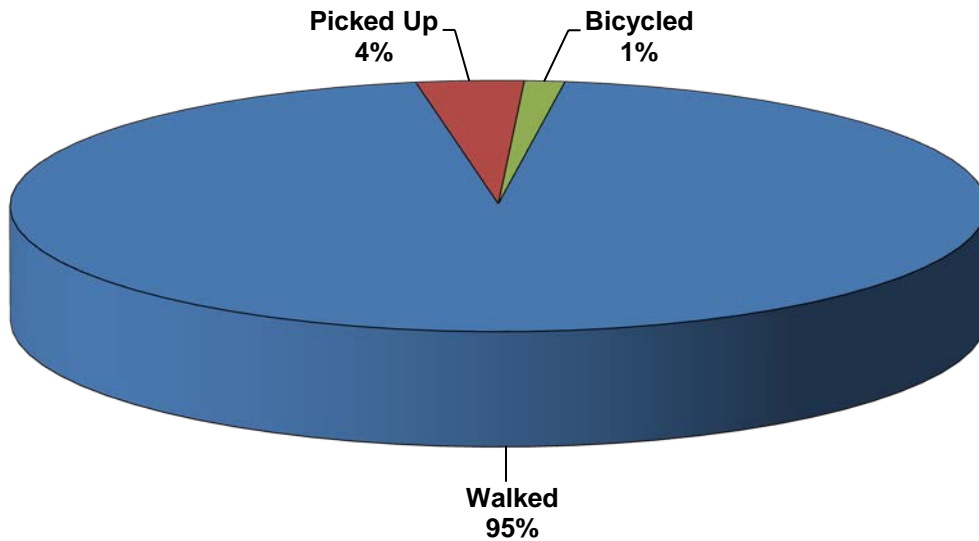
Figure 6: How Many Transfers Needed To Complete Your Trip?

**n=838
Line 427**



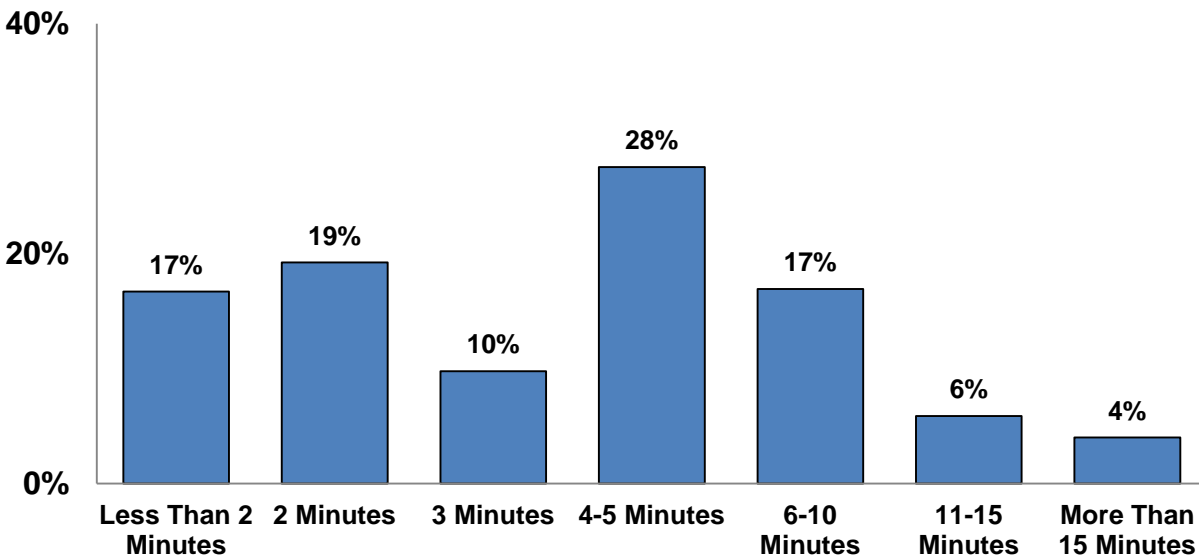
Thirty-eight percent of bus riders complete their bus trip with no transfers. Forty-five percent of riders make one transfer to finish their trip, and 17 percent of all trips require two or more transfers. Together the average number of transit legs for each one-way trip is 1.79.

Figure 7: How Did You Get From Your Last Stop to Non-Home Destination?
n=768



Almost all bus riders (95%) walk from their last stop to their non-home destination. Four percent of riders are picked up by someone, and only one percent bicycle from their last stop to their non-home destination.

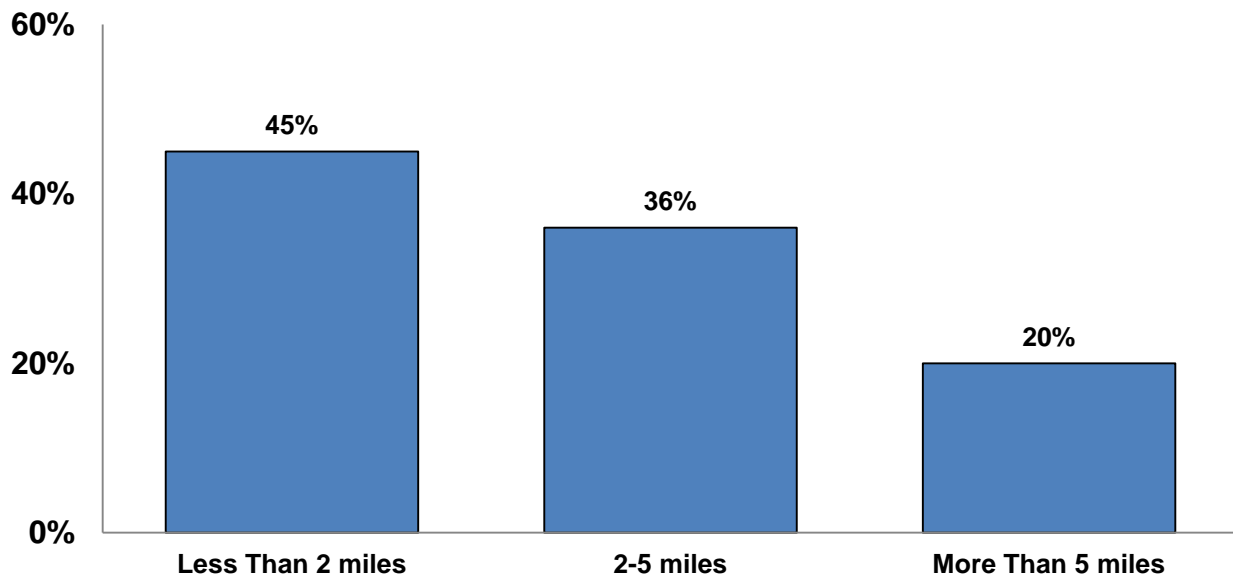
Figure 8: How Many Minutes Did You Walk to Your Non-Home Destination?
n=728



As with walking to their first transit boarding point, the most common walk time to the final destination point is four to five minutes at 28 percent. Seventeen percent walk six to ten minutes, and only ten percent walk more than ten minutes. Conversely, a total of

46 percent walk less than four minutes. The overall average walk time from riders' final alighting point to their non-home destination is 5.6 minutes. The 5.6 minute average walk time to their non-home destination is just over half the 9.1 minute average walk time from home to their first boarding point. This likely reflects a higher density of destinations and bus stops at their non-home destination than in their residential home neighborhood.

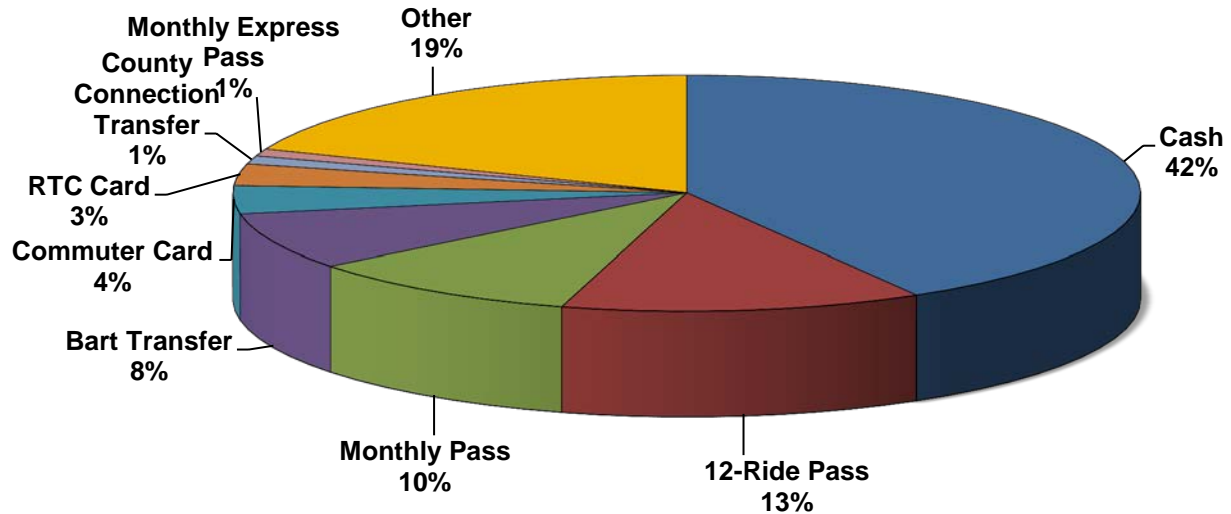
Figure 9: How Many Miles Was It From Your Last Stop to Your Non-Home Destination? (Non-Walkers) n=40



Of those riders who use a mode of transportation other than walking from their last stop, almost half (45%) travel less than two miles to their non-home destination. Thirty-six percent of riders travel two to five miles and 20 percent travel more than five miles. The average distance traveled by non-walkers to their trip-purpose destination is 5.4 miles. It should be noted, however, that this includes two travelers that commuted to a rideshare point and then pooled a long distance to their destination. Removing these two riders from the dataset reduces the average from 5.4 miles to 3.8 miles.

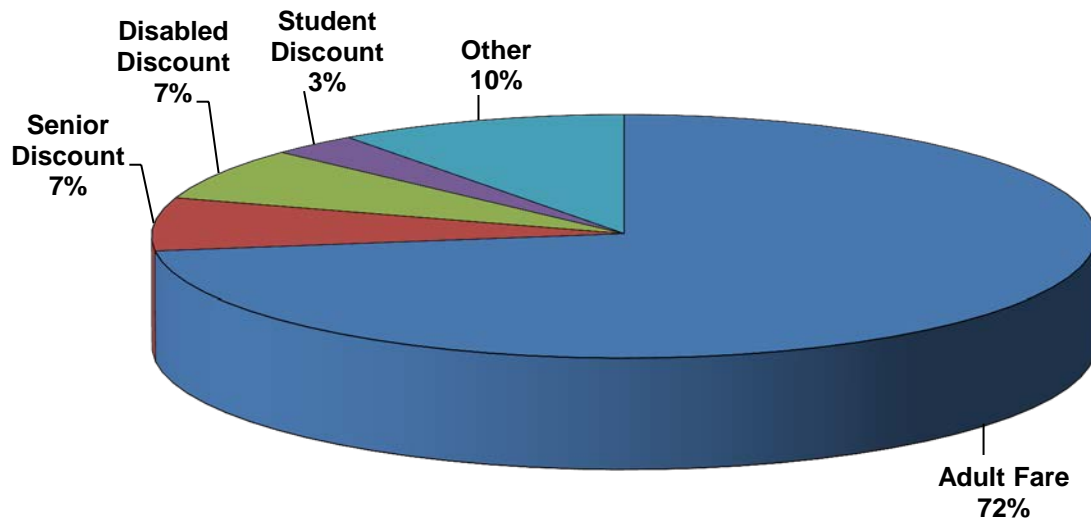
Fare Media

Figure 10: How Did You Pay For Your Bus Fare?
n=838



Riders use a variety of fare media options. The most common form of payment is cash at 42 percent. Those who use a pass (monthly, monthly express, 12-ride) make up 24 percent of the riders. Eight percent of riders use a Bart transfer, and one percent use a County Connection transfer. Commuter cards or RTC cards are used by seven percent. Nineteen percent of riders use some other form of payment including 20-ride passes, Bishop Ranch bus passes, other employee passes, student IDs and free rides.

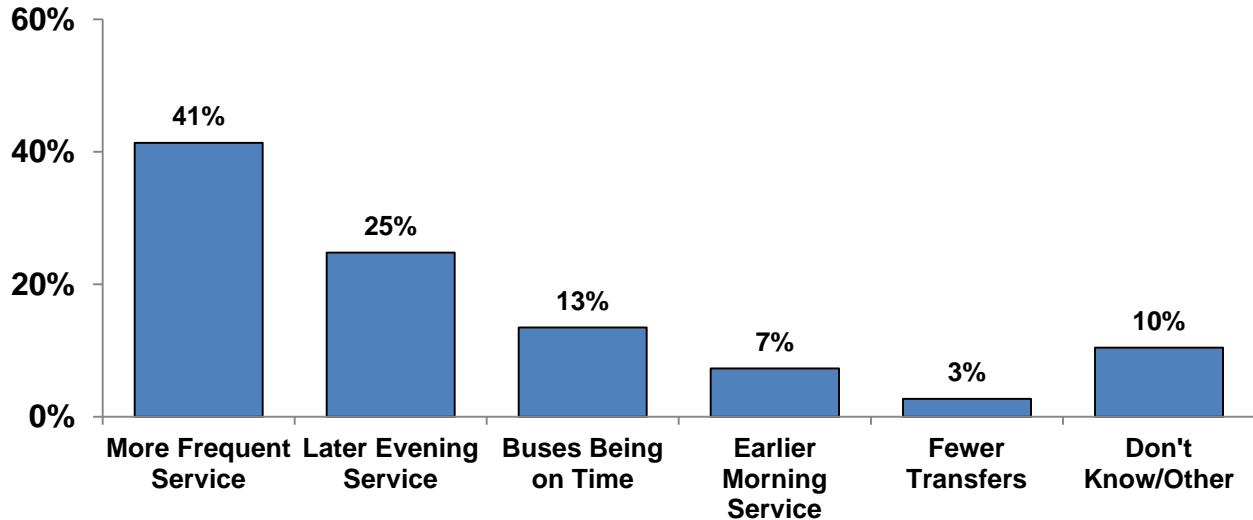
Figure 11: Was That a Full, Adult Fare or Discount Fare?
n=838



Seventy-two percent of riders do not receive a discount and thus pay a full adult fare. Among the discounted fares, a senior discount and a disabled discount are tied for the highest percentage with each comprising seven percent of riders. Only three percent of surveyed riders used a student discount. Ten percent of riders use some other type of fare.

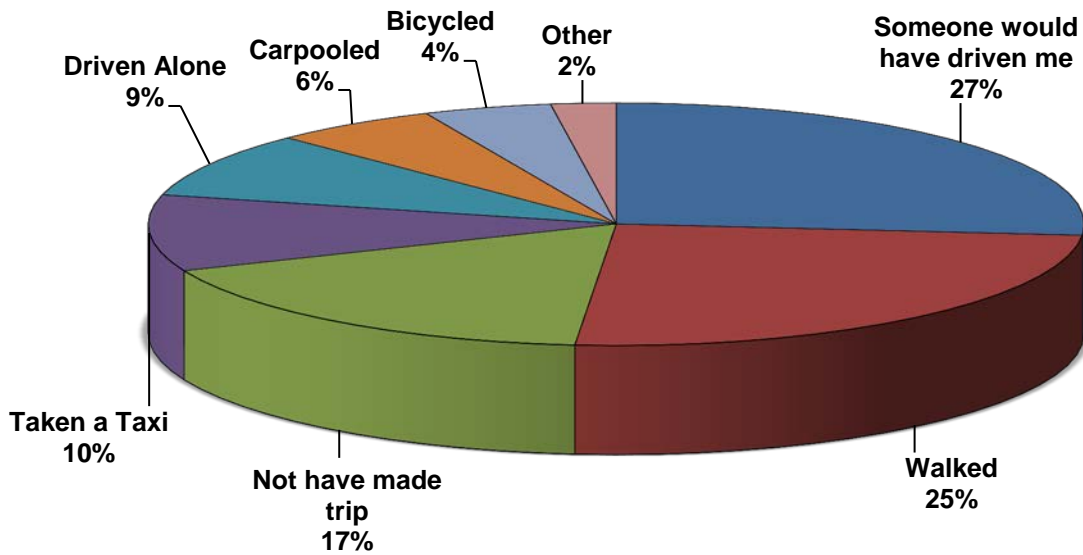
The County Connection Performance

Figure 12: How Can The County Connection Be Improved
n=838



Riders were asked to choose one of five possible specific improvements that could potentially be implemented by County Connection. More frequent bus service is the most commonly requested improvement at 41 percent, and this is relatively consistent across all demographic breakouts. Later evening service and buses being more on time received 25 percent and 13 percent of the responses respectively. The least requested improvements are earlier morning service and fewer transfers to make their trip, at seven and three percent respectively. Ten percent of riders either have another suggestion or do not think that County Connection needs to make any improvements. The most common “other” response was more weekend service, but at less than three percent.

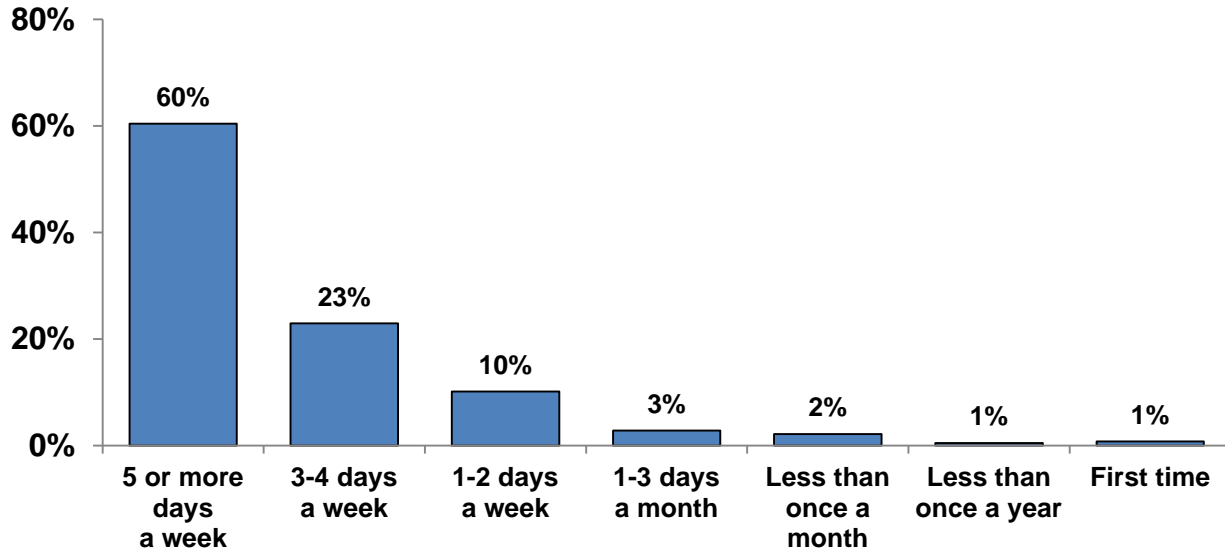
**Figure 13: If There Was No Bus, How Would You Have Made Your Trip?
n=838**



When asked what they would do if their County Connection bus service was not available, 17 percent of riders indicated that they would not make a bus trip at all. Over half of riders (52%) would use another form of motorized vehicular transportation (27% driven by someone, 10% taxi, 9% drive alone, 6% carpool), while 29 percent would either walk (25%) or bicycle (4%). Two percent of riders would use a form of alternate transportation not identified above.

Transportation Demographics

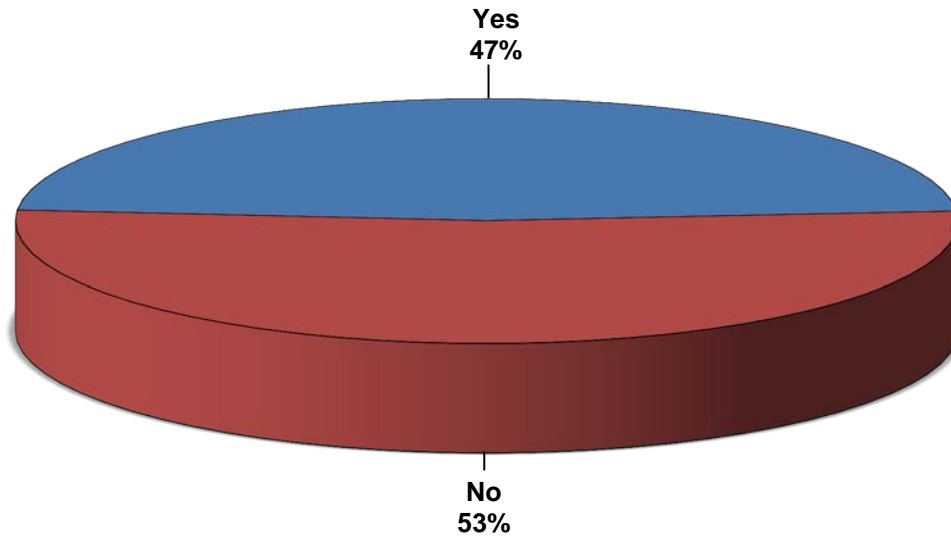
Figure 14: How Often Do You Ride The County Connection
n=838



Over 90 percent of all trips are made by riders that use the bus at least once a week. Nearly two-thirds of all trips (60%) are made by riders that use the bus five or more days a week. Twenty-three percent of trips are by riders that ride three to four days a week and ten percent are by riders that use the bus one to two days a week. Five percent of trips are made by patrons that ride one to three days a month (3%), and by riders that use the bus less than once a month (2%). The remaining two percent is equally split among first time riders and those who use the bus less than once a year.

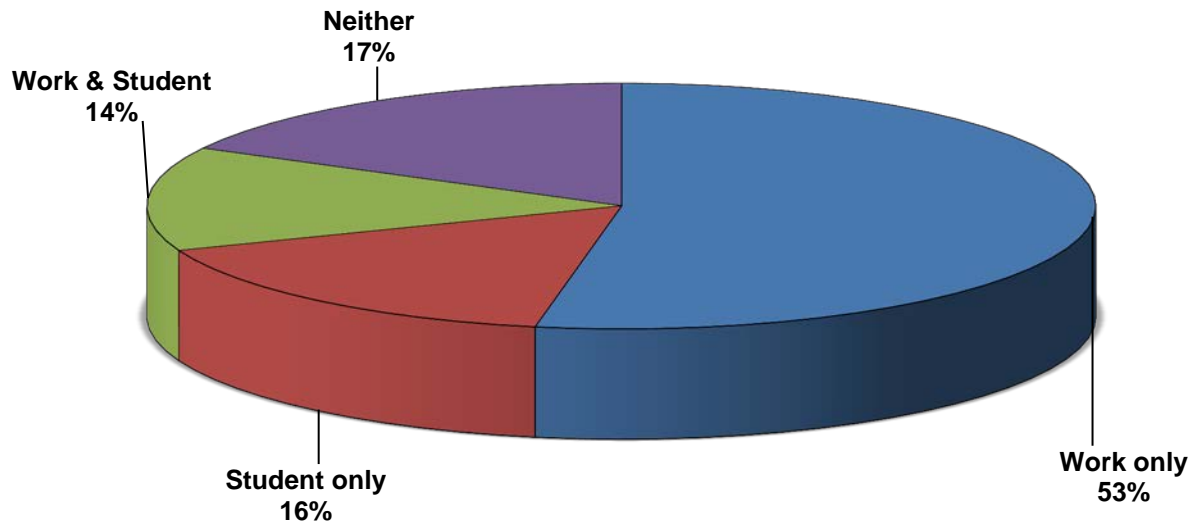
Riders who are employed are more likely to ride the bus five or more days a week than those who are unemployed (69% versus 44% respectively). At 60 percent, riders who possess a driver's license are equally as likely to ride the bus five or more days a week as those who do not have a license (61%). Finally, as would be expected, riders that use a pass to pay their fare are more frequent riders than those that pay cash.

Figure 15: Do You Currently Have a Driver's License?
n=838



Over half of County Connection trips (53%) are made by riders that do not currently have a driver's license. At 50 percent, male riders are slightly more likely to have their driver's license than female riders at 45 percent. The incidence of having a drivers' license increases with age starting at a low of 16 percent for riders under 20, increasing to 37 percent for those in their 20's, 42 percent for those in their 30's and then peaking at 62 percent for riders in their 40's. The incidence then declines slightly to 60 percent for riders in their 50's, and 57 percent for those 60 or older. Hispanic riders are also less likely to have a driver's license at 41 percent compared to 50 percent for non-Hispanic riders. Students and those that are not employed are also less likely than their counterparts to have a license at 31 percent and 34 percent respectively compared to 54 percent of non-students and 54 percent of employed riders.

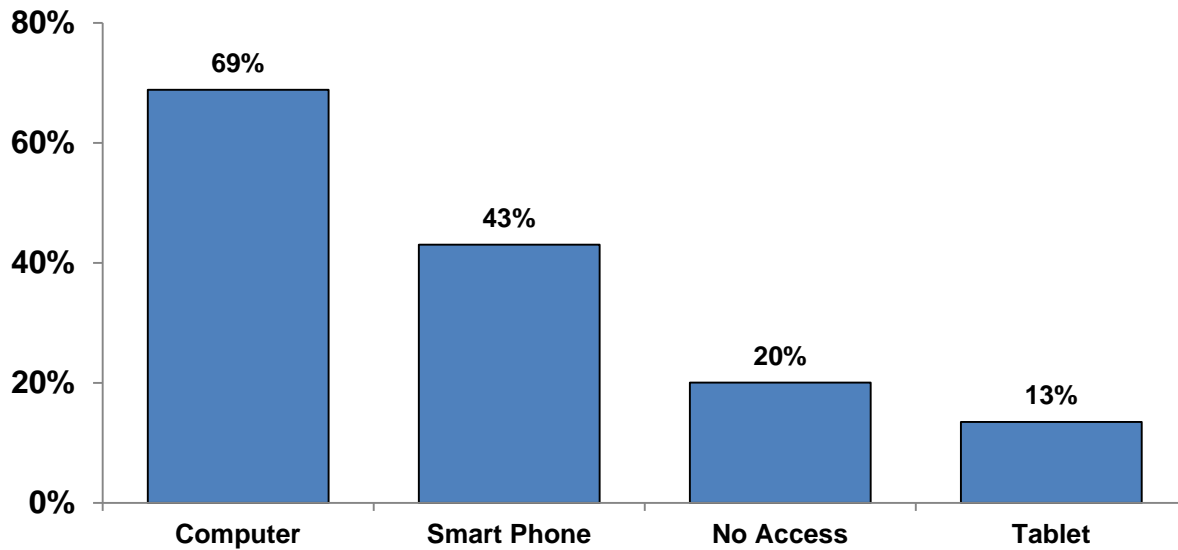
Figure 16: Are You Currently Employed and/or a Student?
n=838



Over a half (53%) of riders are only employed and 16 percent are only students. Fourteen percent of riders are both employed and students, while 17 percent of riders are neither employed nor a student. As might be expected, riders 60 years or older are the most likely to neither work or be a student.

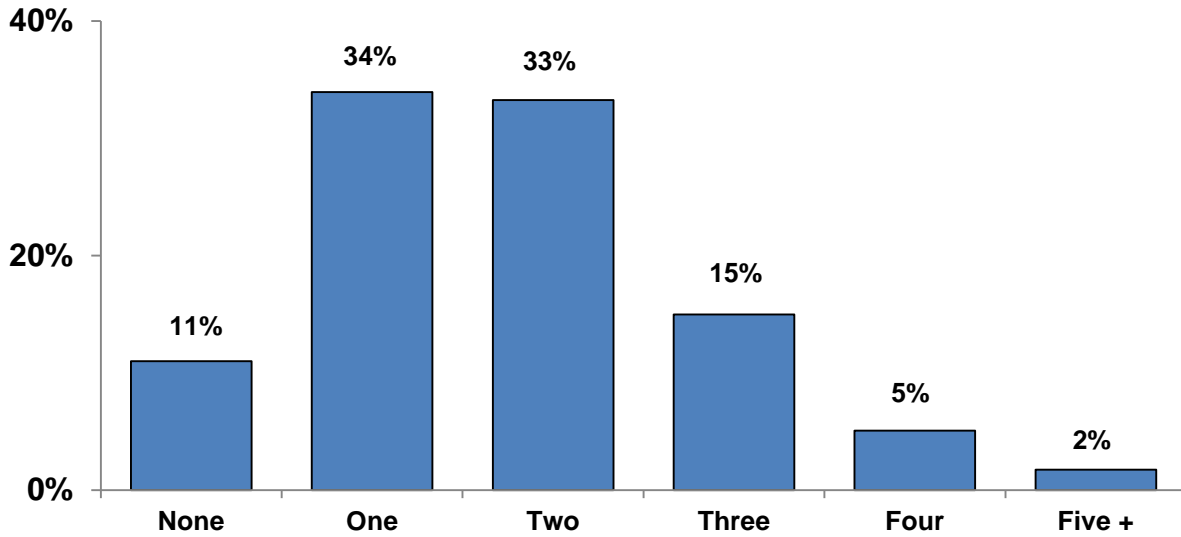
Rider Demographics

**Figure 17: How Do You Access the Internet?
(Multiple Response)
n=838**



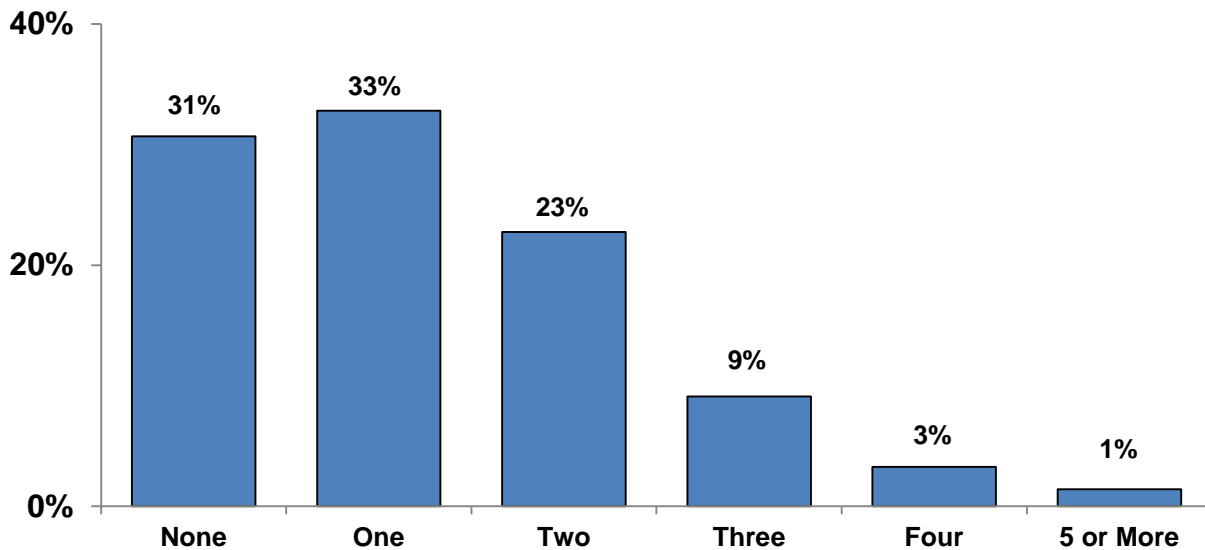
Eighty percent of riders have at least some way to access the Internet through a smart phone, tablet, and/or traditional computer. The majority of riders (69%) have a computer for Internet access. Forty-three percent of riders have a smart phone to access the Internet. Only thirteen percent of riders have access to the Internet through a tablet. Twenty percent of riders do not have any access to the Internet. Note that riders may have Internet access through two or all three forms and thus the total percentages exceed 100 percent.

Figure 18: How Many People Are Employed in Your Household?
n=834



A third of riders (34%) have one person who works either full-time or part-time in their household. Another third (33%) of the riders' households have two people who are employed, and 11 percent of riders do not have anyone in their household who is employed. Fifteen percent have three people employed in their household, and seven percent have four or more employed people in their household.

Figure 19: How Many Drivable Vehicles Are Available To Your Household?
n=837

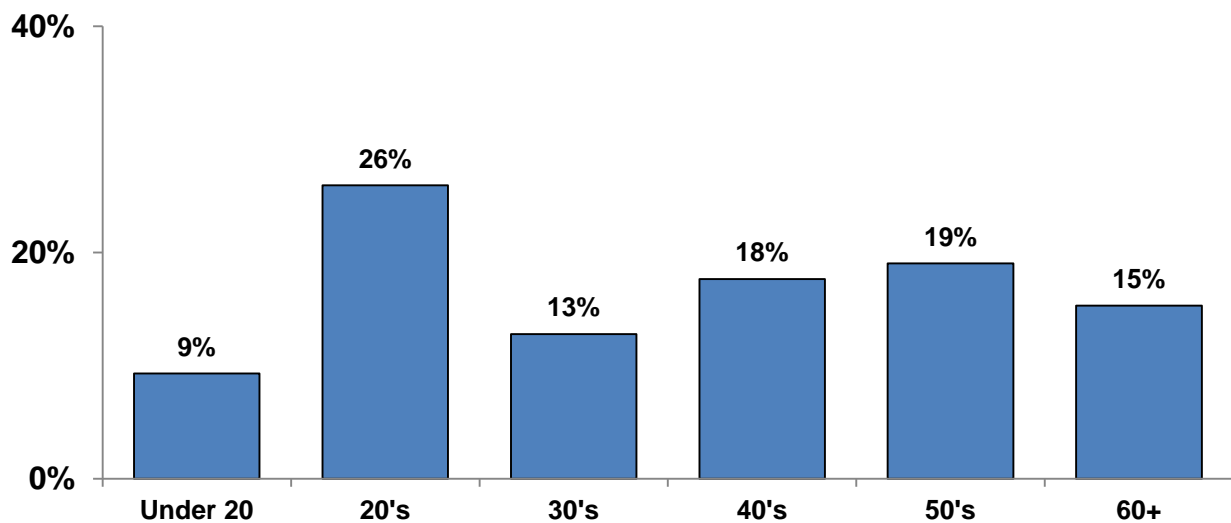


Most County Connection riders (69%) have at least one drivable vehicle available in their household, but nearly a third (31%) do not have any drivable vehicles. Over half of the riders (56%) have either one (33%) or two (23%) drivable vehicles available.

Thirteen percent of riders have three or more operating vehicles available to their household.

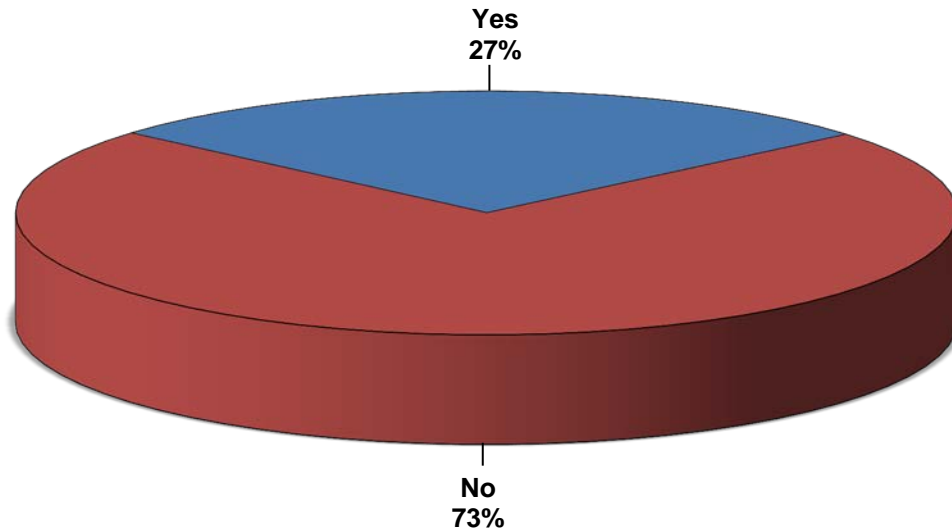
Vehicle availability is positively correlated to household income with vehicle availability starting at a low of 37 percent for those with incomes below \$10,000, and increasing consistently with income to a high of 97 percent for those with incomes above \$75,000. It is negatively correlated to rider age with vehicle availability for the youngest riders (under 20) at a high of 87 percent and then declining to 55 percent for riders that are 60 or older. Non-Hispanic riders are slightly more likely to have a vehicle in the household at 71 percent compared to 65 percent for Hispanic riders.

Figure 20: What Is Your Age Category?
n=824



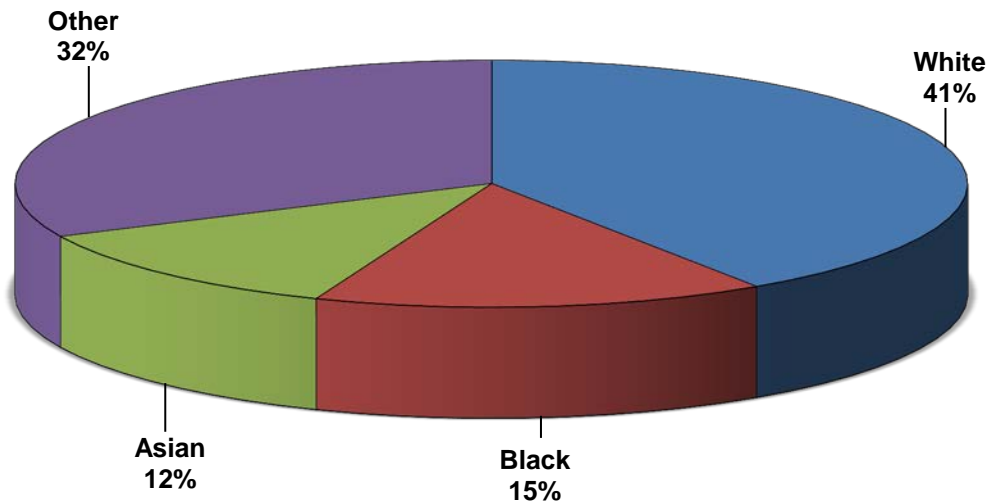
The most common age group of CCCTA riders is those in their 20's at 26 percent. Only nine percent of riders are under the age of 20, while 13 percent are in their 30's. The age of riders are distributed relatively evenly across riders that are at least 40 with 18 percent for riders in their 40's, 19 percent for riders in their 50's, and 15 percent for those 60 or older.

Figure 21: Are You Hispanic, Latino or of Spanish Origin?
n=833



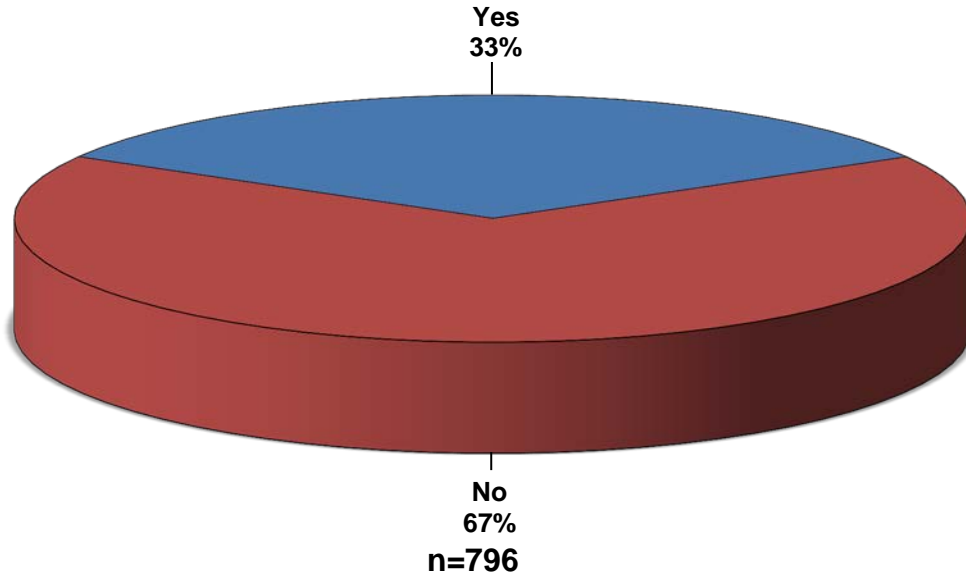
The proportion of surveyed riders that are Hispanic or Latino is slightly more than a quarter (27%) of all riders. Seventy-three percent are not of Hispanic or Latino origin.

Figure 22: What Is Your Race?
n=838



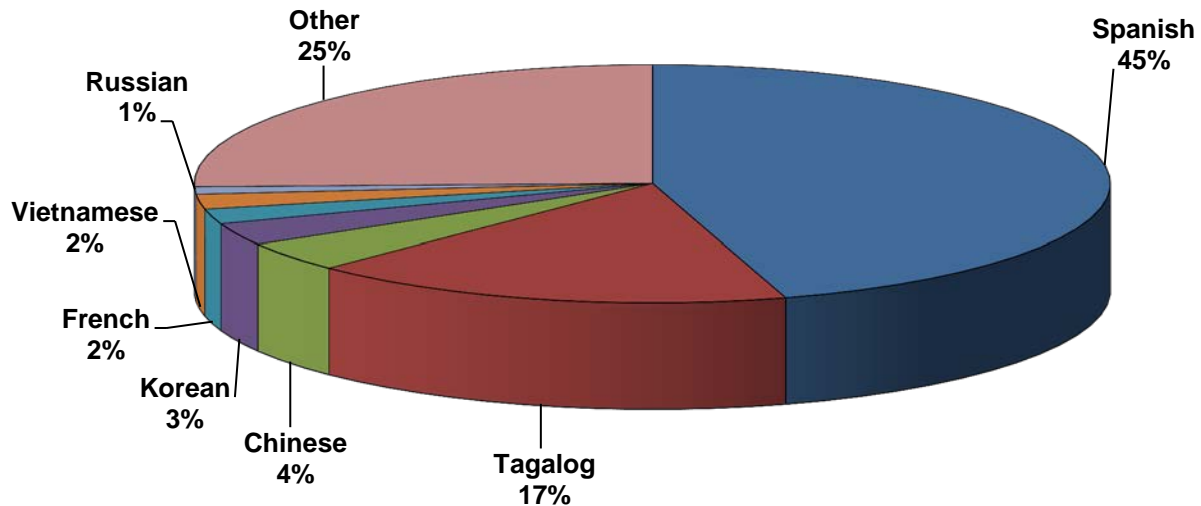
At 41 percent the largest proportion of County Connection riders identify their race as White, with 15 percent saying Black and 12 percent Asian. A large proportion (32%) also identified themselves as “other.” The most common “other” response were Hispanic, Latino, and Mexican.

**Figure 23: Do You Speak a Language Other than English at Home?
(English Language Survey Respondents Only)**



Of those riders who completed the survey in English, 33 percent speak a language other than English at home. Fifty-two percent of Hispanic riders and 80 percent of Asian riders speak a language other than English.

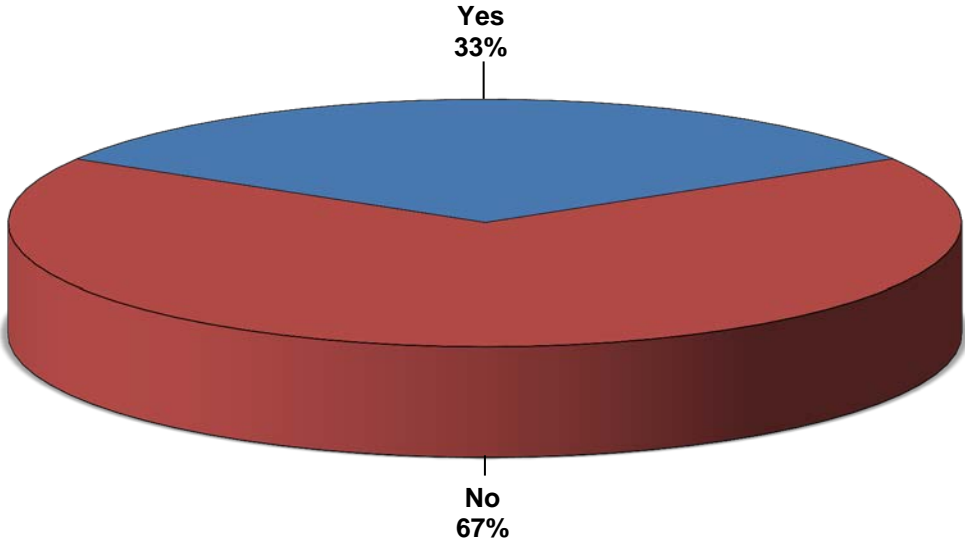
**Figure 24: What Language Do You Speak at Home?
(English Language Survey Respondents Only)
n=275**



At 45 percent, Spanish is the most common language of riders who indicated that they spoke a language other than English at home. The second highest language spoken at home was Tagalog at 17 percent. Four percent of riders speak Chinese and three percent speak Korean. French and Vietnamese are both spoken by two percent of riders, while Russian is spoken by one percent of riders. In addition to English, a quarter of riders speak a language not listed above.

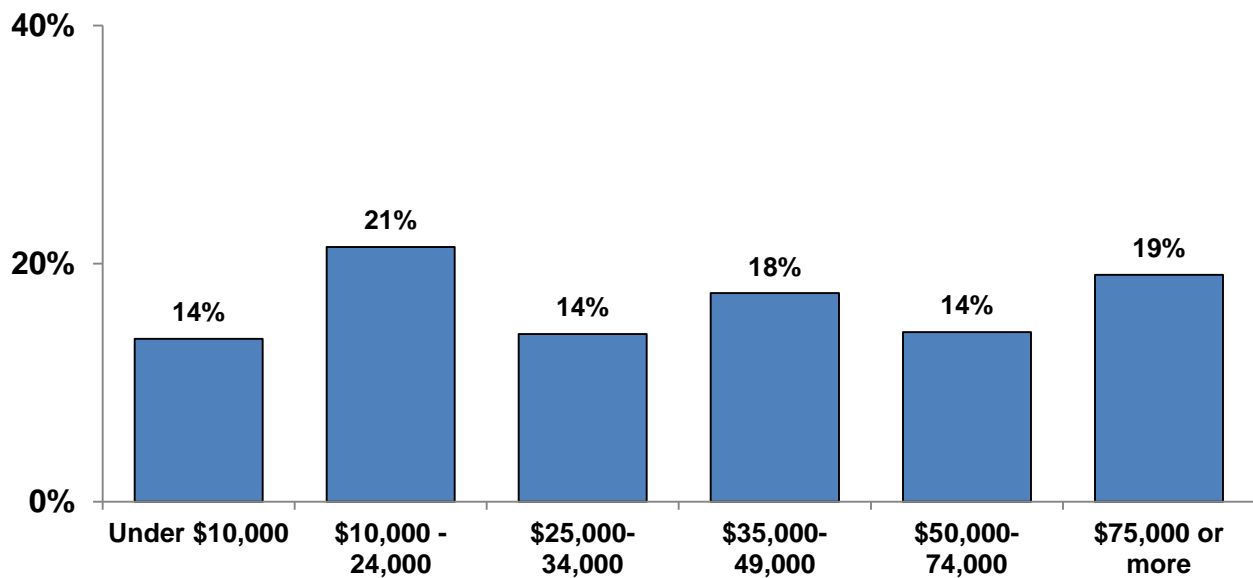
**Figure 25: Do You Speak a Language Other Than Spanish at Home?
(Spanish Language Survey Respondents Only)**

n=42



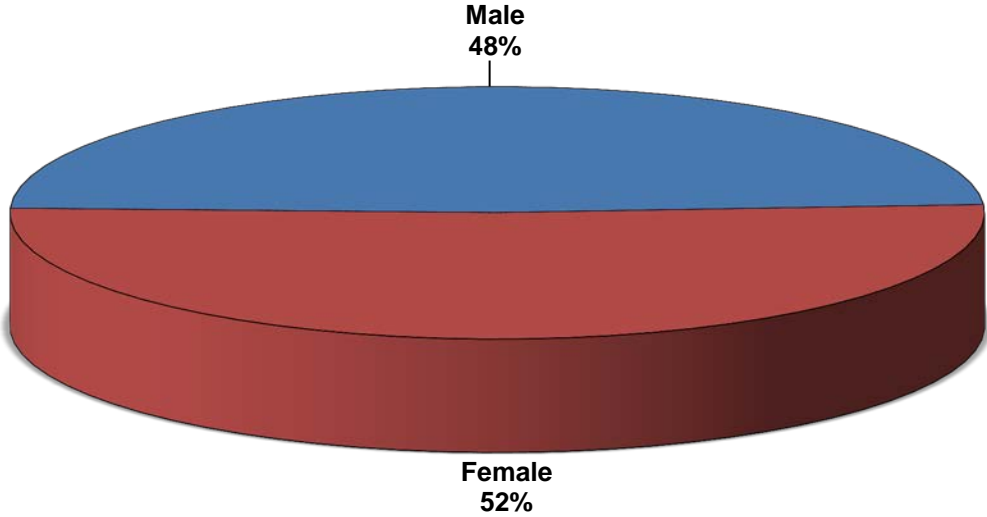
A third of bus riders who completed the survey in Spanish speak a language other than Spanish at home. All of these riders speak English.

Figure 26: What is Your Total Household Income?
n=711



The total household incomes for riders were distributed relatively evenly among the income groups. The most prevalent household income of riders is \$10,000 to \$24,999 at 21 percent followed by \$75,000 or more at 19 percent, and \$35,000 to \$49,999 at 18 percent. Total household incomes of under \$10,000, \$25,000 to \$34,999, and \$50,000 to \$74,999 each comprise 14 percent of the riders. Household incomes over and under \$35,000 were relatively even at 49 percent under \$35,000 and 51 percent over \$35,000.

Figure 27: Gender
n=838



A slight majority of County Connection riders are female with 52 percent female riders and 48 percent male riders.