

WHEELS

2013 Passenger Study

Draft

Survey Findings Report

Conducted
by:

Redhill Group

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EXECUTIVE SUMMARY

METHODOLOGY

Under contract to the MTC, Redhill Group conducted a survey of LAVTA riders to provide accurate trip information to support planning initiatives. The survey included traditional demographics, languages spoken, fare media and selected attitudinal questions. The survey employs a methodology that includes a brief, two-minute onboard survey that is limited to origin and destination-types and rider contact information. This shorter initial survey leads to higher rider participation rates 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 also 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 is to collect a representative sample of five percent of all boardings for riders 16 or older. The average number of boardings per one-way trip for LAVTA transit is 1.5. In addition, almost all riders do round-trips and some riders make multiple outbound trips from home. Given this, the average number of boardings per unique rider is conservatively estimated at three per day. Accordingly, the five percent boarding figure equates to 15 percent of all riders.

The sampling plan for weekday riders was established at 308 which is 5.8 percent of average daily weekday boardings. The actual number of weekday surveys completed was 339. Weekday survey quotas were established by line, by direction and daypart (Early AM 5:00 to 5:59 AM; AM Peak 6:00 to 9:59 AM; Midday 10:00 AM to 2:59 PM; PM Peak 3:00 to 6:59 PM; and Night 7:00 - 9:00 PM). Where the individual combination of line, direction and daypart produced fewer than 100 boardings, cells were combined with the most logical contiguous daypart to produce a survey target of at least five respondents.

Field surveying was conducted between October 23rd and October 28th, 2013. Follow-up telephone surveying was between October 28th and November 26th, 2013. Final results for the surveying process included a total of 339 weekday and 112 weekend phone surveys, and 1,237 weekday and 521 weekend field surveys.

An additional methodology change was implemented to provide more actionable reporting by combining 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

WEEKDAY

- The distribution of home-based trip purposes is diverse with work and business appointments accounting for 55 percent of weekday destinations. Riders riding to reach a shopping destination account for an additional 16 percent, and 10 percent are going to K-12 school or college. Other trip purposes include social/recreational (8%), medical/dental (6%), maintenance (3%), and escorting others (2%).
- The trip purpose distribution is in line with employment and school demographics. At 71 percent, the majority of weekday riders indicate that they work (63% work only, and 8% work and attend school), and 18 percent indicate that they are students (10% students only and 8% both students and workers). Nineteen percent of riders are neither employed nor students.
- The vast majority of weekday riders (87%), access transit from home by walking to their first boarding point. The remaining 13 percent either drive alone (5%), ride a bicycle (4%), carpool (2%), or get dropped off (2%). The average access walk time is 7.2 minutes and 55 percent walk five minutes or less. For the 13 percent of riders who do not walk to their first stop, the average distance from home to their first transit stop is 5.1 miles.
- Similar to access mode, almost all riders (93%) walk to their final destination. The remaining seven percent include bicycling (3%), being picked up (3%), taxi (1%), or carpool (1%)¹. The average walk time from a rider's last transit stop to their destination is 5.2 minutes, less than the access walk time of 7.2 minutes. For those who do not walk from their last transit stop to their destination, the average distance traveled is 3.2 miles.
- Over half of LAVTA riders (55%) complete their one-way trip riding only one bus. The remaining 45 percent require at least one transfer to complete their trip which consists of 36 percent of riders with one transfer, and nine percent with two or more transfers.
- When asked about potential LAVTA service improvements, two services were the predominant choices: more Saturday and Sunday bus services (36%) and increased frequency of bus arrival (30%). When riders were asked to identify the most important factor when deciding whether or not to ride a bus, the convenience of a bus route and schedule was the top reason (47%), followed by cost (15%), and where the bus goes in the Tri-Valley region (12%).
- If riders could improve the bus stops, one quarter of riders (26%), would like a stop that provides more protection from wind, rain, and sun. A comparable proportion of riders would like more real-time electronic information at the stop, as well as better

¹ Percentages do not add up to 100% due to rounding.

lighting at night, each accounting for 20 percent of ridership.

- Cash is the most common form of fare payment at 44 percent followed by a pass (29%), Fare Buster tickets (16%), and transfers (11%). In addition, two-thirds of riders (68%) pay a full adult fare. This is followed by free tickets (15%), senior fares (10%), disabled fares (6%), and student fares (1%).
- Over half (56%) of LAVTA bus trips are made by riders who are transit dependent as defined by not having a driver's license. Furthermore, 35 percent of riders have no drivable vehicles available to their household.
- Approximately 47 percent of LAVTA riders speak a language other than English at home. The primary non-English languages spoken at home as a percentage of all riders are Spanish (30%, 1,598 boardings, 533 riders), Tagalog (3%, 150 boardings, 50 riders), Chinese-Mandarin (2%, 118 boardings 39 riders), and Hindi (2%, 94 boardings, 31 riders).

WEEKEND

In general, weekend findings are similar to weekday findings in terms of trip characteristics, access and egress modes, and demographic profile. Responses for weekend riders were also very similar to weekday riders with regard to service improvements they would like to see, improvements at bus stops they would like to see, and their reasons for deciding whether or not to ride the bus. The key differences that do exist for weekend riders are highlighted below:

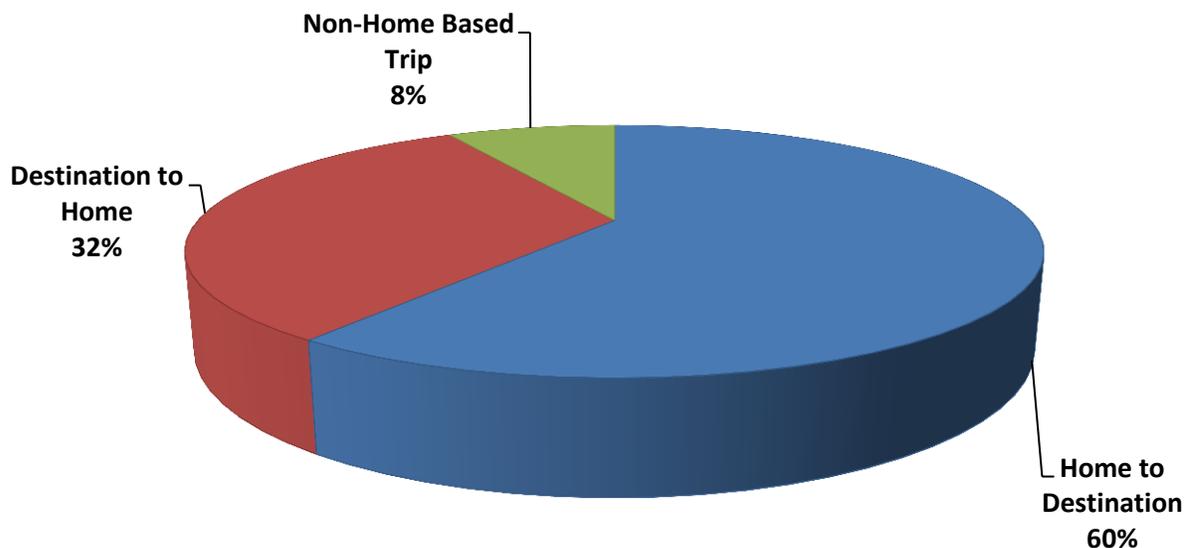
- Income for weekend riders is skewed lower than for weekday riders with 69 percent reporting a household income below \$35,000 compared to 55 percent for weekday riders.
- Weekend riders are more transit dependent than weekday riders with 29 percent of weekend riders saying they have a current driver's license compared to 44 percent for weekday riders. Forty-three percent of weekend riders do not have a drivable vehicle available to their household compared to 35 percent for weekday riders.
- Weekend riders have more diverse trip purposes with 13 percent fewer riders going to work or a business appointment and 10 percent less going to school. Conversely, 21 percent more weekend riders are riding for social/recreational purposes, and 10 percent more for shopping.
- Speaking a language other than English at home is more likely for weekend riders at 59 percent compared to 47 percent for weekday riders.

LAVTA WEEKDAY RIDERSHIP

WEEKDAY TRIP CHARACTERISTICS

Livermore Amador Valley Transit Agency (LAVTA) weekday bus riders were surveyed on 17 weekday routes, traveling in both directions. A total of 339 Computer-assisted telephone interviewing (CATI) surveys were completed for riders on trips between 5:00 AM and 9:00 PM. For all LAVTA riders' trips, 92 percent have origins or destinations that are their "Home," leaving a remainder of eight percent of riders traveling between two non-home locations.

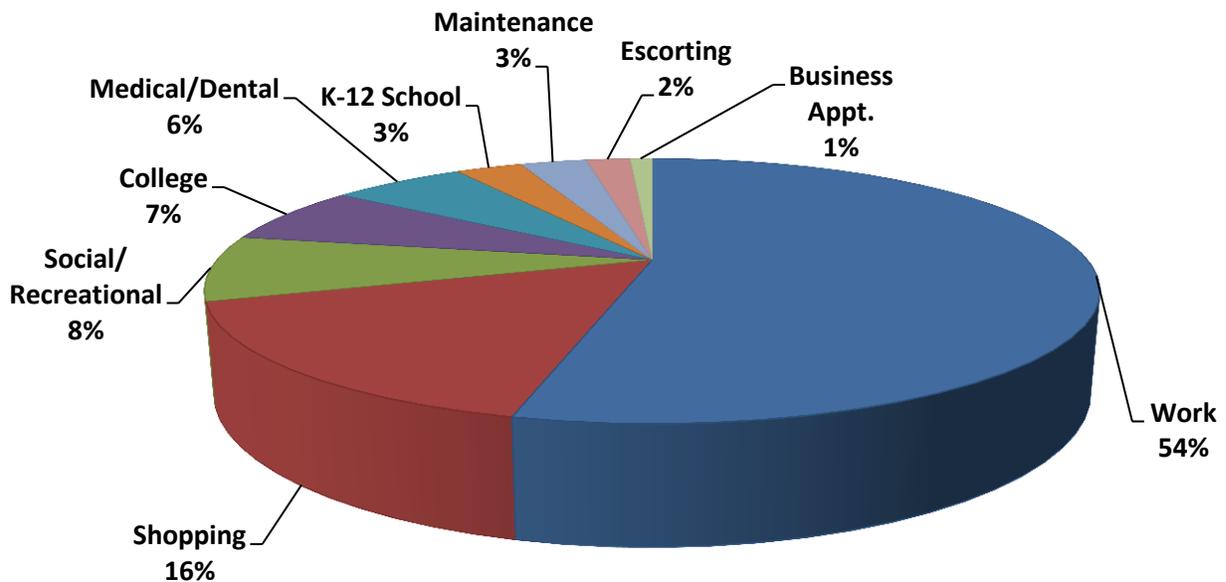
Figure 1: Is Home Your Origin or Destination?
n=339



In traditional onboard survey reporting, all origins are reported collectively regardless of the trip's direction or purpose. This results in the information about trip origins and public transit access being a combination of home, work, and other starting locations. This methodology does not produce a clear and meaningful representation of riders' trips from home to the first transit point, or of the final leg of the trip from the last alighting point to the ultimate destination.

To create a more meaningful representation of riders' public transit interaction, survey results are presented from a modified database of trips in relation to riders' homes. This approach creates a consistent picture of boarding accessibility from riders' ultimate origin, as well as the relationship between their last alighting point to their final destination to create a more meaningful and actionable picture of rider trip behavior.

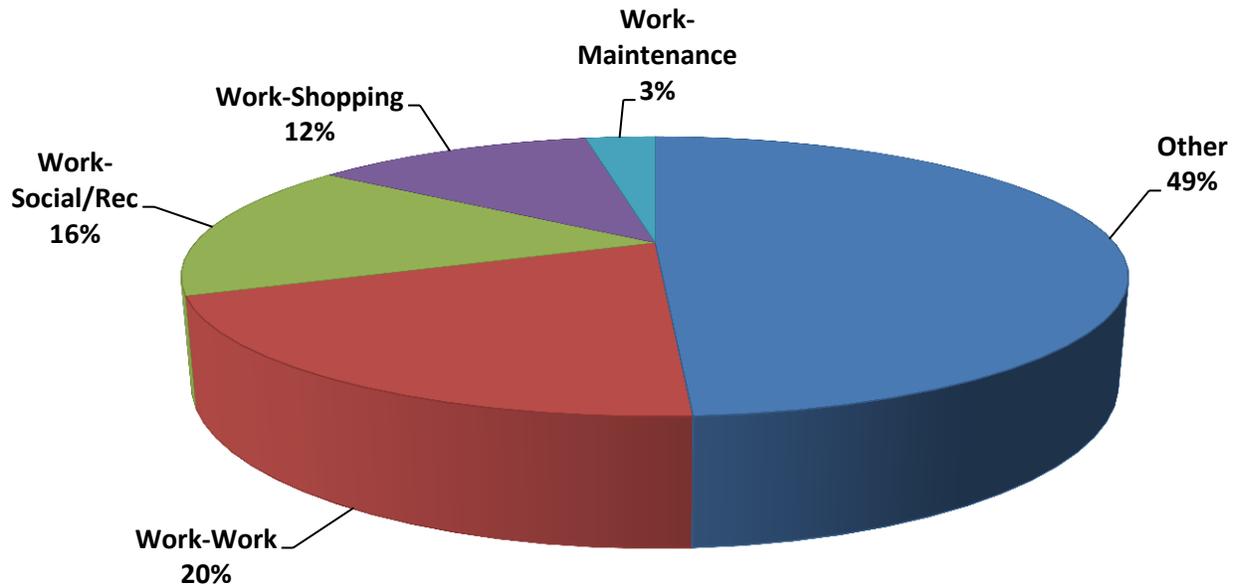
Figure 2: What Is Your Home-Based Trip Purpose?
n=313



Weekday riders have a diverse range of home-based trip purposes with work-related trips, accounting for only a slight majority of all trips at 55 percent. This is a combination of 54 percent traveling to “Work,” and an additional one percent traveling to a “Business Appointment.” This is in line with a relatively high level of transit dependency as only 44 percent of riders report having a current driver’s license. The proportion of trips for work and school are lower than the percentage of riders that say they are employed and/or students, which is consistent with transit dependent riders using the bus for all of their trip purposes. School trips, including “College/University” (7%) and “K-12” (3%) account for 10 percent.

Non work and school trips are spread between “Shopping” trips at 16 percent and “Social/Recreational” trips at eight percent. “Medical/Dental” trips account for six percent and “Maintenance” which covers items such as dry-cleaning and auto repair, accounts for three percent. The remaining two percent is comprised of trips to “Escort Others” such as children and handicapped persons.

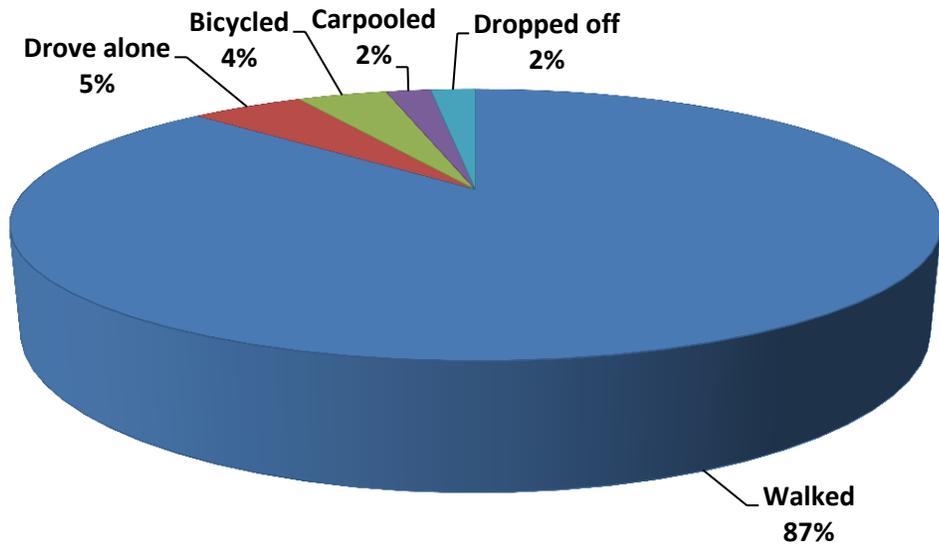
Figure 3: What Is Your Non-Home-Based Trip Purpose?
n=26



A small proportion of weekday trips (8%) neither start nor end at home. Since there is no anchor to the trip such as home, there are numerous possible origin-destination combinations, most of which account for less than three percent of all responses.

Just over half (51%) of non-home-based trips involve work at one end of the trip. This includes “Work” to “Work” trips (20%), “Work” to “Social/Recreational” (16%), “Work” to “Shopping” (12%), and “Work” to “Maintenance” (3%). All other combinations of non-home based trips are grouped into “Other”, and account for 49 percent of all non-home based trips.

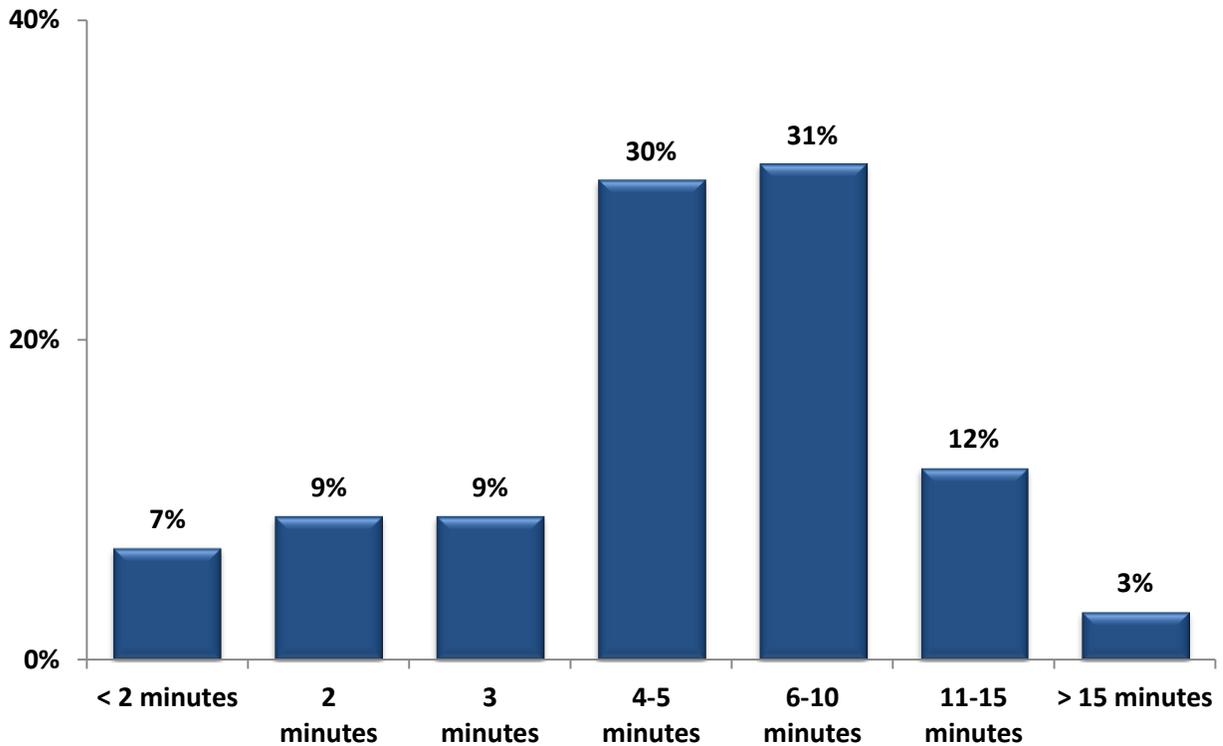
Figure 4: How Do You Get From Your Home to Your First Boarding Point?
n=313



The vast majority of weekday riders (87%) “Walk” from their home to their first transit boarding point. Nine percent of riders use motorized transportation to get to the bus stop including five percent that “Drove alone,” two percent that “Carpooled²,” and another two percent that were “Dropped-off.” “Bicycling” to the first boarding point also accounts for four percent.

² The carpool category includes vanpools and non-public shuttles such as pick-up vans for medical facilities, employers or schools. Public shuttles are accounted for as a trip transfer.

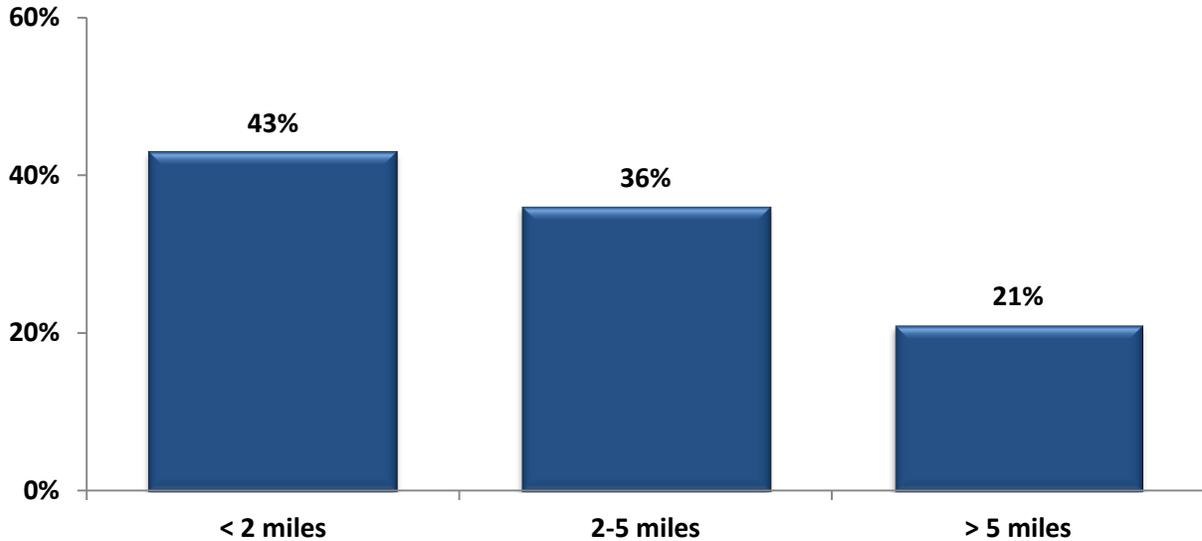
Figure 5: How Many Minutes Is Your Walk From Home to Your First Boarding Point?
n=274



For the majority of weekday trips (87%) made by riders who “Walk” from home to their first boarding point, over half (55%) have a walk time of five or fewer minutes. One-quarter (25%) of riders indicate that they have a walk time of three or fewer minutes. At the upper end of the spectrum, approximately one-third (31%) walk between six and 10 minutes, and 15 percent walk in excess of 10 minutes to reach their first boarding point.³ The overall average walk time from home to the first boarding point is 7.2 minutes.

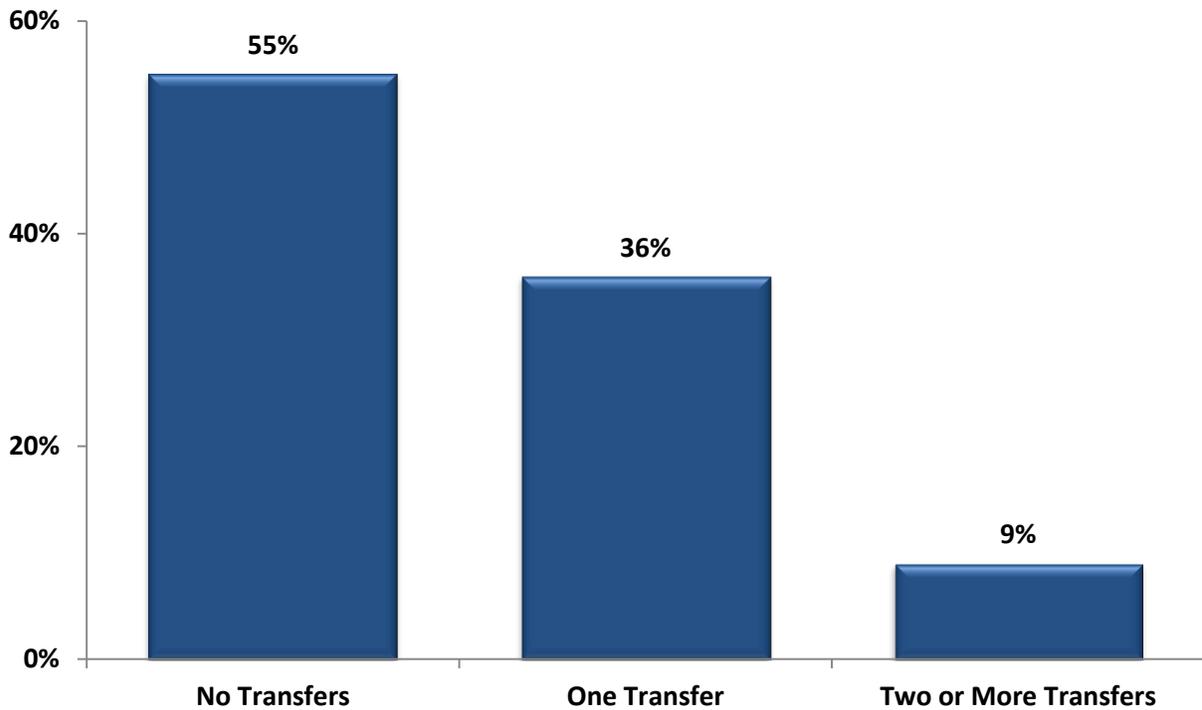
³ Percentages do not add up to 100% due to rounding.

**Figure 6: How Many Miles Is It From
Your Home to Your First Boarding Point?
(Non-Walkers Only)
n=39**



Among the 13 percent of weekday riders who access their first boarding point by a mode other than walking, over two-thirds (79%) of riders travel five miles or less. This breaks out into 43 percent of riders who travel less than two miles and 36 percent who travel two to five miles. Only 21 percent of non-walkers travel over five miles to reach their first boarding point. The average distance traveled from home to the first boarding point is 5.1 miles.

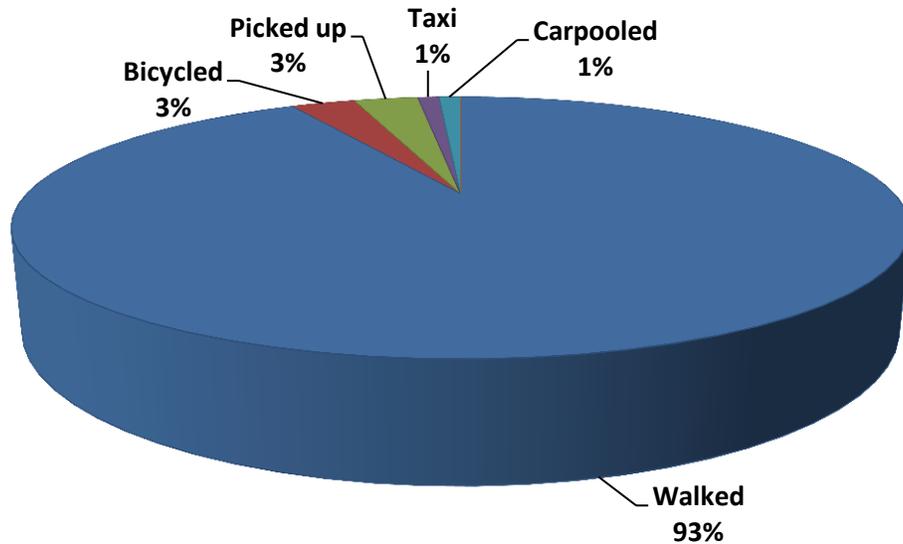
Figure 7: How Many Transfers Are Needed To Complete Your Trip?
n=339



Over half of weekday LAVTA riders complete their trip without any transfers (55%). Over an additional third (36%) require one transfer to complete their trip, and only nine percent of riders make two or more transfers to reach their destination. The average number of transfers is 0.55 which equates to 1.55 trip segments⁴ per one-way trip.

⁴ It should be noted that all transfers including out of system transfers are counted in this statistic, so the average number of LAVTA transit buses used to complete a one-way trip will be lower.

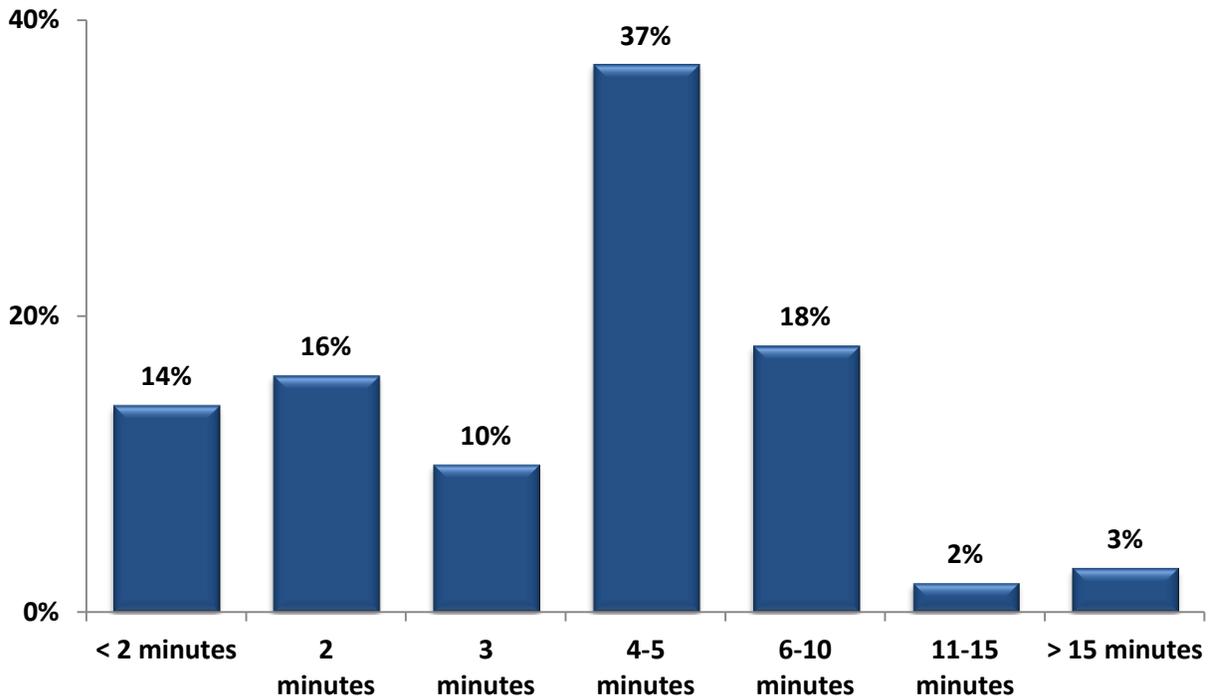
Figure 8: How Do You Get From Your Last Stop to Your Non-Home Destination?
n=313



Similar to the proportion of LAVTA bus riders who walked to their transit boarding point from home (87%), almost all riders (93%) “Walk” from their last stop to their non-home destination. Three percent bicycled to their final destination, in line with the four percent who used a bicycle to reach their first boarding point, and another three percent were picked up by someone. The remaining two percent captures other forms of motorized egress modes such as “Taxi” (1%) and “Carpooling” (1%).⁵

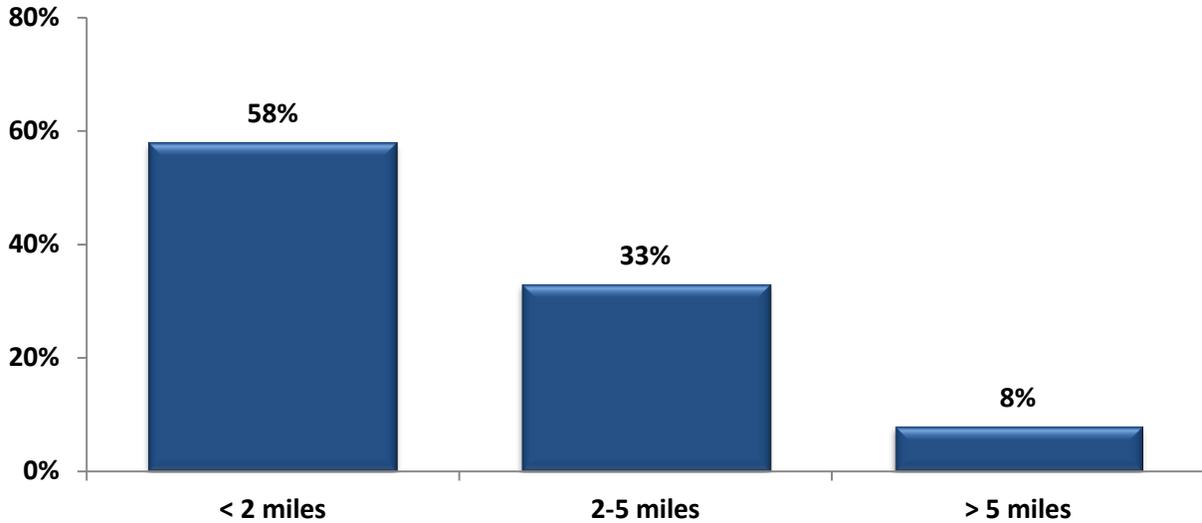
⁵ Percentages do not add up to 100% due to rounding.

Figure 9: How Many Minutes Is Your Walk from Your Last Stop to Your Non-Home Destination?
n=292



For the 93 percent of riders who walk from their last transit stop to their non-home destination, the most common walk time is four to five minutes (37%), and over two-thirds (77%) of riders walk five minutes or less to reach their non-home destination. Approximately one-quarter (23%) walk for more than five minutes. The overall average walk time for riders reaching their destination from their last alighting point is 5.2 minutes. This is two minutes less than the average 7.2 minutes from home to their first boarding point, likely reflecting a slightly higher density at typical non-home trip destinations than in residential areas.

Figure 10: How Many Miles Is It From Your Last Stop to Your Non-Home Destination? (Non-Walkers)
n=21

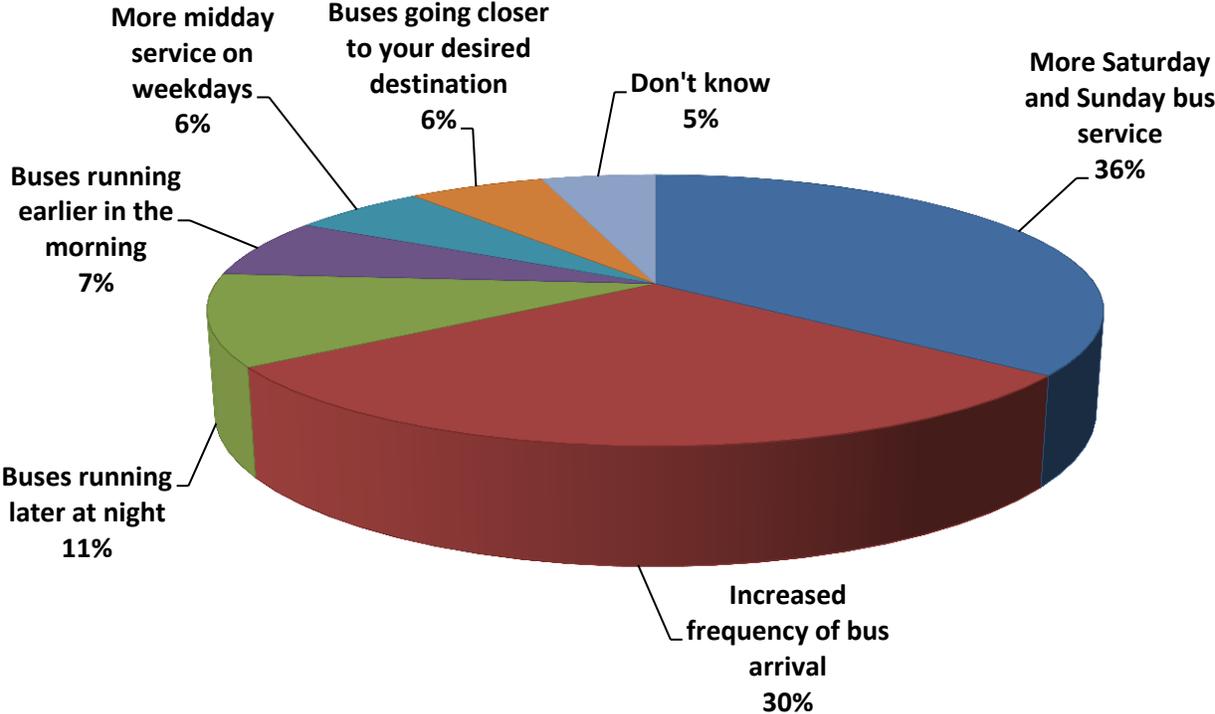


For the small percentage of riders (7%) who do not walk from their last alighting point, over half (58%) of riders travel less than two miles to reach their final destination. An additional third (33%) travel between two and five miles, and the remaining eight percent travel more than five miles to reach their non-home destination.⁶ The average distance traveled by non-walkers to their non-home destination is 3.2 miles.

⁶ Percentages do not add up to 100% due to rounding.

WEEKDAY BUS AMENITY AND SERVICE IMPROVEMENTS

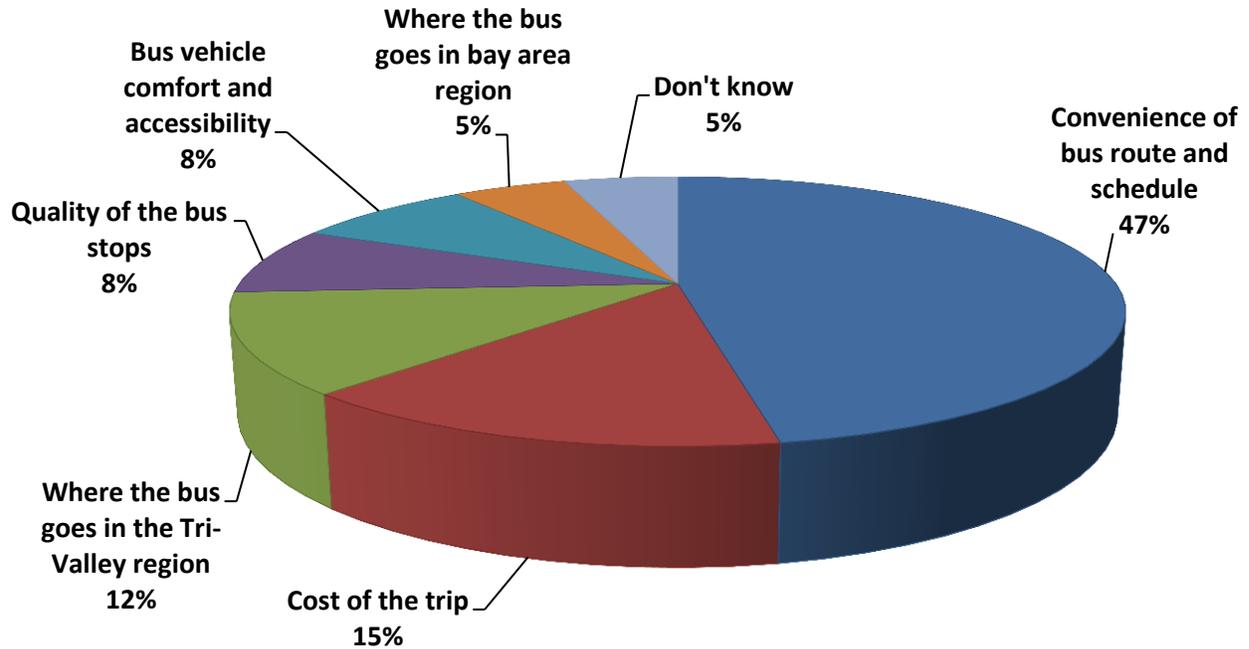
Figure 11: Which Potential Service Improvements You Would Most Like to See?
n=339



Riders were asked which improvements they would most like to see. The most highly requested improvements were increasing weekend service (36%) and increased frequency of bus arrivals (30%). In addition, 18 percent of riders prefer improvements on service span, including 11 percent who would like buses to run later at night and seven percent who would like them to run earlier in the morning. Other service improvements, such as more midday service on weekdays, and buses going closer to desired destinations, each were cited by six percent of riders.⁷

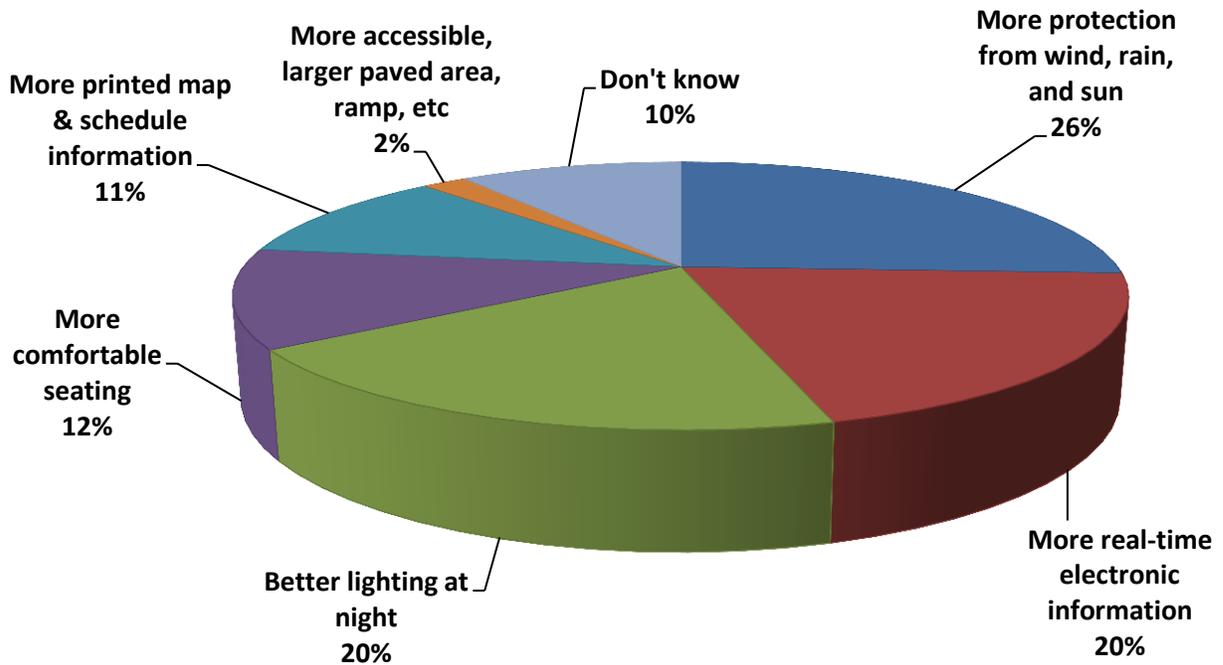
⁷ Percentages do not add up to 100% due to rounding.

Figure 12: Which Factor is the Most Important to You When Deciding Whether or Not to Ride a Bus?
n=339



Almost half (47%) of riders consider the convenience of a bus route and its schedule as the most important factor when deciding whether or not to ride the bus. Trip cost was cited by 15 percent and where the bus goes in the Tri-Valley region was most important to 12 percent of riders. At a lower level amenities, such as the quality of the bus stops and bus comfort and accessibility were cited by eight percent each. Where the bus goes in the Bay Area region was the least frequently cited option at five percent.

**Figure 13: If You Could Improve the LAVTA Bus Stops,
What Would You Change First?
n=339**

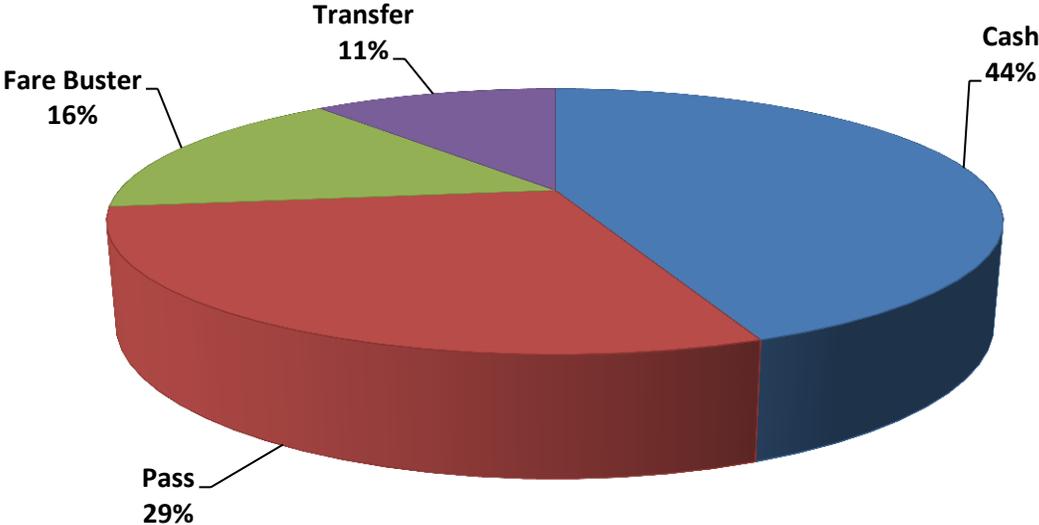


The desired improvements in LAVTA bus stops were spread relatively evenly across the available options. The most highly desired improvements were more protection from wind, rain, and sun (26%), more real-time electronic information (20%) and better night lighting (20%). At a lower level riders would like to see improvements such as more comfortable seating (12%), more printed maps and schedule information (11%), and more accessible paved areas or ramps (2%).⁸ Ten percent did not know what they would like to see improved.

⁸ Percentages do not add up to 100% due to rounding.

WEEKDAY FARE MEDIA

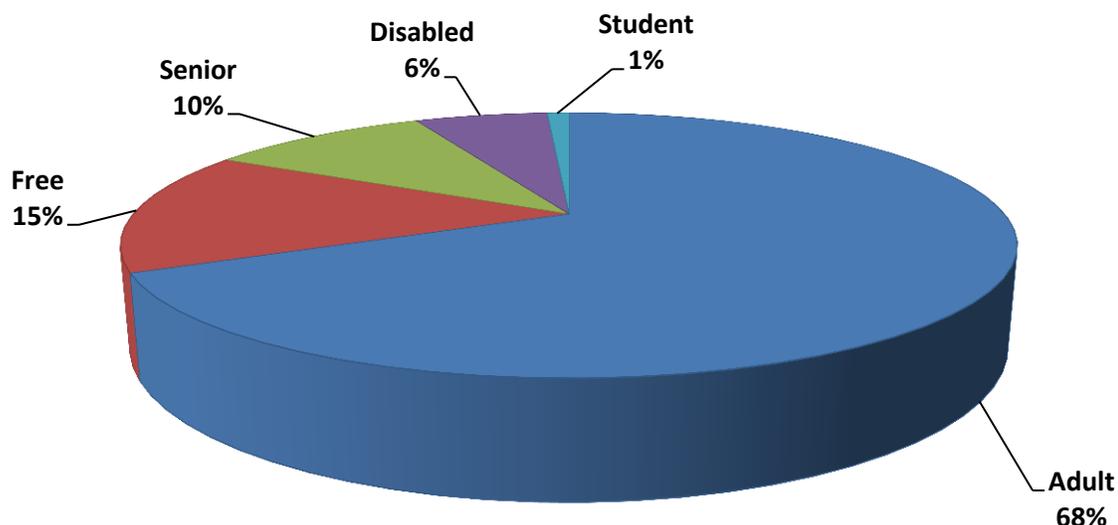
Figure 14: How Do You Pay For Your Bus Fare?
n=339



Weekday LAVTA riders most commonly pay their bus fare using cash (44%) or a Pass (29%). The use of Passes consists of East Bay Monthly Pass (10%), Senior Monthly Pass (5%), Disabled Monthly Pass (4%), Eco-Pass (8%), and Employee Passes (2%). Fare Buster tickets are used by 16 percent of riders including tickets for adults/students (15%) and for senior/disabled persons (1%). Eleven percent of riders use transfers through BART (6%), ACE (3%), and Wheels/LAVTA (2%).

Hispanic riders are more likely to use cash (62%) than non-Hispanic riders (34%). This distribution of cash payment is also consistent with those who completed the survey in Spanish (72% paying cash) compared to those who completed the survey in English (39%).

Figure 15: What Type of Fare Do You Pay?
n=339



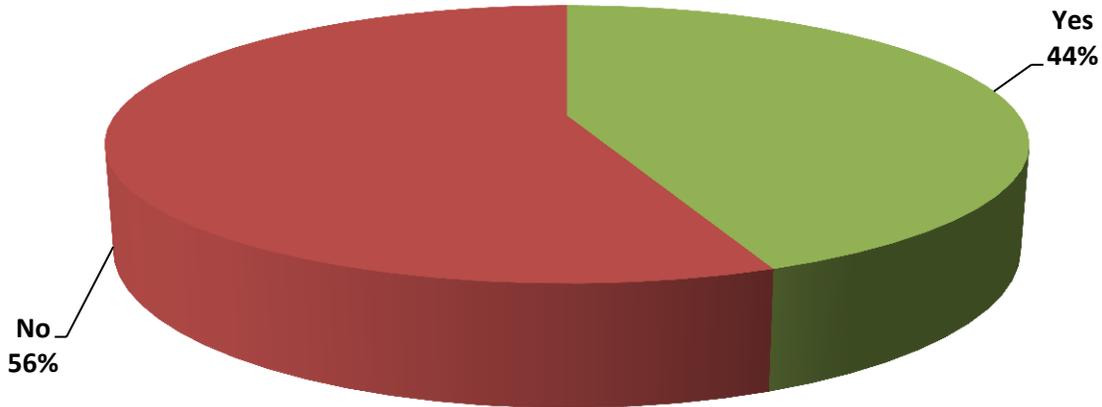
Approximately two-thirds of LAVTA weekday riders (68%) pay a full “Adult” fare. Discounted fares account for the other third (32%) which include those who receive a “Free ticket” (15%), those who pay a “Senior” fare (10%), a “Disabled” fare (6%), or a “Student” fare (1%).

As would be expected, riders in their 50’s or younger are more likely to pay a full adult fare (76%) compared to riders in their 60’s or older who are more likely to pay a discounted fare (79%). The use of adult fares tends to rise moderately with household income from 63 percent for those with income under \$10,000 to 83 percent for those with an income between \$35,000 and \$49,999. However, it reverses for incomes of \$50,000 or more dropping, to 68 percent for the \$50-\$74,999 category and 58 percent for households with an income of \$75,000 or more.

Hispanic riders (82%) are more likely than the non-Hispanic riders (60%) to pay a full adult fare. Conversely, Non-Hispanic riders are more likely to use the senior and disabled fares.

WEEKDAY TRANSPORTATION DEMOGRAPHICS

Figure 16: Do You Currently Have a Driver's License?
n=339

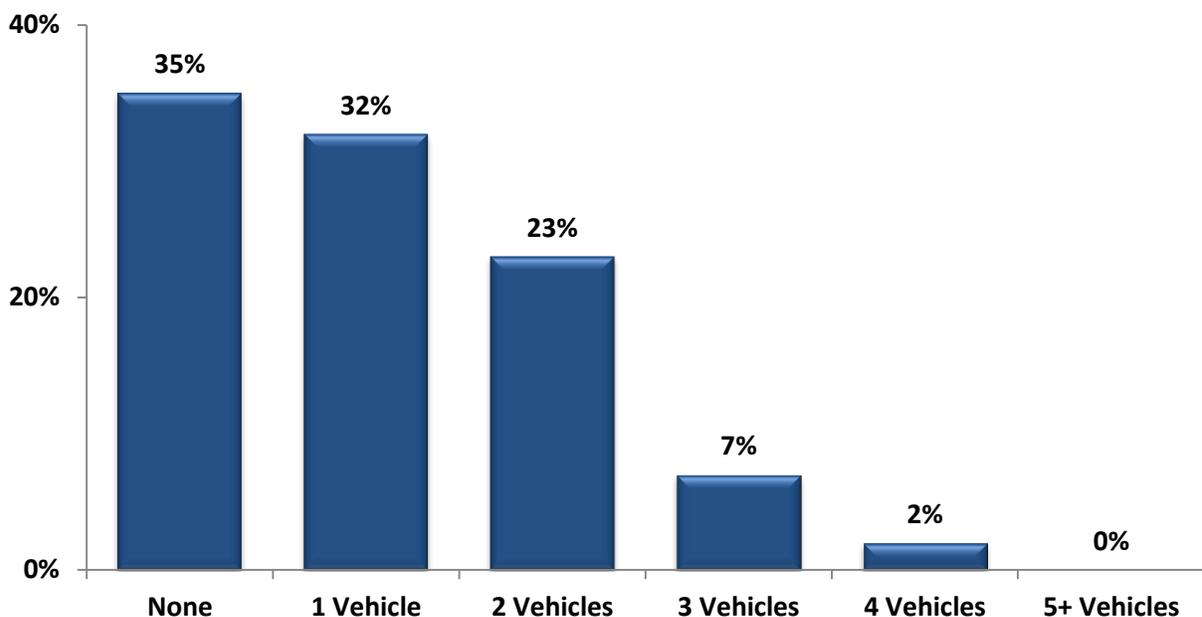


Over half of LAVTA weekday riders (56%) do not currently have a driver's license, and thus are transit dependent. Men (51%) are more likely to have a driver's license than women (39%), and as would be expected, riders under 20 years old are least likely to have a driver's license at 22 percent.

The likelihood of possessing a driver's license increases with a household income starting at a low of 22 percent for riders with a household income under \$10,000 and increasing with each income category to 70 percent for those with a household income of \$75,000 or more. Among unemployed riders, 70 percent do not have a driver's license.

Riders who identify themselves as Hispanic (20%) are less likely to have a driver's license than non-Hispanics (57%). Similarly, those who completed the survey in Spanish (2%) and who speak Spanish at home (16%), are less likely to have a driver's license compared to riders who completed the survey in English (53%) and who only speak English at home (59%).

**Figure 17: How Many Drivable Vehicles
Are Available To Your Household?**
n=337



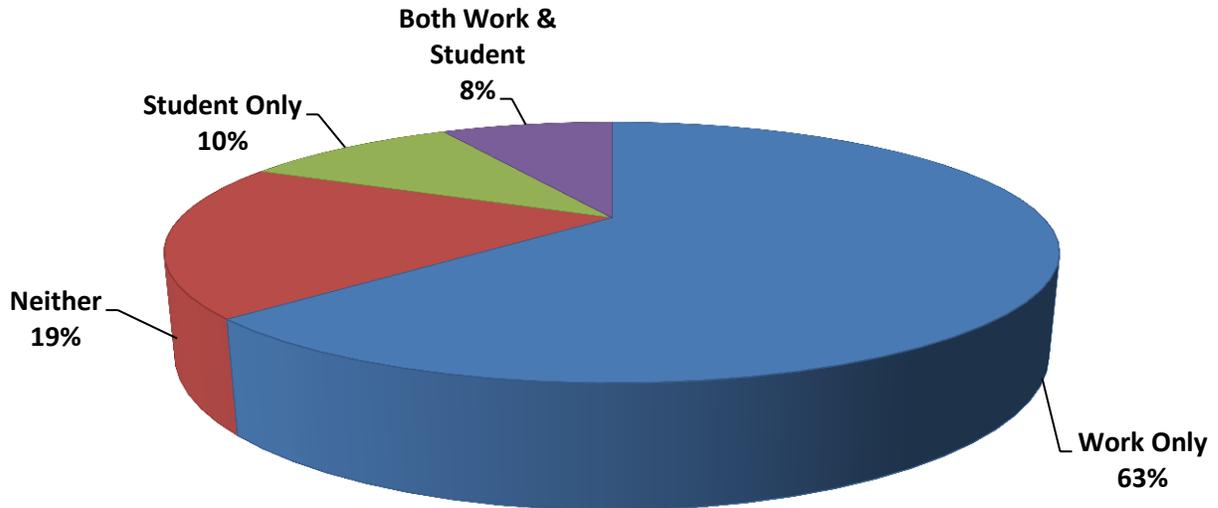
Consistent with only 44 percent of riders having a current driver's license, 35 percent of weekday riders do not have a drivable vehicle available to their household. One-third (32%) of riders possess one drivable vehicle in their household while approximately a quarter (23%) own two vehicles. It drops to seven percent for three vehicles, and two percent for four or more vehicles.⁹

Student riders are more likely than non-student riders to have a drivable vehicle available to their household (76% vs. 63% respectively). The overall average number of drivable vehicles per household is 1.1.

⁹ Percentages do not add up to 100% due to rounding.

WEEKDAY RIDER DEMOGRAPHICS

Figure 18: Are You Currently Employed and/or a Student?
n=339

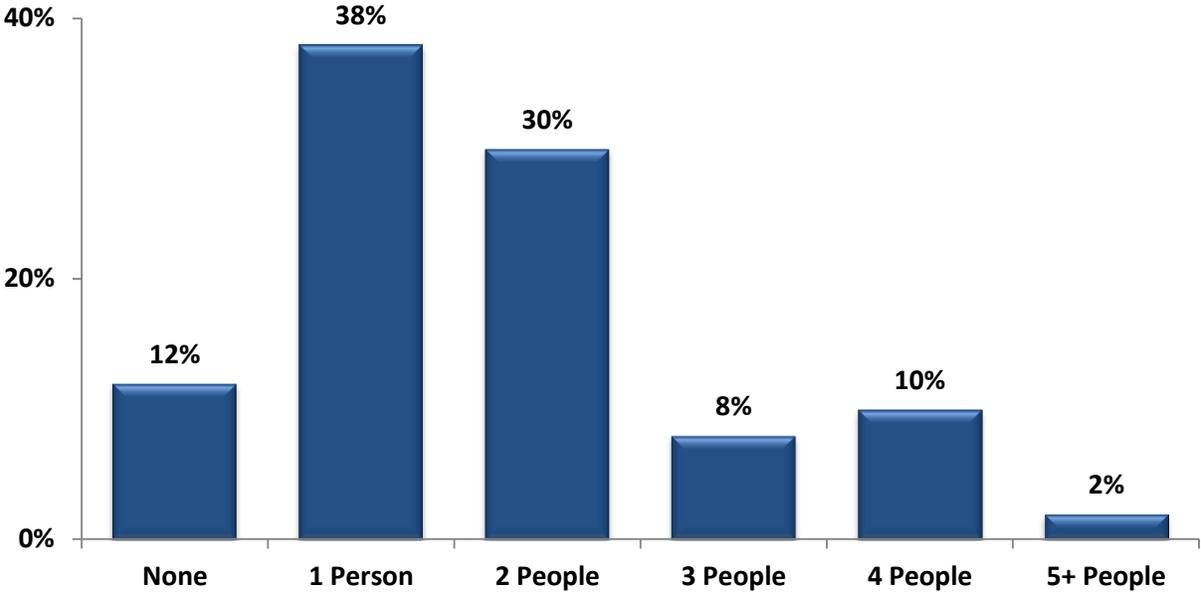


At 81 percent, the majority of LAVTA weekday riders are either employed, students, or both. Riders who only work comprise the largest proportion, accounting for 63 percent of ridership. Ten percent of LAVTA riders are students only, and eight percent are both employed and a student. Nineteen percent of weekday riders are neither employed nor students.

The proportion of riders who only work increases with household income. For households with an income under \$10,000, 40 percent only work. This proportion steadily increases with each income category to a high of 82 percent for riders who earn \$75,000 per year. The opposite trend is true for riders who are neither employed nor students ranging from a high of 43 percent for riders with a household income under \$10,000 to a low of four percent for riders with a household income of \$75,000 or more.

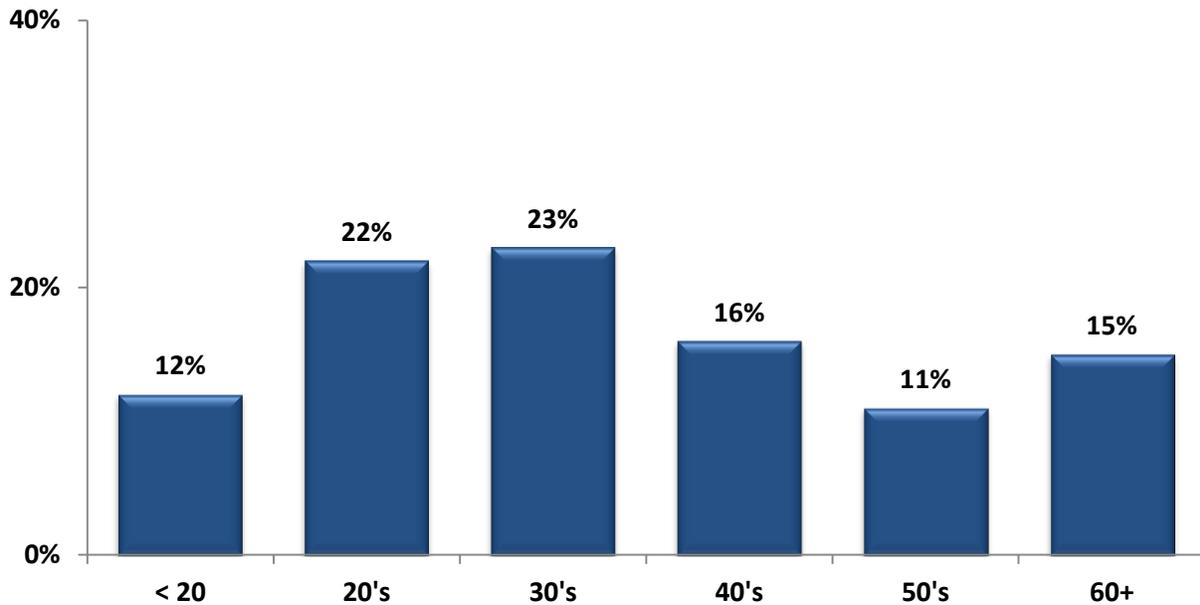
Finally, men (71%) are slightly more likely than women (57%) to only work.

Figure 19: How Many People Are Employed in Your Household?
n=337



Almost nine out of 10 riders (88%) have at least one person employed in their household. Over one-third (38%) of weekday riders have one person in their household working either full time or part-time, and 30 percent have two employed people in the household. The remaining 20 percent have three or more employed people in the household. The average number of employed persons per household is 1.7.

Figure 20: What Is Your Age Category?
n=329

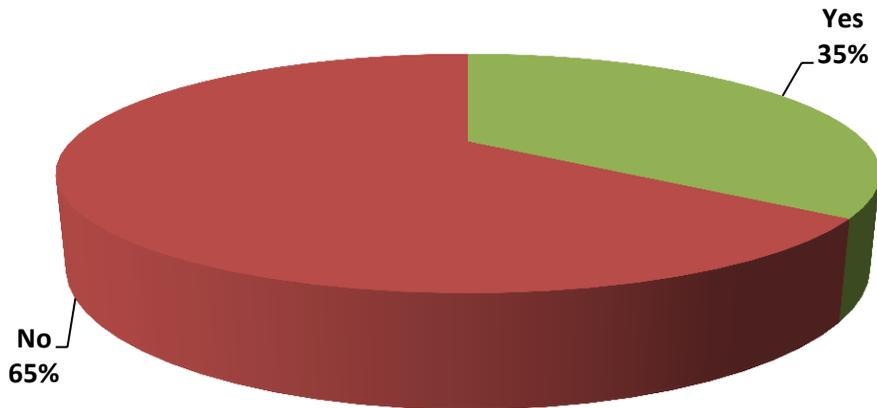


LAVTA has a high proportion of relatively young riders with the highest proportions being in their 20's (22%) or 30's (23%). An additional 12 percent are under 20 years old. Forty-two percent are 40 or older, and are split relatively evenly between the decades with 16 percent in their 40's, 11 percent in their 50's and 15 percent 60 or older.¹⁰

Hispanic riders tend to be younger than non-Hispanic riders. There are higher percentages of Hispanic riders in their 20's and in their 30's, and lower percentages of Hispanics for all age categories 50 or older.

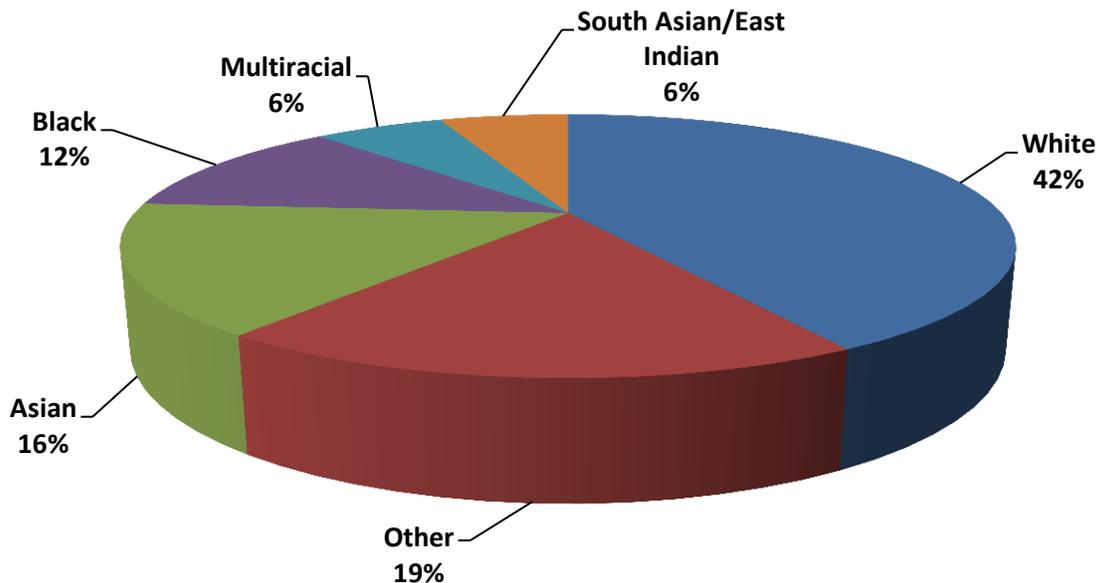
¹⁰ Percentages do not add up to 100% due to rounding.

Figure 21: Are You Hispanic, Latino or of Spanish Origin?
n=373



Just over one-third of LAVTA weekday riders (35%) identified themselves as Hispanic, Latino, or of Spanish origin.

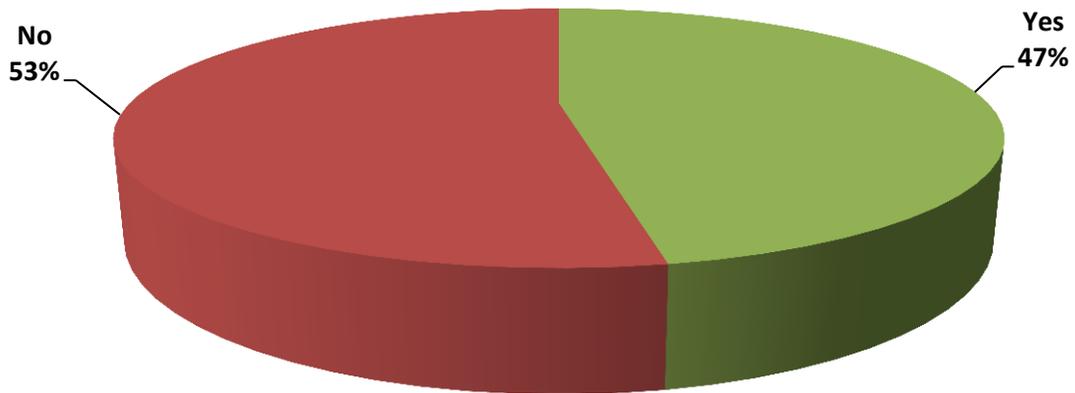
Figure 22: Which of the Following Do You Identify With?
n=286



LAVTA riders were asked to select the U.S. Census race category with which they identify. The largest proportion of riders who selected a discrete listed category indicated they are White (42%). This is followed by Asian (16%), Black (12%), and South Asians/East Indians (6%). Six percent of riders identify themselves as more than one race and 19 percent selected "Other" which mainly consists of "Hispanic," "Latino" or "Mexican" groups.¹¹

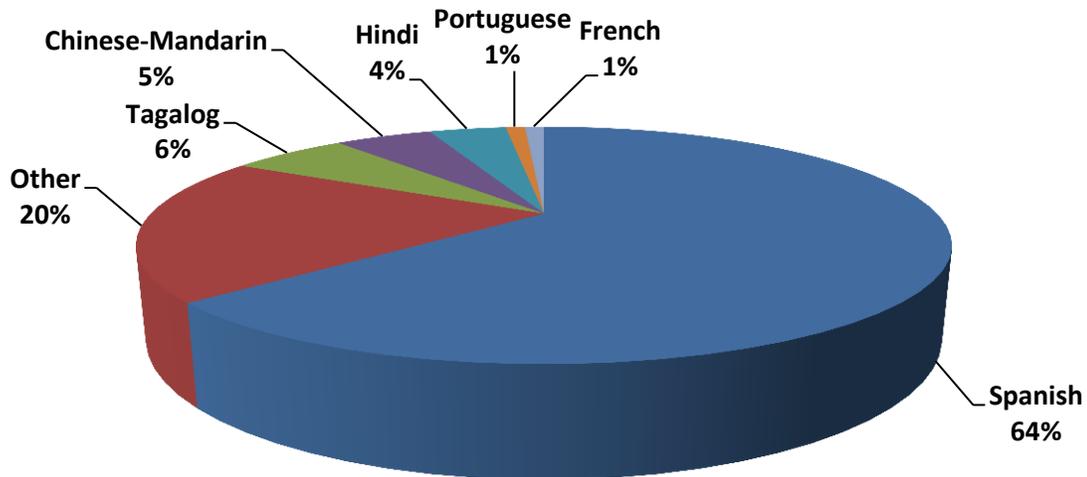
¹¹ Percentages do not add up to 100% due to rounding.

Figure 23: Do You Speak a Language Other Than English at Home?
n=339



Nearly half (47%) of LAVTA riders speak a language other than English at home. This is particularly true for Hispanics where 82 percent say they speak a language other than English at home compared to 29 percent for non-Hispanics.

**Figure 24: What Language Other Than English Do You Speak at Home?
(Only Respondents Who Speak a Language Other Than English at Home)
n=162**



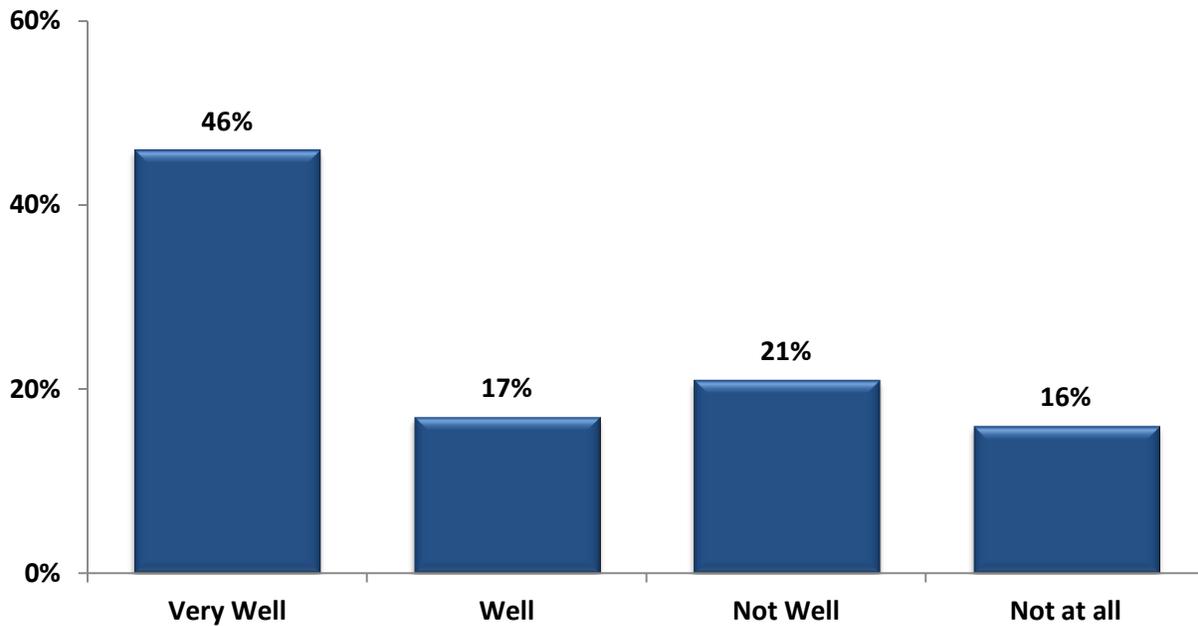
At 64 percent, Spanish accounts for the largest proportion of non-English languages spoken at home. A relatively small proportion of other languages spoken at home are also observed including Tagalog (6%), Chinese-Mandarin (5%), Hindi (4%), Portuguese (1%), and French (1%).¹² Twenty percent of riders speak “Other” languages not listed above, such as Telugu, Tamil, and Malayalam.

It is useful to convert the language percentages to the percentage of all boardings that speak another language at home. Although the average number of vehicles used in a one-way trip is 1.5 vehicles, it is important to note that almost all riders make round trips from home to some location and then returning. Hence, the best conservative estimate of the number of boardings per day for the average rider is 3.0 (1.5 vehicles per one-way trip multiplied by 2 for round trips). Dividing the total number of boardings by this number provides a reasonable estimate of the actual number of unique riders, which is one-third of total boardings.

Based on this, the following results are presented in three ways: (i) as a percentage of all boardings, (ii) the actual number of boardings, and (iii) the estimated number of unique riders by dividing the number of boarding by 3.0. The percentages, boardings, and estimated unique riders that speak languages other than English at home are: Spanish (30%, 1,598 boardings, 533 riders), Tagalog (3%, 150 boardings, 50 riders), Chinese-Mandarin (2%, 118 boardings 39 riders), and Hindi (2%, 94 boardings, 31 riders).

¹² Percentages do not add up to 100% due to rounding.

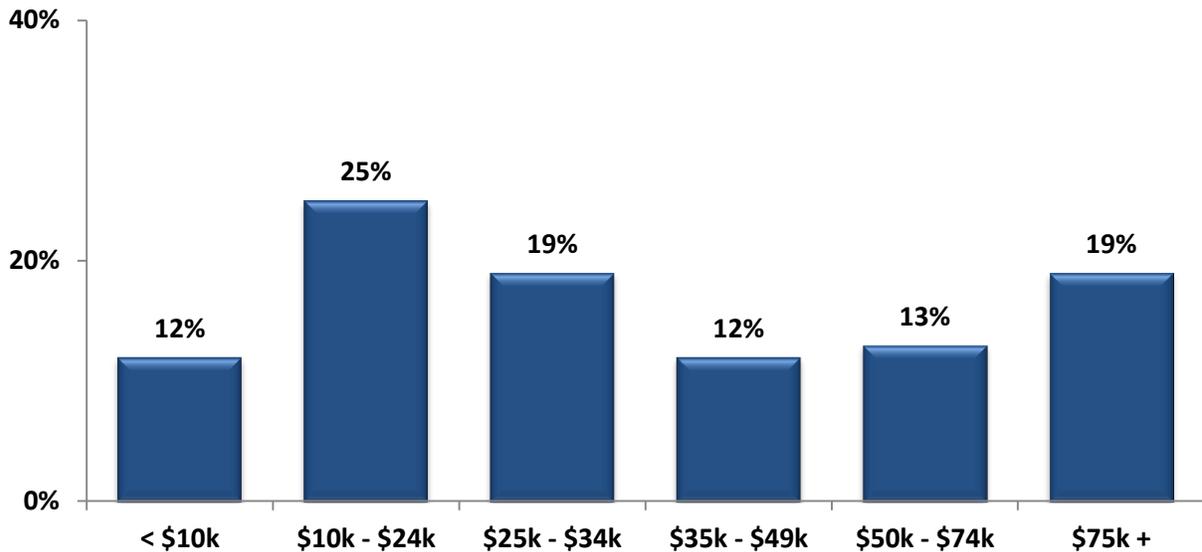
**Figure 25: How Well Would You Say You Speak English?
(Riders That Speak a Language Other Than English at Home)
n=162**



For the LAVTA riders who speak a language other than English at home, nearly half (46%) indicate that they speak English “Very Well,” 17 percent indicate that they speak it “Well,” and 37 percent indicate that they speak it “Not Well” (21%), or not at all (16%). Converting this to a percentage of all boardings, the 37 percent of riders who speak another language at home and say they do not speak English well or very well, equates to 17 percent of all boardings.

Only one-third (34%) of riders who speak Spanish at home indicate that they speak English “Very Well.” This percentage is lower compared to those who speak Tagalog at home (71%), and those who speak Hindi at home (56%). A substantial proportion of riders (22%) who speak Spanish at home indicate that they do not speak English at all, which is higher than those who speak a language other than English or Spanish at home (5%).

Figure 26: What is Your Total Household Income?
n=304

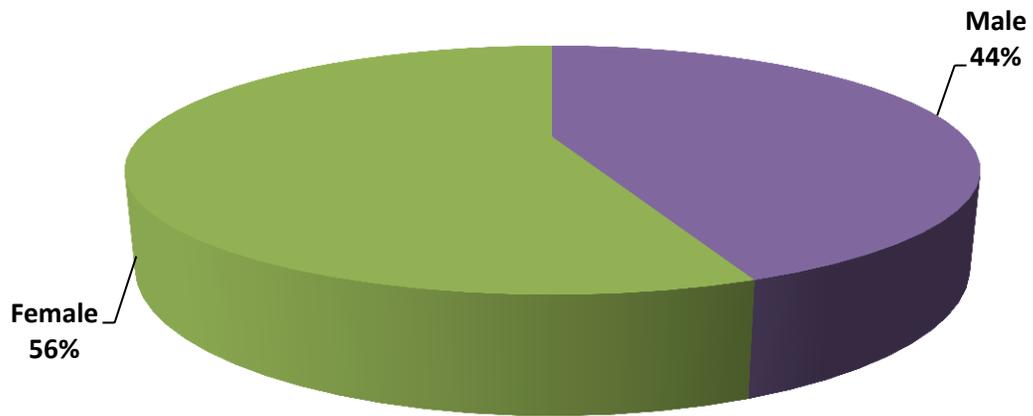


The distribution of household income is split relatively evenly between riders whose income is under \$35,000 (55%), and those who make \$35,000 or more per year (45%). The breakout for households with less than \$35,000 income is 12 percent under (under \$10,000, 25 percent between \$10,000 and \$24,999 and 19 percent between \$25,000 and \$34,999. For those with incomes of \$35,000 or higher, the breakout is 12 percent \$35,000 to \$49,999, 13 percent \$50,000 to \$74,999 and 19 percent \$75,000 or higher. Slightly over one-third of riders (37%), live in households that are below or just above the federal poverty line for a family of four¹³ (\$23,550 per year).

The proportion of riders with income below \$35,000 is higher for Hispanics (75%), for riders without a driver’s license (69%), and for those who are unemployed (71%).

¹³ 2013 HHS Poverty Guidelines (aspe.hhs.gov)

Figure 27: Gender
n=374



LAVTA weekday ridership has slightly more female riders (56%) than male riders (44%).

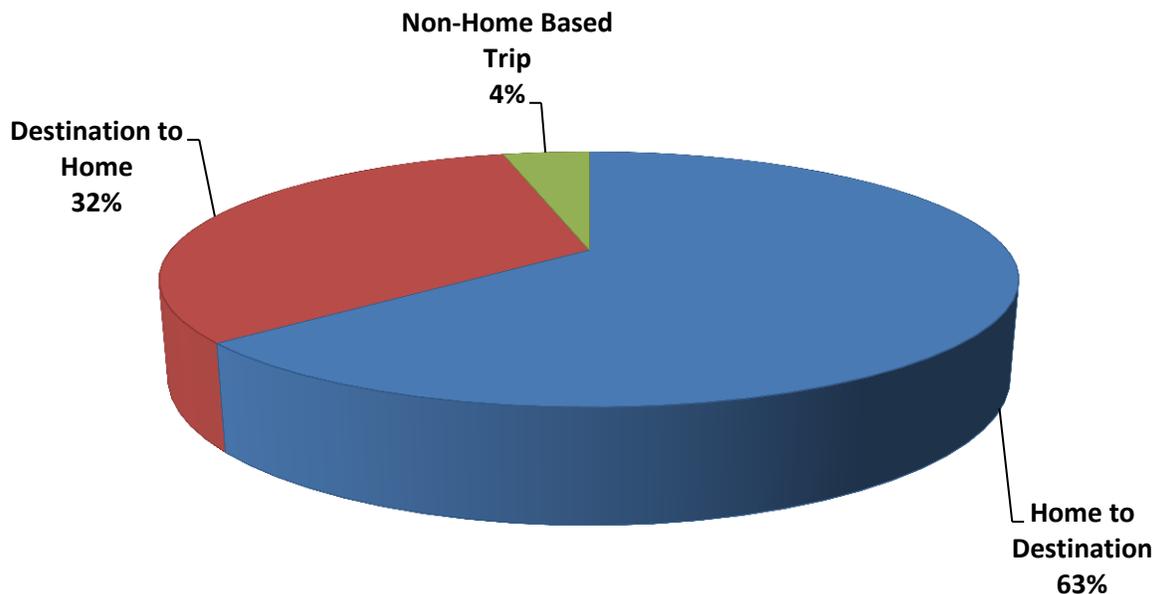
LAVTA WEEKEND RIDERSHIP

LAVTA riders were surveyed on six weekend routes. A total of 112 surveys were completed for riders traveling between the hours of 6:00 AM and 9:00 PM, exceeding the target of 100. Surveys were collected in proportion to a combination of ridership for routes 1, 3, and 8, and to ridership by individual route for routes 12 and 15, and to ridership by route and direction for route 10. Surveys were also distributed in proportion to Saturday and Sunday boardings.

WEEKEND TRIP CHARACTERISTICS

Similar to weekday ridership survey data, the vast majority of trips (96%) include “Home” as either the origin or the destination of their transit trip with the remaining four percent being trips that are neither coming from or going to home.¹⁴

Figure 28: Weekend – Is Home Your Origin or Destination?
n=112

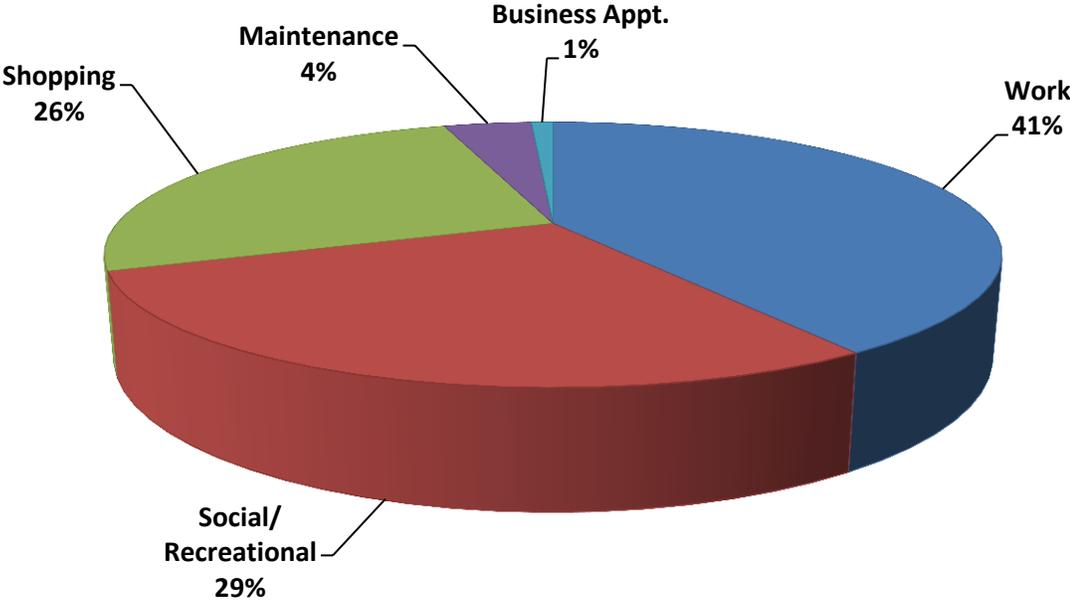


In the same fashion as the weekday ridership sample, all surveys are initially collected regardless of trip direction or purpose which produces a database that is a combination of trips both from home and to home. To create a more meaningful representation of riders’ public transit interaction, survey results are presented in a modified database of trips in relation to rider’s homes; i.e. trips that are from a non-home location to home are “flipped” so that all home-based trips are reported as starting from home. This approach creates a

¹⁴ Percentages do not add up to 100% due to rounding.

consistent picture of boarding accessibility from riders' ultimate origin, as well as the relationship between their last alighting point to their final destination to create a more meaningful and actionable picture of riders' trip behavior.

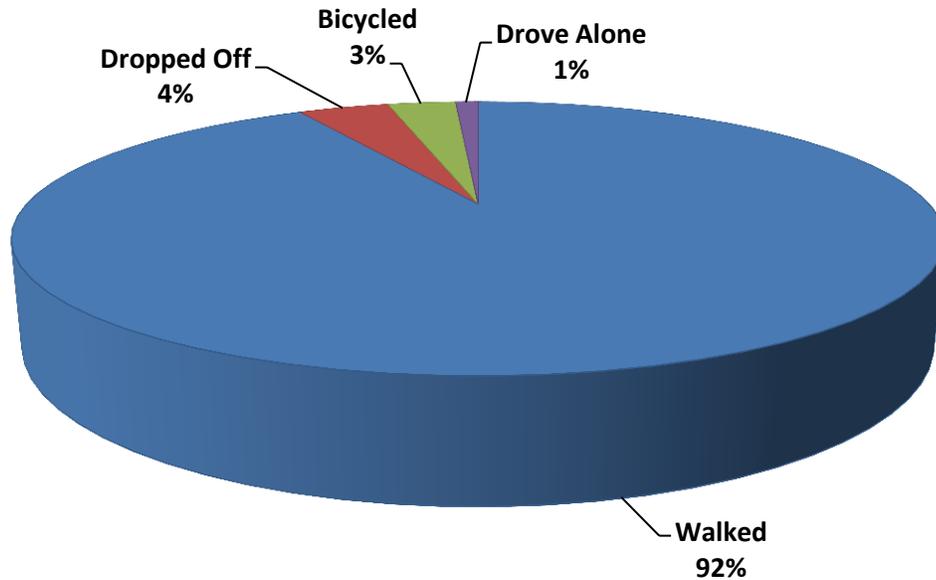
**Figure 29: Weekend – What Is Your Home-Based Trip Purpose?
n=107**



For weekend riders “Work” (41%) and “Business appointments” (1%) are still the most common trip purpose, but at a lower level than the combined 55 percent for weekday travel. Weekend trips are more oriented towards “Social/Recreational” and “Shopping” which account for 29 and 26 percent respectively. Only four percent¹⁵ of the trips are for “Maintenance”, such as trips to dry-cleaning or auto repair.

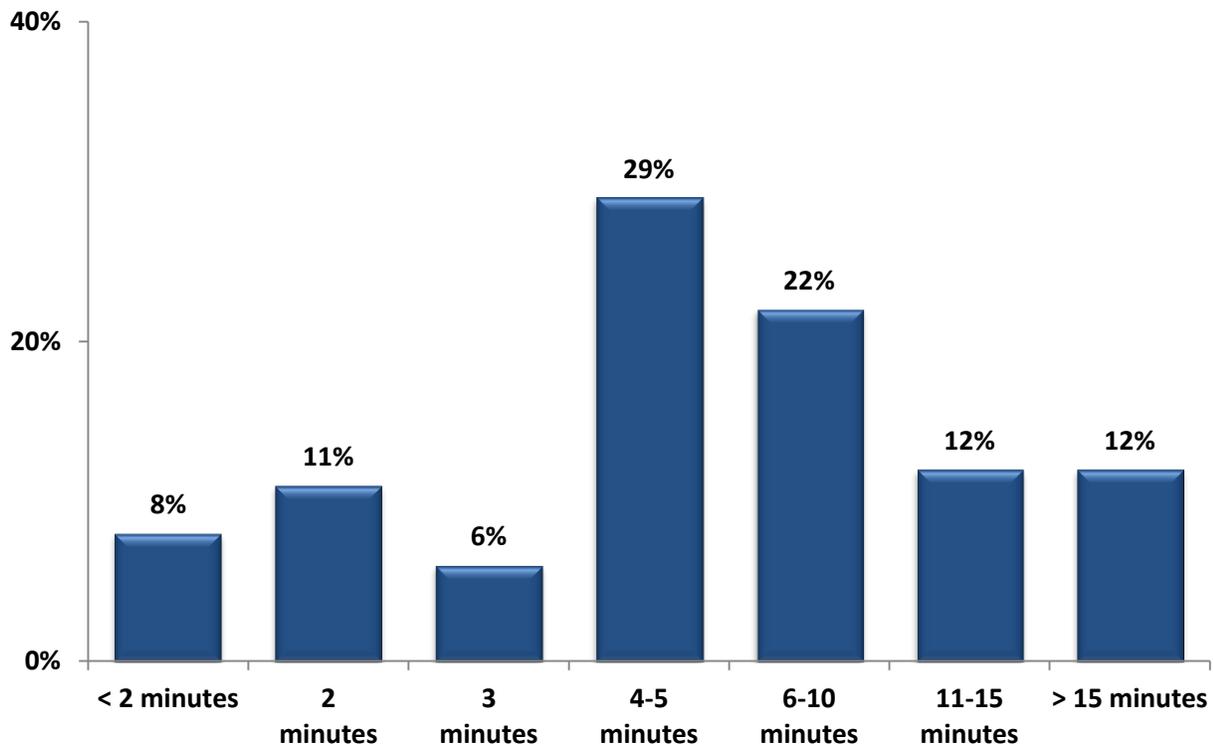
¹⁵ Percentages do not add up to 100% due to rounding.

Figure 30: Weekend – How Do You Get From Your Home to Your First Boarding Point?
n=107



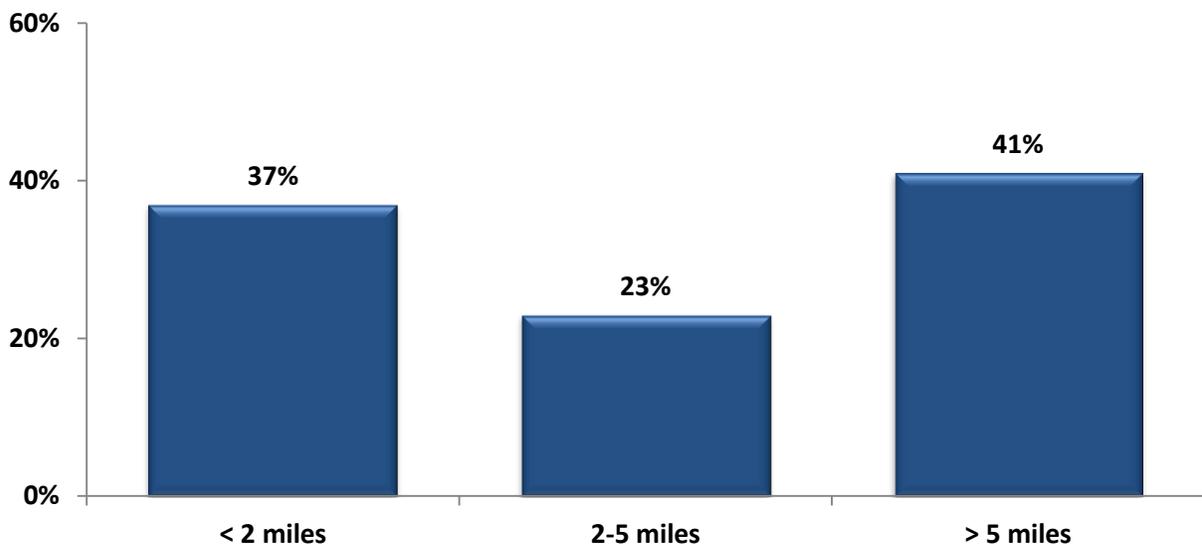
At 92 percent, weekend access mode from home to the first boarding point by walking is slightly higher than on weekdays (87%). Other access modes, such as “Dropped-off” (4%) and “Bicycled” (3%) are virtually unchanged from weekday patterns. The least common access mode is “Drove alone” with only one percent compared to weekdays where it is five percent.

Figure 31: Weekend – How Many Minutes Is Your Walk From Home to Your First Boarding Point?
n=99



For the vast majority (92%) of weekend trips made by riders who walk from home to their first boarding point, over half (54%) walk five or fewer minutes. Within this group, 25 percent walk three or fewer minutes. Both of these percentages are similar to weekday ridership. The overall average walk time from home to the first boarding point is higher for the weekend trips at 8.3 minutes compared to the weekday trips at 7.2 minutes. This likely is a reflection of the higher level of transit dependency for weekend riders (71%) than for weekday riders (56%).

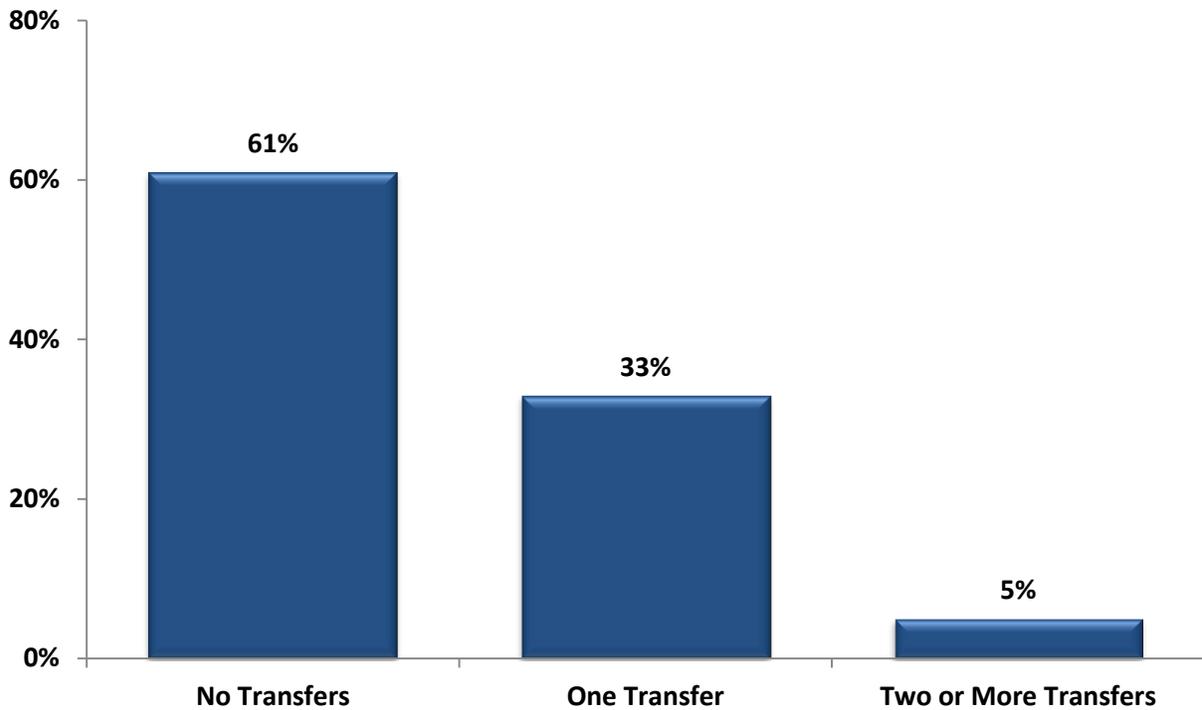
Figure 32: Weekend – How Many Miles Is It From Your Home to Your First Boarding Point? (Non-Walkers Only)
n=8



Due to the small percentage of non-walkers among weekend riders (8% or 8 surveys), the above figure is subject to a high level of variability. Non-walkers have the tendency to either travel for at least five miles (41%) or for less than two miles (37%) from home to their first boarding point. Approximately one-quarter (23%) travel between two to five miles.¹⁶ The average distance traveled from home to the first boarding point is 5.5 miles which is higher than the weekday average at 5.1 miles.

¹⁶ Percentages do not add up to 100% due to rounding.

Figure 33: Weekend – How Many Transfers Are Needed To Complete Your Trip?
n=112

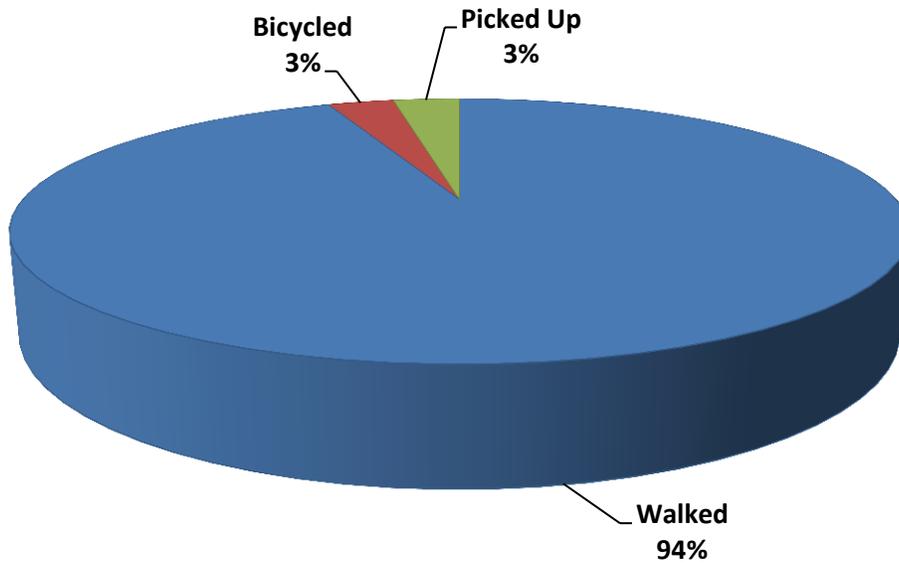


Over half of weekend riders (61%) complete their transit trip riding only one bus. This is higher than the 55 percent of weekday riders who complete their trip with one bus. In contrast, one-third of weekend riders (33%) complete their trip with one transfer, slightly lower than the 36 percent for weekday trips. Only five percent of weekend riders require two or more transfers.¹⁷ The average number of transfers is 0.4 which is equivalent to 1.4 trip segments.¹⁸

¹⁷ Percentages do not add up to 100% due to rounding.

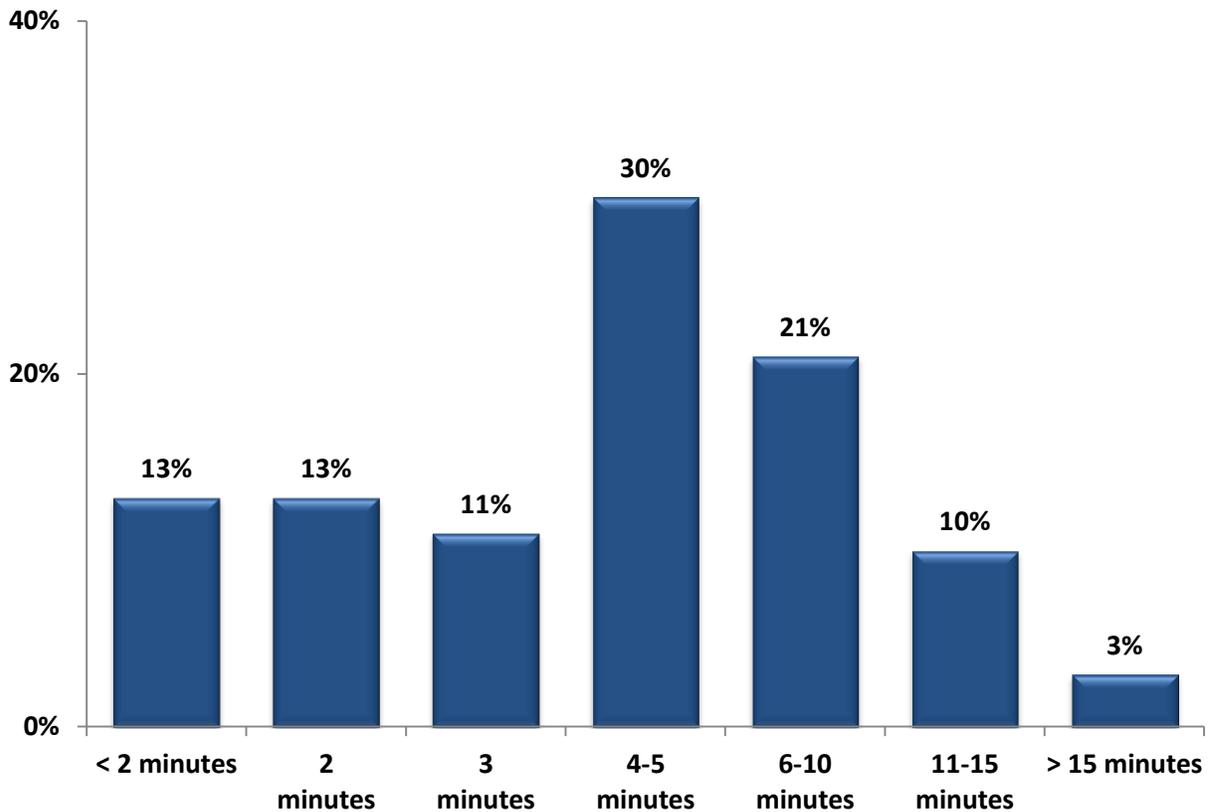
¹⁸ It should be noted that all transfers including out of system transfers are counted in this statistic, so the average number of LAVTA transit buses used to complete a one-way trip will be lower.

Figure 34: Weekend – How Do You Get From Your Last Stop To Your Non-Home Destination?
n=107



The distribution of weekend egress modes is virtually the same as the weekday pattern. On weekend trips, almost all riders (94%) “Walk” from the last transit stop to their non-home destination almost identical to the weekday level of 93 percent. Similarly, those who “Bicycle” or are “Picked Up” each account for three percent on both the weekday and weekend.

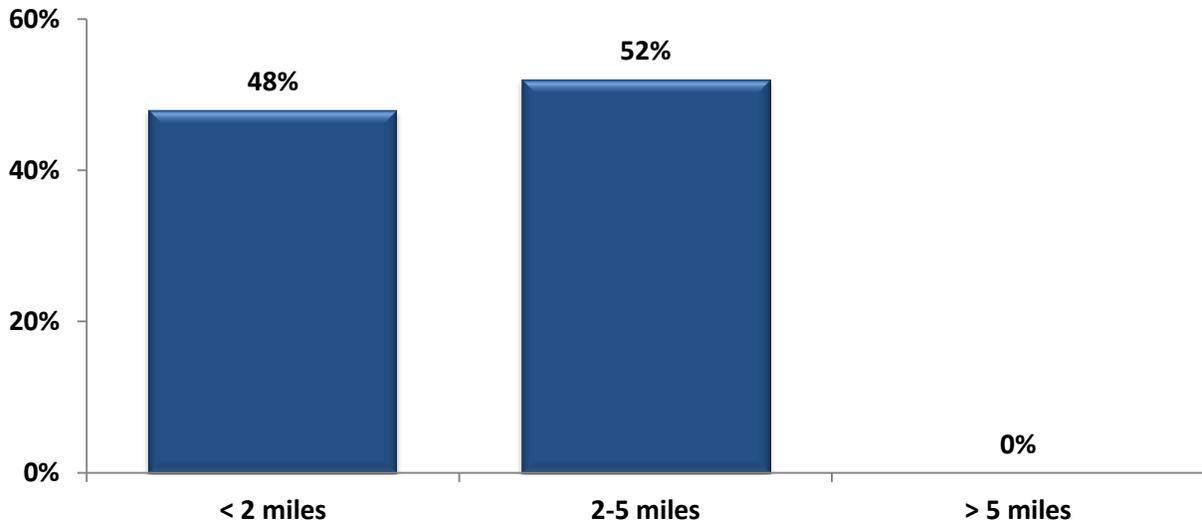
**Figure 35: Weekend – How Many Minutes Is Your Walk From Your Last Stop to Your Non-Home Destination?
n=101**



Sixty-seven percent of weekend riders who walk to their non-home destination from their last transit stop have a walk time of five minutes or less, which is lower than the weekday percentage of 77 percent. The remaining one-third (34%) of riders walk six or more minutes with 13 percent walking more than 10 minutes.¹⁹ The overall average walk time for riders to reach their destination from the last stop is 6.3 minutes which is slightly less than the 8.3 minutes of walk time from home to the first boarding point. Both access and egress walk times are higher on the weekend than for weekday travel where the access time is 7.2 minutes and the time to the final destination is 5.2 minutes.

¹⁹ Percentages do not add up to 100% due to rounding.

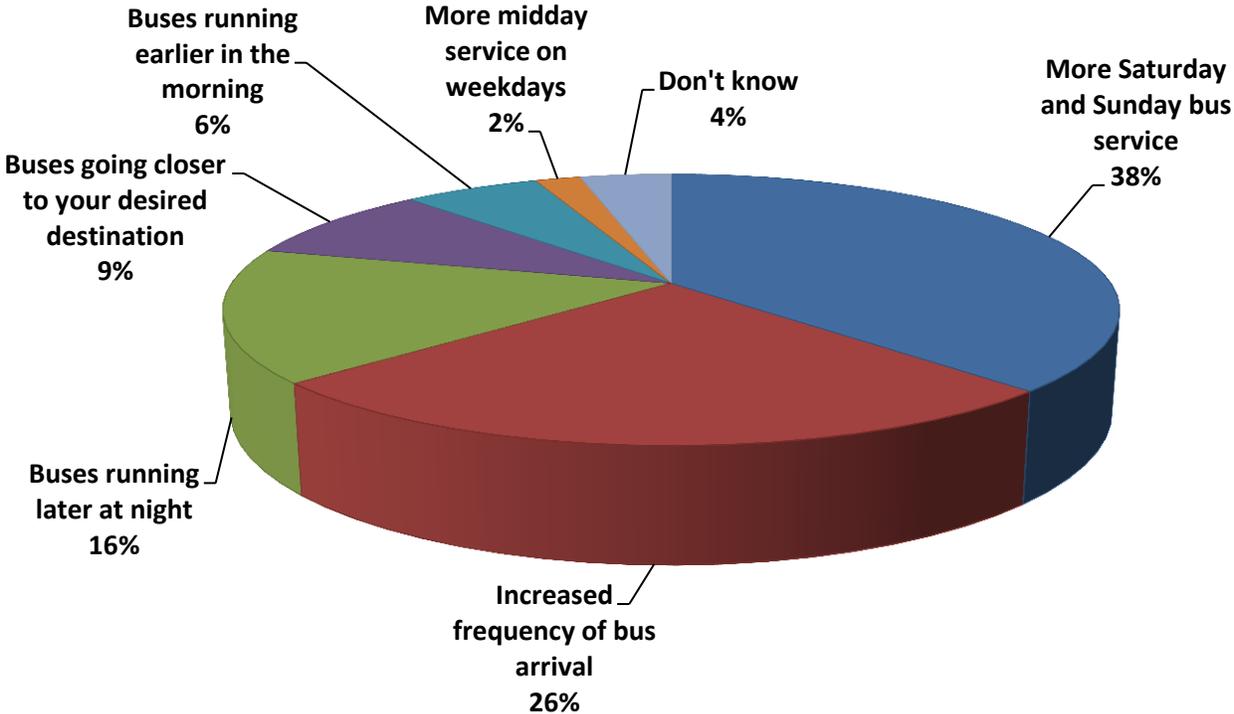
Figure 36: Weekend – How Many Miles Is It From Your Last Stop to Your Non-Home Destination? (Non-Walkers)
n=6



Within the small percentage of riders (6%) who do not walk from their last stop, about half (48%) of riders travel less than two miles while the other half (52%) travel between two to five miles to reach their final destination. Weekend riders tend to travel a shorter distance from their last stop to the final destination at an average of 1.5 miles compared to the 3.2 miles of weekday trips.

WEEKEND BUS AMENITY AND SERVICE IMPROVEMENTS

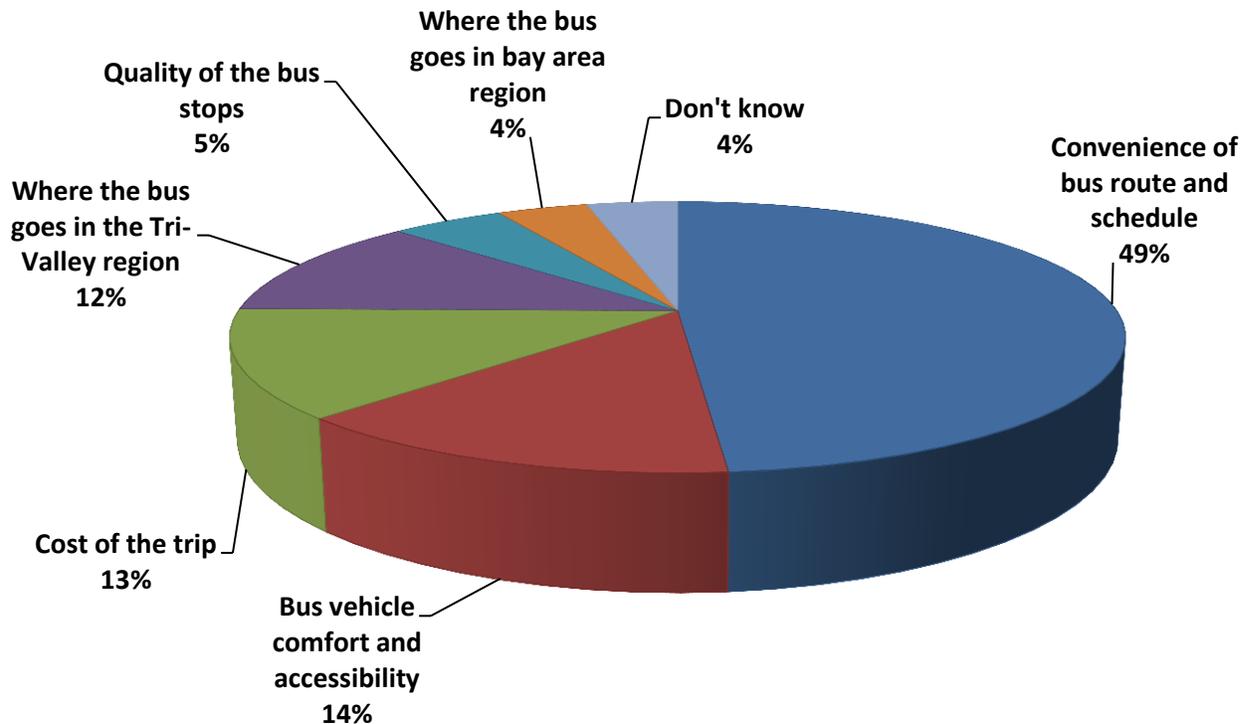
Figure 37: Weekend – Which Potential Service Improvements You Would Most Like to See?
n=112



The top three desired weekend service improvements are more Saturday and Sunday service (38%), increased frequency of bus arrival (26%), and buses to run later at night (16%). This is similar to weekday rider responses where these service improvement factors accounted for 36 percent, 30 percent, and 11 percent respectively. All other improvement options were cited by less than 10 percent of weekend riders each at nine percent for going closer to their desired destination, running earlier in the morning, (6%), and more midday service (2%).²⁰

²⁰ Percentages do not add up to 100% due to rounding.

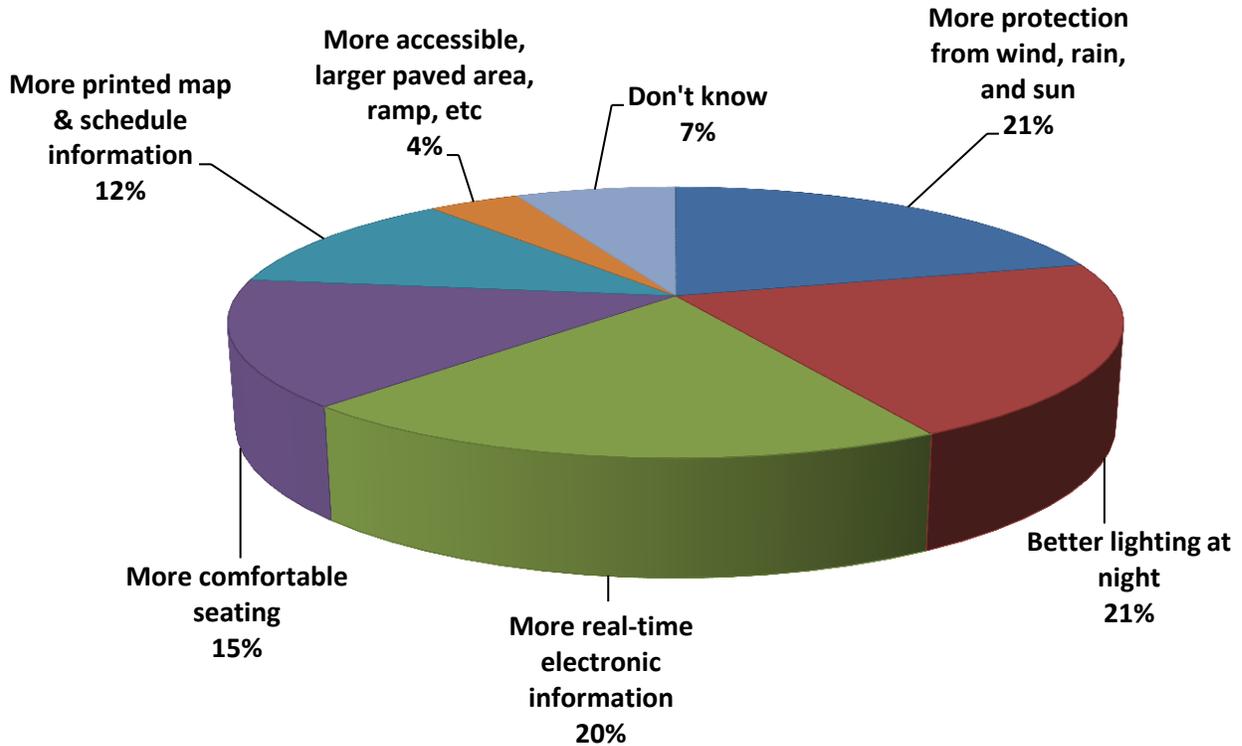
Figure 38: Weekend – Which Factor is the Most Important to You When Deciding Whether or Not to Ride a Bus?
n=112



Similar to the weekday finding of 47 percent, half (49%) of riders consider the convenience of a bus route and its schedule as the most important factor when deciding whether or not to ride the bus. All other factors were cited by less than 15 percent each with bus comfort and accessibility of a bus at 14 percent, cost of a trip (13%), where the bus goes in the Tri-Valley region (12%), quality of the stops (5%), and where the bus goes in the Bay Area region (4%)²¹.

²¹ Percentages do not add up to 100% due to rounding.

**Figure 39: Weekend – If You Could Improve the LAVTA Bus Stops, What Would You Change First?
n=112**



For weekend riders priorities for desired bus stop improvements are very similar to weekday riders. For weekend riders the desired improvements were bus stops that provide more protection from wind, rain, and sun (21%), preference for better lighting (21%), more real-time electronic information (20%), more comfortable seating (15%), more printed maps and schedule information (12%), and at the lowest level (4%), bus stops that are more accessible with larger paved areas and ramps. This compares to 26 percent, 20 percent, 20 percent, 12 percent, 11 percent, and two percent respectively for weekday riders.

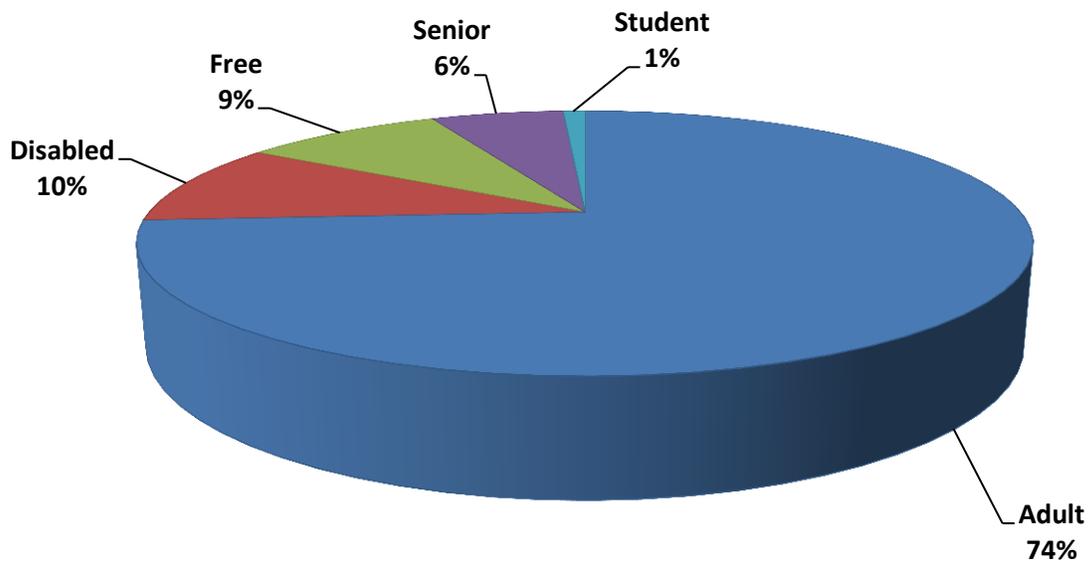
WEEKEND FARE MEDIA

Figure 40: Weekend – How Do You Pay For Your Bus Fare?
n=112



Half of weekend riders (50%) use cash to pay their bus fare, a higher percentage than the 44 percent of weekday riders. This is followed by passes at 26 percent, fare buster tickets at 19 percent, and transfers at five percent.

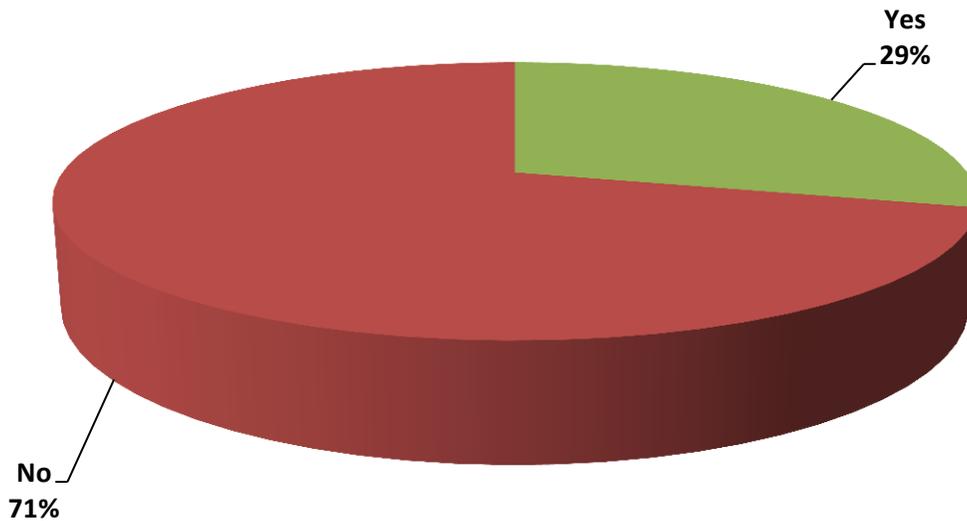
Figure 41: Weekend – What Type of Fare Do You Pay?
n=112



The majority of LAVTA weekend riders (74%) pay the full “Adult” fare price. A discounted fare type is paid by one-quarter (26%) of weekend riders including those who paid a “Disabled” fare (10%), “Senior” fare (6%), “Student” fare (1%), or those who received it for free (9%).

WEEKEND TRANSPORTATION DEMOGRAPHICS

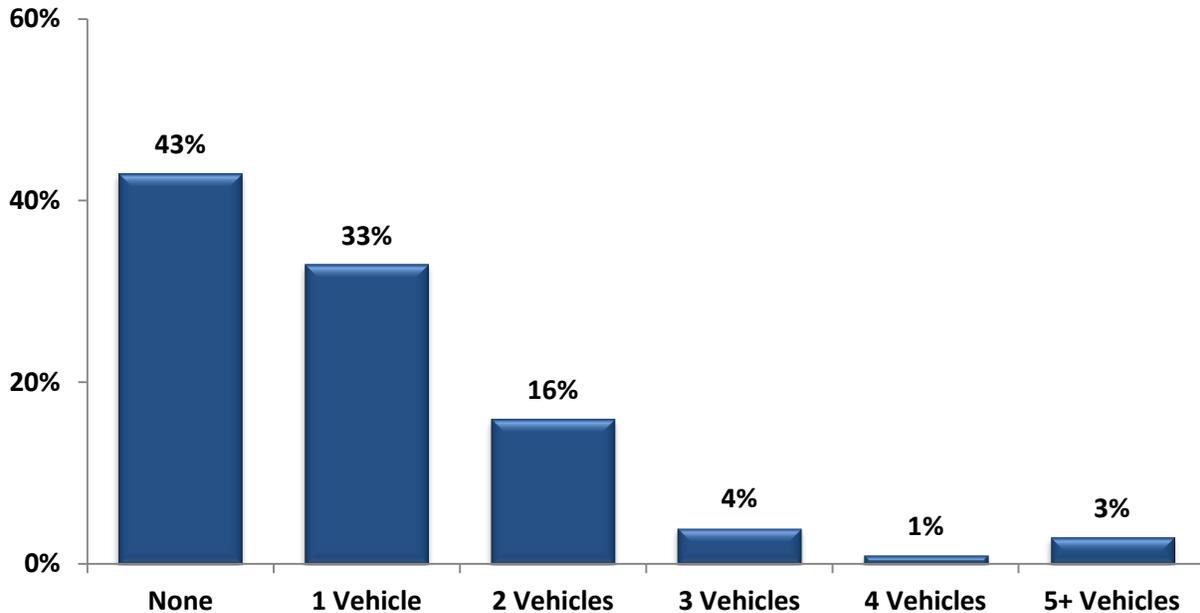
Figure 42: Weekend – Do You Currently Have a Driver’s License?
n=181



The prevalence of driver’s licenses among weekend riders at 29 percent is significantly lower than among weekday riders where it is 44 percent. Over two-thirds (71%) of weekend riders do not have a driver’s license and thus are transit dependent compared 56 percent for weekday riders.

Similar to the weekday survey, weekend riders who identify themselves as Hispanic (17%) are less likely to have a driver’s license than non-Hispanics (36%). In addition, those who speak Spanish at home are less likely to have a driver’s license (16%) compared to those who only speak English at home (41%).

Figure 43: Weekend – How Many Drivable Vehicles Are Available To Your Household?
n=111



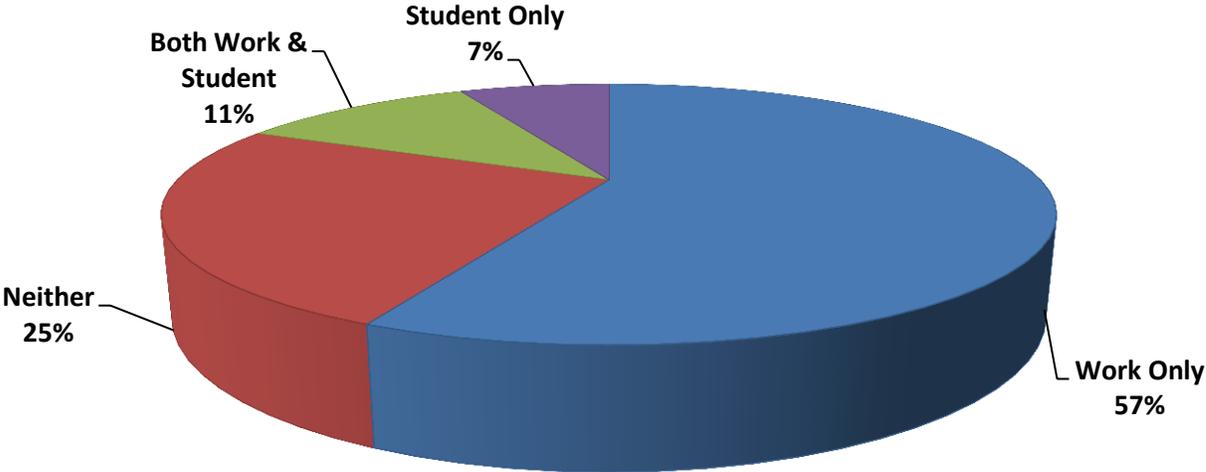
At 43 percent, weekend riders are more likely than weekday riders (35%) to not have a drivable vehicle available to their household. Vehicle availability among weekend riders starts at 33 percent for one vehicle, decreases to 16 percent for those who have two, four percent for three vehicles, and another four percent for those with four or more vehicles.

Access to a drivable vehicle increases with household income. Approximately half of weekend riders (52%) with household incomes of \$10,000 or less have access to a drivable vehicle, increasing to 87 percent of households with incomes of \$50,000 to \$74,999.

The overall average number of drivable vehicles per household is 1.0 for weekend riders, which is similar to the average for weekday riders at 1.1 vehicles.

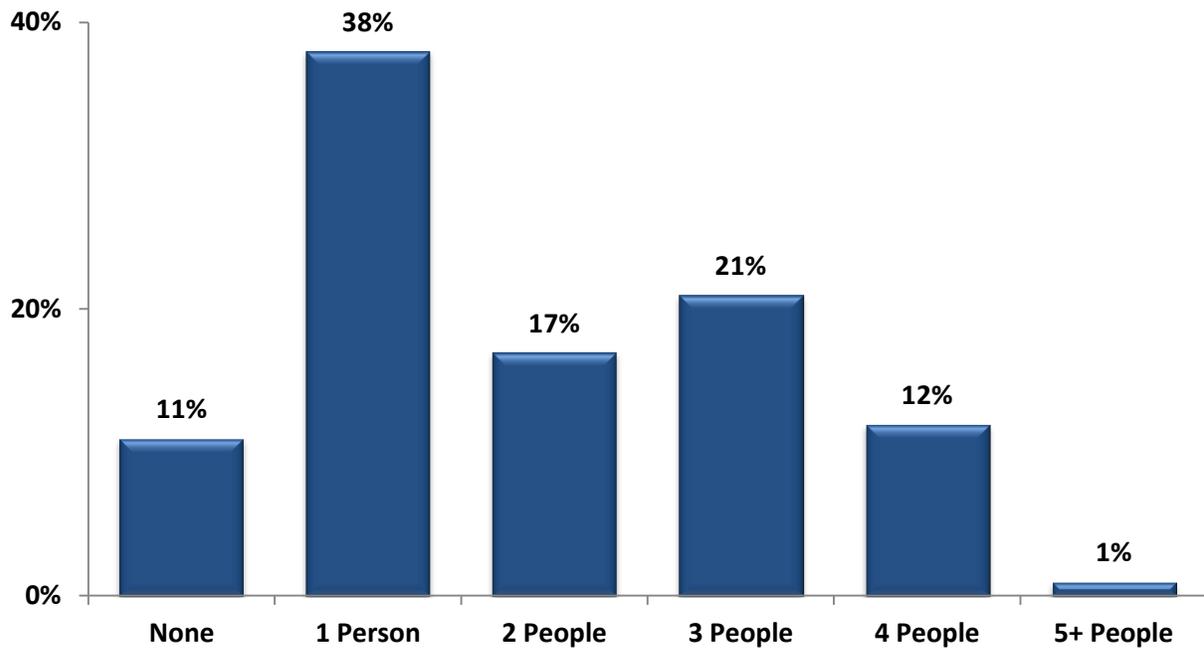
WEEKEND RIDER DEMOGRAPHICS

Figure 44: Weekend – Are You Currently Employed and/or a Student?
n=112



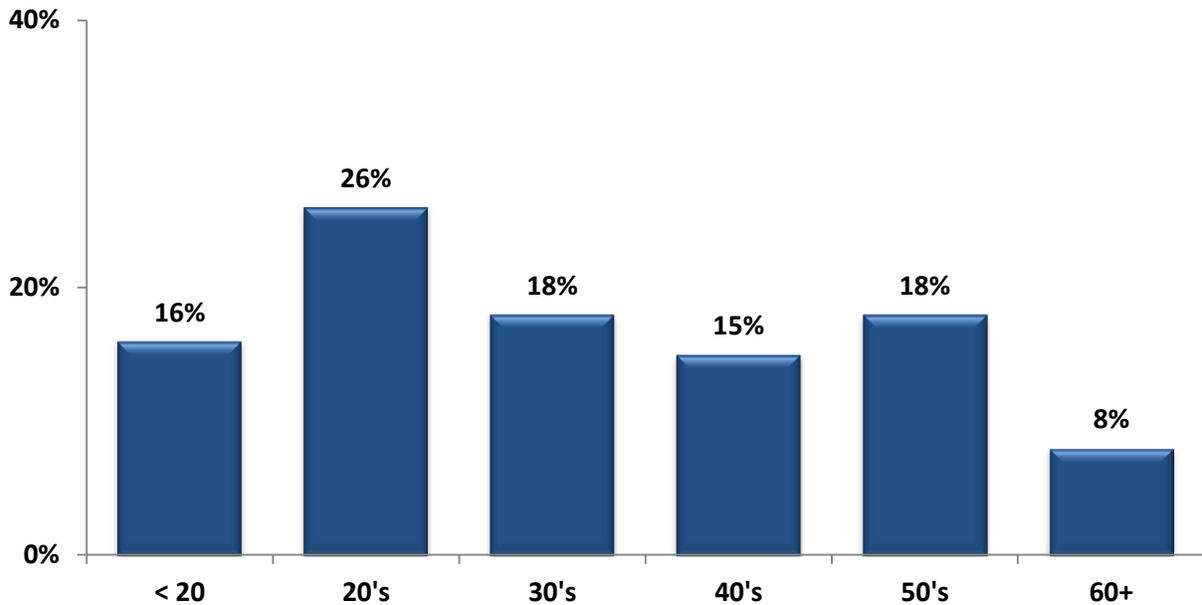
Fifty-seven percent of weekend riders only work and an additional 11 percent both work and are students. Seven percent are only students, and 25 percent are neither students nor workers.

**Figure 45: Weekend – How Many People Are Employed in Your Household?
n=111**



Similar to weekday ridership, 11 percent of weekend riders have no workers in their household while 38 percent have one worker in their household. The remaining 51 percent have two or more workers in the household. The average number of employed persons per household for weekend riders is 1.9, which essentially matches the weekday average of 1.7 persons.

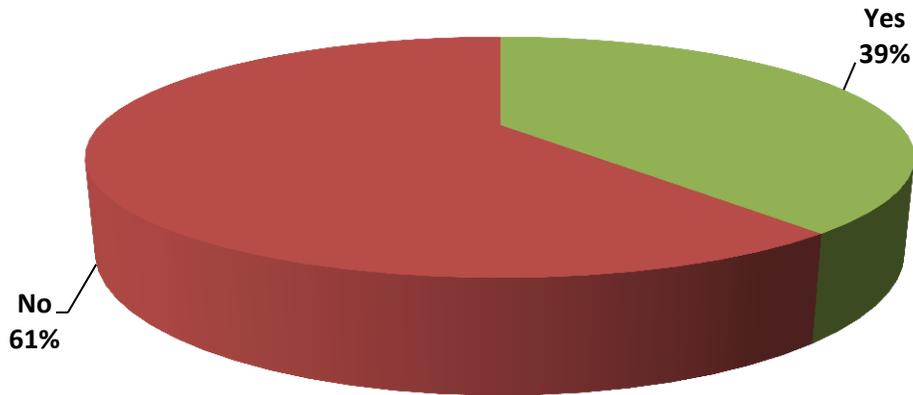
Figure 46: Weekend – What Is Your Age Category?
n=111



The age distribution for weekend bus riders is similar to weekday riders where the largest proportion of riders are either in their 20's or 30's (44% vs. 45%, respectively). The remaining age groups are also similar to the weekday trend with 16 percent of riders under 20, 15 percent in their 40's and 26 percent of riders who are at least 50 years old.²² Among weekday riders, these age groups account for 12, 16, and 26 percent respectively.

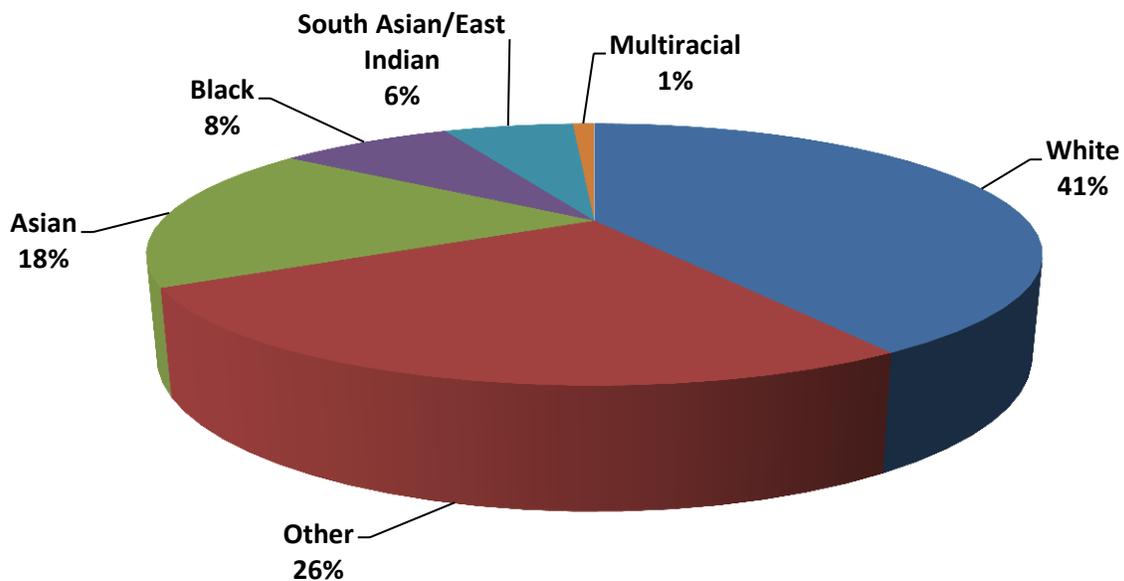
²² Percentages do not add up to 100% due to rounding.

Figure 47: Weekend – Are You Hispanic, Latino or of Spanish Origin?
n=112



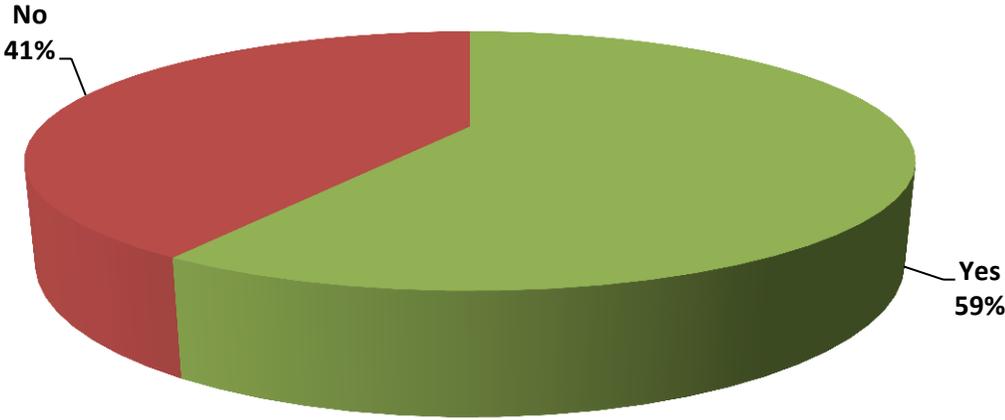
The proportion of Hispanic riders on the weekend is similar to the weekday at 39 percent and 35 percent, respectively.

Figure 48: Weekend – Which of the Following do You Identify With?
n=96



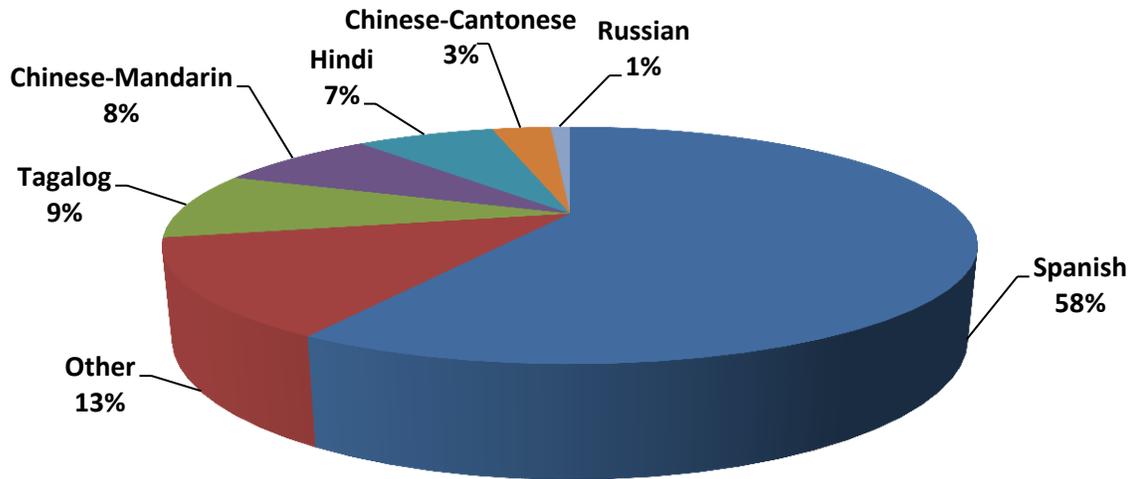
Weekend riders were asked to select the U.S. Census race category that they identify with. The distribution is similar to weekdays with the largest proportion of riders being White (41% weekend vs. 42% weekday) followed by Asian (18% vs. 16%), and South Asian/East Indian (6% vs. 6%). In addition eight percent of weekend riders identified themselves as Black and 26 percent as “Other,” which mostly includes riders who identified themselves as Hispanic, Latino, or Mexican.

**Figure 49: Weekend – Do You Speak a Language Other Than English at Home?
n=112**



Over half (59%) of weekend riders speak a language other than English at home, 12 percentage points higher than the 47 percent of weekday riders.

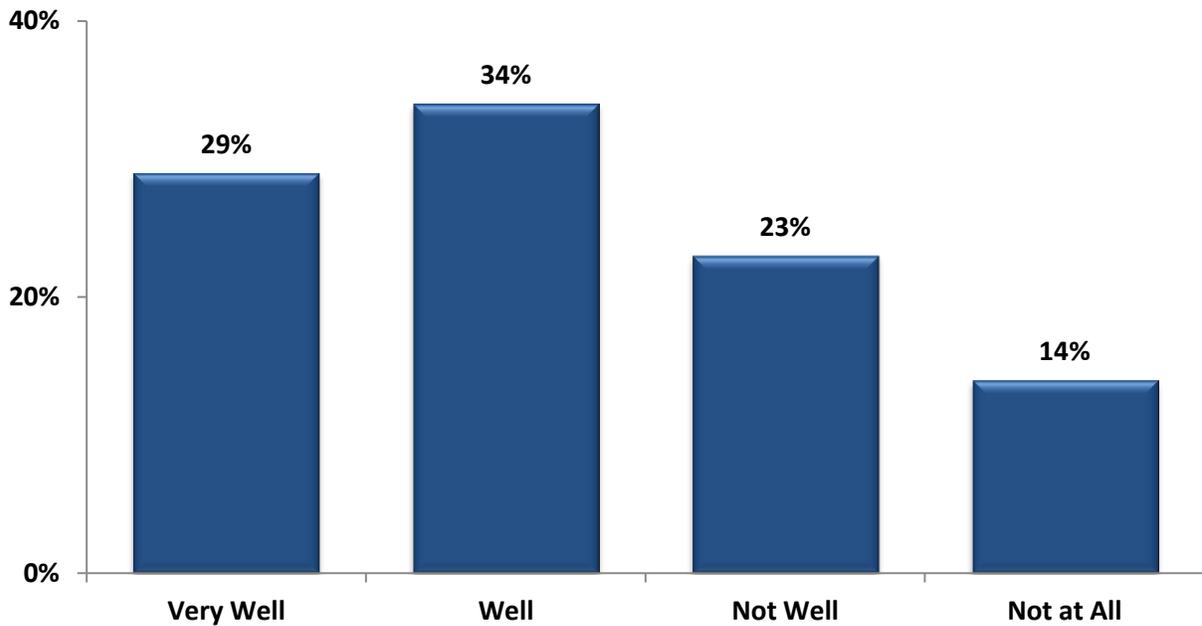
**Figure 50: Weekend – What Language Other Than English Do You Speak at Home?
(Only Respondents Who Speak a Language Other Than English at Home)
n=66**



Among weekend riders who speak a language other than English at home, over half (58%) report speaking Spanish. The second most common language spoken at home is Tagalog (9%), followed by Chinese-Mandarin (8%), and Hindi (7%). Languages spoken at home that comprise three percent or less are Chinese-Cantonese (3%) and Russian (1%). There are also 13 percent who speak “Other” languages not listed above including Bengali, Czech, Khmer, Persian, etc.²³

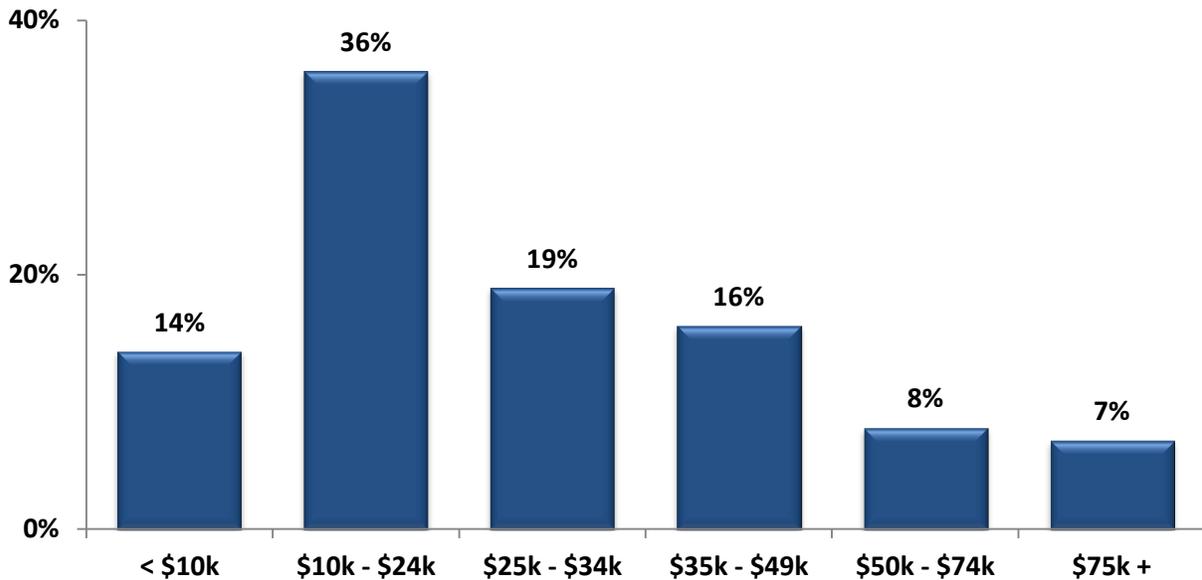
²³ Percentages do not add up to 100% due to rounding.

**Figure 51: Weekend – How Well Would You Say You Speak English?
n=66**



Among LAVTA weekend riders who speak a language other than English at home (59%), 29 percent indicate that they speak English “Very Well”, 34 percent indicate that they speak it “Well,” 23 percent indicate that they speak it “Not Well”, and 14 percent say they do not speak English at all. Weekday riders are more likely to speak English “Very Well” (46%) than weekend riders (29%). In both the weekday and weekend samples, 37 percent said that they speak English “Not Well” or do not speak English at all.

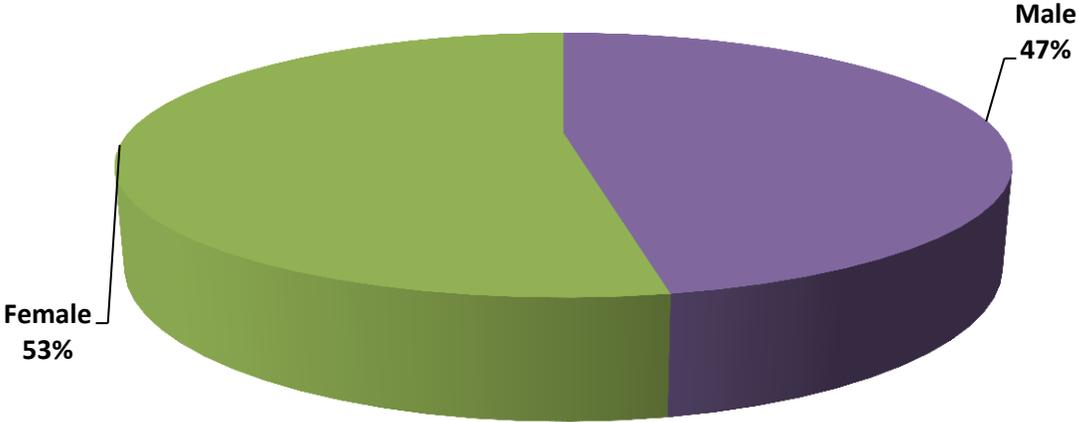
Figure 52: Weekend – What is Your Total Household Income?
n=102



Weekend riders show lower levels of annual household income than weekday riders with a split of 69 percent under \$35,000 and 31 percent of \$35,000 or higher, compared to 55 and 45 percent respectively for weekday riders. Weekday income distribution is fairly distributed across the whole income spectrum, ranging from 12 percent to 25 percent for each income category. In contrast, weekend distribution of household income is more heavily weighted towards households that make \$10,000 to \$24,999 per year (36%). In addition, half (50%) of weekend riders live in households that are below or just above the federal poverty line for a family of four²⁴ (\$23,550 per year), 13 percentage points higher than the weekday sample.

²⁴ 2013 HHS Poverty Guidelines (aspe.hhs.gov)

Figure 53: Weekend – Gender
n=112



The gender distribution of LAVTA weekend ridership shows more female riders (53%) than male riders (47%).