

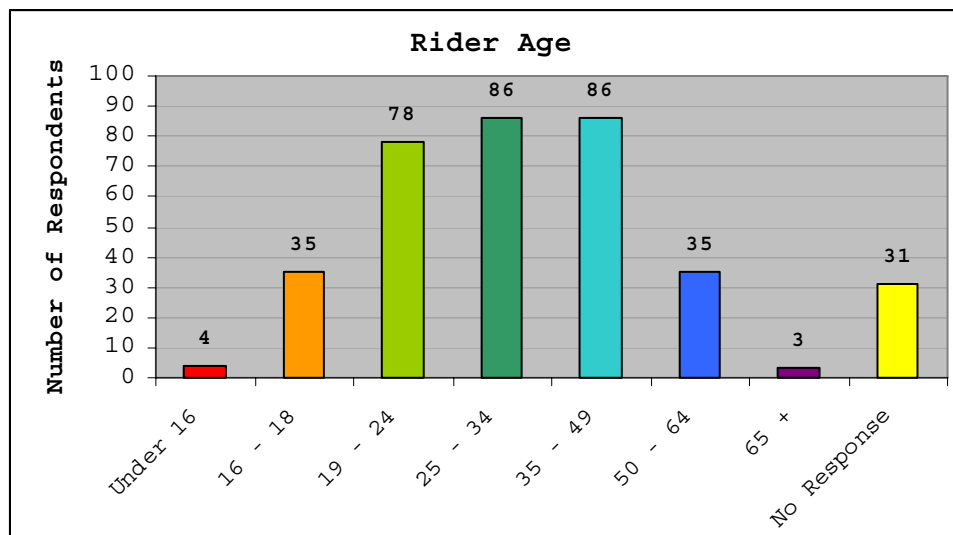
LOUDOUN COUNTY TRANSIT PLAN FIXED ROUTE BUS SURVEY RESULTS

A survey of fixed route bus riders was conducted in March, 2008 on the routes operated in Loudoun County by Virginia Regional Transit. The routes and distribution of survey results are provided at the end of this report. A total of 357 surveys were collected over a 6 day period. The survey questions targeted four general categories of data: rider profile, trip characteristics, general transit habits, and general perceptions of transit service.

Rider Profile

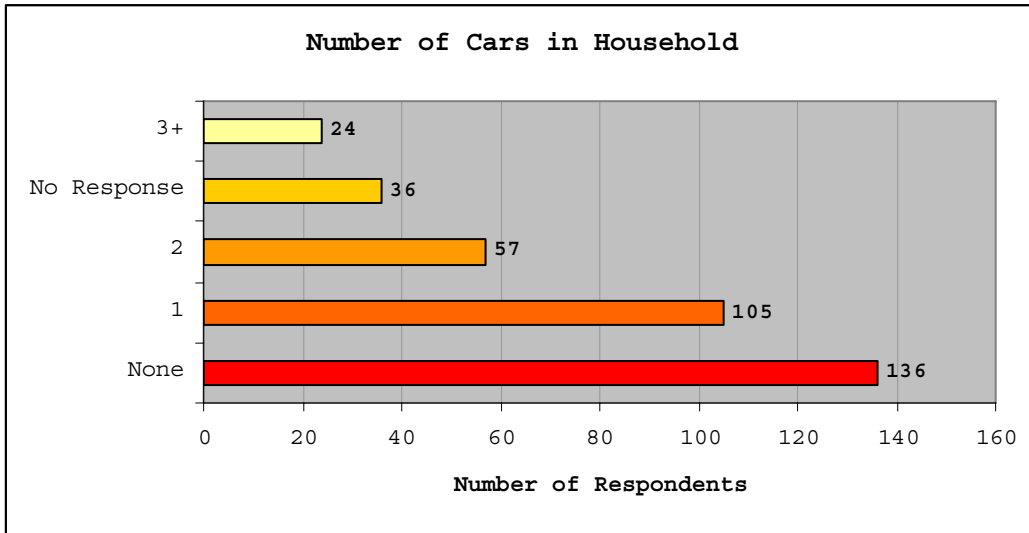
Several different characteristics were gathered regarding the personal profile of each survey respondent. Among respondents, 54% were female and 68% speak English as their primary language. Important to note however, is that 32% of respondents speak Spanish as their first language. Surveys were provided in both English and Spanish; it is possible that other primary languages are used by passengers that were not captured by the survey results.

Survey respondents were grouped in seven different age categories: under 16, 16 to 18, 19 to 24, 25 to 34, 35 to 49, 50 to 64, and 65+. The greatest number of respondents identified their age within the 25 to 34 and 35 to 49 age groups. As shown below, the curve seems normally distributed, with a slight skew towards the younger age groups.

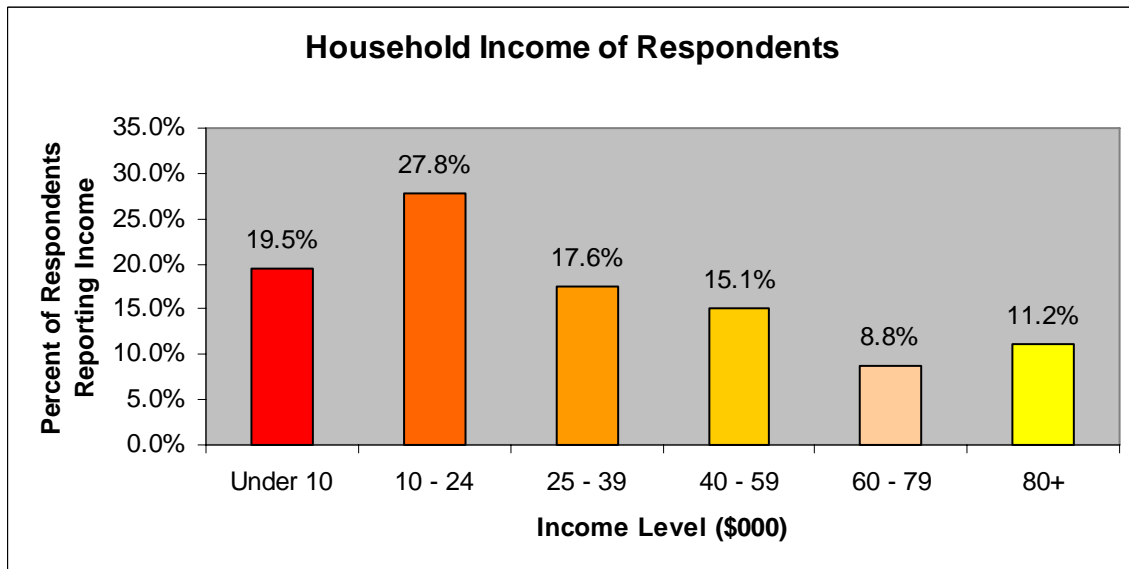


Car availability seems to be an issue among survey respondents, with 78% reporting that they did not have access to a personal automobile for the surveyed transit trip. In addition, 136 respondents, 38%, reported having no cars within their household. The number of households with multiple cars is a minority within the population of

respondents. Only 23% of survey respondents noted the presence of multiple cars in their household. This relationship is illustrated in the chart below.

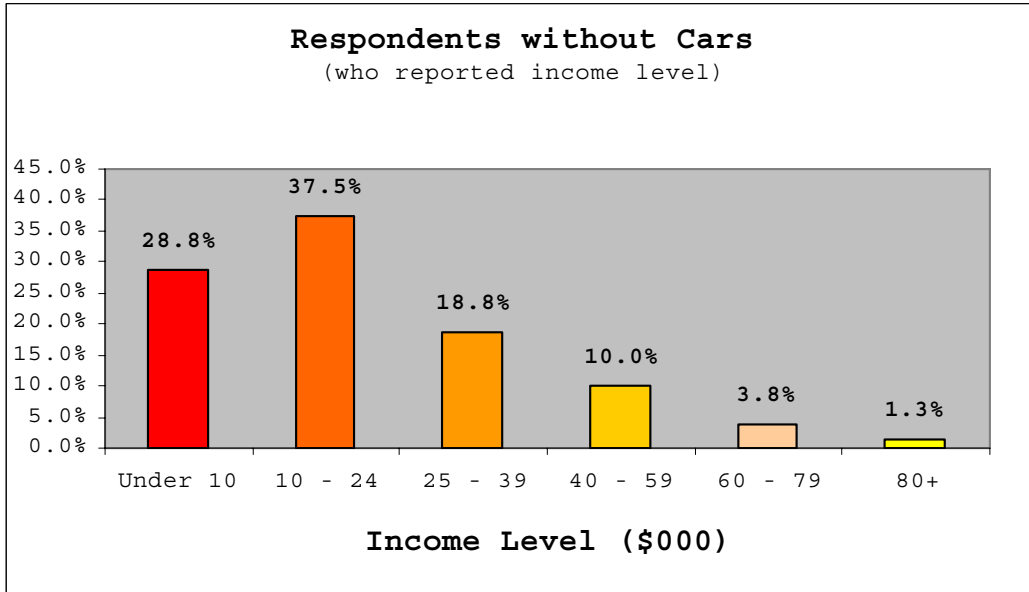


Income levels were categorized into 6 different ranges of annual household income as shown in the chart below.¹ The highest share of respondents had household income between \$10,000 and \$24,000 per year. However, 11% of respondents indicated their household income is \$80,000 per year or more, which is likely to indicate in keeping with the results of the auto ownership question, that there are some riders who have a choice about riding transit versus driving.



¹ Survey respondents were also allowed not to comment on their household income. 97 respondents, 27%, answered with no comment.

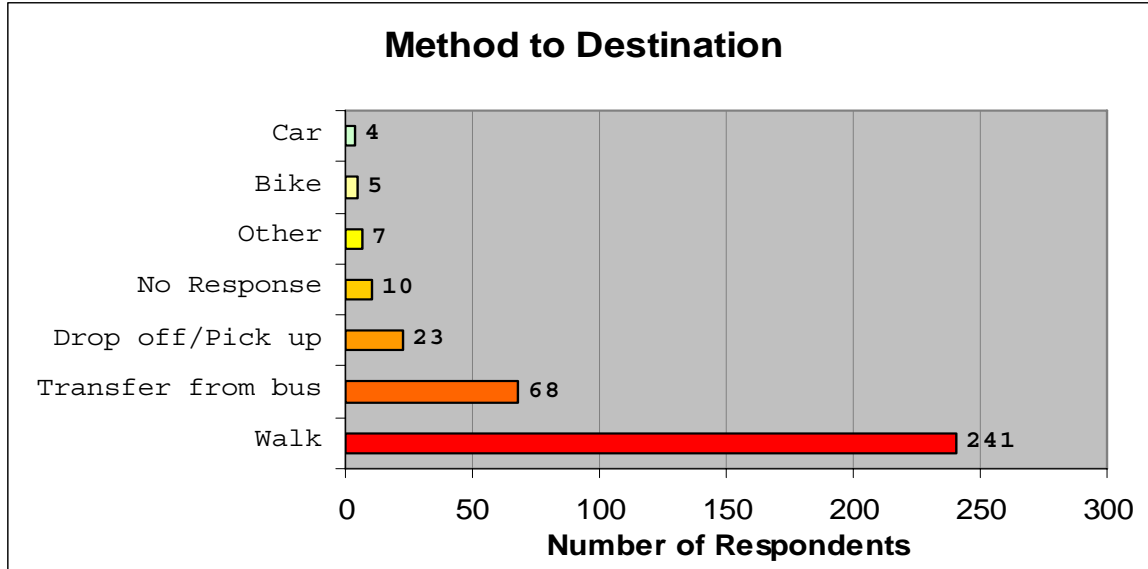
The lack of access to automobiles appears to be related to income among respondents. The chart below illustrates the relationship between income level and access to automobiles by showing the income distribution only for those respondents with zero cars. Results show that over 66% of zero-car households are in the two lowest income brackets (below \$24,000). The distribution of income for respondents with no vehicles shows similar trends to the previous graphic showing all respondents, but it does reveal an overall lower income distribution for those with no vehicles.



Trip Characteristics

Characteristics of the trip made during the time of the survey were gathered, focusing on trip purpose, destination, origin, and modes of travel outside of the bus. In this case, trip origin and trip destination have very similar statistics. Walking is the most common method of transportation used by respondents to get to the bus. Walking is also the most common method used to get from the bus to the respondents' destination. In both cases, over 67% walked. The chart below shows the results for transportation method to destination.²

² As discussed, method from origin is almost identical.



Interestingly, the average walking time for both trips (from origin to the bus and from bus to destination) is approximately 9 minutes.

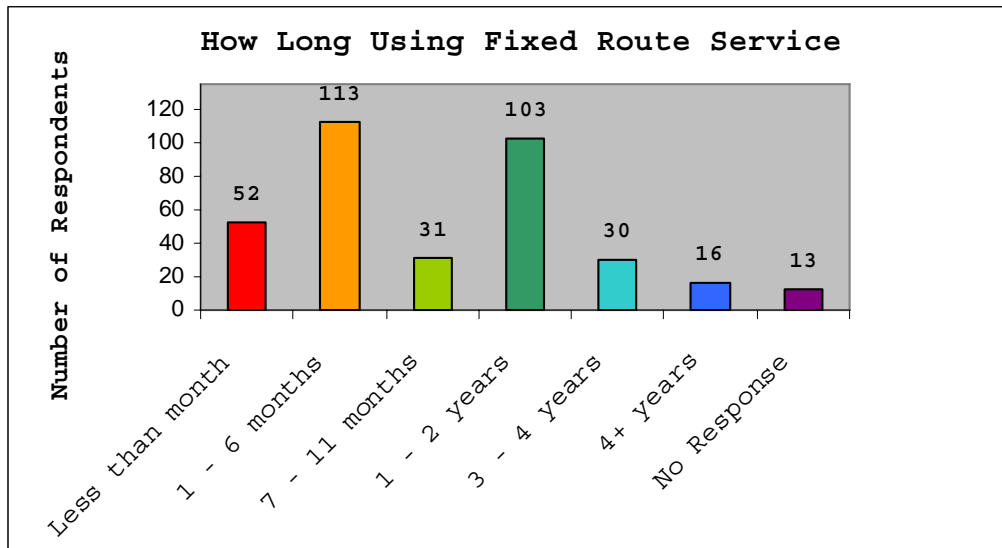
Likewise, the place of origin and place of destination are very similar. As seen in the table below, most trips originate at either home or work and end at either work or home. It is noteworthy that the highest response for trip origin is home (60%) and for destination the highest response is work (39%).

| Location | Trip Origin | Trip Destination |
|-----------------|-------------|------------------|
| Work | 20% | 39% |
| Home | 60% | 23% |
| Shopping | 5% | 12% |
| Social/Personal | 4% | 9% |
| Medical | 3% | 6% |
| School | 2% | 6% |
| No Response | 4% | 4% |
| Other | 2% | 1% |

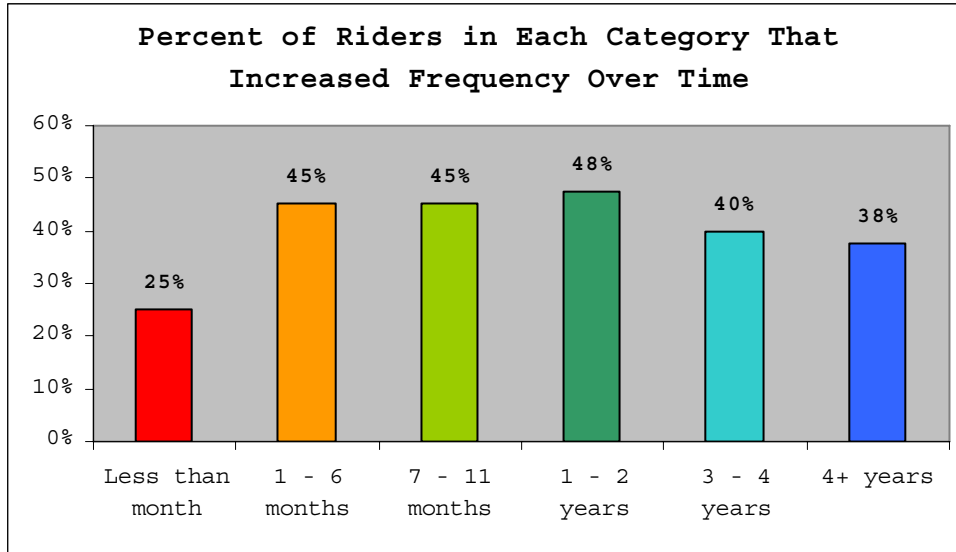
Transit Habits

To gain a better understanding of general rider habits, respondents were asked about their frequency of use, how long they have been using fixed route service, and if any change in frequency has occurred over time.

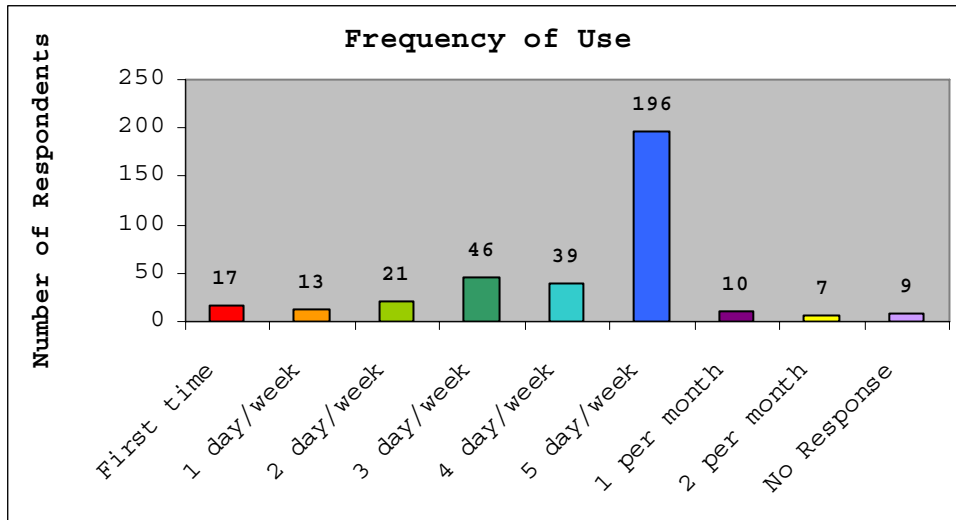
Results for length of use were somewhat varied. Riders were split into 6 different categories for length of use: less than 1 month, 1 – 6 months, 7 – 11 months, 1 – 2 years, 3 – 4 years, and 4+ years. Based on the data, it seems that most riders have been using fixed route service for 2 years or less. The chart below shows these results and also indicates a spike of use between 1 – 6 months and 1 – 2 years.



In a positive vein, very few respondents reported a decrease in frequency over time. Only 6% of respondents noted a decrease in frequency, whereas 41% increased their frequency of use. Once more, it seems that there is a positive relationship between length of use and increase in frequency over time. The chart that follows shows the percent of respondents in each length of use category that reported an increase in frequency over time. The lowest percentage is amongst riders using fixed route service for less than a month. The percentage increases through riders using fixed route service for 1 – 2 years, and begins to decline with riders of several years or more.



The general frequency habits of riders seem to corresponding with a 5 day work week. Over 50% of respondents use fixed route service 5 days a week, as shown in the following chart.



To further analyze rider habits, survey respondents were asked how they would be affected if bus service were discontinued. Respondents were divided into groups based on the purpose of their trip. Trip type includes: work, medical, shopping/recreation, and education. The results of this question are depicted in the charts below.

| Work Trip | Number | Percent | Shopping Trip | Number | Percent |
|------------------------------------|---------------|----------------|--|---------------|----------------|
| Adjust Working Hours | 16 | 6.9% | Go to Different Shopping Center | 17 | 13.3% |
| Look for Another Job | 53 | 22.8% | Maker Fewer Trips | 47 | 36.7% |
| Not Be Able to Work | 56 | 24.1% | Shop Online/Catalog | 8 | 6.3% |
| Use Other Means of Transportation | 80 | 34.5% | Use Other Means of Transportation | 37 | 28.9% |
| Work at Home | 9 | 3.9% | Other | 19 | 14.8% |
| Other | 18 | 7.8% | | | |
| Education Trip | Number | Percent | Medical Trip | Number | Percent |
| Choose Another School | 16 | 19.8% | Not Seek Medical Attention as Frequently | 40 | 44.9% |
| Miss Classes and Campus Activities | 14 | 17.3% | Receive Home Care | 2 | 2.2% |
| Not Able to Attend | 21 | 25.9% | Select Another Physician | 9 | 10.1% |
| Use Other Means of Transportation | 25 | 30.9% | Use Other Means of Transportation | 26 | 29.2% |
| Other | 5 | 6.2% | Other | 12 | 13.5% |

Work Trip:

For a work trip, 34% of respondents noted that they would find an alternative transportation method to reach their destination. Respondents also suggest that if fixed route service was not available they would either be unable to work (24%) or would have to find an alternative job (23%). Interestingly, most respondents felt that adjusting their work hours (7%) or working from home (4%), both effective tools used in traffic demand management, was not a viable option.

Shopping Trip:

For a shopping trip, the most popular alternative amongst respondents was to make fewer shopping trips (37%). Another popular response was to use another means of transportation (29%). Similarly to a work trip, the lowest percentage of respondents suggested that they would shop online or through a catalog (6%). This suggests that making the trip is a necessity amongst most respondents.

Education Trip:

The most popular response amongst respondents making a trip to school was to use another means of transportation (31%). Another large percentage of respondents suggested that they would not be able to attend school (26%) if transit service was discontinued.

Medical Trip:

For a medical trip, respondents indicated that they would not seek medical attention as frequently (45%) if bus service was unavailable. Many others would use another means of transportation (29%) to reach medical care.

Perception of Transit Service

Survey respondents were also asked to comment on their perception of fixed route service. These questions queried respondents' satisfaction with service and pinpointed areas of needed improvement.

Respondents were asked questions regarding their satisfaction with transit availability and route coverage. Transit availability queried satisfaction with service scheduling and frequency. Results suggest that respondents have the need for increased

| Transit Availability | | |
|----------------------|-----|-------|
| Meets All Needs | 108 | 31.4% |
| Ride More | 77 | 22.4% |
| Earlier AM | 25 | 7.3% |
| Later PM | 112 | 32.6% |
| More Frequency | 48 | 14.0% |
| Weekend Hours | 120 | 34.9% |

weekend service and later hours of operation. About 31% of respondents felt that transit availability met all their needs; however this was the third most popular response. The most frequently chosen response was increased weekend hours, selected by 35% of respondents.

Satisfaction with route coverage far exceeded transit availability considering that 53% of respondents indicated that route coverage meets all of their needs. However, 16% noted their needs were not met by current route coverage, and 16% need to transfer to other buses in order to make their desired trip.

| Route Coverage | | |
|--------------------|-----|-------|
| Meets All Needs | 175 | 52.9% |
| Closer Routes | 47 | 14.2% |
| More Direct Routes | 24 | 7.3% |
| Must Transfer | 52 | 15.7% |
| Need Not Met | 52 | 15.7% |

Respondents were also asked to rank their satisfaction with fixed route service – on a scale of 1 (not satisfied) through 5 (highly satisfied) – in regard to frequency, reliability, cost, route maps/information, and safety. The tables below illustrate these results. In general, the tables suggest an overall satisfaction with fixed route service. Fare cost stands out with a particularly high percentage of satisfied respondents. Respondents also feel satisfied with safety of bus stop locations, at bus stops and while riding on the bus. Each safety category had over 65% satisfaction from respondents. The categories that seemed to falter are frequency of service, bus reliability and route maps/information. Although the majority of respondents indicate they are satisfied with these aspects of service, the results of the survey show a larger percentage of respondents that are unsatisfied with these aspects relative to the other questions asked.

| Satisfaction Rank | Frequency of Bus Service | | Bus Reliability | | Fare Cost | | Route Maps & Information | |
|---------------------------|--------------------------|-------|-----------------|-------|-----------|-------|--------------------------|-------|
| Not Satisfied 1 | 7 | 5.8% | 6 | 5.0% | 3 | 2.5% | 14 | 11.7% |
| 2 | 3 | 2.5% | 7 | 5.8% | 1 | 0.8% | 5 | 4.2% |
| 3 | 26 | 21.7% | 24 | 20.0% | 2 | 1.7% | 15 | 12.5% |
| 4 | 38 | 31.7% | 32 | 26.7% | 7 | 5.8% | 25 | 20.8% |
| Highly Satisfied 5 | 38 | 31.7% | 48 | 40.0% | 102 | 85.0% | 54 | 45.0% |
| No Response | 8 | 6.7% | 3 | 2.5% | 5 | 4.2% | 7 | 5.8% |

| Safety Rank | Safety of Bus Stop Locations | | Personal Safety on Bus | | Personal Safety at Bus Stop | |
|---------------------------|------------------------------|-------|------------------------|-------|-----------------------------|-------|
| Not Satisfied 1 | 4 | 3.3% | 1 | 0.8% | 5 | 4.2% |
| 2 | 2 | 1.7% | 1 | 0.8% | 0 | 0.0% |
| 3 | 6 | 5.0% | 10 | 8.3% | 6 | 5.0% |
| 4 | 21 | 17.5% | 22 | 18.3% | 22 | 18.3% |
| Highly Satisfied 5 | 80 | 66.7% | 82 | 68.3% | 79 | 65.8% |
| No Response | 7 | 5.8% | 4 | 3.3% | 8 | 6.7% |

The tables above provide a general sense of respondents’ perception toward transit service. An additional question was asked to pinpoint respondents single most improvement need. This question was administered as an open ended question, allowing respondents to freely depict their specific needs. As a result, responses were widely varied. In order to summarize and interpret the results, responses were consolidated into several common themes. If respondents depicted more than one improvement need, the first listed improvement was chosen as their single most important need. Results were consolidated into the following improvement needs:

- Additional Routes
- Better Connections
- Bus Stop Amenities
- Driver Behavior
- Extended AM/PM Hours
- Increased Frequency
- Better Information
- More Seats
- On-Time Reliability
- More Weekend Service

The most commonly identified improvement need was increased weekend service, followed closely by extended AM/PM hours of operation. This suggests service gaps both during the week and on weekends. Other popular choices included the need for increased frequency to reduce headway times and more reliable on-time service³.

³ The final percentage of each category has not been calculated because several responses were written in Spanish. Once translated, the percentages will be available.

Additional Data

The distribution of surveys by day and by route are provided in the following tables. Average daily boardings on the VRT routes in 2007 was 1,311. The 357 surveys gathered represents approximately a 27% response rate on the basis of comparing to 2007 boardings; if you assume most passengers make trips in both directions, then the passenger response rate is even higher. The average daily boardings by route are provided in the second table below, in comparison to the survey responses by route. The two lowest-ridership routes are the two Ashburn routes, and there were no surveys received from these routes.

| Distribution of Surveys | |
|-------------------------|----|
| Wednesday, March 19 | 57 |
| Thursday, March 20 | 84 |
| Friday, March 21 | 55 |
| Monday, March 24 | 41 |
| Tuesday, March 25 | 96 |
| Wednesday, March 26 | 24 |

| Number of Respondents by Route | | |
|--------------------------------|----------------------|------------------|
| Route | 2007 Daily Boardings | Survey Responses |
| 7 to 7 on 7 | 456 | 151 |
| Leesburg Airport | 317 total | 13 |
| Leesburg Battlefield | | 19 |
| Leesburg Trolley | | 54 |
| Sterling/Countryside | 250 | 58 |
| Dulles to Dulles | 144 | 25 |
| Purcellville | 66 | 22 |
| Ashburn Village | 49 | 0 |
| Ashburn Farm | 29 | 0 |