Arlington Transit
Ridership Study
October 2013

Prepared by

LDA Consulting
Southeastern Institute of Research
Presentation Outline

• Project Background, Objectives & Methodology
• Overview of Analysis Segments
• Demographic Profile of ART Riders
• ART Ridership Behavior by Frequency and Routes
• Reasons People Ride ART
• Alternate Modes of Transportation
• Overall Satisfaction with ART
• Performance on Critical Success Factors
• Service Use and Communications Preferences
• Awareness of Transportation Services
• ART Rider Travel Patterns and Recent Changes
• Origin Destination Data
Project Background, Objectives & Methodology
Project Background

• This Arlington Transit (ART) Rider Study is a component of the FY 2013 Arlington County Commuter Services (ACCS) Research Plan.

• This study is a follow-up wave to the 2008 ART Rider Study.

• Both 2008 and 2013 ART Rider studies were designed and executed in close cooperation between ACCS and ART senior staff and the SIR-LDA consulting team.
Project Objectives

- Determine characteristics of bus use, such as frequency of transit use, route utilization, trip purpose and reason for trips.
- Gauge primary and alt mode preferences.
- Measure awareness and perceptions of transportation options in Arlington County.
- Assess satisfaction with, and attitudes towards, ART against critical performance factors.
- Understand service use and communications preferences.
- Develop demographic profiles of rider segments.
- Track trends from the 2008 benchmark ART Rider Study.
Survey Methodology

- A four-page survey was designed by ART, SIR and LDA Consulting.
- Interceptors rode the bus routes in May and June of 2013 and proctored the 2,905 self-administered surveys: an estimated 1,977 surveys were fully completed.
- Quotas were set by route number, weekend versus weekday and time of day based on actual ridership.
- Spanish and English versions of the survey were created for in-person fielding on ART buses. 575 (20%) of respondents elected to complete the survey in Spanish.
- Each respondent was incentivized with a free ride token.
- In order to manage length of the survey for each respondent, as well as to gather a breadth of information, two versions of the survey were created:
  - Version A focused on impact analysis of transit use.
  - Version B focused on operational attribute importance and performance.
### Sample Quotas by Route

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<thead>
<tr>
<th>Route Description</th>
<th>Total</th>
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<tr>
<td>41 Columbia Pike – Ballston - Court House</td>
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<td>349</td>
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<tr>
<td>42 Ballston – Pentagon</td>
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<td>45 Columbia Pike – DHS/Sequoia – Rosslyn</td>
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<tr>
<td>51 Ballston – Virginia Hospital Center</td>
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<tr>
<td>52 Ballston – Virginia Center Hospital – East Falls Church Metro</td>
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<td>53 Ballston Metro – Old Glebe – East Falls Church Metro</td>
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<td>55</td>
<td>--</td>
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<tr>
<td>61 Rosslyn – Court House Metro Shuttle</td>
<td>89</td>
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<tr>
<td>62 Court House Metro – Lorcom Lane - Ballston</td>
<td>27</td>
<td>27</td>
<td>--</td>
</tr>
<tr>
<td>74 Douglas Park – Arlington Village – Arlington View – Pentagon City</td>
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<td>28</td>
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</tr>
<tr>
<td>75 Shirlington – Wakefield HS – Carlin Springs Road – Ballston – Virginia Square</td>
<td>83</td>
<td>83</td>
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</tr>
<tr>
<td>77 Shirlington – Lyon Park – Court House</td>
<td>221</td>
<td>149</td>
<td>72</td>
</tr>
<tr>
<td>84 Douglas Park – Nauck – Pentagon City</td>
<td>50</td>
<td>50</td>
<td>--</td>
</tr>
<tr>
<td>87 Pentagon Metro – Army Navy Drive - Shirlington</td>
<td>310</td>
<td>238</td>
<td>72</td>
</tr>
</tbody>
</table>

Note: Survey route # recorded by field interviewer.

Survey counts by route and weekend versus weekday were determined by actual ART route ridership. Total sample = 2,905.
Recap of 2008 ART Rider Study
ART 2008 Rider Study Offered Many Insights. The Top Six Are Listed Here.
Recap of Findings From 2008 ART Rider Study

- ART is truly an Arlington County service, providing transit for residents and workers.
- User turnover is high: one-third a year were new riders.
- One half of riders transferred to and from Metro.
- Satisfaction with ART was high (85% top 2 box).
- ART eliminated SOV travel - 10% of ART riders would have otherwise driven alone.
- Driver courteousness was identified as a particular area of opportunity to increase rider interface and satisfaction scores.
Look for signs of operational impact in 2013 data. For example, is ART exceeding expectations on driver courteousness?
Overview Of Analysis Segments
Respondent Segments Used for Analysis

In order to evaluate differences in awareness, perceptions and usage of transportation modes and communication preferences, survey results were analyzed by relevant user segments, as follows:

– Generational Segments
– Gender
– Ethnicity
– Employment Status
– Household Size
– Household Income
– Primary Household Language
– Choice Riders versus Transit Dependent Riders

Note: Segments used for analysis were calculated from demographic survey data as well as rider behavior.

Please refer to Appendix A for comparisons of survey respondent demographics to County census profile and to 2008 survey demographic data.
Q25. In what year were you born?

Respondent Generational Segments

Generations defined as those born:
- Silent: 1945 and earlier
- Boomer: 1946 to 1964
- GenX: 1965 to 1982
- Millennial: 1983 and later

Respondent ages range from 14 to 83, with an average (mean) age of 37, similar to the 2008 mean of 36 years.

- Silent + Boomer: 42% (n = 698)
- GenX: 35% (n = 570)
- Millennial: 23% (n = 374)

4 in 10 ART riders are Millennials, age 30 and younger.

n = 1,642
Q26. Are you:?

- **Male**: 45%  
  - n = 888

- **Female**: 55%  
  - n = 1,083

Slightly more females responded to the survey than males. Note that this mirrors the gender breakout of the 2008 wave.
Q27. Which of the following best describes your ethnic background?

- African/Black: 25% (n = 479)
- Hispanic/Latino: 22% (n = 430)
- Asian: 11% (n = 205)
- White: 32% (n = 623)
- Other: 9% (n = 179)

Results will be analyzed by the ethnicity categories of:
- White
- African/Black
- Hispanic
- Other

One-third (32%) of survey respondents identified their primary ethnic background as Caucasian, compared to 27% in 2008.
Q17. Which of the following best reflects your current employment status?

- Employed full-time: 61%
- Employed part-time: 18%
- Full-time student: 8%
- Looking for work, not currently employed: 4%
- Otherwise not employed: 5%
- Prefer not to answer: 5%

79% of respondents indicated they are currently employed, either full-time or part-time, compared to 78% in 2008.

n = 2,075
Q28. Including yourself, how many live in your household (# Adults 18+/# Children under 18)?

The average household size is three people, with one-quarter of respondents being single and an additional three in ten being part of a couple.
Q29. Which category best describes your household’s total annual income?

Over half of respondents (55%) reported annual household incomes of less than $50,000. Comparatively, 70% of those participating in the 2008 survey wave reported incomes of less than $60,000.

As would be expected, Choice Riders report significantly higher incomes than do Transit Dependent Riders.
Q30. Is English your primary language at home? If no, which language is primary?

- 72% English (n = 1,328)
- 15% Other (n = 278)
- 13% Spanish (n = 242)

Languages in the “Other” category include:
- Amharic (20)
- French (18)
- Arabic (17)
- Bengali (13)
- Mongolian (13)

A total of 575 respondents (20%) elected to complete the survey in Spanish, compared to 700 Spanish completes (32%) in the 2008 wave.

According to 2011 census data, 29% of households in Arlington County speak a language other than English.
Transit Dependent Versus Choice Rider

For analysis purposes in this study, a Transit Dependent Rider is defined by anyone who indicated that one of the reasons they take ART is “I don’t have a driver’s license—it’s my only means of transportation.”

Q4 For what reasons do you take ART buses? Please select all that apply and indicate your one main reason. (Option e. I don’t have a driver’s license – It’s my only means of transportation.)
Demographic Profile of ART Riders
Key Finding

ART serves everyone!
Demographic Profile of ART Riders

*Arlington Transit serves a varied population*

*Based on respondent demographics, ART riders tend to be:*

- Millennials – 30 years and younger
- Either gender
- All ethnic backgrounds
- All household sizes
- Wide range of household incomes
- Mostly employed, with the majority employed full-time
- Predominantly English speaking, but represented by a wide range of nationalities

Please refer to Appendix A for a comparison of ART riders to the 2008 rider survey demographic profile and the census data demographic profile of Arlington County residents.
Art serves all segments of Arlington County residents. Reinforce this point in all stakeholder relations and budget funding discussions.
ART Ridership Behavior by Frequency and Routes
**Key Finding**

**ART riders are loyal. Most riders are frequent users of ART.**

*Even for short distances, they ride multiple times per week, rely on ART for round-trip travel and use multiple routes.*
The Large Majority of Riders Are Regular Riders, Riding At Least Weekly

Q1. How often do you ride ART buses?

- One or more days per week: 86%
- A few times per month, but less than once per week: 4%
- Once per month or less: 9%
- DK/Don't remember: 1%

n = 2,750

Please refer to Appendix B for a complete profile of ART ridership frequency and usage.
Almost Half of ART Riders Are Frequent Riders – 5 or More Times per Week

Q1. How often do you ride ART buses? If one or more days per week, specify number of days.

- 19% (n = 524) 1 or more times per week
- 13% (n = 359) 5 times per week
- 20% (n = 533) More than 5 times per week
- 28% (n = 760) 1 to 4 times per week
- 20% (n = 545) 6+ days per week
- 13% (n = 359) 1 or more times per week unspecified
- 13% (n = 359) 1 or more times per week unspecified

Note that 20% of respondents selected that they ride ART “One or more days per week”, but did not indicate the actual number of days they ride.

Among those riding weekly and specifying number of days per week (n = 1,829):
- 1-4 days = 30%
- 5 days = 42%
- 6+ days = 28%

n = 2,721
Almost 2 in 10 ART Riders Who Specified Frequency Ride Every Day of the Week

Note that riding frequency has increased: 71% ride five or more days per week, compared to 58% in 2008.

71% ride ART five or more days a week compared with 58% in 2008.

n = 1,829

Note: 1,829 of the 2,362 respondents who indicated they ride ART one or more days per week specified the number of days.
Arlington Transit Serves Everyone

Frequent Riders Have Varying Profiles

<table>
<thead>
<tr>
<th></th>
<th>Commuters</th>
<th>Daily Riders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ride Frequency</strong></td>
<td>5 x per Week</td>
<td>6 – 7 x per Week</td>
</tr>
<tr>
<td><strong>Primary Language</strong></td>
<td>English</td>
<td>Spanish</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td>Non Hispanic</td>
<td>Hispanic</td>
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<tr>
<td></td>
<td>Non Black</td>
<td></td>
</tr>
<tr>
<td><strong>Income Bracket</strong></td>
<td>Mid to High $50K +</td>
<td>Low to Mid &lt; $50K</td>
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<td><strong>Employment</strong></td>
<td>Full-time</td>
<td>Part-time or Not</td>
</tr>
<tr>
<td><strong>Type of Transit Rider</strong></td>
<td>Choice: Access to Personal Vehicle</td>
<td>Transit Dependent: No Access to Personal Vehicle</td>
</tr>
</tbody>
</table>

Q1. How often do you ride ART buses? If one or more days per week, specify number of days.

Please refer to Appendix B for a complete demographic profile of ART ridership frequency.

Commuters are defined as regular riders riding 5 days per week. Daily Riders are defined as regular riders riding more than 5 days per week.

n = 768 Commuters

n = 530 Daily Riders
Over Half of ART Riders Travel Five or Fewer Miles to Their Destinations

Among those travelling to school or work, average travel distance is nine miles.

Minimum = 1 mile

Maximum = 100 miles

7% of ART respondents (48 riders) indicated their travel distance was more than 20 miles each way to school or work.

Q18. About how many miles is it from your home to your work or school (one-way)?

n = 709

- 3 miles or less: 28%
- 4 - 5 miles: 29%
- 6 - 10 miles: 25%
- More than 10 miles: 19%
- More than 20 miles each way: 7%

Southeastern Institute of Research
The Majority of Riders Use ART for Round-Trip Travel

n = 2,151

Q13. Is the trip you are on now part of a round-trip?

Yes, I made this same trip in reverse earlier today: 37%
Yes, I plan to make this same trip in reverse later today: 35%
No, this is a one-way trip: 28%

72% of respondents were interviewed during round-trip travel on ART.
On Average, ART Riders Ride Two or More Routes Regularly

Q2. What routes do you regularly use? (Choose as many as apply).

Half of all riders utilize Route 41 Columbia Pike – Ballston – Court House

Routes listed in order of reported ridership.

Please refer to Appendix C for a complete demographic profile of ART ridership by routes.

n = 2,846
Focus promotional activities on getting people to “Try ART.” Once people have the “ART experience,” most become a regular and frequent user.
Reasons People Ride ART
Arlington Transit is a convenient and easy way to travel, regardless of trip purpose.
Most Riders Use ART to Get to Work, Many Also Use ART for Other Trip Types

Q3. For what types of trips do you ride the bus? And what is the purpose of this trip?

- Going to work: 78% (All Trips), 59% (This Trip)
- Shopping: 44% (All Trips), 15% (This Trip)
- Running errands: 41% (All Trips), 19% (This Trip)
- Dining/entertainment: 34% (All Trips), 16% (This Trip)
- Medical appointments: 33% (All Trips), 13% (This Trip)
- Going to school: 23% (All Trips), 11% (This Trip)
- Going to church: 16% (All Trips), 6% (This Trip)

Most respondents reported using ART for three or more types of trips.

The majority of riders were on their way to, or from, work when surveyed.

Please refer to Appendix D for a complete demographic profile of riders by trip purpose.
While Less Than Transit Dependents, Choice Riders Use ART for Other (Non-Work) Trips, Too

Q3. For what types of trips do you ride the bus? And what is the purpose of this trip?

- **Going to work**:
  - Transit Dependents: 71%
  - Choice Riders: 74%

- **Shopping**:
  - Transit Dependents: 32%
  - Choice Riders: 60%

- **Running errands**:
  - Transit Dependents: 55%
  - Choice Riders: 30%

- **Dining/entertainment**:
  - Transit Dependents: 45%
  - Choice Riders: 26%

- **Medical appointments**:
  - Transit Dependents: 48%
  - Choice Riders: 22%

- **Going to school**:
  - Transit Dependents: 33%
  - Choice Riders: 11%

- **Going to church**:
  - Transit Dependents: 6%
  - Choice Riders: 27%

While Choice Riders are as likely as Transit Dependent Riders to utilize ART to or from work, they are significantly less likely to ride the bus for other trips and errands.
Arlington Transit is Convenient and Easy to Use

Q4. For what reasons do you ride ART buses? Please select all that apply and indicate your one main reason.

- It's convenient: 75%
- It's easy to use: 70%
- It's affordable: 56%
- It's reliable: 53%
- It's good for the environment: 36%
- It eliminates the need to park: 35%
- It's my only means of transportation: 34%
- I can use commute time productively: 26%
- It's quicker than driving: 23%
- Other: 9%

On average ART riders have more than four separate reasons for riding the bus. “Other” responses include necessity (no car), convenience and cost efficiency.

One-third of ART riders indicated they do not have access to a car, and are considered to be Transit Dependent Riders.

n = 2,905
Choice Riders Select ART Over Other Travel Options For Convenience

Q4. For what reasons do you ride ART buses? Please select all that apply and indicate your one main reason.

Choice Riders are most likely to ride ART for the convenience, and are as likely as Transit Dependent Riders to consider ART to be a good option for that reason.

- It's convenient
- It's easy to use
- It's affordable
- It's reliable
- It's good for the environment
- It eliminates the need to park
- I can use commute time productively
- It's quicker than driving

n = 984
Transit Dependents

n = 1,921
Choice Riders

22% of Choice Riders consider convenience to be the one main reason they elect to use Arlington Transit.
Among those indicating a main reason for taking ART, 4 in 10 cited the convenience, which includes proximity to stops and route schedules.

Of the total sample, 22% of Choice Riders, compared to 8% of Transit Dependents, cited convenience as their main reason.

Q4. For what reasons do you ride ART buses? Please select all that apply and indicate your one main reason.

- It's convenient: 41%
- It's my only means of transportation: 16%
- It's affordable: 9%
- It eliminates the need to park: 8%
- It's reliable: 7%
- It's easy to use: 6%
- It's good for the environment: 3%
- I can use commute time productively: 2%
- It's quicker than driving: 2%
- Other: 7%

n = 1,148
Look for opportunities to increase ridership among Choice Riders - they are already riding ART to work, but not as much as Transit Dependents for other trips. Increase trial of ART by selling (reinforcing) just how convenient and easy to use current riders find the service.

Implication
Alternate Modes of Transportation
Key Finding

ART riders have numerous other options, yet show a preference for bus travel, utilizing ART over Metrobus. Walking plays a big role in ART usage - to and from stops as part of their ART experience or as an alternative to ART.
Almost all ART Riders Have Travel Options

Only A Few Would Not Have Made Their Trip if ART Were Unavailable

Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply).

- Metrobus: 41%
- Walk: 28%
- Taxi: 22%
- Metrorail: 18%
- Driven alone: 13%
- Would not have made the trip: 7%
- Bicycle: 5%
- Carpool: 4%
- Capital Bikeshare: 2%
- Other: 3%

If ART had been unavailable, rider preference would be to take another bus.

n = 2,364

“Other” responses include:
- Ride from a friend or family member: 18 mentions
- Shuttle service, including Pentagon or Department of Defense service: 11 mentions

Please refer to Appendix F for rider profiles by alternate mode preferences.
ART Makes a Significant Difference in Eliminating SOV Travel

<table>
<thead>
<tr>
<th>Description</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly average of ART Riders</td>
<td>53,703</td>
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<tr>
<td>Would have driven alone if ART unavailable*</td>
<td>13%</td>
</tr>
<tr>
<td>Weekly SOV trips eliminated</td>
<td>6,981</td>
</tr>
</tbody>
</table>

*Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply). 13% responded “Driven Alone”.

Note: ART Ridership figures for May, 2013

| Average Weekday Riders                           | 9,512         |
| Average Saturday Riders                          | 3,979         |
| Average Sunday Riders                            | 2,164         |

n = 2,364
Choice Riders Are as Likely as Transit Dependents to Take Another Bus or Walk

Choice Riders are significantly more likely than Transit Dependents to take Metrorail, while Transit Dependents are more likely to hail a cab as an alternative had ART been unavailable.

Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply.)

- Metrobus
- Walk
- Taxi
- Metrorail
- Would not have made this trip
- Bicycle
- Carpool
- Capital Bikeshare

n = 984
Transit Dependents

n = 1,921
Choice Riders
Most Riders Walk to and From Their ART Bus Stops

- **Walk**: 73% (To Stop)
- **Transfer from/to Metrorail**: 14% (To Stop), 17% (From Stop)
- **Transfer from/to Another Bus**: 14% (To Stop), 11% (From Stop)
- **Dropped Of/Picked Up**: 3% (To Stop), 2% (From Stop)
- **Drive Self**: 1% (To Stop), 1% (From Stop)
- **Other**: 1% (To Stop), 1% (From Stop)

Choice Riders are more likely to utilize Metrorail as part of their trip, while Transit Dependents are more likely to transfer to or from another bus.

In 2008, 30% of respondents said they were transferring to or from the Metrorail.

Q10. How did you get to the bus stop today where you got on this bus. (Choose as many as apply)?
Q12. When you get off this bus, how will you get to your final destination?
Implication

Continue ongoing “rider convenience” assessment of routes/stops, as a strong majority of riders incorporate walking into their ART experiences (or as a possible alternative to ART).
Overall Satisfaction With ART
Everyone loves ART! Almost everyone who rides ART is satisfied with their overall experience and many think it is better than other transit options available to them.
Almost all ART Riders Are Satisfied With Their Overall Experience

Q6. How satisfied are you overall with your experience with ART? Please use a scale of 1 to 5, where “1” means you are “Not at all satisfied” and “5” means that you are “Very satisfied”?

90% of ART riders are satisfied with their overall experience: 63% are very satisfied.

Overall satisfaction with ART is consistent by demographic markers and by frequency of ART use.

91% of Choice Riders and 90% of Transit Dependent Riders are satisfied with their overall ART experiences (rating of 4 or 5).

n = 2,334
Almost all ART Riders Are Satisfied With Their Overall Experience

Q6. How satisfied are you overall with your experience with ART? Please use a scale of 1 to 5, where “1” means you are “Not at all satisfied” and “5” means that you are “Very satisfied”?

Satisfied with their overall ART experiences (rating of 4 or 5).

| Choice Riders | 91% |
| Transit Dependent Riders | 90% |

n = 2,334
Overall Satisfaction With ART Has Increased Since 2008

Satisfaction is consistently high, regardless of routes typically ridden.

Q6. How satisfied are you overall with your experience with ART? Please use a scale of 1 to 5, where “1” means you are “Not at all satisfied” and “5” means that you are “Very satisfied”.

- 5 - Very satisfied
- 4
- 3
- 2
- 1 - Not at all satisfied

- 2008 = 85%
- 2013 = 90%

n = 2,334
2013

n = 1,616
2008
Few Riders Consider Other Transit Options To Be Better Than ART

Q5. Overall, and considering service, ride, tools, apps and resources, how does ART compare to other transit services?

- ART is better
- Both the same
- Other is better
- Don't Know

191 ART riders surveyed think ART is better than any other transit option.

Those who think other options are better than ART:
- Metrobus – 4%
- Metrorail – 13%
- Other – 3%

n = varies

2,449
Metrobus
1,745
Metrorail
1,346
Other

60% of Transit Dependent Riders, compared with 52% of Choice Riders, think ART is better than Metrobus.

14% of Choice Riders, compared with 10% of Transit Dependent Riders, think Metrorail is better than ART.
ART riders are advocates of the brand. Not only are ART riders satisfied with their experiences, most are likely to show their satisfaction with ART in a concrete way, by recommending it to others.
Riders Are Highly Likely to Recommend ART to Others

The average (mean) rating of likelihood to recommend ART is 8.53 on a 10 point scale.

Q7. How likely are you to recommend ART for travel around Arlington? Please use a scale of 0 to 10, where “0” means you are “Not at all likely” and 10 means you are “Very likely”.

n = 2,254
Net Promoter Score® Calculation

• Take the percentage of members who are promoters (those who are highly likely to recommend your company or products), and subtract the percentage who are detractors (those who are less likely to recommend your company or products).

• Promoters = 9-10 score
• Detractors = 0-6 score

\[
\text{% of Promoters} \quad \text{Less} \quad \text{% of Detractors} = \quad \text{Net Promoter Score (NPS®)}
\]
Riders Give Arlington Transit a Net Promoter Score™ of 50%

Percentage of Promoters
(Rating 9 or 10) 64%

Percentage of Detractors
(Rating 0 to 6) 14%

Net Promoter Score™ 50%

NPS scores are comparable across most typical routes ridden.

Note: 2008 NPS score of 85% inflated due to different data collection method.

NPS by Rider Segment:
Choice Rider 51%
Transit Dependent 50%

n = 2,254
ART’s Net Promoter Score Performs Fairly Well Compared to Some Other Commuter Service Organizations…
But, Still, Offers Room for Improvement

<table>
<thead>
<tr>
<th>2013 ART</th>
<th>Arlington County</th>
<th>RideFinders</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 CommtuerDirect.com (Corporate)</td>
<td>96%</td>
<td>2012 Emergency Ride Home</td>
</tr>
<tr>
<td>2007 CommtuerDirect.com (Individual)</td>
<td>82%</td>
<td>2012 Commuter Store</td>
</tr>
<tr>
<td>2007 The Commuter Stores™</td>
<td>72%</td>
<td>2012 Website</td>
</tr>
<tr>
<td>2007 ATP Services</td>
<td>61%</td>
<td></td>
</tr>
<tr>
<td>2011 BikeArlington</td>
<td>58%</td>
<td></td>
</tr>
<tr>
<td>2011 WalkArlington</td>
<td>49%</td>
<td></td>
</tr>
<tr>
<td>2008 ART</td>
<td>85%</td>
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</tbody>
</table>

NPS scores are comparable across most typical routes ridden.

Note: 2008 NPS score of 85% inflated due to different data collection method.
Celebrate your success and promote the fact that riders consistently rate ART highly and are prone to recommend the service to others. Consider a “refer a friend” promotional campaign and offer incentives to do so (on the less crowded routes).
Performance on Critical Factors
Timing and scheduling of routes and reliability of service are critical to rider satisfaction.
Numerous Factors Are Important When Selecting a Preferred Travel Mode

Comparison of importance on the 2008 ART study:
- Bus is reliable 89%
- Bus runs on time 89%
- Route is direct 86%
- Wait time is short 85%
- Enough seating 80%
- Driver is courteous 77%

n = varies

Q19. How important are each of the following attributes when riding the bus? Please use a scale of 1 to 5, where “1” is “Not at all important” and “5” is “Very important.” Note: Asked on Version B only.
ART Receives High Ratings From Riders for Attribute Performance

Q20. Based on your experience, how would you rate ART on each of these attributes? Please use a scale of 1 to 5, where “1” is “Very poor” and “5” is “Excellent”. Note: Asked on Version B only.

Comparison of performance on the 2008 ART study:

- Route is direct: 87%
- Bus is reliable: 80%
- Driver is courteous: 78%
- Enough seating: 77%
- Bus runs on time: 72%
- Wait time is short: 69%

n = varies
ART Generally Performs Highly Although There Are a Few Shortcomings

Q19. How important are each of the following attributes when riding the bus? Please use a scale of 1 to 5, where “1” is “Not at all important” and “5” is “Very important.”

Q20. Based on your experience, how would you rate ART on each of these attributes? Please use a scale of 1 to 5, where “1” is “Very poor” and “5” is “Excellent”.

Note: Critical factors ordered by importance.

ART has opportunities to improve service delivery on the most important factors, while they are over-delivering on other factors that, because of high performance perceptions, are non-issues for riders.

n = varies

Note: Asked on Version B only.
Riders Aspire to ART Improving On-Time and Reliable Service

Universally, ART riders have high expectations for on-time and reliable service.

Choice Riders are more concerned than average with short wait times and convenient routes, while Transit Dependent Riders are more concerned than average with accessible stops and adequate on-board seating.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Importance Rating</th>
<th>Performance Rating</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>The bus is reliable/runs on time</td>
<td>90%</td>
<td>77%</td>
<td>-13%</td>
</tr>
<tr>
<td>My wait time is short</td>
<td>88%</td>
<td>68%</td>
<td>-20%</td>
</tr>
<tr>
<td>The bus runs when I need it</td>
<td>85%</td>
<td>75%</td>
<td>-10%</td>
</tr>
<tr>
<td>The route is direct</td>
<td>83%</td>
<td>84%</td>
<td>+1%</td>
</tr>
<tr>
<td>The driver is courteous</td>
<td>80%</td>
<td>82%</td>
<td>+2%</td>
</tr>
<tr>
<td>The bus stop is accessible</td>
<td>76%</td>
<td>88%</td>
<td>+12%</td>
</tr>
<tr>
<td>There are enough seats on the bus</td>
<td>64%</td>
<td>81%</td>
<td>+17%</td>
</tr>
<tr>
<td>The bus pulls close to the curb</td>
<td>56%</td>
<td>80%</td>
<td>+24%</td>
</tr>
</tbody>
</table>

Q19. How important are each of the following attributes when riding the bus? Please use a scale of 1 to 5, where “1” is “Not at all important” and “5” is “Very important.”

Q20. Based on your experience, how would you rate ART on each of these attributes? Please use a scale of 1 to 5, where “1” is “Very poor” and “5” is “Excellent”. Note: Asked on Version B only.
In Order to Gather Insight Into Performance Expectations, Two Open-Ended Questions Were Asked

Q21. Specifically, why did you give the driver the rating you did for courteousness? (positive and negative responses recorded)

Q22. Are there any specific reasons that the bus schedule does not meet your needs?
Over Half of Respondents Rating Driver Courteousness Shared Specific Reasons for Their Positive Perceptions

Drivers are complimented for consistently:
- Smiling
- Greeting riders
- Answering questions
- Being friendly
- General politeness

Q21. Specifically, why did you give the driver the rating you did for courteousness? Note: Asked on Version B only.

n = 462
Among those giving a 4 or 5 rating in Q20
Very Few Respondents Cited Specific Criticisms of ART Drivers

Criticisms were stated as being rare:

- Driving too fast and aggressively
- Honking
- Being rude and mean to riders

Q21. Specifically, why did you give the driver the rating you did for courteousness? Note: Asked on Version B only.

n = 24

Among those giving a 1 or 2 rating in Q20
Riders Would Ideally Like to See Expanded Service, In Terms of Extended Hours and Frequency

Specific suggestions for improving service to better meet rider needs include:

- Better weekend (Sunday) service
- Later routes
- More frequent service
- Timeliness (both lateness and early departures are problematic)

Q22. Are there any specific reasons that the bus schedule does not meet your needs? Note: Asked on Version B only.

n = 449
This map helps illustrate how drivers of satisfaction and perceived performance on attributes can highlight ART strengths and opportunities.

**An Opportunity Map Illustrates the Areas of Growth Opportunity**

- **GROWTH OPPORTUNITY**
  - **Opportunities for improvement**
    - Continue to invest and develop to build strength

- **BUILD AND MAINTAIN**
  - **SAVE RESOURCES**
    - Should not invest resources here
  - **RESERVE STRENGTH**
    - A reserve that can “protect”

**Importance**

**Performance**
While ART scores highly on all attributes, if attention is to be given to any particular areas, they would be improving the actual (or perceived) wait time, increasing the reliability of bus timeliness and assuring that bus routes are scheduled during the most needed times.
Areas of Opportunity Revolve Around Timing and Scheduling

**GROWTH OPPORTUNITY**
- Shortening wait time (or the perception of wait time)
- Matching routes with travel needs (particularly weekends and late evenings)
- Improving the reliability of on-time service (late buses and early departures are problematic)

**BUILD AND MAINTAIN**
- Offering direct routes, so that riders do not need to transfer to get to their destinations
- Hiring and training for driver courtesy

**SAVE RESOURCES**
- No attributes were identified as lacking in performance and being relatively unimportant

**RESERVE STRENGTH**
- Planning/designing accessible bus stops
- Scheduling routes and timing (particularly rush hour) for adequate seating
- Training drivers to pull close to the curb for easy embarkment/dismembarkment

Note that ART scored highly (80% or higher giving a performance rating of 4 or 5) on all attributes. Identified opportunities are those attributes where performance scores fall below average as compared to other performance measures.
Statistical regression analysis models data to explore and identify any linkages between how people rated overall measures (satisfaction) to specific performance variables (i.e., wait time). This process looks for relationships or predictors where a higher rating on an attribute positively or negatively impacts the overall rating.
Reading Regression Analysis

The closer you get to 1.0 the greater the correlation
Overall Satisfaction is Most Closely Correlated With Direct Routes, Minimizing Transfers

The closer to one (either positive or negative) the coefficient rating, the better predictor it is of impacting satisfaction.

In the 2008 wave, significant drivers of satisfaction included:

- Driver is courteous (.257)
- Wait time is short (.181)

Please note:
Includes only those respondents for Version B, who answered Q19 and Q.20

Q6. How satisfied are you overall with your experience with ART? Please use a scale of 1 to 5, where “1” means you are “Not at all satisfied” and “5” means that you are “Very satisfied”?
Implication

Keep up the good work of hiring and training customer service focused transit operators – they are the face of the brand and are well positioned to make the ART experience an easy one.
Drive satisfaction by focusing on what riders perceive is important. Remember why people ride ART - for its convenience and ease of use. Redouble your efforts on route planning - to ensure bus stops and routes are as direct, accessible and convenient as possible. Promote schedules and reliability to help showcase and demonstrate convenience.
Service Use and Communication Preferences
ART riders actively seek information. Few riders rely on one single form of information about pertinent changes to routes and schedules, but information en route, at stops and on buses is critical.

When not in transit, riders, particularly Choice Riders, seek information using the latest technology.
Most People Rely on Information While They Are En Route

Q14. How do you want to learn about upcoming ART service and route changes? Choose as many as apply.

- Signs on the bus: 59%
- Signs at the bus stop: 49%
- ArlingtonTransit.com: 36%
- ART alerts via text or email: 19%
- ART Forum newsletter: 8%
- Commuter stores: 6%
- Other: 5%

While all riders look for information at stops and on-board buses, Choice Riders are more likely than their Transit Dependent Rider counterparts to also refer to technology based information sources.

n = 2,132

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As might be expected, Choice Riders are more likely than their Transit Dependent counterparts to have the tools that enable them to utilize technology-based information about ART service and route changes.

Fewer than 1 in 10 riders have no technology access.


n = 2,058
Most Riders Pay, and Prefer to Pay, Their Fares With a SmarTrip Card

Q16. How did you pay for this bus fare today? And how do you prefer to pay for bus fares?

“Other” fare options include:
- Free passes from residential communities (Avalon specifically mentioned) 25 mentions
- Free fare with work ID (VHC specifically mentioned) 12 mentions

n = 1,198 Prefer to Pay
n = 2,046 Paid today

Lower income riders are significantly more likely than others to pay for their fare with cash, while higher income riders and Choice Riders are most likely to use a SmarTrip card.
Continue to communicate practical information about routes and schedules at the point of service – at transit stops and on-board, and utilize technology-based methods for more esoteric messages that will appeal to Choice Riders.

Look for ways to minimize barriers (such as initial cost and purchase requirements) to SmarTrip use, particularly for Transit Dependent riders.
Awareness of Transportation Services
Opportunities abound to increase awareness of ACCS services.

Riders, even those who report visiting the ART website, are somewhat unaware of the transportation information and assistance options available to them.
Q23. Following is a list of services that provide transportation information and assistance in Arlington. For each, select if 1) you have used this service, 2) you have not used it but are aware of it or 3) you are not aware of this service. Note: Asked on Version B only.

While no statistical significances exist between the two rider segments, Choice Riders do generally tend to be less aware of transportation services in the County than do their Transit Dependent Rider counterparts.

Continues to next slide

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2008 survey:
- Metro: 67% used + 17% aware
- Commuter Store: 33% used + 32% aware
- ACCS: 32% used + 31% aware
- Commuter Page: 18% used + 34% aware
- VRE: 15% used + 47% aware

n = varies
Q23. Following is a list of services that provide transportation information and assistance in Arlington. For each, select if 1) you have used this service, 2) you have not used it but are aware of it or 3) you are not aware of this service. Note: Asked on Version B only.

- **BikeArlington**: 12% used + 39% aware
- **Commuter Connections**: 11% used + 35% aware
- **CommuterDirect**: 7% used + 35% aware
- **Car-Free Diet**: 8% used + 39% aware
- **WalkArlington**: 9% used + 35% aware

2008 survey:
- **CaBi**: Not asked

*Continued from previous slide*
Recall that almost all ART riders (91%) have access to technology, either through smartphones and/or through PC based Internet.

Over One-Third of Riders Rely on the ART Website for Information

Q14. How do you want to learn about upcoming ART service and route changes?

- 36% www.ArlingtonTransit.com
ART - Arlington Transit

ART - Arlington Transit operates within Arlington County, Virginia, supplementing Metrobus with cross-County routes as well as neighborhood connections to Metrorail. Most of ART's state-of-the ART buses operate on clean-burning natural gas; all have climate control to keep you comfortable and dependable schedules to keep you on time.

ART to Run Holiday Service on Monday, October 14

ART will run holiday service on Monday, October 14, in observance of Columbus Day. ART 41, 42, 51, 77 and 87 will operate on Saturday schedules. All other ART routes will not operate.

Learn more.

ART RealTime

Find out when the next ART bus will arrive at your stop. Either enter in the RealTime number (found on the bus flag) or select your route and stop. ART RealTime is also available for your smartphone as part of CommuterPage.com Mobile Services.
Yet, relatively few are aware of the ACCS Family of Services.
Use of the ART Website Does Not Lift Familiarity With ACCS Services

Familiarity and use of ACCS services is comparable regardless of whether one uses the ART website or not.

- **ACCS**: 41%
- **Commuter Direct**: 58%
- **WALKArlington**: 57%
- **Commuter Page**: 54%
- **Commuter Connections**: 50%
- **Car-Free Diet**: 50%
- **Bike Arlingon**: 41%
- **Commuter Stores**: 30%
- **Capital Bikeshare**: 24%

n = varies
Implication

Explore ways for better linkages of ACCS’ and ART’s service-oriented brands to reinforce Arlington County’s full array of transportation services.
While there are opportunities to increase awareness of Arlington Transit’s services, those who have used them tend to be satisfied.
Those Who Have Used ART Services Tend To Be Satisfied With Them

As shown by the yellow bars: Few who have used ART services are not satisfied

Q24. Following is a list of services specific to Arlington Transit (ART). For each, select 1) if you have used the service and are satisfied 2) have used the service and are not satisfied 3) you have not used the service but are aware of it, or 4) you are not aware of the service. Note: Asked on Version B only.

n = varies
There are opportunities to promote ART consumer services, particularly ART Forum and ART alerts.

Q24. Following is a list of services specific to Arlington Transit (ART). For each, select 1) if you have used the service and are satisfied 2) have used the service and are not satisfied 3) you have not used the service but are aware of it, or 4) you are not aware of the service. Note: Asked on Version B only.

- 703-228-RIDE:
  - Used/Satisfied: 27%
  - Used/Not Satisfied: 34%
  - Aware/Not Used: 28%
  - Not Aware: 10%

- ART Alerts:
  - Used/Satisfied: 24%
  - Used/Not Satisfied: 36%
  - Aware/Not Used: 35%
  - Not Aware: 5%

- Bike Rack:
  - Used/Satisfied: 18%
  - Used/Not Satisfied: 15%
  - Aware/Not Used: 63%
  - Not Aware: 5%

- ART Forum:
  - Used/Satisfied: 32%
  - Used/Not Satisfied: 11%
  - Aware/Not Used: 52%
  - Not Aware: 5%

Of note, Choice Riders are significantly more likely than Transit Dependent Riders to not only be aware of Bike Racks on the bus, but also to use them.
More aggressively promote, through consistent messaging, the ART-related transportation info services available to riders.
ART Rider Travel Patterns and Recent Changes
Among those travelling to school or work, average travel distance is nine miles.

Minimum = 1 mile

Maximum = 100 miles

7% of ART respondents indicated their travel distance. 48 riders travel more than 20 miles each way to school or work.

Q18. About how many miles is it from your home to your work or school (one-way)?

- 3 miles or less: 28%
- 4 - 5 miles: 29%
- 6 - 10 miles: 25%
- More than 10 miles: 19%

Among those travelling to school or work, average travel distance is nine miles.
Minimum = 1 mile
Maximum = 100 miles
7% of ART respondents indicated their travel distance. 48 riders travel more than 20 miles each way to school or work.
Weekly Commute Trips

ART riders use ART as their primary mode for 48% of their weekly commute trips; they make another 35% by other transit options.

83% of weekly commute trips made by some form of transit: ART, other bus, or train.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART bus</td>
<td>48%</td>
</tr>
<tr>
<td>Metrorail, commuter rail</td>
<td>21%</td>
</tr>
<tr>
<td>Metrobus, other bus</td>
<td>14%</td>
</tr>
<tr>
<td>Drive alone</td>
<td>8%</td>
</tr>
<tr>
<td>Carpool/vanpool</td>
<td>5%</td>
</tr>
<tr>
<td>Bike/walk</td>
<td>3%</td>
</tr>
<tr>
<td>Telework</td>
<td>1%</td>
</tr>
</tbody>
</table>

Q19. In a typical week, what type of transportation do you use each day, for the longest distance of your trip to work or school?
51% of ART riders use ART for the longest distance part of their commute trip at least one day per week.

Q19. In a typical week, what type of transportation do you use each day, for the longest distance of your trip to go to work or school?

- 49% use ART at least one day per week as their “longest distance” mode
- 11% use ART on 1 or 2 days
- 8% use ART on 3 or 4 days
- 32% use ART on 5 or more days

Note: Asked on Version A only
Additional 197 eligible respondents left this question blank
Use of ART as the Primary Commute Mode is Statistically the Same Across Age Groups

Q19. In a typical week, what type of transportation do you use each day, for the longest distance of your trip to go TO work or school?

Men and women also show a similar pattern of ART use for commuting:

- Men – 48% of weekly trips
- Women – 48% of weekly trips

<table>
<thead>
<tr>
<th>Age Group</th>
<th>ART Use (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 25 years</td>
<td>53%</td>
</tr>
<tr>
<td>25 - 34 years</td>
<td>46%</td>
</tr>
<tr>
<td>35 - 44 years</td>
<td>44%</td>
</tr>
<tr>
<td>45 - 54 years</td>
<td>51%</td>
</tr>
<tr>
<td>55 years or more</td>
<td>47%</td>
</tr>
</tbody>
</table>

Note: Asked on version A only
Hispanic Riders Have the Highest Use of ART as Primary Commute Mode

But overall transit ridership is similar across groups

<table>
<thead>
<tr>
<th>Group</th>
<th>ART bus</th>
<th>Other transit</th>
<th>Total transit %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>62%</td>
<td>25%</td>
<td>87%</td>
</tr>
<tr>
<td>Asian</td>
<td>50%</td>
<td>36%</td>
<td>86%</td>
</tr>
<tr>
<td>African-American</td>
<td>48%</td>
<td>40%</td>
<td>88%</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>41%</td>
<td>43%</td>
<td>84%</td>
</tr>
</tbody>
</table>

Q19. In a typical week, what type of transportation do you use each day, for the longest distance of your trip to go TO work or school?
Primary Use of ART for Commuting is Highest Among **Lower Income** Riders

Q19. In a typical week, what type of transportation do you use each day, for the longest distance of your trip to go TO work or school?

- **Total transit %**
  - Less than $35,000: 57% ART bus, 30% Other transit, 87% total
  - $35,000 - $49,999: 48% ART bus, 41% Other transit, 89% total
  - $50,000 - $74,999: 43% ART bus, 40% Other transit, 84% total
  - $75,000 - $124,999: 44% ART bus, 38% Other transit, 82% total
  - $125,000 or more: 38% ART bus, 47% Other transit, 85% total

Percentage of weekly commute trips

- ART bus
- Other transit

**Note:**
- < $35,000, n = 203
- $35,000 - $49,999, n = 56
- $50,000 - $74,999, n = 92
- $75,000 - $124,999, n = 108
- $125,000 or more, n = 86
Alternate Modes of Transportation

If ART was not available for this trip, 41% might have used Metrobus and 28% might have walked – only 13% would have driven.

Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply).

- Metrobus: 41%
- Walk: 28%
- Taxi: 22%
- Metrorail: 18%
- Driven alone: 13%
- Would not have made the trip: 7%
- Bicycle: 5%
- Carpool: 4%
- Capital Bikeshare: 2%
- Other: 3%

Respondents whose trip was for commuting were slightly more likely to say they would have driven:

- Work trip – 15%
- Non-work – 11%

n = 2,364
Multiple responses permitted

"Other" responses:
- Ride from a friend or family member: 18 mentions
- Shuttle service, including Pentagon or DOD service: 11 mentions
Only shows statistically different results as determined by calculated ChiSquare.

“All Reasons” reported (Multiple response allowed).

n = as shown in table

Metrobus. 41% of riders (n = 977)
Comparatively, these riders tend to be:

- Female
- Employed full-time
- African America or Asian (and least likely to be Hispanic)
- Regular, five times per week, ART riders (and least likely to be those ridding ART less than once per week)

Walk. 28% of riders (n = 660)
Comparatively, these riders tend to be:

- Older (Silent and Boomer), (and least likely to be GenX)

Taxi. 22% of riders (n = 530)
Comparatively, these riders tend to be:

- Younger (Millennial), and likelihood decreases incrementally as age increases
- Employed full-time

Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply).
Southeastern Institute of Research

Only shows statistically different results as determined by calculated ChiSquare.

“All Reasons” reported (Multiple response allowed).

n = as shown in table

Metrorail. 18% of riders (n = 432)
Comparatively, these riders tend to be:

- Employed full-time
- Female

Driven alone. 13% of riders (n = 308)
Comparatively, these riders tend to be:

- Higher incomes (likelihood increases incrementally as does income)
- Employed full-time
- White or Asian (and least likely to be Hispanic)
- Regular, five times per week ART riders (and least likely to be riding ART more than five times per week, an indication of transit dependency)

Would not have made the trip. 7% of riders (n = 167)
Comparatively, these riders tend to be:

- Generations other than GenX
- Lower income (less than $25,000)
- Not employed full-time

Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply).
Bicycle. 5% of riders (n = 115)  
Comparatively, these riders tend to be:  
- Male  
- Employed full-time

Carpool. 4% of riders (n = 93)  
Comparatively, these riders tend to be:  
- No significant differences in response by demographic or transit use segments

Capital Bikeshare. 2% of riders (n = 46)  
Comparatively, these riders tend to be:  
- No significant differences in response by demographic or transit use segments

Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply).
Analysis of Recent Mode Change

The survey included several questions related to changes riders might have made in their commute and non-work travel patterns in the past year:

- New/increased use of alternative modes for commute
- Commute modes used prior to making the change
- Change in weekly transit commute trips in past year

- New/increased use of transit modes for non-work trips
- Change in weekly transit non-work trips in past year
69% of Riders said they Started or Increased Use of an Alternative Mode for **Commuting** in the Past Year

- Started / increased ART bus: 55%
- Started / increased Metrobus, other bus: 23%
- Started / increased Metrorail, other train: 19%
- Started / increased bike or walk: 10%
- Started / increased carpool or vanpool: 5%
- Started / increased telework: 2%
- No changes: 31%

Q20. In the past year, have you **started using or increased how often you use** any of the following types of transportation to go to or from work/school? Note: Asked on Version A only.

Riders who said they made a commute change were asked to report on their commute mode for the time before the change – **Current and Previous modes were then compared to estimate actual changes**

n = 999
Multiple responses permitted
Riders Who Said they Made a Commute Change and Provided Current and Previous Mode Details: 59% Actually Made a Change

- Increased ART bus: 36% Reported, 81% Actual
- Increased Metrobus, other bus: 14% Reported, 34% Actual
- Increased Metrorail, other train: 18% Reported, 30% Actual
- Increased bike / walk: 4% Reported, 15% Actual
- Increased carpool/vanpool: 6% Reported, 6% Actual
- No changes: 0% Reported, 41% Actual

Some changes might have been temporary. It’s also likely some changes were for “access modes” rather than primary modes.

Q20. In the past year, have you started using or increased how often you use any of the following types of transportation to go to or from work/school?

Q21. Before you made this change, how many days in a typical week did you use each of the following types of transportation to go to or from work or school? Note: Asked on Version A only.
Comparison of Current vs Previous Mode for These Riders Shows a Net Increase in ART and Other Transit Modes

ART bus
- Previous mode: 29%
- Current mode: 29%
- Increase: 20%

Metrorail, commuter rail
- Previous mode: 18%
- Current mode: 26%
- Increase: 8%

Metrobus, other bus
- Previous mode: 5%
- Current mode: 15%
- Increase: 10%

Drive alone
- Previous mode: 31%
- Current mode: 42%
- Increase: 11%

Carpool/vanpool
- Previous mode: 7%
- Current mode: 7%
- Increase: 0%

Bike/walk
- Previous mode: 8%
- Current mode: 5%
- Decrease: 3%

Telework
- Previous mode: 2%
- Current mode: 1%
- Decrease: 1%

Q19. In a typical week, what type of transportation do you use each day, for the longest distance of your trip to go to work or school?

Q21. Before you made this change, how many days in a typical week did you use each of the following types of transportation to go to or from work or school? Note: Asked on Version A only.
Overall 40% of Riders Increased Their Use of Alt Modes for Commuting in the Past Year;

18% made their “most significant change” to ART bus and an equal share increased “other” transit use.

Q20. In the past year, have you started using or increased how often you use any of the following types of transportation to go to or from work/school?

Q21. Before you made this change, how many days in a typical week did you use each of the following types of transportation to go to or from work or school? Note: Asked on Version A only.
Similar Shares of Respondents in Different Age Groups Made Commute Changes

Men and women were about equally likely to increase alt modes for commuting:

Men – 39% made a commute change
Women – 38% made a change

Under 25 years: 38%
25 - 34 years: 44%
35 - 44 years: 40%
45 - 54 years: 41%
55 years or more: 33%

Q20. In the past year, have you started using or increased how often you use any of the following types of transportation to go to or from work/school?
Q21. Before you made this change, how many days in a typical week did you use each of the following types of transportation to go to or from work or school? Note: Asked on Version A only.
African-American and White Riders Increased Alternative Mode Use More Than Did Asian or Hispanic Riders

Percentage of respondents who increased alt mode use

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>33%</td>
</tr>
<tr>
<td>Asian</td>
<td>34%</td>
</tr>
<tr>
<td>African-American</td>
<td>42%</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>41%</td>
</tr>
</tbody>
</table>

Q20. In the past year, have you started using or increased how often you use any of the following types of transportation to go to or from work/school?

Q21. Before you made this change, how many days in a typical week did you use each of the following types of transportation to go to or from work or school? Note: Asked on Version A only.
Middle Income Respondents Were Most Likely To Have Increased Alternative Mode Use

Q20. In the past year, have you started using or increased how often you use any of the following types of transportation to go to or from work/school?

Q21. Before you made this change, how many days in a typical week did you use each of the following types of transportation to go to or from work or school? Note: Asked on Version A only.
Each Rider Who Increased Use of Alt Modes During the Past Year Reduced an Average of **1,150 Annual Commute Vehicle Trips**

<table>
<thead>
<tr>
<th>Average weekly vehicle trips reduced per “changer”</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Before making commute change</td>
<td>3.3</td>
</tr>
<tr>
<td>Current commute travel</td>
<td>-0.7</td>
</tr>
<tr>
<td>Weekly vehicle trips reduced per rider</td>
<td>2.6 vehicle trips</td>
</tr>
<tr>
<td>Average one-way miles per trip</td>
<td>x 9.0 miles</td>
</tr>
<tr>
<td>Miles reduced per week per “changer”</td>
<td>23 miles</td>
</tr>
<tr>
<td>Work weeks per year</td>
<td>X 50</td>
</tr>
<tr>
<td><strong>Miles reduced per year per “changer”</strong></td>
<td>1,150 miles</td>
</tr>
</tbody>
</table>
41% of Riders Said They Increased Use of Transit for Non-Work Trips in the Past Year

- Started / increased ART bus: 33%
- Started / increased Metrobus, other bus: 17%
- Started / increased Metrorail, other train: 13%
- No changes: 59%

Percentage of respondents reporting change

Q22. In the past year, have you started using or increased how often you use any of the following types of transportation for trips you make for purposes other than getting to or from work/school? Note: Asked on Version A only.
Respondents Who Provided Before/After Data on Non-work Transit Use Increased ART Bus Use by an Average of 1.3 Bus Trips per Week

Riders who reported increasing non-ART transit make an average of:

- 0.6 more other bus trips
- and
- 0.7 more train trips

now compared with 1 year ago.

**ART bus** n = 348
**Metrobus or other bus** n = 235
**Metrorail/train** n = 269

Two thirds of respondents who reported a non-work change left the follow-up question blank, so their actual changes could not be examined.

**Q24.** How does your current transit use compare to one year ago for non-work and non-school trips?

**Note:** Asked on Version A only.
Riders Who Reported Increased Use of Transit for Commuting Also Reported Increased Use of Transit for Non-work Trips

Increased use of ART bus for commuting: 30%
Increased use of non-ART transit for commuting: 31%
Did not increase transit use for commuting: 11%

Percentage of respondents who increased non-work transit use

Q20. In the past year, have you *started using or increased how often you use* any of the following types of transportation to go to or from work/school?
Q24. How does your current transit use compare to one year ago for non-work and non-school trips?

Note: Asked on Version A only.
ART bus plays an important role for Arlington County commuters as both a direct origin-destination transit service and as a feeder service to regional transit options.

A sizeable portion of the ART riders who started or increased use of ART/transit in the past year for commuting shifted from driving alone.

Promotion of ART for commuting might also encourage use for non-work trips by familiarizing riders with the service.
Task Description

Survey ART riders to collect information on trips that originate in and are destined to locations within Arlington County. Produce O-D data to geocode, visualize and analyze captured travel patterns with the help of GIS software.
Origin and Destination Data Was Gathered From Respondents in Order to Provide a Snapshot of Travel Patterns

Q9. Where did you get on this bus? (Place, Street Address or Nearest Intersection)

Q11. Where will you get off this bus? (Place, Street Address or Nearest Intersection)
Methodology

- 1,758 of 2,906 respondents completed both origin and destination questions

- 1,110 records were useable, having entered identifiable origin-destination address or street intersection for geocoding into GIS

- Sample size yields statistically sound results
Key Takeaways (1 of 2)

• The most common trip (by far), taken by almost 12% of surveyed passengers, was between Ballston Metro and bus stops surrounding the Virginia Hospital Center complex.

• The next most popular trip is between Shirlington Transit Center and Pentagon Metro, taken by over 3% of respondents.

• Another 3% of respondents used ART to travel between Pentagon Metro and bus stops around the intersections of 26th Street S and S Adams/S Troy streets.
Key Takeaways (2 of 2)

Some other major Origin-Destination pairs (each taken by about 2% of respondents):

- Courthouse Metro to Ballston Metro
- Ballston Metro to Pentagon Metro
- Courthouse Metro to Clarendon Metro
- Courthouse Metro to Shirlington Transit Center
- Ballston Metro to George Mason Drive & Lee Hwy
- Pentagon City to 24th & Glebe
- 12th Street N & Queen Street to Rosslyn Metro
The primary purpose of the Origin-Destination mapping/analysis is to visualize and understand the travel patterns of ART transit users in Arlington County, assist with planning of the transit network and prioritization of bus stop improvements.
Appendix A: ART Rider & Census Profile
Respondent Age
Comparison 2008, 2013 and AC Census

As respondents would have migrated to different generational cohorts from 2008 to 2013, it is useful to look at the respondent comparison by age.

Arlington County profile is based on 2011 American Community Service Data n = 202,999

n = 1,642 2013
n = 1,386 2008

Age calculated from: Q25. In what year were you born?

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2013</th>
<th>2008</th>
<th>Census</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 to 19</td>
<td>9%</td>
<td>4%</td>
<td>14%</td>
</tr>
<tr>
<td>20 to 24</td>
<td>15%</td>
<td>15%</td>
<td>9%</td>
</tr>
<tr>
<td>25 to 34</td>
<td>21%</td>
<td>27%</td>
<td>29%</td>
</tr>
<tr>
<td>35 to 44</td>
<td>18%</td>
<td>16%</td>
<td>18%</td>
</tr>
<tr>
<td>45 to 64</td>
<td>24%</td>
<td>23%</td>
<td>29%</td>
</tr>
<tr>
<td>65 and older</td>
<td>4%</td>
<td>3%</td>
<td>9%</td>
</tr>
</tbody>
</table>

n = 1,642 2013
n = 1,386 2008
Respondent Generational Cohorts Comparison 2008 to 2013

n = 1,642
2013
n = 1,386
2008

Q25. In what year were you born?

Respondent ages range from 14 to 83, with an average (mean) age of 37, similar to the 2008 mean of 36 years.

For analysis (crosstab) purposes, Silent and Boomer generations are combined.
Respondent Gender
Comparison 2008, 2013 and AC Census

Q26. Are you:

- **Female**
  - 2013 Survey Data: 55%
  - 2008 Survey Data: 55%
  - AC Census: 50%

- **Male**
  - 2013 Survey Data: 45%
  - 2008 Survey Data: 45%
  - AC Census: 50%

Sample by gender is similar in 2013 to what it was in 2008, and is representative of Arlington County residents.

Arlington County profile is based on 2011 American Community Service Data, n = 202,999.

n = 1,971
Respondent Ethnic Background
Comparison 2008, 2013 and AC Census

Q27. Which of the following best describes your ethnic background?

- White
  - 2013: 32%
  - 2008: 27%
  - AC Census: 74%

- African/Black
  - 2013: 25%
  - 2008: 9%
  - AC Census: 28%

- Hispanic/Latino
  - 2013: 22%
  - 2008: 31%
  - AC Census: 15%

- Other
  - 2013: 26%
  - 2008: 14%
  - AC Census: 12%

Note: totals add to more than 100%, as some respondents indicated they fall in to more than one category.

Arlington County profile is based on 2011 American Community Service Data
n = 202,999

“Other” ethnicities include Asian, Native American and mixed race.

n = 1,916
2013
n = 1,368
2008

One-third of ART riders are white, while one-quarter are Black/African American and two in ten are of Hispanic/Latino heritage.
As shown, ART riders tend to be from larger households than representative in the metro area.

Arlington County profile is based on 2011 American Community Service Data
n = 92,436

Q28. Including yourself, how many live in your household (# Adults 18+/# Children under 18)?

Comparison of Household Size
ART Riders to Arlington County Residents

<table>
<thead>
<tr>
<th>Household Size</th>
<th>ART Survey Data</th>
<th>AC Census Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>25%</td>
<td>41%</td>
</tr>
<tr>
<td>Two</td>
<td>28%</td>
<td>33%</td>
</tr>
<tr>
<td>Three</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td>Four or more</td>
<td>30%</td>
<td>13%</td>
</tr>
</tbody>
</table>

n = 1,513
Comparison of Household Income
ART Riders to Arlington County Residents

Results from the 2008 survey:
70% < $60K
22% $60K-$120K
8% $120K+

Arlington County profile is based on 2011 American Community Service Data
n = 92,436

n = 1,550

Q29. Which category best describes your household’s total annual income?

Note: Comparison not made to 2008 data, as income categories were dissimilar.
Q17. Which of the following best reflects your current employment status?

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>2013</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed full-time</td>
<td>61%</td>
<td>58%</td>
</tr>
<tr>
<td>Employed part-time</td>
<td>18%</td>
<td>20%</td>
</tr>
<tr>
<td>Full-time student</td>
<td>8%</td>
<td>14%</td>
</tr>
<tr>
<td>Other</td>
<td>13%</td>
<td>8%</td>
</tr>
</tbody>
</table>

“Other” categories include those currently unemployed, those looking for work, stay-at-home parents, part-time students and others.
Appendix B: ART Ridership Frequency & Usage
There are significant differences in ridership between Spanish and English speaking riders. English speaking riders tend to be workday commuters, rather than taking ART occasionally or relying on ART for all of their transportation needs.

There are significant differences in ridership between Spanish and English speaking riders. English speaking riders tend to be workday commuters, rather than taking ART occasionally or relying on ART for all of their transportation needs.

Q1. How often do you ride ART buses? If one or more days per week, specify number of days.

Q30. Is English your primary language at home? If No, which language is primary?
Frequency of ART Ridership by Primary Language

Q1. How often do you ride ART buses? If one or more days per week, specify number of days.

Q30. Is English your primary language at home? If No, which language is primary?

English speaking riders are most likely to be consistent, five days per week Arlington Transit commuters.

Note: add % of those English speaking, 5 day-ers who were interviewed on a weekday

n = 1,778
As suggested by ridership by primary language, Hispanic/Latino riders are the most likely ethnic group to use Arlington Transit every day of the week.

Q1. How often do you ride ART buses? If one or more days per week, specify number of days.

Q27. Which of the following best describes your ethnic background?
There are significant differences in ridership by income, as wealthier riders tend to be regular workday commuters rather than appearing to rely on public transit every day of the week.

Q1. How often do you ride ART buses? If one or more days per week, specify number of days.

Q29. Which category best describes your household’s total annual income?
Frequency of ART Ridership by Employment

Q1. How often do you ride ART buses? If one or more days per week, specify number of days.

Q17. Which of the following best reflects your current employment status?

- Less than once per week: 12%
- 1 or more times per week unspecified: 15%
- 1 to 4 times per week: 24%
- 5 times per week: 20%
- More than 5 times per week: 22%

Full-time employed ART riders are the most likely to ride consistently five days per week.
Q1. How often do you ride ART buses? If one or more days per week, specify number of days.

2013 ART ridership is comparable to ridership as it was in 2008.
Appendix C: ART Rider Profile by Routes
## Regular ART Route Ridership

**Q2. What routes do you regularly use? (Choose as many as apply).**

<table>
<thead>
<tr>
<th>Routes Regularly Used</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>41 Columbia Pike – Ballston - Court House</td>
<td>52%</td>
</tr>
<tr>
<td>42 Ballston – Pentagon</td>
<td>28%</td>
</tr>
<tr>
<td>45 Columbia Pike – DHS/Sequoia – Rosslyn</td>
<td>20%</td>
</tr>
<tr>
<td>51 Ballston – Virginia Hospital Center</td>
<td>26%</td>
</tr>
<tr>
<td>52 Ballston – Virginia Hospital Center – East Falls Church Metro</td>
<td>21%</td>
</tr>
<tr>
<td>53 Ballston Metro – Old Glebe – East Falls Church Metro</td>
<td>6%</td>
</tr>
<tr>
<td>61 Rosslyn – Court House Metro Shuttle</td>
<td>6%</td>
</tr>
<tr>
<td>62 Court House Metro – Lorcom Lane - Ballston</td>
<td>4%</td>
</tr>
<tr>
<td>74 Douglas Park – Arlington Village – Arlington View – Pentagon City</td>
<td>4%</td>
</tr>
<tr>
<td>75 Shirlington – Wakefield HS – Carlin Springs Road – Ballston – Virginia Square</td>
<td>12%</td>
</tr>
<tr>
<td>77 Shirlington – Lyon Park – Court House</td>
<td>19%</td>
</tr>
<tr>
<td>84 Douglas Park – Nauck – Pentagon City</td>
<td>4%</td>
</tr>
<tr>
<td>87 Pentagon Metro – Army Navy Drive - Shirlington</td>
<td>14%</td>
</tr>
</tbody>
</table>

Most ART riders regularly use more than one route on a regular basis.

n = 2,846
41 Columbia Pike – Ballston – Court House. 52% of total sample (n = 1,476) ride this route. Comparatively these riders tend to be:

- Spanish speakers
- From large households of five or more
- In lower income brackets
- Not employed full-time
- Most likely to be Hispanic and least likely to be White

42 Ballston – Pentagon. 28% of total sample (n = 806) ride this route. Comparatively these riders tend to be:

- Not employed full-time
- Very frequent ART riders (more than five times per week)
Q2. What routes do you regularly use? (Choose as many as apply).

150

<table>
<thead>
<tr>
<th>Route Description</th>
<th>Percentage of Total Sample (n)</th>
<th>Tendencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>51 Ballston – Virginia Hospital Center</strong></td>
<td>26% (n = 753)</td>
<td>Older riders, In lower income brackets (under $50,000), Not employed full-time, Non-white, particularly Black or African American, Very frequent ART riders (more than five times per week), Not regular (five times per week) ART commuters</td>
</tr>
<tr>
<td><strong>52 Ballston – Virginia Hospital Center – East falls Church metro</strong></td>
<td>21% (n = 606)</td>
<td>Older riders, Very frequent ART riders (more than five times per week), Not regular (five times per week) ART commuters, English speakers</td>
</tr>
</tbody>
</table>

Only shows statistically different results as determined by calculated ChiSquare.

n = as shown in table
Q2. What routes do you regularly use? (Choose as many as apply).

<table>
<thead>
<tr>
<th>Route</th>
<th>Percentage of Sample (n)</th>
<th>Tendencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>45 Columbia Pike – DHS/Sequioa – Rosslyn</strong></td>
<td>20% (n = 580)</td>
<td>- Female</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- In lower income brackets (under $50,000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Not employed full-time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Black/African American or Hispanic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Very frequent ART riders (more than five times per week)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Spanish speakers</td>
</tr>
<tr>
<td><strong>77 Shirlington – Lyon Park – Court House</strong></td>
<td>19% (n = 539)</td>
<td>- Not employed full-time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Very frequent ART riders (more than five times per week)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Not regular (five times per week) ART commuters</td>
</tr>
</tbody>
</table>

*Only shows statistically different results as determined by calculated ChiSquare.*

n = as shown in table
87  Pentagon Metro – Army Navy Drive – Shirlington. 14% of total sample (n = 405) ride this route. Comparatively these riders tend to be:

- Younger riders
- Smaller households (single or couples)
- Higher incomes ($50,000 and over)
- Employed full-time
- White/Caucasian
- Regular, five times per week, ART riders

75  Shirlington – Wakefield HS – Carlin Springs Rd – Ballston – Virginia Square 12% of total sample (n = 344) ride this route. Comparatively these riders tend to be:

- Older or younger riders, but less likely to be GenX
- Not employed full-time
- Hispanic and other ethnicities other than White or Black/African
- Very frequent ART riders (more than five times per week)
61 Rosslyn – Court House Metro Shuttle. 6% of total sample (n = 173) ride this route. Comparatively these riders tend to be:

- Older riders (and least likely to be Millennial)
- Smaller households (single or couples)

53 Ballston Metro – Old Glebe – East Falls Church Metro. 6% of total sample (n = 156) ride this route. Comparatively these riders tend to be:

- Not employed full-time

62 Court House Metro – Lorcom Lane – Ballston. 4% of total sample (n = 121) ride this route. Comparatively these riders tend to be:

- Not employed full-time
- Not regular (five times per week) Art riders
- Non-Spanish speakers

Q2. What routes do you regularly use? (Choose as many as apply).
Q2. What routes do you regularly use? (Choose as many as apply).

<table>
<thead>
<tr>
<th>Route</th>
<th>Percentage</th>
<th>Ridership Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>74 Douglas Park – Arlington Village – Arlington View – Pentagon City</td>
<td>4%</td>
<td>Have no significant differences among demographic rider segments</td>
</tr>
<tr>
<td>84 Douglas Park – Nauck – Pentagon City</td>
<td>4%</td>
<td>Higher income (ridership increases incrementally as does income)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employed full-time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>White or Black/African American</td>
</tr>
<tr>
<td></td>
<td></td>
<td>English speakers (non-Spanish speakers)</td>
</tr>
</tbody>
</table>

Only shows statistically different results as determined by calculated ChiSquare.
Appendix D:
ART Riders by Trip Purpose
As in 2008, most ART riders use the bus to get to and from work.

Q3. For what types of trips do you ride the bus? And what is the purpose of this trip?

n = 2,723
All trips

Going to work: 78% (2013) vs. 74% (2008)
Shopping: 44% (2013) vs. 22% (2008)
Running errands: 41% (2013) vs. 37% (2008)
Dining/entertainment: 34% (2013) vs. 24% (2008)
Medical appointments: 33% (2013) vs. 2% (2008)
Going to school: 23% (2013) vs. 22% (2008)
Going to church: 16% (2013) vs. 1% (2008)
Ride ART to work. 78% of riders for all trips (n = 1,476), 59% of riders for this trip. Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>GenX</td>
</tr>
<tr>
<td>Higher income (likelihood increases incrementally as does income)</td>
</tr>
<tr>
<td>Employed full-time</td>
</tr>
<tr>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Regular ART riders (at least once per week and likely multiple times per week)</td>
</tr>
<tr>
<td>English speakers</td>
</tr>
</tbody>
</table>

Ride ART for shopping. 44% of riders for all trips (n = 1,193), 15% of riders for this trip. Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower income (likelihood decreases incrementally as income increases)</td>
</tr>
<tr>
<td>Not employed full-time</td>
</tr>
<tr>
<td>Non-white</td>
</tr>
<tr>
<td>Not regular, five times per week ART riders</td>
</tr>
<tr>
<td>Non-English speakers and particularly likely to be Spanish speakers</td>
</tr>
</tbody>
</table>

Q3. For what types of trips do you ride the bus? And what is the purpose of this trip?
Q3. For what types of trips do you ride the bus? And what is the purpose of this trip?

Ride ART for running errands. 41% of riders for all trips (n = 1,112), 19% of riders for this trip. Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Lower income (likelihood decreases incrementally as income increases)</td>
</tr>
<tr>
<td>Not employed full-time</td>
</tr>
<tr>
<td>Hispanic or Black/African American</td>
</tr>
<tr>
<td>Very frequent ART riders (more than five times per week)</td>
</tr>
<tr>
<td>Non-English speakers (and particularly Spanish speakers)</td>
</tr>
</tbody>
</table>

Ride ART for dining/entertainment. 34% of riders for all trips (n = 937), 16% of riders for this trip. Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower income (likelihood decreases incrementally as income increases)</td>
</tr>
<tr>
<td>Not employed full-time</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>Very frequent ART riders (more than five times per week)</td>
</tr>
<tr>
<td>Spanish speakers</td>
</tr>
<tr>
<td>Millennials</td>
</tr>
</tbody>
</table>

Only shows statistically different results as determined by calculated ChiSquare.

\( n = \text{as shown in table} \)
Ride ART for medical appointments. 33% of riders for all trips (n = 891), 13% of riders for this trip. Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>33%</td>
</tr>
<tr>
<td>Older riders (likelihood decreases incrementally as does age)</td>
<td>13%</td>
</tr>
<tr>
<td>Lower income (likelihood decreases incrementally as income increases)</td>
<td></td>
</tr>
<tr>
<td>Not employed full-time</td>
<td></td>
</tr>
<tr>
<td>Non-white (primarily Hispanic, secondarily Black/African American)</td>
<td></td>
</tr>
<tr>
<td>Very frequent (more than five times per week) ART riders. Unlikely to be regular, five times per week riders.</td>
<td></td>
</tr>
<tr>
<td>Non-English speakers</td>
<td></td>
</tr>
</tbody>
</table>

Only shows statistically different results as determined by calculated ChiSquare.

Q3. For what types of trips do you ride the bus? And what is the purpose of this trip?

n = as shown in table

LDA Consulting
Ride ART for going to school. 23% of riders for all trips (n = 621), 11% of riders for this trip. Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>Millennials</td>
<td></td>
</tr>
<tr>
<td>From larger households</td>
<td>(likelihood increases incrementally as does household size)</td>
</tr>
<tr>
<td>Lower income</td>
<td>(likelihood decreases incrementally as income increases)</td>
</tr>
<tr>
<td>Not employed full-time</td>
<td></td>
</tr>
<tr>
<td>Non-white (particularly Hispanic)</td>
<td></td>
</tr>
<tr>
<td>Very frequent (more than five times per week)</td>
<td>ART riders. Unlikely to be regular, five times per week riders</td>
</tr>
<tr>
<td>Non-English speakers (and particularly Spanish</td>
<td>speakers)</td>
</tr>
</tbody>
</table>

Q3. For what types of trips do you ride the bus? And what is the purpose of this trip?

Only shows statistically different results as determined by calculated ChiSquare.

n = as shown in table
Q3. For what types of trips do you ride the bus? And what is the purpose of this trip?

Ride ART for going to church. 16% of riders for all trips (n = 442), 6% of riders for this trip. Comparatively these riders tend to be:

- Lower income (likelihood decreases incrementally as income increases)
- Not employed full-time
- Non-White, non-Asian
- Most likely to be Hispanic or Black/African American
- Very frequent (more than five times per week) ART riders. Unlikely to be regular, five times per week riders.
- Spanish speakers
Appendix E: Reasons for Selecting ART
**Ride ART because it’s convenient. 79% of riders (n = 2,184)**

Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smaller households (particularly couples) and least likely to be five or more</td>
</tr>
<tr>
<td>Higher incomes ($50,000 and higher)</td>
</tr>
<tr>
<td>Employed full-time</td>
</tr>
<tr>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Ride ART 1 – 5 times per week, but not less or more frequently</td>
</tr>
<tr>
<td>Most likely English speakers (least likely Spanish speakers)</td>
</tr>
</tbody>
</table>

**Ride ART because it’s easy to use. 73% of riders (n = 2,023)**

Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed full-time</td>
</tr>
<tr>
<td>English speakers (and least likely to be Spanish speakers)</td>
</tr>
<tr>
<td>Regular ART riders (more than once per week, although likelihood does not increase as frequency per week increases)</td>
</tr>
<tr>
<td>English speakers (lower perception is similar for Spanish and other languages)</td>
</tr>
</tbody>
</table>
Q4. For what reasons do you ride ART buses? Please select all that apply and indicate your one main reason.

Ride ART because it’s affordable. 60% of riders (n = 1,641) Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed full-time</td>
</tr>
<tr>
<td>Regular (weekly) ART riders</td>
</tr>
<tr>
<td>English speakers</td>
</tr>
</tbody>
</table>

Ride ART because it’s reliable. 56% of riders (n = 1,536) Comparatively these riders tend to be:

<table>
<thead>
<tr>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smaller households (single or couples)</td>
</tr>
<tr>
<td>Employed full-time</td>
</tr>
<tr>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Regular (weekly) ART riders</td>
</tr>
<tr>
<td>English speakers (least likely to be Spanish speakers)</td>
</tr>
</tbody>
</table>

Only shows statistically different results as determined by calculated ChiSquare.

“All Reasons” reported (Multiple response allowed).

n = as shown in table
Q4. For what reasons do you ride ART buses? Please select all that apply and indicate your one main reason.

**Ride ART because it’s good for the environment. 38% of riders (n = 1,040)**

Comparatively these riders tend to be:

- Older riders (Silent + Boomer more likely than GenX more likely then Millennials)
- Asian and White (Hispanic least likely)

**Ride ART because it eliminates the need to park. 37% of riders (n = 1,020)**

Comparatively these riders tend to be:

- Male
- Generations older than Millennials
- Single (likelihood decreases incrementally as household size increase)
- Upper incomes (likelihood increases incrementally as does income level)
- Employed full-time
- White (Hispanic least likely)
- Regular, five times per week, ART riders
- English speakers
Q4. For what reasons do you ride ART buses? Please select all that apply and indicate your one main reason.

Ride ART because it’s my only means of transportation. 36% of riders (n = 948)
Comparatively these riders tend to be:

- Larger households
- Lower incomes (likelihood increases incrementally as income decreases)
- Not employed full-time
- Hispanic
- Very frequent ART riders (more than five times per week)
- Non-English speakers

Ride ART because I can use the commute time productively. 28% of riders (n = 771). Comparatively these riders tend to be:

- High income ($100,000 and over)
- Regular ART riders (at least once per week)
Q4. For what reasons do you ride ART buses? Please select all that apply and indicate your one main reason.

Ride ART because it’s quicker than driving. 25% of riders (n = 679)

Comparatively these riders tend to be:

- Older riders (Silent + Boomer more likely than GenX more likely than Millennials)
- Black/African American (Asian least likely)
- English speakers

“All Reasons” reported (Multiple response allowed).

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ride ART because it’s quicker than driving.</td>
<td>25%</td>
</tr>
<tr>
<td>Older riders (Silent + Boomer more likely than GenX more likely than Millennials)</td>
<td></td>
</tr>
<tr>
<td>Black/African American (Asian least likely)</td>
<td></td>
</tr>
<tr>
<td>English speakers</td>
<td></td>
</tr>
</tbody>
</table>

n = as shown in table
Appendix F: Alternate Mode Rider Profiles
The propensity to walk or take a taxi has increased since 2008, while the likelihood to use Metrorail as an alternate means of travel has decreased since 2008.

Alternate Modes of Transportation Comparison 2008 and 2013

Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply.)

- Metrobus: 45% (2013) vs 41% (2008)
- Taxi: 22% (2013) vs 9% (2008)
- Metrorail: 24% (2013) vs 18% (2008)
- Driven alone: 13% (2013) vs 10% (2008)
- Would not have made this trip: 7% (2013) vs 7% (2008)
- Bicycle: 6% (2013) vs 5% (2008)
- Carpool: 4% (2013) vs 3% (2008)
- Capital Bikeshare: 2% (2013) vs 2% (2008)
- Other: 3% (2013) vs 2% (2008)
Only shows statistically different results as determined by calculated ChiSquare.

“All Reasons” reported (Multiple response allowed).

n = as shown in table

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Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply).

### Metrobus. 41% of riders \((n = 977)\)
Comparatively, these riders tend to be:

- Female
- Employed full-time
- African America or Asian (and least likely to be Hispanic)
- Regular, five times per week, ART riders (and least likely to be those riding ART less than once per week)

### Walk. 28% of riders \((n = 660)\)
Comparatively, these riders tend to be:

- Older (Silent and Boomer), (and least likely to be GenX)

### Taxi. 22% of riders \((n = 530)\)
Comparatively, these riders tend to be:

- Younger (Millennial), and likelihood decreases incrementally as age increases
- Employed full-time
<table>
<thead>
<tr>
<th>Metrorail. 18% of riders (n = 432)</th>
<th>Comparatively, these riders tend to be:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed full-time</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drive alone. 13% of riders (n = 308)</th>
<th>Comparatively, these riders tend to be:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher incomes (likelihood increases incrementally as does income)</td>
<td></td>
</tr>
<tr>
<td>Employed full-time</td>
<td></td>
</tr>
<tr>
<td>White or Asian (and least likely to be Hispanic)</td>
<td></td>
</tr>
<tr>
<td>Regular, five times per week ART riders (and least likely to be riding ART more than five times per week, an indication of transit dependency)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Would not have made the trip. 7% of riders (n = 167)</th>
<th>Comparatively, these riders tend to be:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generations other than GenX</td>
<td></td>
</tr>
<tr>
<td>Lower income (less than $25,000)</td>
<td></td>
</tr>
<tr>
<td>Not employed full-time</td>
<td></td>
</tr>
</tbody>
</table>
Bicycle. 5% of riders (n = 115)
Comparatively, these riders tend to be:
- Male
- Employed full-time

Carpool. 4% of riders (n = 93)
Comparatively, these riders tend to be:
- No significant differences in response by demographic or transit use segments

Capital Bikeshare. 2% of riders (n = 46)
Comparatively, these riders tend to be:
- No significant differences in response by demographic or transit use segments

Q8. If ART had been unavailable today, how would you have made this trip? (Choose as many as apply).
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