

**Arlington County  
Commuter Assistance Program  
Research Plan  
2000-2002**

February 22, 2000

# Research Plan

As the County continues to experience economic growth, it faces the challenges of planning to meet the demands of regional mobilization. It has become more apparent to the those involved in the development of transit solutions the need to better inform ourselves to best meet the opportunities and challenges ahead of us.

To accomplish this Pulsar is recommending a basic market research program to monitor the overall attitudes of existing and trial riders as well as track the retention of trial riders. In addition we will work with Metro to utilize their rider and non-rider research base.

We are proposing a major new segmentation study for the county which would encompass residents and non-residents and be capable of providing usable data about a variety of market segments by neighborhood and corridor.

## Market Segmentation Study

Implementing a market segmentation strategy will improve Arlington County Metrobus' competitive position and increase its transportation market share. Some specific objectives include:

- Increasing ridership (both by increasing the frequency of current riders and attracting new ones),
- Increasing transit's share of mode choice in the Arlington County market,
- Efficiently allocating resources to markets that represent the greatest potential for change in light of changes to the marketing mix,

- Providing for a market-driven creative platform for marketing and advertising materials, and
- Enhancing the image and reputation of public transportation in order to increase support for public funding.

Market segmentation will serve as the cornerstone of an efficient overall strategy. Research in the private sector with Metro and other transit carriers , has shown conclusively that agencies can achieve significant increases in ridership. Specifically, the research reveals when agencies implement three components, (1) establishing segments that are both identifiable and can be differentiated, (2) will remain effectively stable, and (3) can effectively be reached, the results of marketing to these segments significantly increases ridership.

Market segmentation program benefits include:

- **Designing responsive products to meet the needs of the marketplace.** By thoroughly researching customer preferences – an essential component of segmentation analysis – your agency will move toward an essential element of a market orientation – achieving a customer focus. The agency places the customer first and designs and refines its product and service mix to satisfy the needs of the market. This information enhances the effectiveness of both service planning and designing information systems. In addition, the proposed study will help break down market segments by neighborhood.
- **Developing effective and cost-efficient promotional strategies.** As a planning tool, segmentation identification and analysis is extremely valuable in developing the agency's communication mix. Advertising can then be designed with a message that touches the hearts and minds of the market. These messages can in turn be targeted to appropriate media vehicles such public relations initiatives,

sales promotion methods and direct marketing or relationship marketing programs.

- **Providing insight on present marketing strategies.** It is important to periodically reevaluate present marketing strategies to capitalize on new opportunities and circumvent potential threats. Market segmentation research is useful in exploring new markets – perhaps secondary or fringe markets such as infrequent or occasional riders that might have otherwise been neglected by concentrating on primary markets (for example, commuters and/or frequent riders). Moreover, effective segmentation provides a systematic approach for controlled market coverage, as opposed to the hit-or-miss effectiveness of mass marketing strategies. The current campaign, though based on a regional market segmentation study, has not been specifically tested on a segmentation study of Arlington County.
- **Providing data to base resource allocation decisions.** A major use of market segmentation analysis for transit is the data provided on which the agency can then make decisions regarding the allocation of scarce resources. This data will be particularly useful when making special funding requests.
- **Ongoing consumer and market segmentation analysis provides important data to identify which long-range planning strategy – for market growth or product development – should be emphasized.** Finally, while market segmentation is an important tool for achieving the short-term benefits described above, perhaps its greatest strength lies in providing data for long-range planning. A thorough understanding of the characteristics of the market today, coupled with projections for future trends, can help the long-range planner develop and price products and services to meet the needs of these markets in the future. This is particularly important when considering that many of these new products and services represent significant capital investments.

In summary, market segmentation provides the necessary research base on which all marketing strategies can be successfully formulated. This embraces all aspects of marketing, including product and service development, route structure, pricing and fare programs, and communications. Following segmentation, the agency can select *target markets* – one or more groups that will respond favorably to certain product or service configurations and messages about particular products or services. The agency can then *position* its products and services by developing unique marketing strategies to appeal to the selected target market(s).

Segmentation research analyzes markets, identifies niche opportunities, and capitalizes on a superior competitive position to ultimately improve customer service while enhancing your commercial image.. A segmentation-driven program can help agencies design responsive products, develop effective promotional strategies, understand emerging trends in the marketplace and fine-tune current market initiatives. In summary, it is a systematic approach for controlled market coverage and expansion.

## **Approach**

A market segmentation study is proposed is based on the work done in the Washington DC Metro area as part transit market segmentation developed National Transportation Research Board. The study was one of the most comprehensive and advanced market research projects ever conducted for a transit system. It has served as a basis for similar studies conducted in other metropolitan markets and was used as the foundation for producing the Transportation Research Board’s workbook, “Using Market Segmentation to Increase Transit Ridership.” While a portion of Arlington County was included in this original research, the sample size was relatively small. The proposed research will build on the database and methodology

this effort, providing a comprehensive picture of nonriders and choice riders in Arlington County.

### **Stage 1: Definition of Project Objectives**

The success of any research project depends on a thorough understanding of project objectives. Before moving forward with the project, we will ensure that our team clearly and completely understands research objectives, project goals and special issues unique to Arlington County that a segmentation study can realistically address.

The specific objective of this research will be to identify market segments that represent the greatest opportunity for transit ridership using two different approaches: (1) psychographic market segmentation, and (2) benefit or needs-based segmentation. The research questions to be answered include:

What market segments for transit services represent the greatest potential for transit ridership? The earlier regional Metro study identified “Generation X” (young, educated, white collar) as the most productive target group. The existing Arlington Metrobus campaign is also targeted at this group.

How large are these potential market segments in Arlington County?

Are there better ways to define these segments?

What are the demographic characteristics of the segments?

Can the segments be targeted by neighborhood or corridor?

Does transit currently meet segment needs?

## **Stage 2: Determination of the Correct Research Methodology**

During this stage, sampling technique and research methodology will be tailored to fit Arlington County's specific requirements and specifications. Potential respondents will be profiled to determine how and when to reach them, how many questions might be appropriate and devise ways to keep them interested and answering candidly.

The proposed study is based on completing 1,000 surveys with nonriders and choice riders. **Nonriders** are defined as individuals aged eighteen and older, who have not ridden in the past year. In addition, if they have ridden in the past year, they have done so only infrequently (less than once a month), because their car was unavailable, in cases of bad weather, or for a special event or occasion. **Choice riders** are defined as individuals aged eighteen and older, who have ridden once a month or more often in the past year. They have a valid driver's license, have a car available for their personal use, or if they do not have a car, use public transportation because they have **chosen** not to buy a car.

All segmentation studies have one goal in common – projecting the segmentation schema obtained to the entire pertinent market. Therefore, these studies generally require probability samples from that market. The use of convenience or judgement samples will lead to unreliable results and potentially misleading results and are not applicable to the population. Therefore, the sample will be a simple random sample of households and employment lists, stratified by zip code.

## **Stage 3: Questionnaire Development**

Experienced technical staff will carefully design questions to meet project objectives. The wording and phrasing of each question is carefully constructed to produce clear, accurate and relevant responses. All questions are subject to your final review and

approval. A large portion of the question set already exists and has been thoroughly tested.

The questionnaire will incorporate many of the same questions as used in the TRB Metro study. Over two years of refinement is currently invested in these questions – notably in terms of the benefits sought when using public transportation. Moreover, questions will be added to address special issues in Arlington County (e.g., advertising effectiveness, information system use, etc.). It is estimated that the questionnaire will average 35 minutes in length. Up to three open-ended questions will be used.

Following final approval of the questionnaire, it will be programmed for computer-assisted telephone interviewing (CATI). CATI is an interactive PC-based software that displays the question wording on a computer screen for the interviewer to read to the respondent. The CATI program manages the logic of the questionnaire – determining which question the interviewer asks – thereby minimizing the introduction of interviewer error. The interviewer enters each response directly into the computer via the computer’s keyboard. CATI programs accept both alpha and numeric responses. The CATI program limits the range and type of responses that can be entered – thereby minimizing data entry errors.

#### **Stage 4: Pre-Testing and Fine Tuning**

At this stage, all questions are thoroughly pre-tested. The wording, sequencing and effectiveness of the questions and subsequent answers are carefully assessed. Refinements are made as needed to assure the reliability of results.

Before the start of the actual fieldwork, interviews will be conducted with approximately 30 individuals to pretest the questionnaire. The pretest will ascertain the clarity, viability and impartiality of the questions, potential question order problems (order confusion or bias), questions that yield the wrong information due

to misinterpretation and validity problems, and the overall efficacy of the survey instrument. The wording, sequencing and effectiveness of the questions and subsequent answers are carefully assessed. Refinements will be made as needed to assure the reliability of results.

### **Stage 5: Data Collection**

High quality fielding is the key to accurate results. Therefore, highly experience survey professionals and proven technology will be utilized. Trained surveyors will be fully briefed prior to the project. These research professionals play important roles to ensure the delivery of superior research results.

Because of different lifestyles, it is important to use procedures that maximize the possibility of completing an interview with all qualified sample elements. Consequently, to assure the accuracy and validity of the sample, the interviewers will make up to five callbacks to each sample element.

Interviewers will be monitored throughout the data collection process. Monitoring consists of both audio and visual follow-along of both the interviewer and the respondent. A silent monitoring system will allow supervisors to hear and see both sides of the interview without interruption or noise on the line.

### **Stage 6: Data Processing**

After the completion of data collection, codes will be developed for the open-end questions. The codes will be used to quantify the verbatim responses. Following coding, the data will be carefully cleaned and reviewed for quality. When the data file is ready, it can be tabulated in banner table format. Banners provide a useful reference tool for staff members to quickly locate answers to specific questions included in the data. Moreover, the cross-tabulations will facilitate comparisons by key subgroups. The tables will include relevant descriptive statistics, including where applicable, the mean and standard deviation for the total sample and for each

subgroup. All t-test comparative and Chi-square directional statistical tests will be run at the 95 percent level.

### **Stage 7: Analysis**

Two methods for segmenting the market will be explored.

The first reviews an individual's values and lifestyle. The view is based on past research that indicates an individual's ridership and/or predisposition to ride is largely driven by their values and lifestyle. Responses to the transit system as perceived by the respondent are assumed to be governed by the individual's values and lifestyle.

For example, perceptions regarding whether or not public transit is safe will affect behavior differently depending on the individual's perceived vulnerability. Individuals who are especially concerned about their safety will avoid using a transit system whenever there is even a slight chance of danger, whereas individuals not especially worried about their safety may continue to use the system even though they recognize that some risk is present.

This analysis uses a series of lifestyle scales and the list of values that commonly define an individual. Cluster analysis will be used to define this segment. The clusters will be described in terms of their values and lifestyles. Moreover, the demographic and/or geodemographic characteristics of the individual segments will be assessed to provide a clear profile of the different groups.

The second method focuses on individual beliefs about transit. If individuals base their decisions in part on their perceptions of the transit system, these perceptions necessarily reflect both the actual operations of the system and indirect information about the system. The latter includes word of mouth, mass media news stories and transit promotions. It is expected that individuals will consider the pros and cons of using the transit system and make a rational decision about whether to use it or not.

The responses to the questions on benefits sought and perceptions of transit will be combined to develop a transit belief variable. Again, cluster analysis will be used to define the segments.

The resulting variables from the factor analysis, along with the variables measuring general beliefs about transit and current or past use/consideration of transit, will be compared across the clusters identified above. This analysis will identify which, if any of the clusters, reveal evidence of the highest existing ridership and/or propensity to ride.

### **Stage 8: Report and Presentation**

An experienced research analyst will review the project results with you to assure your complete understanding of the research results. Special presentations to your board, management teams and other groups or individuals can also be arranged.

## **Database Surveys**

Over the next years the attempts at developing trial ridership will include forms of imbedded research devices which will enable us to develop a database of trial riders. This database will not only be used for telemarketing efforts but will serve as a tracking mechanism to help us determine.

- Ridership retention
- Percentage of first time riders
- Demographics
- Reasons for riding or not riding

As in the past we will do a random call-back survey of individuals who actually tried riding the bus. Not only to obtain the information listed above, but also to explore communications and attitudinal questions.

It's anticipated the attitudinal questions would include:

- Overall experience on Metrobus?
- How riders see the system as fitting into their lifestyle?
- What do they like most or least about riding Arlington Metrobus?

Communications questions at a minimum would include:

- How do people obtain Metrobus schedule and routing information?
  
- Web site
- Telephone Information
- Bus Stop
- Direct mail/newspaper inserts
- Timetables
- Commuter Stores
- How would they like to access information?

We would also include questions to evaluate the effectiveness of various types of advertising. Did the trial rider hear about Arlington Metrobus service via direct mail/inserts, cable TV or other ways?

Three surveys would be conducted in conjunction with telemarketing call-backs keeping the cost of this program low.

## **Qualitative Research**

There are a number of areas where pure quantitative research like the projects described above cannot get at subtleties in behavior and attitudes where direct observation and discussion can. In the case of Arlington County two issues clearly fall into this realm. One is the evaluation of its transportation information system and the other is the testing of future creative concepts for its advertising program.

### **Information System Testing**

A key component of Arlington County's transit marketing program is its transportation information system. Having accessible and understandable transit information is key to any decision to try or continuing to use a transit system. Arlington County recognized this issue early in its efforts to market alternative transportation modes.

Utilizing research from other systems it developed new timetables, maps and bus stop information pieces. In addition it applied the basic designs of these materials to its website "CommuterPage.Com". Recent research indicates that most people say they find the materials understandable, but there has been no actual testing of peoples ability to use the materials to accurately plan a trip.

In addition research indicates a heavy reliance on obtaining information at the bus stop with 60% of existing and trial riders saying that is where they obtain transit information. In Arlington County however only a small percentage of bus stops actually have much information posted at the stops. Most have only have a flag with a Metro logo and telephone number. Approximately 25% have "Ride Guides" with schedules and route maps.

The county plans to expand the information system to provide more information at each stop including printed map and schedule information. Also it intends to evaluate new technologies which can provide real time and trip planning capability at the stops. In addition an improved information system will include improved distribution of timetables and other printed information through employers and a variety of retail outlets.

Before commitment is made to types of information formats and amount invested in the program prototype displays and signage as well existing materials should be tested. The best way to test these is to allow a representative sample of the population actually get to look at the pieces, try to use them and express their opinions about them and how they would like to get transit information.

To accomplish its recommended that focus group be used where participants can actually get use the existing and proposed materials. It is recommended that six groups of 10 to 12 each be conducted half with current riders and half with non-riders. A professional moderator would probe to find out current use of information, likes and dislikes. Participants would be tested in their actual ability to use existing for information for trip planning. They would also be given an opportunity to see new technologies, use them and comment.

From the groups modifications or additions will be made to information pieces and system design as needed.

## **Advertising Testing**

The current marketing campaign is based on data from the 1997 TRB Segmentation and focus group of actual campaign elements in 1998. If the proposed segmentation study indicates any other target groups or shift in the attitudes of the existing target it would be prudent to modify the existing campaign. Any such modification should at least go through two or three “red flag” focus groups to make sure the modifications are on target and do no harm to the existing marketing program.

## **Co-op Research**

The excellent research database already created by the WMATA and the National Transportation Research Board which provided the foundation for this plan will continue as the foundation for the marketing program. The existing research studies to be utilized include. • WMATA 1998 system wide on-board survey

- Transportation Research Board, TRB Market Segmentation Study in WMATA’s service area, Northwest Research Group, 1997.
- Profile of the WMATA Travel Market, WMATA Market Analysis, 1995.
- WMATA Ridership Analysis Study, Peter Harris Research Group, 1995.
- WMATA Service Based Market Development Study, Ilium, 1994.
- WMATA Service Area Usage-Attitude Assessment, The Gallup Organization, 1993.

Though WMATA's future research plans are not yet set in stone it is likely that there program will be built on the question sets and methodologies used in past studies. Arlington County should continue to cooperate with the agency in developing question sets related to Arlington and encourage as large a sample sizes as possible in Arlington County.

## **Regional Trends**

We will also identify other supporting research tools to help anticipate Arlington County population trends, demographic information, route trends, route structures, transit information materials and resident/employee access to transportation solutions. Access to regional and local planning documents will enable us to better determine the direction and budget for programs that will support area land use and environmental planning.

# Budget

# **Segmentation Study**

## **Preliminary Questionnaire**

## Preliminary Questionnaire

**Intro:** Hello I'm \_\_\_\_\_ from a public opinion research firm we're working on conducting a study for Arlington County that will be used to benefit the transportation system in Arlington County. This study is on consumer values and lifestyles, and transportation. Your participation in this study is very important to us.

- Q1. What is the zip code of your residence?
- Q2. If you travel to work or school regularly what is the zip code of that destination. (If unknown ask for closest intersection)
- Q3. Have you personally used public transportation in the past year?
1. Yes
  2. No [**Qualified as a non-rider, skip SCR3**]
  3. Don't know [**Skip to Script 2.1**]
  4. Refused [**Skip to Thanks 2**]
- Q4. What types of public transportation did you use?
1. Metrobus only
  2. Metrorail only
  3. Metrobus and Metrorail
  3. VRE Only
  4. VRE and other \_\_\_\_\_.
  5. MARC only
  6. MARC and other \_\_\_\_\_.
  7. ART
  8. Other \_\_\_\_\_
- Q5. How many days a week did you use public transportation last year?
- \_\_\_\_\_ Days per week [**rider**]
1. 1 - 3 Days a month [**rider**]
  2. Less than once a month [**skip to non-rider SCR3**]
  3. Only road because car was not available/bad weather [**skip to non-rider SCR3**]
  4. Only road because of a special even or occasion [**skip to non-rider SCR3**]
- SCR2.1 Have you personally used public transportation in the past month?
- 1 Yes [**Skip to SCR2.2**]
  - 2 No
  - 3 Don't know refused [**Skip to Thanks2**]

- SCR2.1a Have you stopped riding the bus?
- 1 Yes [**Skip to SCR3**]
  - 2 No
  - 3 Don't know/refused [**Skip to Thanks2**]
- SCR2.1b When you rode, did you ride only....
- 1 because your car was broken down or not available  
[**Skip to SCR3**]
  2. because of bad weather  
[**Skip to SCR3**]
  3. or because of some other unusual circumstance  
[**Skip to SCR3**]
  4. None of the above [**Skip to SCR3**]
  5. Don't know [**Skip to Thanks2**]
  6. Refused [**Skip to Thank2**]
- SCR2.2 taken [**If SCR2.1 EQ 1**] How many one-way tips have you personally taken on public transportation in the past month?  
\_\_\_\_ Number  
Don't know or refused [**Skip Thanks 2**]
- SCR3 Do you have a valid drivers license?
1. Yes
  2. No [ **If rider skip to Thanks 3**]
  3. Don't know/refused [**Skip to Thanks2**]
- SCR4 have How many automobiles in working condition do you personally have available for your use?  
\_\_\_\_Number  
3. Don't know/refused [**Skip to Thanks2**]
- SCR5 [**If SCR4 = 0 and non-rider**] How do you usually get around?
1. Ride with someone else
  2. Bicycle
  3. Motorcycle
  4. Walk
  5. Other \_\_\_\_\_
- SCR6 [**If SCR4 = 0 and rider**] Do you rely on public transportation for....
1. All of your local travel,

2. Most of your local travel,
3. Some of your local travel, or
4. None of your local travel [Rescreen]
5. Don't know/refused [**Skip to Thanks2**]

SCR7 [IfSCR6 = 2 or 3] How else do you usually get around?

1. Ride with someone else
2. Bicycle
3. Motorcycle
4. Walk
5. Other \_\_\_\_\_

SCR8 [IfSCR6 = <4] Do you use public transportation because you have chosen not to buy a car or to buy an additional car for your household?

SCR9.1 Are you currently...

1. Employed full-time (30 or more hours per week),
2. Employed part-time (less than 30 hours per week),
3. Self employed,
4. Not employed outside the home (a homemaker),
5. A student,
6. Retired, or
7. Unemployed?
8. Other \_\_\_\_\_

SCR9.2 [If SCR9.1 <3] Do you commute to fixed work site outside your home?

1. Yes
2. No

SCR11 I'd like to mention once again how important your participation in the

project. We plan to use this information to improve Arlington County's entire transportation system. I am going to ask you a number of questions about your lifestyle and will take a little while. Please be assured that all of this information is confidential and will only be used to help better plan area transportation improvements. Do you have time to continue?

1. Yes
2. No

Could I call back at a more convenient time?

1. Yes [**Note day and time**]
2. No [**Skip to Thanks2**]

## Overall Values

A1  
want

I'm going to read you a list of things that some people look for or

out of life. As I read the list, please rate each item on how important it is in your daily life. Use a 9-point scale where "1" means "very unimportant" and "9" means "very important." You may use any number in between.

1. A sense of belonging
2. Excitement
3. Warm relationships with others
4. Self-fulfillment
5. Being well respected
6. Fun and enjoyment in life
7. Security
8. Self-respect
9. A sense of accomplishment

## Values and Lifestyle Characteristics

INTRO1

*Next I'm going to read you a list of statements about how you might think or feel in different situations. Please tell me the extent to which you agree or disagree with each statement using a 7-point scale where "1" means "strongly disagree" and "7" means "strongly agree" You may use any number in between*

### **Susceptibility to Interpersonal Influence**

1. I often identify with other people by purchasing the same products and brands they purchase
2. When buying products and services I generally purchase those brands that I think others will approve of.
3. I like to know what bands and products make good impressions on others.
4. I frequently gather information from friends or family member before I buy.
5. I achieve a sense of belonging by purchasing the same products, brands and services that others purchase.

### **Optimum Stimulation Level/Arousal Seeking Tendency**

1. I like to experience novelty and change in my daily routine.

2. I like to go somewhere different every day.
3. Designs or patterns should be bold and exciting.
4. I sometimes like to do things that are a little frightening.
5. I prefer friends who are reliable and predictable to those who are exciting and unpredictable.

### **Innovativeness**

1. I like to take chances.
2. When it comes to taking changes, I would rather be safe than sorry.
3. I like people who are little shocking.
4. I believe in leaving well enough alone.

### **Time Management**

1. I like to plan my activities by the clock.
2. Because I schedule my activities by the clock, I am able to get more things done.
3. I hate wasting time.
4. I am always looking for ways to be more efficient so that I can get more things done.
5. I prefer friends who are reliable and predictable to those who are exciting and unpredictable.

INTRO2 *The next list contains statements about the environment. Please tell me the extent to which agree or disagree with each of the following using a 7-point scale where "1" means "strongly disagree" and "7" means "strongly agree" You may use any number in between.*

### **General Environmental Concern**

1. We use too much oil and gasoline in this country.
2. We have to do something immediately to reduce the amount of gasoline we use.
3. In the future, my children will have to live in an extremely polluted environment.

### **Socially Responsible Consumption Behavior**

1. It really makes me angry to think that the government does not do more to help control pollution of the environment.
2. I think that a person should urge his or her friends not to use products or services that pollute or harm the environment.
3. Our public schools should require all students to take a course dealing with environmental and conservation problems.

4. Pollution is presently one of the most critical problems facing this area.
5. The who pollution issue has never upset me too much since I feel it is somewhat overrated.
6. I become angry when I think about the harm being done to plant and animal life by pollution.
7. People are simply going to have to change the way they have always done things if there is to be any hope for the environment.

INTRO3 *Now I'm going to read you statements describing other attitudes or opinions you might hold. Please tell me the extent to which agree or disagree with each of the following still using a 7-point scale where "1" means "strongly disagree" and "7" means "strongly agree" You may use any number in between.*

#### **Automobile Involvement**

1. Cars offer me relaxation and fun when life's pressures build up.
2. Sometimes I get too wrapped up in my car.
3. Driving my car is one way I often use to relieve daily pressures.
4. Driving my car is one of the most satisfying and enjoyable things I do.

#### **Internal Locus of Control**

1. Getting people to do the right things depends on ability; luck has little or nothing to do with it.
2. When I make plans, I am certain I can make them work.
3. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
4. Getting what I want has little or nothing to do with luck.

#### **Self Confidence/Leadership**

1. I think I have more self-confidence than most people.
2. I am more independent than most people.
3. I like to be considered a leader.
4. I think I have a lot of personal ability.
5. I can often talk others into doing something.

#### **Fearfulness/Fear of crime/Physical Comfort**

1. I worry a lot about or a family member becoming a victim of a crime.
2. This area is a dangerous place.
3. I am constantly concerned for my own safety.

#### **Cleanliness**

1. The kind of dirt you cannot see is worse than the kind of dirt you can see.
2. You have to use disinfectants to get things really clean.

3. I am uncomfortable when I am in places that are not totally clean.
4. When I am someplace that does not smell right I get the heebie jeebies.

### **Sociability**

1. I like to spend a lot of time alone.
2. I make friends easily.
3. I do not typically socialize with people at work or school or in my neighborhood.

### **Frugality**

1. I believe in being careful how I spend my money.
2. I discipline myself to get the most for my money.
3. I am willing to wait on purchases I want so I can save money.
4. There are things I resist buying today so I can save for tomorrow.

### **Personal Control and Responsibility**

1. I always schedule my time so that I arrive at my destination a few minutes early.
2. It is very important to me not to have to rely on other people.
3. It is always important for me to be on time.
4. I always like to feel I am in control of my life.
5. I do not like to have rely on other people for help.

### **Physical and Occupational Mobility/Financial Optimism**

1. In the last ten years, I have lived in at least three different cities.
2. I will probably move at least once in the next five years.
3. I expect to be a top executive in the next ten years.
4. I will probably have more money to spend next year than I have now.
5. Five years from now my total household income will probably be a lot higher than it is now.
6. I often worry about financial security.
7. I wish I had a lot more money.

### **Overload**

1. I need more hours in the day to do all the things that are expected of me.
2. I can never seem to get caught up.
3. I never seem to have any time for myself.
4. Sometimes I feel as if there are not enough hours in the day.

5. I seem to have overextended myself to finish everything I have to do.

## Use of/Consideration of Transit as Mode

S-INTRO: *Now I'm going to ask you some questions about transportation and your work and non-work travel.*

S1 **[Rider]** When you ride the bus or train, what is the primary purpose of you trip? **[RECORD ONE RESPONSE ONLY]**

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S2 **[RIDER]** What other types of trips do you take on public transportation?  
**[ENTER ALL THAT APPLY]**

1. TO AND/OR FROM WORK
2. TO AND/OR FROM SCHOOL
3. TO AND/OR FROM BUSINESS APPOINTMENTS/ERRANDS
4. TO AND/OR FROM SHOPPING/ERRANDS
5. TO AND/OR FROM VOLUNTEERING
6. TO AND/OR FROM MEDICAL APPOINTMENTS
7. TO AND/OR FROM SPORTING EVENTS
8. TO AND/OR FROM CULTURAL EVENTS
9. TO AND/OR FROM SPECIAL EVENTS

**[SPECIFY]** \_\_\_\_\_

10. FUN / RECREATION / SOCIAL / VISITING
11. PERSONAL BUSINESS
12. OTHER **[SPECIFY]** \_\_\_\_\_

S3 **[NON-RIDER]** Have you ever considered using public transportation instead of driving for your local travel ?

1. YES
2. NO

S4 **[IF S3 = 1]** For what type of trips have you considered public transportation?

**[ENTER ALL THAT APPLY]**

1. TO AND/OR FROM WORK
2. TO AND/OR FROM SCHOOL

3. TO AND/OR FROM BUSINESS
4. APPOINTMENTS/ERRANDS
5. TO AND/OR FROM SHOPPING/ERRANDS
6. TO AND/OR FROM VOLUNTEERING
7. TO AND/OR FROM MEDICAL APPOINTMENTS
7. TO AND/OR FROM SPORTING EVENTS
8. TO AND/OR FROM CULTURAL EVENTS
9. TO AND/OR FROM SPECIAL EVENTS  
[SPECIFY]\_\_\_\_\_
10. FUN / RECREATION / SOCIAL / VISITING
11. PERSONAL BUSINESS
12. OTHER [SPECIFY] \_\_\_\_\_

S5 [NON-RIDER]] Have you ever tried to get information on using public transportation in the Arlington area (for example, on routes, schedules and fares.)?

1. YES
2. NO

S6 [NON-RIDER]] In the past, have you ever ridden public transportation?

1. YES
2. NO

S7 [IF S6=1] When was the last time you rode public transit?

1. Within the past one to six months,
2. Six months to a year ago,
3. More than one but less than five years ago, or
4. More than five years ago? [SKIP TO S12]
5. DON'T KNOW/REFUSED [SKIP TO S12]

S8 [IF S7 < 4] When you were using public transportation, how many days a week did you ride?

- \_\_\_\_\_ [ENTER NUMBER OF DAYS A WEEK]
2. 1 - 3 DAYS A MONTH
  3. LESS THAN ONCE A MONTH
  4. ONLY ROAD BECAUSE CAR WAS NOT AVAILABLE/
  5. BAD WEATHER
  6. ONLY ROAD BECAUSE OF SPECIAL EVENT/OCCASION

S9 [IF S8 < 3] When you were using public transportation, how many days a

week did you ride?

[ENTER ALL THAT APPLY]

1. TO AND/OR FROM WORK
  2. TO AND/OR FROM SCHOOL
  3. TO AND/OR FROM BUSINESS
  4. TO AND/OR FROM SHOPPING/ERRANDS
  5. TO AND/OR FROM VOLUNTEERING
  6. TO AND/OR FROM MEDICAL APPOINTMENTS
  7. TO AND/OR FROM SPORTING EVENTS
  8. TO AND/OR FROM CULTURAL EVENTS
  9. TO AND/OR FROM SPECIAL EVENTS
- [SPECIFY] \_\_\_\_\_
10. FUN / RECREATION / SOCIAL / VISITING
  11. TO AND/OR FROM APPOINTMENTS/ERRANDS
  12. PERSONAL BUSINESS
  13. OTHER [SPECIFY] \_\_\_\_\_

S10 [IF S8 < 3] When you were using public transportation, were you living at your current address?

1. YES
2. NO

S10.1 [IF S8 < 3] Were you living in Arlington County?

1. YES
2. NO

S11 [IF S8 < 3 AND COMMUTER] When you were using public transportation, were you working at your current job location?

1. YES
2. NO

S11.1 [IF S8 < 3 AND COMMUTER] Were you working in Arlington County?

1. YES
2. NO

S12 [COMMUTERS] Is the idea of using public transportation instead of driving to **work/school** appealing/unappealing to you personally? Would that be very or somewhat

1. APPEALING
  - a. VERY
  - b. SOMEWHAT

2. UNAPPEALING

S13 Is the idea of using public transportation instead of driving for your **personal travel** appealing/unappealing to you personally? Would that be very or somewhat

1. APPEALING
  - a. VERY
  - b. SOMEWHAT
2. UNAPPEALING

S14 Thinking about the different methods for getting around, how likely are you to use public transportation to make the following trips in the next year? Please answer a 7-point scale where "1" means "not at all likely" and "7" means "very likely."

S14.1 Commuting to work or school

S14.2 Shopping

S14.3 Special events, such as sporting events or fairs

S14.2 Medical or other appointments

S14.2 Cultural events

S15.1/S15.2 Please assume that driving alone or using public transportation are the only options available. Both are equally accessible to you. If you had a total of 100 points to divide between the two options and higher amount is given to the method you prefer, how many points would you give to [public transportation / driving alone?

S16 If offered a choice between convenient public transportation and taking a car, would you...

1. Always drive a car,
2. Sometimes use public transportation, or
3. Always use public transportation

## Facilitating Factors

### Familiarity with services

T1 In general, are you familiar or unfamiliar with public transportation services in your area – that is the types of services available, schedules, routes, etc.? Would you say very or somewhat?

1. FAMILIAR
  - a. VERY
  - b. SOMEWHAT
2. UNFAMILIAR

T2 In general, are you informed or uninformed about public transportation services in your area – that is the types of services available, schedules, routes, etc.? Would you say very or somewhat?

1. FAMILIAR
  - a. VERY
  - b. SOMEWHAT
2. UNFAMILIAR

## **Access to service**

U1 To the best of your knowledge, how far is it from your home to the nearest bus stop [**PROBE**: Please answer in either blocks or miles]

U2 To the best of your knowledge, how far is it from your home to the nearest Metrorail or Commuter Rail Station [**PROBE**: Please answer in either blocks or miles].

U2.1 Is it a...

1. Metrorail station
2. VRE
3. MARC
4. Amtrak

U2 To the best of your knowledge, how far is it from your home to the nearest park-and-ride lot [**PROBE**: Please answer in either blocks or miles].

## ***Commuters Only. Non-commuters skip to V2***

U4 To the best of your knowledge, do you currently have bus or train service available from where you live to where you work / attend school?

1. Yes
2. No [SKIP TO U9]
3. Don't know [SKIP TO U9]
4. Refused [SKIP TO U9]

U5 To the best of your knowledge, how far is it from where you work / attend school to the nearest bus stop [**PROBE**: Please answer in either blocks or miles]

U6 To the best of your knowledge, how far is it from where you work / attend school home to the nearest Metrorail or Commuter Rail Station [PROBE: Please answer in either blocks or miles].

Is it a...

1. Metrorail station
2. VRE
3. MARC
4. Amtrak

U7 [Would/ does] the route you [would need to take/ take]to work or school require transferring?

1. Yes
2. No
3. Don't know

U8 [IF U7 = 1] How many transfers?

\_\_\_\_\_ [RECORD NUMBER]

U9 How many miles do you travel from home to work/school one-way?

[PROBE: Using your best estimate.][IF LESS THAN 1, ENTER 1]

\_\_\_\_\_ [RECORD NUMBER]

U10 About how long [does][would]your trip to work/school usually take door to door from the time you leave your home until the time you get to work/school if you drive alone?

\_\_\_\_\_ [MINUTES] [RECORD NUMBER]

----- VARIES

U11 How long [does][would] it take on mass transit.

\_\_\_\_\_ [MINUTES] [RECORD NUMBER]

----- VARIES

## **Congestion/Parking**

V1 [COMMUTERS] How much is your commute trip affected by traffic?  
Would you say....

1. Affected a great deal,
2. Affected somewhat,
3. Not affected very much, or
4. Not affected at all?

V2 How much is daily non-work travel affected by traffic?  
Would you say....

1. Affected a great deal,
2. Affected somewhat,
3. Not affected very much, or
4. Not affected at all?

V3 How often do you change your travel plans or not take trips because of  
the cost of parking at the destinations where you would like to go?  
Would you say...

1. Never,
2. Rarely
3. Not affected very much, or
4. Not affected at all?

V4 How often do you change your travel plans or not take trips because of the availability of parking at the destinations where you would like to go? Would you say...

1. Never,
2. Rarely
3. Not affected very much, or
4. Not affected at all?

**Employer Support- Work Commuters Only.**  
Non-commuters skip to YINTRO

W1 Does your employer provide you with free or reduced fee parking?

1. Yes, free,
2. Yes, reduced fee
3. No
4. No, but have free parking somewhere else
5. Don't know

W2 [IF W1 = 2 OR 3 SKIP IF S1 = 1] How much does it cost you personally to park your car when you go to work?  
[PROBE: Is that daily or monthly?]

\_\_\_\_\_ ENTER AMOUNT OF DOLLARS

W3 [IF W1 = 2 OR 3] How much would parking have to be before you would use public transportation to get to and from work?  
[PROBE: Is that daily or monthly?]

\_\_\_\_\_ ENTER AMOUNT OF DOLLARS

W4 Does your employer...[INSERT STATEMENT]? [PROBE IF SELF EMPLOYED: Does your company...?]

W4.1 Offer a program to pay for some or all of the transportation costs for employees who ride public transportation - for example pay for a bus pass.

W4.2 Provide a car to use for work purposes during work hours.

W4.3 Sell bus or rail passes.

W4.4 Provide bus or rail information on routes and schedules.

W4.5 Allow bus and train riders to use a company car during the day to run personal errands.

W4.6 Assist in forming carpools and vanpools.

W4.7 Provide bike racks, showers and lockers.

1. Yes
2. No
3. Don't know

## Job Characteristics

X1 What time do typically arrive at work?

1. Before 6:00 a.m.
2. Between 6:00 and 7:00 a.m.
3. Between 6:01 and 8:00 a.m.
4. Between 8:01 and 9 a.m.
5. Between 9:01 and 10 a.m.
6. After 10:00 a.m.
7. Varies

X2 What time do typically leave work to travel home?

1. Before 3:00 p.m.
2. Between 4:00 and 4:00 p.m.
3. Between 4:01 and 5:00 p.m.
4. Between 5:01 and 6 p.m.
5. Between 6:01 and 7 p.m.
6. After 7:00
7. Varies

X3 How often does your job require you to [INSERT STATEMENT]?  
Would you say....

1. Never,
2. Rarely,
3. Sometimes,
4. Often, or
5. Always

X3.1 Work regular hours (start and finish work at the same time each day)?

X3.2 Use your own personal automobile for work-related travel during the day?

### X3.3 Work overtime hours?

X4 Does your job allow you to [INSERT STATEMENT]...

1. Yes
2. No
3. Don't know
4. Refused

X4.1 Work flexible hours (that is, start and finish work at different times each day so long as put in the required number of hours)

X4.2 Work an alternative work schedule (for example, a 4-day work week working 10 hours a day or 3 12-hour work days)?

X4.3 Telecommute (that is, work at home that does not include work in the evenings or weekends)

X5 How often do you [INSERT STATEMENT] would you say...

1. Never,
2. Rarely,
3. Sometimes,
4. Often, or
5. Always

X5.1 Leave work during the day to eat lunch or run errands to places farther than you can walk

X5.2 Drop off and/or pick up children at day care or school on your way to or from work

X5.3 Run errands on your way to or from work

X5.4 Begin work earlier or finish later than your regularly scheduled work hours.

## Involvement With Mode Choice

Y1 Would you say the decision to use public transportation is as an important decision or and unimportant decision? Would that be very or somewhat important/unimportant?

1. VERY UNIMPORTANT
2. SOMEWHAT UNIMPORTANT
3. NIETHER IMPORTANT NOR UNIMPORTANT
4. SOMEWHAT IMPORTANT
5. VERY IMPORTANT

Y2 Would you say the decision to use public transportation requires...

1. Absolutely no thought at all
2. Very little thought
3. Some thought
4. A great deal of thought

Y3 If you decide to use public transportation would you say there is...

1. Nothing to loose if you make the wrong decision
2. Little to loose if you make the wrong decision
3. Something to loose if you make the wrong decision.
4. A lot to loose if you make the wrong decision

Y4 How sure are you about the ability of [INSERT STATEMENT] to perform satisfactorily? Would you say you are....

1. Not sure at all
2. Somewhat unsure
3. Neither sure nor unsure
4. Somewhat sure
5. Very sure
6. DK/REF

Y4.1 Metrobus

Y4.2 Metrorail

Y4.3 ART

Y4.4 VRE  
Y4.5 MARC

## **Benefits Sought**

Z1-INTRO Different people consider different things important when deciding whether to drive or to use transit for local travel. As I read the following list, please tell me how important each item is to you in the method of transportation that you use. Please answer on a 7-point scale where 1 means the statement “does not describe public transportation at all” and 7 means the statement “describes public transportation very well.” You may use any number in between.

Z1.1 I can count on it to get me to where I am going on time.

Z1.2 I can control my own schedule.

Z1.3 It is easy to arrange time.

Z1.4 I am able to get home in an emergency

Z1.5 I am able to come and when I want to.

Z1.6 It offers me the flexibility I need in my schedule.

Z1.7 It gives me time to be alone and think.

Z1.8 I can count on it to get me to where I am going on time.

Z1.1 I can count on it to get me to where I am going on time.

Z1.1 I can count on it to get me to where I am going on time.

Z1.1 I can count on it to get me to where I am going on time.

Z1.1 I can count on it to get me to where I am going on time.

## **DEMOGRAPHICS**

DEMO1 Finally I have few demographic questions that will be used to help us analyze the results of this study.

D1 What is your age?

\_\_\_ ENTER ACTUAL NUMBER. [IF REFUSED ASK]

Are you between,

- \_\_\_ 16 - 22
- \_\_\_ 23 - 30
- \_\_\_ 30 - 40
- \_\_\_ 41 - 50
- \_\_\_ 51 - 65
- \_\_\_ 65 and older
- \_\_\_ Refused

D2 What category best describes your household Income?

- \_\_\_ Under \$20,000
- \_\_\_ \$20,000 - \$30,000
- \_\_\_ \$30,000 - \$40,000
- \_\_\_ \$40,000 - \$55,000
- \_\_\_ \$55,000 - \$75,000
- \_\_\_ \$75,000 and more
- \_\_\_ Refused

D3 Are you...

- \_\_\_ Married,
- \_\_\_ Single, never married,
- \_\_\_ Divorced or separated
- \_\_\_ Widowed
- \_\_\_ Refused

D4 What was the highest level of formal education you have had the opportunity to complete?

- \_\_\_ Grades 1-8
- \_\_\_ Grade 9
- \_\_\_ Grade 10
- \_\_\_ Grade 11
- \_\_\_ Grade 12
- \_\_\_ Technical or vocational school
- \_\_\_ First year of college

- Second year of college
- Third year of college
- Graduated college
- Attended graduate school
- Completed graduated school

D5.  Male  Female

